Results of Review
Permanent Program Permit Application No. 399
Hillsboro Energy LLC
Deer Run Mine

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The Illinois Department of Natural Resources, Office of Mines and Minerals, Land Reclamation Division (Department), the Regulatory Authority in Illinois under the Surface Mining Control and Reclamation Act of 1977 (Federal Act), 30 U.S.C. Section 1201 et seq, has reviewed Hillsboro Energy LLC's (Hillsboro) Deer Run Mine application for Permit No. 399 in accordance with the Surface Coal Mining Land Conservation and Reclamation Act (State Act), 225 ILCS 720, and the Department's regulations at 62 Ill. Adm. Code 1700-1850.

Hillsboro has submitted in writing the modifications required by the Department's May 30, 2008, letter (Appendix A). These modifications have been reviewed and approved by the Department. Pursuant to 62 Ill. Adm. Code 1773.19, the Department has decided to approve the application as modified. The Department's decision is based upon a review of the record as a whole, and is supported and documented by the record. The findings and reasons for the Department's decision are set forth below. The period for administrative review under 62 Ill. Adm. Code 1847.3 commences as of the date of this decision.

I. SUMMARY OF PERMIT APPLICATION No. 399

Surface coal mining and reclamation operations permit application No. 399 submitted by Hillsboro, for its Deer Run Mine, proposes a permit on 803.5 acres.

Of the 803.5 acres proposed for the permit area, 2.0 acres are proposed to be used for ventilation, air shafts, 53.3 acres are proposed to be used for processing areas and support facilities, 78.0 acres are proposed to be used for access, haul roads, and transport facilities, 63.2 acres are proposed to be used for soil storage areas, 109.0 acres are proposed to be used for mine waste areas, 34.5 acres are proposed to be used for mine buildings and mine support facilities, 382.0 acres are proposed to be used for undeveloped areas and 81.5 acres are proposed for other uses.

The following is a summary of the pre-mining land uses shown by Hillsboro, and the proposed post-mining land uses:

Land Use Table

Land Use	Pre-Mining Acres	Post-Mining Acres
Cropland	665.30	298.60
Residential	1.80	1.80
Industrial/Commercial	1.10	7.40
Fish and Wildlife Habitat	135.30	495.70
Total	**803.50**	**803.50**

II. PROVISIONS FOR PUBLIC PARTICIPATION

The Department finds that the public participation requirements of 62 Ill. Adm. Code 1773.13 and 1773.14 have been met.

The 803.5 acre permit application was filed with the Department on September 21, 2007, and was deemed complete on December 21, 2007. The applicant placed a newspaper advertisement of the proposed operation in the Litchfield News-Herald, a newspaper of general circulation in the area affected, published in Montgomery County, once a week for four consecutive weeks, beginning on December 21, 2007. The applicant filed two copies of the permit application with the County Clerk of Montgomery County, in accordance with 62 Ill. Adm. Code 1773.13(a)(2), on December 21, 2007. Copies of the application were sent to the following State Agencies: Illinois Department of Agriculture (IDOA), and Illinois Environmental Protection Agency (IEPA), and the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) on January 7, 2007, for review and comment. Written notification of the application was given to those governmental agencies and entities required to receive notice under 62 Ill. Adm. Code 1773.13(a)(3).

State agency comments on this application have been received by the Department, with the source and date of comments as follows: IDOA (February 15, 2008); and IEPA (February 15, 2008). Comments on this application were received from the NRCS dated March 17, 2008.

The Department received a request for both an informal conference and public hearing for permit application No. 399 from the Chairman of the Montgomery County Board, Mike Plunkett, on December 26, 2007. Requests were also received from members of the public.

The Department held an informal conference on February 20, 2008, in the VFW Post 1306 in Taylor Springs, Illinois. The Department held a public hearing on March 19, 2008, in the VFW Post 1306 in Taylor Spring, Illinois. The Department's responses to the comments and objections resulting from the informal conference and the public hearing are contained in Appendix B.

All comments received have been considered by the Department in reviewing this application. The Department's responses to these comments are set forth in Appendix B.

All comments received on permit application No. 399 have been furnished to the applicant, and have been filed for public inspection at the office of the Montgomery County Clerk.

III. SUMMARY OF THE DEPARTMENT'S FINDINGS

The Department, upon completing its review of the information set forth in the application, the required modifications submitted (see Appendix A) and information otherwise available, and made available to the applicant, and after considering the comments of State agencies, and all other comments received, makes the following findings:

A. Findings Required by 62 Ill. Adm. Code 1773.15

1773.15(b)(1) The Department has determined and finds from the schedule submitted in the application in accordance with 62 Ill. Adm. Code 1778.14(c) and other information available to the Department that the applicant or any person who owns or controls the applicant is not currently in violation of the State Act, Federal Act or any other law or regulation referred to in Section 1773.15(b)(1).

1773.15(b)(3) The applicant, anyone who owns or controls the applicant, or the operator specified in the application does not control and has not controlled surface coal mining and reclamation operations with a demonstrated pattern of willful violations of the Federal or State Acts of such nature and duration and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the Federal or State Acts.

1773.15(c)(1) The permit application as modified is accurate and complete and all requirements of the Federal and State Acts and the regulatory program have been met.

1817.121 Hillsboro has proposed to conduct underground mining operations utilizing the longwall method in Permit No. 399. The Department finds that the subsidence control plan as modified is capable of meeting the performance standards of the Department's Permanent Program Rules. The Department will monitor Hillsboro's performance in meeting the mitigation requirements of 62 Ill. Adm. Code 1817.121.

Hillsboro has committed to securing all necessary rights, including the right to subside, through execution of an affidavit required by 62 Ill. Adm. Code 1778.15(f).

Regardless of subsidence rights, surface ownership or the existence of any private contractual agreements, Hillsboro must correct material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence. Hillsboro's subsidence control plan, as modified, contains a description of measures to be taken in order to comply with 62 Ill. Adm. Code 1817.121(c)(1). Similarly, Hillsboro must correct material damage resulting from subsidence caused to any uncontrolled structures or facilities by repairing the damage or compensating the owner of such

structures or facilities in the full amount of the diminution in value resulting from subsidence. Hillsboro's subsidence control plan, as modified, contains a description of measures to be taken in order to comply with 62 Ill. Adm. Code 1817.121(c)(2).

Occupied dwellings, structures and facilities exist within the projected area of planned subsidence. In accordance with the procedures of 62 Ill. Adm. Code 1784.20(b)(8)(A) and 1817.121(a), damage minimization efforts must be taken on all structures and facilities within the projected area of planned subsidence unless a written waiver is obtained or the cost of minimization exceeds the cost of repairs. Hillsboro has committed to providing the appropriate documentation of waivers, cost analysis or minimization plans for each structure a minimum of 120 days in advance of anticipated impacts. The Department finds that Hillsboro's damage minimization plan meets the intent of this regulatory requirement.

Public roads and utilities exist over the planned subsidence mining areas. Based on potential public safety issues, and the lack of any detailed plan to minimize damage to protect the public, Hillsboro must obtain agreements from the authority with jurisdiction over the roads and utilities prior to any impacts occurring. The Department has conditioned the permit to obtain these agreements to assure precautions are in place to protect the public during and after subsidence impacts. (Please see Condition M.)

Pursuant to 62 Ill Adm. Code 1817.41(j), Hillsboro must promptly replace any drinking, domestic or residential water supply that is contaminated or interrupted. Hillsboro has provided a plan for conducting surveys of drinking, domestic and residential water supplies required under 62 Ill. Adm. Code 1817.121(a)(2) wherever necessary. Therefore, all wells for which no specific agreement exists concerning post subsidence resolution of water supply issues, shall be monitored to acquire adequate seasonal data sufficiently in advance of any potential impacts.

Hillsboro has provided projected post-subsidence contours for all proposed longwall panels. Due to limitations in computer modeling, variations in the actual seam height extracted, and variable geologic conditions, the actual amount and extent of subsidence may vary to some degree from Hillsboro's projections. Hillsboro will verify the accuracy of modeled subsidence with land surveying techniques over the initial longwall panels. Based on the results of monitoring, the defined subsidence magnitude and extend may be revised.

The Department will review the performance of Hillsboro's subsidence control plan in the field concerning prompt and effective mitigation. The Department will monitor Hillsboro's performance in meeting land mitigation requirements, replacement of protected water supplies, and structure mitigation requirements and has conditioned this permit to insure this result. Quarterly reports detailing the mitigation accomplished and

outlining future mitigation planning is required to assure compliance with 62 Ill. Adm. Code 1817.121. (Please see Condition N)

The Department finds that Hillsboro's subsidence control plan, as modified, is in accordance with 62 Ill. Adm. Code 1784.20.

SUBSIDENCE BIBLIOGRAPHY:

Trent, Bauer, DuMontelle: "Bibliography of Subsidence Related Literature" 1988, IMSRP-V 190 pages, Illinois State Geological Survey.

Trent, Bauer, DuMontelle: "Bibliography of Subsidence Related Literature 88-89 Update", 33 pages, September 1989. Illinois State Geological Survey.

1817.46(e) The regulations at 62 Ill. Adm. Code 1817.46(e) allows the Department to grant exemptions from the requirement to pass all disturbed drainage through a siltation structure when:

a.. the disturbed drainage area within the total disturbed area is small; and,

b. the permittee demonstrates that siltation structures and alternate sediment control measures are not necessary for drainage from the disturbed drainage areas to meet the effluent limitations and water quality standards for the receiving water set forth in Section 1817.42.

The Department has determined the request meets the criteria established in Section 1817.46(e) and hereby grants an exemption from the use of a sedimentation pond for this area.

1817.57(a) The regulations at 62 Ill. Adm. Code 1817.57(a) allow the Department to authorize disturbance within 100 feet of the top of the normal channel of a perennial or intermittent stream. In accordance with 62 Ill. Adm. Code 1817.57, the Department finds that:

a. the original stream channel and its associated riparian vegetation will be restored; and,

b. underground mining activities will not cause or contribute to a violation of Section 1817.42 and will not adversely affect the water quantity and quality or other environmental resources of the stream.

Therefore, the Department authorizes underground mining activities within 100 feet of or through the stream.

1773.15(c)(2) The applicant has demonstrated that reclamation as required by the Federal and State Acts and the regulatory program can be accomplished under the reclamation plan contained in the permit application, as modified.

1773.15(c)(3)(A) The proposed permit area is not within an area under study or administrative proceedings under a petition, filed pursuant to 62 Ill. Adm. Code 1764, to have an area designated as unsuitable for surface coal mining operations.

1773.15(c)(3)(B) The proposed permit area is not within an area designated as unsuitable for mining pursuant to 62 Ill. Adm. Code 1762 and 1764 or subject to the prohibitions or limitations of 62 Ill. Adm. Code 1761.11.

1761.11(a) The proposed permit area does not include any lands within the boundaries of the National Park System, the National Wildlife Refuge System, the

National System of Trails, the National Wilderness Preservation System, the Wild and Scenic Rivers System, or National Recreation Areas designated by Act of Congress.

1761.11(b) The proposed permit area is not on any Federal lands within the boundaries of any national forest.

1761.11(c) The proposed surface coal mining and reclamation operations will not adversely affect any publicly owned park or any privately owned or publicly owned places included on the National Register of Historic Places.

1761.11(d) The proposed permit area is within one hundred (100) feet of the outside right-of-way line of public roads in Montgomery County, described as follows:

> The proposed permit area will be within 100 feet of the right-of-way of Ashmore Trail in Section 7, T8N, R3W. The anticipated surface affects will be the construction, maintenance and use of subsoil and topsoil storage piles, coarse refuse disposal, installation of mine support utilities, internal mine property access roads (that do not necessarily connect to the public road), employee parking lots, sediment control ponds/structures, drainage diversions, ground storage of mining equipment, parts and supplies, railroad and security fencing, and other miscellaneous activities associated with the surface effects of an underground coal mine.
>
> No approvals from the authority with jurisdiction over the road were required. The applicant provided proper public notice and opportunity for a public hearing. Comments received, either at the informal conference or public hearing or in writing, concerning the activities within 100 feet of the public road have been addressed in Appendix B.
>
> The Department finds the interests of the public and affected landowners will be protected from the proposed mining operations as a result of the measures to be taken by Hillsboro.

1761.11(e) The proposed permit area is not within three hundred (300) feet of any occupied dwellings.

1761.11(f) The proposed permit area is not within three hundred (300) feet measured horizontally of any public building, school, church, community or institutional building. The permit area is not located adjacent to a public park

from which the applicant will be required to maintain a three hundred (300) foot buffer zone.

1761.11(g) The proposed permit area is not within one hundred (100) feet measured horizontally of a cemetery.

1773.15(c)(4) This section is applicable to surface mining operations only.

1773.15(c)(5) The Department has assessed the probable cumulative impacts of all anticipated coal mining on the hydrologic balance in the cumulative impact area, in accordance with 62 Ill. Adm. Code 1784 and finds that the operations proposed under the application have been designed to prevent material damage to the hydrologic balance outside the proposed permit area (see Appendix C).

1773.15(c)(6) The applicant has not proposed the use of any existing structures in the permit application.

1773.15(c)(7) The applicant will submit fees required by these regulations before the permit is issued. The fee required is $20,087.50 for the term of the permit, which may be paid in annual increments. The Department finds that the applicant has paid all reclamation fees from previous and existing operations as required by 30 CFR 870.

1773.15(c)(8) A soil survey was submitted by the applicant which shows there prime farmland soils identified on this permit area. The prime farmland identified in the permit are exempt from the provisions of 62 Ill Adm Code 1785.17 as provided under 1823.11. The Department finds the areas are to be actively used for an extended period of time, coal waste disposal is not technologically and economically feasible to store in the underground mine or on non-prime farmland, and will affect a minimal amount of land.

1773.15(c)(9) The applicant has satisfied the requirements for a long-term, intensive agricultural post-mining land use, in accordance with the requirements of 62 Ill. Adm. Code 1816.111(d).

1773.15(c)(10) Analysis of potential effects of the proposed operations on federally listed threatened and endangered species has shown that although the federally endangered Indiana Bat (*Myotis sodalis*) is not known to occur in Montgomery County, the bat may occur on the proposed permit area at some time during the life of the permit as all of Illinois is considered to be in the species range. It has been determined that if timber disturbance is limited to the time period when the species was not present (September 15 to April 15) there will be no effect on the continued existence of the species. The Department finds the proposed activities will not effect the continued existence of endangered or threatened species or result in the destruction or adverse modification of

their critical habitats, as determined under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq).

1773.15(c)(11) This section is not applicable to this application.

1773.15(c)(12) The effect of the proposed permitting action on properties listed on or eligible for listing on the National Register of Historic Places has been taken into account by the Department.

A phase 1 Survey was submitted for the permit area. The site was determined on October 23, 2007, to have no sites eligible for listing on the National Register of Historic Sites. The IHPA concurred on November 2, 2007.

B. Findings Required by 62 Ill. Adm. Code 1785 (Applicable Sections)

The prime farmland identified in the permit is exempt from the provisions of 62 Ill. Adm. Code 1785.17 as provided under 1823.11. The Department finds the area is to be actively used for an extended period of time, coal waste disposal is not technologically and economically feasible to store in the underground mine or on non-prime farmland, and will affect a minimal amount of land.

C. Compliance with 62 Ill. Adm. Code 1773.19

1773.19(a)(1) The Department has based its decision to approve, as modified, Hillsboro's application for Permit No. 399, Deer Run Mine, on the complete application, public participation as provided by 62 Ill. Adm. Code 1773.13 and 1773.14, compliance with all applicable provisions of 62 Ill. Adm. Code 1785, and the processing and complete review of the application.

1773.19(a)(3) The Department is providing written notification of its final permit decision to the following persons and entities:

A. The applicant, each person who filed comments or objections to the permit application, and each party to the public hearing;

B. The Montgomery County Board; and,

C. The Office of Surface Mining.

All materials supporting these findings are a part of the public record and are hereby incorporated by reference. Based upon the information contained in the permit application, information otherwise available and made available to the applicant, the comments of State Agencies, all findings and information contained herein and conditions set forth in Part IV, the Department is issuing, as modified, Hillsboro's application for Permit No. 399.

Enter on behalf of the Illinois Department of Natural Resources, Office of Mines and Minerals, Land Reclamation Division as Regulatory Authority.

Marc Miller, Acting Director
Illinois Department of Natural Resources

Joe Angleton, Director
Office of Mines and Minerals

Dated: February 11, 2009

IV. Permit Conditions

A. The permittee shall conduct surface coal mining and reclamation operations only on those lands specifically designated as the permit area on the maps submitted with the application and authorized for the term of the permit and that are subject to the performance bond or other equivalent guarantee in effect pursuant to 62 Ill. Adm. Code 1800.

B. The permittee shall conduct all surface coal mining and reclamation operations as described in the approved application, except to the extent that the Department otherwise directs in the permit.

C. The permittee shall comply with the terms and conditions of the permit, all applicable performance standards of the Federal and State Acts, and the requirements of the regulatory program.

D. Without advance notice, delay, or a search warrant, upon presentation of appropriate credentials, the permittee shall allow the authorized representatives of the Department and Secretary of the United States Department of the Interior to:

1. Have the right of entry provided for in 62 Ill. Adm. Code 1840.12; and,

2. Be accompanied by private persons for the purpose of conducting an inspection in accordance with 62 Ill. Adm. Code 1840, when the inspection is in response to an alleged violation reported to the Department by the private person.

E. The permittee shall take all possible steps to minimize any adverse impacts to the environment or public health and safety resulting from noncompliance with any term or condition of this permit, including, but not limited to:

1. Accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance;

2. Immediate implementation of measures necessary to comply; and,

3. Warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

F. As applicable, the permittee shall comply with 62 Ill. Adm. Code 1700.11(d) for compliance, modification, or abandonment of existing structures.

G. The permittee shall pay all reclamation fees required by 30 CFR 870 for coal produced under this permit for sale, transfer, or use.

H. Within thirty (30) days after a cessation order is issued under 62 Ill. Adm. Code 1843.11, for operations conducted under the permit, except where a stay of the cessation order is granted and remains in effect the permittee shall either submit to the Department the following information, current to the date the cessation order was issued, or notify the Department in writing that there has been no change since the immediately preceding submittal of such information:

1. Any new information needed to correct or update the information previously submitted to the Department by the permittee under 62 Ill. Adm. Code 1778.13(c); or,

2. If not previously submitted, the information required from a permit application by 62 Ill. Adm. Code 1778.13(c).

I. Issuance of this permit under the Surface Coal Mining Land Conservation and Reclamation Act does not in any way authorize any take of any listed species in violation of the Illinois Endangered Species Protection Act, 520 ILCS 10/1 et. seq. or The Endangered Species Act of 1973, 87 Stat. 844.16. U.S.C. Sect 1531 et seq. If "take" as defined by these Acts is anticipated to result from permitted activities, the permittee should apply for an incidental take permit from the Illinois Department of Natural Resources, Office of Resource Conservation for state listed species and the U.S. Fish and Wildlife Service for federally listed species.

J. The permittee shall submit analyses of representative samples of coarse and fine coal waste within 180 days of the initiation of coal processing. The analyses shall include potential acidity and neutralization potential.

K. The permitee shall submit the information required in the Department's January 8, 2009 letter to the permitee regarding potentially historic structures no less than 120 days prior to undermining. Required mitigation measures must be completed prior to subsiding the structure.

L. Pursuant to 62 Ill. Adm. Code 1816.41(c), the applicant shall monitor all groundwater monitoring wells for dissolved iron and dissolved manganese, in addition to the following standard parameters: pH, total dissolved solids, hardness, alkalinity, acidity, sulfates, total iron, total manganese, chlorides and water elevation (reported as true elevation, not depth to water).

M. Pursuant to 62 Ill. Adm. Code 1817.121(a)(3), the Department requires submittal of finalized agreements with each public road and utility authorities that assures public safety during subsidence. General information such as surveillance of effects as they occur and precautions taken to assure public safety shall be described. This information shall be submitted a minimum of 60 days prior to subsidence of any section of road, utility or railroad. If Hillsboro alternatively proposes a unilateral plan to minimize

damage to these facilities, the Department will consider such a plan a significant revision pursuant to 62 Ill. Adm. Code 1774.13(b)(2).

N. Pursuant to 62 Ill. Adm. Code 1784.20, 1817.100 and 1817.121, the Department is conditioning the issuance of the permit to assure satisfactory application of the subsidence control plan. Hillsboro is required to report quarterly to the Department as to the disposition of the subsidence control plan. These reports are to address the application of the plan to specific instances of material damage resulting from subsidence. As part of this report, the permittee shall include the following:

1. an evaluation of the type and extent of damages to land, structures and facilities;

2. a schedule in which Hillsboro proposes to implement direct actions to mitigate damages. Subsequent reports shall discuss the reasons for any delays in mitigation which may occur, or discuss the success of final mitigation measures which have been implemented;

3. details on any potential disruptions in services such as water and electric and how these disruptions will be managed;

4. the status of obtaining agreements that constitute a written waiver that would negate the need for damage minimization efforts or a specific plan for damage minimization for each structure. Compliance with 62 Ill. Adm. Code 1784.20(b)(8)(A) and 1817.121(a)(3) must be provided a minimum of 120 days in advance of planned subsidence operations;

5. updates on the status of pre- subsidence structure condition surveys and surveys of drinking domestic and residential water supplies pursuant to 62 Ill. Adm. Code 1817.121(a)(2). Water supplies requiring collection of pre-mining quality and quantity data shall be done sufficiently in advance to document seasonal fluctuations;

6. updates on the surface monitoring plan and acquisition of subsidence data.

The first report shall be submitted to the Department approximately ninety (90) days prior to the commencement of planned subsidence mining. Depending on specific circumstances, the Department may require more frequent and specific information involving individual subsidence events, and an update on the minimization plan for each structure.

APPENDIX A

Illinois Department of
Natural Resources
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http://dnr.state.il.us

Rod R. Blagojevich, Governor
Sam Flood, Acting Director

May 30, 2008

Mr. Michael Beyer
Hillsboro Energy
925 South Main St.
Hillsboro, IL 62049

Via Certified Mail

Re: Modification to Permit No. 399
Hillsboro Energy, Deer Run Mine

The Department, after reviewing the information contained in the permit application and information otherwise available to the applicant, and after considering all other comments received, has determined that modification of Permit Application No. 399 is necessary. The modifications to the application shall comply with the requirements of 62 Ill. Adm. Code 1777.11. The modifications required by the Department are enclosed here. If the applicant does not desire to modify the permit application as described below, it may, by filing a written statement with the Department, deem the permit application denied, and such denial shall constitute final action.

Pursuant to 62 Ill. Adm. Code 1773.15(a)(1)(B)(i), modifications required by the Department shall be received within one year from the date of this letter. Absent the modifications required by the Department, the application does not demonstrate compliance with the requirements of the Illinois Surface Coal Mining Land Conservation and Reclamation Act, Regulations and Regulatory Program and the Department will issue a written finding denying the application.

The period for administrative review (62 Ill. Adm. Code 1847.3) shall commence upon:

1. receipt by the applicant of a written decision from the Department, approving the application as modified, or

2. if the applicant's modifications are insufficient, or if the applicant fails to submit the required modifications in accordance with 62 Ill Adm. Code 1773.15(a)(1)(B)(i), receipt by the applicant of a written decision from the Department denying the permit application, or

3. receipt by the Department of the applicant's denial statement.

The modifications required by the Department are as follows:

1. Pursuant to 62 Ill. Adm. Code 1779.25(b), 1780.14(c), and 1780.25(a), and as required by Part I(10)(B) of the application, the Department is requiring the applicant to modify the application by submitting engineering certifications where the modifications result in changes to maps, plans, or cross sections submitted under the original application.

2. Pursuant to 62 Ill. Adm. Code 1777.11(c), and as required by Part I(1) of the application, the Department is requiring the submittal of a verification by a responsible official of the applicant for the information being submitted as a result of this modification letter.

3. On page 10 of Part V, the applicant proposes to limit timber disturbance to the time period September 30 to April 1 annually as a protection measure for the federally and state endangered Indiana bat. Pursuant to 62 Ill. Adm. Code 1817.97(a), the Department issued a policy statement on this issue in Operator Memorandum 2006-04 in which the Department identified the timber disturbance period currently in use. Pursuant to 62 Ill. Adm. Code 1817.97(a), the applicant shall modify the timber disturbance period to coincide with the provisions of Operator Memorandum 2006-04.

4. The applicant on page 10 of Part V, indicates that 12 acres of wetlands will be affected and that 22 acres of wetlands will be constructed. Pursuant to 62 Ill. Adm. Code 1784.13, the applicant shall describe steps being taken to comply with Section 404 of the Clean Water Act regarding these wetlands. Pursuant to 62 Ill. Adm. Code 1817.49(b), 1817.22, 1817.83(c)(4), and 1784.13, of the 22 acres of wetlands to be constructed, the following design information shall be submitted for all wetlands in the permit area which are part of the post mining land use plan. Since a number of post mining wetlands are proposed, each shall be identified with a number or label on the post mining land use map corresponding to the design information for each.

   A. Adequate proposed contours or cross sections to depict the basin's three dimensional shape.

   B. Characterization of wetland soils including a statement indicating the presence or absence of acid or toxic forming materials in the wetland or watershed and a description of how such materials are to be managed.

   C. Identification on a map of the wetland watershed area and a corresponding acreage figure.

   D. A statement of anticipated water quality.

E. A properly designed discharge structure.

F. A revegetation plan.

5. Seven species listed under the Illinois Endangered Species Protection Act were identified by public commenters as possibly being associated with the permit area or adjacent area: Henslow's sparrow, royal catchfly, blazing star, ear-leafed foxglove, eastern blue-eyed grass, buffalo clover, and bald eagle. Pursuant to 62 Ill. Adm. Code 1784.21(a)(2) the applicant shall determine if these species are likely to be included within the permit area or adjacent area. Pursuant to Section 1777.13 the applicant shall provide the names of persons or organizations that made these determinations, descriptions of methodologies used and the qualifications of the persons making those determinations. If these species are likely to be included in the permit area or adjacent area, the applicant shall provide, pursuant to Section 1784.21(a)(2), site specific resource information for these species and, pursuant to Section 1784.21(b) protection and enhancement plans for these species.

6. A public commenter identified the Coffeen Lake Upland Management Area and Coffeen Lake State Fish and Wildlife Area as important wildlife habitat areas which are to be impacted by the proposed operations. The applicant has proposed to subside part of the Coffeen Lake Upland Management Area, which is part of the Coffeen Lake State Fish and Wildlife Area. Pursuant to 62 Ill. Adm. Code 1817.121, the applicant shall describe what impacts are expected to occur to this area as a result of the planned subsidence and shall explain how the value and reasonably foreseeable use of this land will be maintained. The applicant shall identify any anticipated structural damages from the proposed subsidence in this area and describe how such structural damages are to be mitigated.

7. On page 6 of part V, item 6, the applicant makes a reference to 450 live stems per acre for reclaimed forestry land; however forestry land use is not shown on the post mining land use map or in the post mining land use summary table (page 8, Part V). Pursuant to 62 Ill. Adm. Code 1773.15(c)(1) this discrepancy shall be resolved.

8. The applicant at Part I(6)(A) of the application does not list officers, directors or managers, but rather an Authorized Person, Mike Beyer, is designated for the applicant. Under Attachment 1.6.A of Part I of the application, a Consent to Company Action by Foresight Management, LLC as manager of Hillsboro Energy, LLC designating Mike Beyer as an Authorized Person for Hillsboro Energy, LLC; however, no documentation was provided in the application showing Foresight Management, LLC as the controlling entity, manager, of Hillsboro Energy, LLC. Pursuant to 62 Ill. Adm. Code 1773.5 and 1778.13(c), all entities owning or controlling the applicant, Hillsboro Energy, LLC must be documented in the application. For Foresight Management, LLC, a non-member/owner, manager,

documentation must be submitted by the owners of Hillsboro Energy, LLC designating and authorizing Foresight Management, LLC as the manager of Hillsboro Energy, LLC.

9. On page TOC-1 of the application submittal under Part I - Applicant Information, Attachment 1.4 "Purchaser of Record of Permit Area" was listed; however, Attachment 1.4 was not submitted with the application. References to Attachment 1.4 must be removed from the application attachment listing on page TOC-1. The Department notes that the required information for the "purchaser of record of the permit area" was submitted in response to Part I(4) in the application proper.

10. Pursuant to 62 Ill. Adm. Code 1777.11, the response to Part V(1)(A) shall be modified to correct the references to Sections 1817.62 and 1817.01.

11. Pursuant to 62 Ill. Adm. Code 1777.11, the response to Part IV(7)(K)(3) concerning proximity of permit to urban development shall be clarified.

12. The response to Part I(10)(C)(1) indicates there will be surface coal mining and reclamation operations within 100 feet of the right-of-way line of a public road. The response goes on to outline numerous activities that may be conducted in the 100 foot buffer zone, but these activities are not shown on the operations map. This discrepancy shall be corrected.

13. Pursuant to 62 Ill. Adm. Code 1783.21, Attachment II(6)(A)(2) must be revised to reference Bulletin 811 and the relevant data provided in that document.

14. Pursuant to 62 Ill. Adm. Code 1817.133 response V(2)(B)(4), page V 8, must be modified to justify why the soil stockpile area south of slurry pond 1 has not been returned to its premining land use of cropland. In addition the applicant must provide adequate information to demonstrate that the provisions of 62 Ill. Adm. Code 1823.11 apply.

15. Pursuant to 62 Ill. Adm. Code 1784.20, response II(12), page II-6, must be modified to locate existing drainage tiles in both the permit and shadow areas, or describe efforts to identify them in the field.

16. Pursuant to 62 Ill. Adm. Code 1783.12, response II(10)(A) and (E)(1), pages II-5 and II-6, must describe what efforts are being made to identify potentially eligible historic resources within the proposed shadow area and also summarize the conclusions of the Phase 1 survey within the permit area.

17. Pursuant to 62 Ill. Adm. Code 1784.15, response V(1)(D)(7), page 6, must be modified to address the nine acres of industrial land use which have been identified on the map and in Question V(2).

18. Pursuant to 62 Ill. Adm. Code 1784.13, response II(13)(E), page II-7, must be modified to address the removal of B and C horizons for areas of refuse disposal, not just sediment pond construction.

19. In response to Part V, Attachment V.1.B page No. 4 of the Reclamation Cost Estimate, the applicant shall correct the permit number.

20. In response to Part III(2)(D)(1), the applicant states coal processing wastes will be placed in the proposed refuse disposal area (RDA). Additional information concerning the construction of this RDA shall be submitted pursuant to 62 Ill. Adm. Code 1784.14. The applicant shall provide specific construction details of the in-situ liner proposed to be installed in the RDA, sediment ponds and ditches. Included in these details shall be a discussion of how the applicant will test the in-situ materials to determine if a permeability of $1x10^{-7}$ cm/sec is being achieved throughout the construction of the liner and what quality controls/quality assurance measures will be used to determine the design specifications are being met. Additionally, the applicant shall provide a discussion on the amount of material it expects to excavate from the interior of the impoundment area.

    Additionally, in response to Part IV(6)(B), the applicant states *"Future additional drilling can better define the extent, depth and thickness. . ."*, however, it is unclear if additional drilling is proposed. If additional drilling will be conducted in the RDA, the applicant shall provide a plan pursuant to 62 Ill. Adm. Code 1784.14.

21. In response to Part III(2)(D)(1), the applicant makes certain statements regarding groundwater characteristics. Pursuant to 62 Ill. Adm. Code 1784.14(e), the applicant shall quantify their statements of current groundwater flow directions/flow paths, hydraulic conductivity values, aquifer yield data and groundwater quality (within the permit, adjacent and shadow areas). Additionally, pursuant to 62 Ill. Adm. Code 1784.14(b)(1)(B), the applicant shall provide supporting documentation for these statements, as well as providing a discussion on the presence or absence of wells/groundwater supplies within the permit and adjacent areas. If wells and/or other groundwater supplies do not exist within the permit and adjacent areas, the applicant shall state as such.

    Pursuant to 62 Ill. Adm. Code 1784.14(e), the applicant must adequately characterize the surface and groundwater regimes within the permit, adjacent and shadow areas, including addressing the utilitization of water for the mine processes and how this use will affect the hydrologic balance. The applicant shall incorporate this

information into the Probable Hydrologic Consequences (PHC) determination.

22. In response to Part III(2)(B)(2) and III(2)(C)(2)(b), the applicant discusses seasonal variations in groundwater and surface water. Pursuant to 62 Ill. Adm. Code 1784.14(b)(1)(A) and 1784.14(b)(2)(B), the applicant shall quantify their statements of the seasonal variations in both surface and groundwater regimes (of the permit, adjacent and shadow areas), as well as describe the streams present within the permit, adjacent and shadow areas.

23. Pursuant to 62 Ill. Adm. Code 1784.14(b)(1)(A)(ii); 1784.14(b)(3) and 1784.14(e), the applicant shall provide baseline characterization of groundwater within the shadow area. If surface water is expected to be impacted, the applicant must also provide characterization of all streams, springs and ponds within the permit, shadow and adjacent areas.

    Additionally, the applicant's response to III(2)(C)(1), mentions a *"few small water bodies"* within the shadow area, but these water bodies are not identified. The applicant shall add a table to identify these water bodies, including a statement of ownership that can be easily cross-referenced to the Hydro-Geological Map (Map 4).

24. The applicant presented, on the Surface Facilities Map (Map 6 S.F.) that the proposed RDA will discharge via NPDES Point 005. This discharge point is upstream of an unnamed tributary which drains into the Lake Hillsboro watershed. Lake Hillsboro has been identified as a back-up water supply source to Glen Shoals Lake, which supplies the town of Hillsboro with its drinking water. Pursuant to 62 Ill. Adm. Code 1784.14(g), the applicant shall characterize Lake Hillsboro and shall demonstrate how it will protect this surface water resource from negative impacts due to runoff from the proposed RDA.

25. Pursuant to 62 Ill. Adm. Code 1784.14(b)(1)(A) and 1784.14(b)(2)(A), the applicant shall submit all analytical results collected to date, for the groundwater monitoring wells and surface/stream sampling points. This information shall also be incorporated into the applicants PHC determination. Additionally, the applicant shall provide a discussion on the sampling protocol for surface water sampling (including, but not limited to the data collection during periods of low or no flow).

26. Pursuant to 62 Ill. Adm. Code 1784.14(b)(1)(B), and as required by Part III(2)(B)(3), the applicant shall supply the potentiometric levels and rates of discharge/usage of the coal seam to be mined and all water-bearing strata above and below the coal, which could be potentially impacted. Where this information is not applicable, the applicant shall state as such.

27. In response to Part III(2)(D)(1)(b), the applicant references the laboratory data sheets

in Attachments III.2.A.2 and III.2.A.3, but does not supply a narrative explanation of the results. Pursuant to 62 Ill. Adm. Code 1784.22(b)(2)(B), the applicant shall provide a narrative discussion of the acid-base accounting/sulfur forms analysis which includes a description of the potential acid/toxic forming materials and their locations; a description of the potentially alkaline producing materials and their locations; as well as what criteria were used to determine if the materials to be encountered are acidic/toxic forming or alkaline in nature. The applicant shall also include a discussion on how the potentially acidic materials will be field identified and handled during shaft/slope development/construction, temporary storage, use or disposal and final reclamation.

Additionally, the applicant shall provide an explanation for the delay in the acid-base accounting and sulfur forms analyses. Samples were collected on February 1, 2007 and analyzed on August 6, 2007. The applicant shall provide documentation on the core sample storage during the six month delay between sample collection and laboratory analysis.

In the response to Part IV(6)(A), the applicant indicates that "suitable" shaft and slope materials will be used as a base for roadways, rail lines and storage areas. The applicant shall revise this response to assure that acidic materials will not be utilized.

28. The applicant reports (in UCM 1 Application Addendum No. 1) that only 17 of 49 groundwater user survey respondents actually rely on groundwater as their primary source of drinking water. This number represents 35% of the total respondents. However, the table provided as Attachment IV.3.B.5.C indicates that there are 57 survey respondents (out of 116 surveys sent) and that 22 of these 57 respondents rely on groundwater as their primary source of drinking water.

Pursuant to 62 Ill. Adm. Code 1784.14(b)(1), the applicant shall first explain the discrepancy in the number of users/respondents and secondly, shall provide documentation for the conclusion that these numbers indicate a *"limited availability and poor quality"* groundwater resource.

29. In their response to Part III(2)(D)(3)(c) the applicant did not provide sampling methods, sampling frequency or parameters to be analyzed for the NPDES program. Pursuant to 62 Ill. Adm. Code 1784.14(i), the applicant shall provide details of the proposed NPDES monitoring program.

30. Pursuant to 62 Ill. Adm. Code 1784.14 the applicant must provide sufficient information that allows the Department to determine if adverse impacts to the hydrologic balance may occur. All hydrologic/geologic statements presented in Section III, Section IV and Addendum No. 1 (and any attachments) must be

documented and confirmable. Sources of site-specific information must be presented (e.g., field collected, published materials or personal discussions/observations).

31. In response to Part III(2)(D)(5), the applicant states that there are no known sources of pollution that could affect stream quality. Pursuant to 62 Ill. Adm. Code 1784.14(e), the applicant shall provide a discussion on the methodology used to determine the presence or absence of potential sources of surface and/or groundwater contamination.

32. The Underground Operations Map (Map 6 U.G.) depicts areas of previous underground mining, however, the applicant did not provide details. Pursuant to 62 Ill. Adm. Code 1784.14(e), the applicant shall provide a discussion of previous mining activities in the area and the potential impacts on the surface and groundwater regimes from these activities.

33. In response to Part III(2)(D)(1)(a), the applicant states *"Should runoff. . . develop acidic characteristics,* [it] *will be collected and neutralized to meet water quality standards."* Pursuant to 62 Ill. Adm. Code 1784.14(e)(3), the applicant shall provide details on the determination/identification of acidic runoff, the collection and treatment of this runoff and what erosion/sediment controls will be implemented to minimize contamination of the runoff.

34. The applicant has provided seemingly contradictory statements regarding the groundwater resources in the area. In their response to Part III(1)(B) it is stated that there are no major or minor bedrock valley aquifers, yet in response to Part III(1)(D), they provide a statement that the best potential source for groundwater is within the *"sand and gravel deposits in the major valley systems."*

Further, in response to Part III(2)(D)(1)(a) the applicant claims there is limited groundwater and limited geologic materials to allow infiltration, yet the groundwater encountered during drilling is considered to be Class I. Additionally, the applicant states, *"Infiltration from the creek to the shallow ground water regime through the alluvial deposits along the streams already occurs,"* yet, there is no discussion of the potential for stream loss as a result of subsidence.

The applicant shall clarify these apparent contradictory statements.

35. In the Schedule B, the applicant presents quality data from the 12 currently installed groundwater monitoring wells. However, it is unclear whether this data is from one or multiple sampling events, as no sampling dates were provided. The data indicates extremely high levels of iron, manganese and magnesium, well above the Class I Groundwater Quality Standards.

In their letter, dated February 15, 2008, the Illinois EPA requires a statistical analysis of the existing water quality. However, due to the extremely high levels it may be necessary for the applicant to pursue an Alternative Groundwater Quality Standard under 35 Ill. Adm. Code 620.450. Pursuant to 62 Ill. Adm. Code 1784.14(h), the applicant shall provide an explanation of the data, as presented in Schedule B.

36. The applicant must provide, pursuant to 62 Ill. Adm. Code 1784.14(e) a determination of the probable hydrologic consequences of the proposed operations on proposed permit, shadow and adjacent areas. In their response to Part III(D)(1), the applicant appears to address these issues for the permit and adjacent areas, but not for the shadow area. Therefore, the applicant shall provide additional discussions of the proposed impacts of the mining operations within the shadow area.

Additionally, pursuant to 62 Ill. Adm. Code 1784,14(e)(3)(C)(iii), the applicant must characterize those streams which may be impacted due to mining operations with regard to flooding and/or stream flow alterations. The applicant shall describe the potential impacts and must describe efforts to be used to prevent material damage to the hydrologic balance within the permit, shadow and adjacent areas.

37. In response to Part IV(2)(B) of the of the UCM-1 application concerning soil storage protection, additional information is necessary. Pursuant to 62 Ill. Adm. Code 1817.11(f), the applicant shall:

A. In response to Part IV(2)(B)(1), the applicant references the Surface Facilities Map (6 S.F.) for soil horizon storage areas. This map locates soil storage areas but does not differentiate as to the content (topsoil or subsoil). The applicant shall revise the mapping of soil storage areas to differentiate topsoil storage from subsoil areas. In the event different soil types will be stored adjacent to one another in a given area, detail how the material will be segregated in the field to assure proper reclamation.

B. In response to Part IV(2)(B)(2), the applicant shall use best practices for erosion control until such time that adequate vegetative cover is established. The applicant shall revise the response to indicate what erosion control practices will be employed prior to vegetative cover establishment. The applicant discusses soil stockpiles that are outside the surface drainage collection system. It is unclear what soil stockpiles do not report to a sediment pond. If sediment storage falls outside of drainage control, then a request for a small drainage area exemption shall be made and justified or all soil storage areas relocated to report to a sediment pond.

38. In response to Part IV(2)(D) of the UCM-1 application, the applicant has defined areas of "Future Refuse Disposal" and "Future Course Refuse Disposal Area" and indicated that the areas are not being bonded at this time. The applicant has not provided adequate baseline geologic or hydro-geologic information for the two future disposal areas as requested in Part III(2)(D) of the UCM-1 Application. As such, a significant revision will be necessary to allow any refuse disposal in either of the two areas. Pursuant to 62 Ill. Adm. Code 1784.14(e), the applicant shall remove the contours of the "Future Course Refuse Area" and cross hatch the area as labeled in the southern "Future Refuse Area".

39. In response to Part IV(5)(C) of the UCM-1 application concerning transportation facilities, the applicant references the Surface Facilities Map (Map 6 S.F.). It does not appear that any borrow areas are defined for the construction of the rail loop or roads. Attachment IV.5.C.2 - Roads /Railroad Details provides grade relative to pre-construction elevations. Pursuant to 62 Ill. Adm. Code 1784.24, the applicant shall provide cut and fill volume balancing and if necessary, locate borrow areas for bed construction on the Operations Map.

40. In response to UCM-1 application Part (IV)(5)(C)(3) for transportation facilities and IV(7)(A)(2) surface drainage control, it appears that portions of some roads and portions of the rail loop will not report to a sediment control pond, including the rail load out. Pursuant to 62 Ill. Adm. Code 1817.46(e), the applicant shall:

    A. Clearly delineate on an appropriate map all areas for which an exemption is being sought.

    B. Provide a specific plan as to the measures (see Section 1817.45(b)) that will be utilized to control sediment loss. Indicate the size of each area if greater than 0.1 acre.

    C. Provide additional detail on alternative sediment control for the load out facility that assures coal and sediment runoff will not reach receiving streams.

41. In response to Part (IV)(5)(C)(7) of the UCM-1 application concerning culvert design, the applicant references Attachment IV.5.C.2. The attachment presents cross sections locating culverts and defining the diameter of each. Pursuant to 62 Ill. Adm. Code 1784.24, the applicant shall provide calculations that assure the culverts are properly sized and locate them on an appropriate plan view map.

42. In response to Part IV(6)(B) of the UCM-1 application concerning coal processing waste bank dam designs, the applicant discusses the long term plans for an impoundment but has designed the initial phase to not impound coal waste above natural grade. The plan shows an incomplete course refuse ring to limit above natural grade impounding of slurry. The "Slurry Cell No. 1 Plan and Cross Sections" drawing shows a berm Section A-A with top elevation of 627.5 and a spillway elevation of 626.0. Pursuant to 62 Ill. Adm. Code 1784.16, the applicant shall;

    A. Provide the volume of impounded slurry, if any, proposed in this application.

    B. Define the minimum freeboard to be maintained from the top of slurry to the spillway crest to assure slurry is not discharged to the receiving stream.

    C. Contour intervals defining the corse refuse shall be provided on the plan view as well as the cross sectional location of the terrace.

43. In response to Part IV(6)(H) of the of the UCM-1 application, the applicant discusses four feet of earthen cover consisting of B horizon material and top soil.

    A. Based on the dimensions of the above grade course refuse and the below grade slurry area, the applicant shall provide soil balancing to show that enough soil cover material will be stockpiled from the construction and excavation of the refuse site. If the volumetric calculation shows less than adequate cover, a borrow area within permit shall be established to assure reclamation can be achieved.

    B. In response to Part V(1)(A) and V(4)(B), the applicant discusses the potential use of dredged material from local lakes or stream channels. Pursuant to 62 Ill. Adm. Code 1784.16, the applicant shall provide further details on the source of any off site material, how this material will be obtained in compliance with all applicable regulatory requirements and how the material will be tested to assure that it is suitable for cover, or remove all references to dredged material as use in refuse cover.

44. The Department is in receipt of a letter addressed to the applicant dated February 15, 2008, from the Illinois Environmental Protection Agency (IEPA) requesting additional information and corrections. Pursuant to 62 Ill. Adm. Code 1773.12, the applicant shall provide the responses to this letter to insure coordination with each agencies regulations. For responses that result in changes to this application, clearly indicate which application part, attachment and/or map is being revised.

45. Part (IV)(7) of the UCM-1 application addresses surface drainage control. In addition to the design information and corrections required by the IEPA's letter addressed above, the following information shall be provided pursuant to 62 Ill. Adm. Code 1817.46(c).

    A. The applicant references the Surface Facilities Map (Map 6 S.F.) in response to Part IV(7)(A)(1). To assist in evaluation of sediment control design, watershed boundaries reporting to each sediment pond shall be defined.

    B. The applicant shall incorporate flow direction arrows for ditches 1A, 1B, 2A, 2B, 3A, 3B, 4A and 4B.

    C. Ditches 3A and 3B are connected but would appear to flow in opposite directions, the drainage divide shall be defined.

    D. The west end of Ditch 6A appears to terminate at a draw. Clarify whether this ditch will extend across the draw and intercept this drainage.

46. In response to Part (IV)(7)(I) of the UCM-1 application, the applicant responds "no" concerning the location of intermittent streams. The Department questions this response based on the definition of intermittent streams found in 62 Ill. Adm. Code 1701.5. The rail loop will cross sections of what appears to qualify as an intermittent stream. Such activities shall not be located in the channel of an intermittent stream unless specifically approved by the Department in accordance with applicable Sections of 62 Ill. Adm. Code 1817.41 through 1817.43 and 1817.57. Unless the applicant can demonstrate that this stream course does not meet the definition of an intermittent stream, the applicant shall indicate how compliance with these regulations will be achieved. The following shall be included as part of the assessment.

    A. Clearly delineate on the Surface Facilities Map or other appropriate map those areas where disturbance within the stream buffer are contemplated.

    B. Indicate how the requirements of Section 1817.57(a)(1) will be met.

    C. Discuss the measures taken to prevent coal or coal waste from entering the stream buffer zone.

    D. Provide cross sections of the stream at the proposed crossing locations, adequate to describe the existing geometry and including elevations.

E. Provide Engineering calculations justifying all culvert sizes as indicated in Attachment IV.5.C.2 Road/Railroad Details. Locate and identify all culverts on the plan view Surface Facilities Map or other appropriate map.

F. Provide a description of the construction practices in the crossing locations. Describe the type of fill materials to be used anywhere within the stream buffer, and the erosion control practices to be followed during construction and operation for each structure.

47. In response to Part IV(6)(H) of the UCM-1 application, the applicant discusses coarse refuse disposal. Pursuant to 62 Ill. Adm. Code 1817.81, the applicant shall indicate what is proposed as the maximum lift thickness and describe any testing procedures to verify proper compaction.

48. In response to Part IV(3)(B)(5)(a) of the UCM-1 Application the applicant indicates that Attachment 1.2.B cross references with the Identification of Interests Map. The Identification of Interest Map does not locate all structures. Pursuant to 62 Ill. Adm. Code 1784.20(b)(10), the applicant shall correct the reference to an appropriate map and assure that the listing 1.2.B can be cross referenced to the longwall panels as requested. For clarity, the Underground Operations Map (Map 6 U.G.) shall be revised to show all structures. Currently, it appears that the color coded years of mining supercedes the surface features layer.

49. A public comment was received indicating the location of a gas line located along Route 185 was incorrectly located near his property. Pursuant to 62 Ill. Adm. Code 1784.20(a)(1), the applicant shall determine if the utility is mis-located and if necessary make corrections to all appropriate maps for accuracy in the permit file.

50. In response to Part IV(3)(B)(2) of the UCM-1 application concerning prediction of planned subsidence areas, the applicant provides post subsidence contour maps defining the limits of subsidence with a 0.0 isopleth line. The angle of draw proposed is 25 degrees which will be verified by surface monitoring over the first panel. Pursuant to 62 Ill. Adm. Code 1784.20(b)(2), the applicant shall verify whether or not this line represents 25 degrees. All maps of the shadow area shall be revised to clearly define the limits of planned subsidence for clarity so that it can be readily determined which structures require pre-subsidence condition surveys, damage minimization or waivers from damage minimization, and where subsidence rights must be in place prior to subsidence impacts occurring.

51. In response to Part IV(3)(a)(3) of the UCM-1 application concerning geology, the applicant references the Hydro-Geologic Map (Map 4). Part III.1.A.1 provides eight lithologic descriptions contained in two cross sections, "A" and "B". Pursuant to 62 Ill. Adm Code 1784.20(b)(3), cores 08-03-18-07 and 08-03-18-14 require additional information to accurately define unconsolidated thickness, depth to coal and coal thickness. Additional geologic descriptions within the shadow area away from the two cross sections are necessary to better define the geology present.

52. In response to Part IV(3)(B)(5)(b) of the UCM-1 Application the applicant references the Post Subsidence Contour Map (Map 8). This map resulted from the use of a computer model entitled "Subsidence Deformation Prediction System" (SDPS). Public comments have questioned the use of this model alleging it is not appropriate for midwest conditions. The Department is aware that this model has the ability to model midwestern subsidence based on geologic conditions and historical data when properly implemented. Pursuant to 62 Ill. Adm. Code 1784,20(b)(6), the applicant shall provide background on the input data and settings used to generate the profiles used in developing the post mining contour map to assure it is applicable to this longwall operation.

53. Part IV(3)(B)(4)(c) and (d) request information in relation to surface features listed under 62 Ill. Adm. Code 1761.11 and 12. The Department of Interior, Office of Surface Mining has determined that the limitations and prohibitions described in this regulatory section do not apply to subsidence and therefore this agency no longer applies the requirements of this section to subsidence The Department is however requiring additional information to assure that the requirements of 62 Ill. Adm. Code 1784.20 and 1817.121 regarding the implementation of the subsidence control plan are met.

    A. Public Roads: Absent a detailed damage minimization plan required under 62 Ill. Adm. Code 1784.20(b)(8), the Department finds that an agreement with the public road authorities is necessary to assure subsidence will not create a public safety hazard to the motoring public. The applicant shall commit to securing a written agreement with all appropriate road authorities that establishes that safety precautions will be in place during and after subsidence. The agreements shall be in place prior to subsidence impacting any public road.

    B. Public Parks: The applicant has responded that no public parks exist in the shadow area. The Cranfill Unit of the Coffeen Lake Fish and Wildlife Area would be considered a park as it is publicly controlled property used for recreation. For clarity in the permit file the applicant shall revise the response accordingly.

C. Cemeteries: In response to Part IV(3)(B)(4)(C), the applicant references the Identification of Interests Map. This map identifies one cemetery within the shadow area. A field inspection revealed the name of the cemetery based on a marker as "The County Farm Cemetery". This cemetery is located outside the area of full extraction but within the angle of draw. Pursuant to 62 Ill. Adm. Code 1784.20(b)(2), the applicant shall define the limits of subsidence based on the projected angle of draw on the Maps 6 UG, 8, and 11. The anticipated amount of subsidence projected at the cemetery based on the subsidence modeling shall be provided.

54. In response to Part IV(3)(c)(1) of the UCM-1 application concerning mine stability in unplanned subsidence control plan areas, the applicant indicates that the mine plan under the prison will be mined on a conservative plan of 150 x 100 foot centers. The remainder of Part IV(3)(C) is answered as not applicable. Although the area of unplanned subsidence is limited to the north south main, the responses to Part IV(3)(C) are applicable for room and pillar areas outside the limits of planned subsidence. Therefore, this section shall be addressed including minimum pillar dimensions in areas outside the zone of mining influence on the prison if smaller pillars are proposed.

55. In response to I.B.2 of the UCM-1 Addendum No. 1 concerning monitoring of specific drinking domestic and residential water supplies, the applicant provides a plan to notify the Department of any ground water sources that should be monitored. The applicant indicates that a quarterly progress report will be maintained, documenting the location of wells in the next six months of longwall mining projections. Pursuant to 62 Ill. Adm. Code 1784.20(b)(8)(B), the applicant shall provide a template of this tracking report to demonstrate how this information will be presented and updated to document the progress of water monitoring and assure collection of adequate seasonal quality and quantity data in advance of subsidence impacts.

56. In response to I.B.3 of the UCM-1 Addendum No. 1 concerning an exemption from monitoring water supplies, the applicant appears to request an exemption from conducting a survey of water supplies. This appears to contradict the commitments made in I.B.2. The applicant has not justified an exemption from water quality and quantity monitoring. Based on the results of the initial mail survey conducted, many well depths are unknown at this time. Therefore, the Department can not exempt any well from specific monitoring at this time and denies the request. Exemptions can be granted on a case-by-case basis if agreements preclude the need for monitoring or site specific geotechnical information assures a given well will not be negatively impacted. Pursuant to 62 Ill. Adm. Code 1784.20(b)(8)(B), additional information to justify a site specific well monitoring exemption shall be presented or a

commitment to monitor all wells in the planned subsidence and adjacent areas shall be maintained.

57. In response to Part IV(3)(B)(7)(c) of the UCM-1 application, the applicant discusses plans to mitigate damage to land and structures. Pursuant to 62 Ill. Adm. Code 1784.20(b)(8), (9) and (10) and in response to Part IV(3)(B)(7)(c) of the UCM-1 application, the following additional information shall be provided:

    A. The applicant describes pre- and post-subsidence surveys to determine the degree of material damage. The applicant shall additionally describe how disputes between the land owner and permittee over the existence, amount, level or degree of material damage will be resolved.

    B. The applicant indicates agreements will be pursued with governmental bodies, utility companies, road authorities and buried pipeline companies to allow prevention or minimization of subsidence damages. The applicant shall provide a list identifying all such entities within the planned subsidence area.

58. In response to II.A.1.c of the UCM-1 Addendum No. 1 concerning specific damage minimization methods for each structure, the applicant indicates an agreement with the structure owner will be pursued prior to subsidence. Minimization of damage is required unless the structure owner specifically waives this requirement in writing. Therefore, agreements may or may not preclude the need for damage minimization. The applicant has committed to providing a plan for damage minimization 120 days in advance of planned subsidence in the event a waiver is not obtained. In the event the Department determines this mining application is approved, the Department will require quarterly reporting of the disposition of the approved subsidence control plan. Pursuant to 62 Ill. Adm. Code 1784.20(b)(8), (9) and (10), the format of a tracking spread sheet table that will be used as part of the quarterly reporting shall be provided. The tracking spread sheet shall detail at a minimum the status of agreements reached with structure owners, damage minimization waivers obtained, completion of pre-subsidence condition surveys, completion of water well quality and quantity surveys and repair of both land and structures requiring such. The information shall be presented on a per panel basis as the mine develops.

59. Pursuant to 62 Ill. Adm. Code 1784.20, response IV(3)(B)(7)(b), page IV 8 must be modified to explain in more detail, the restoration efforts for the areas identified on map 8 showing drainage interruptions, which are impacted by subsidence which will affect the land capability. This must include procedures for initial landowner contacts and follow-ups, crop damage compensation, timing, duration and planned practices within the shadow area and areas needed outside the shadow area for the restoration efforts. The Department strongly recommends that you work cooperatively with the

Montgomery County Soil in addition to Water Conservation District and USDA Natural Resources Conservation Service, to take advantage of local expertise.

60. Pursuant to 62 Ill. Adm. Code 1783.25(b)(3), in response to Part III(2)(A)(3) the strike and dip of the coal to be mined shall be depicted on an appropriate map.

61. A public commenter is concerned with public survey markers such as section markers being moved by subsidence. Pursuant to 62 Ill. Adm. Code 1784.20(b)(10), the applicant shall address potential subsidence impacts and necessary actions to established and recorded survey markers.

If you have any questions please contact this office at (217) 782-4970.

Sincerely,

Joe Angleton, Director
Office of Mines and Minerals

JA:SF

cc: C. Johnson
OSMRE
Montgomery County

APPENDIX B
Consideration of Comments and Objections

62 Ill. Adm. Code 1773.13(b) allows submission of written comments on applications for a permit. The following are comments received from the State Agencies, County Board and other members of the public and the Department's response to those comments.

Illinois Department of Agriculture

Comment - The Illinois Department of Agriculture (IDOA) has reviewed the above referenced permit application for a longwall operation and surface disturbance for 803.5 acres. The IDOA has the following comments.

In Part II Attachment ll.6.A.2, the yield data specified in the table should be changed from Circular 1156 *(Soil Productivity/n Illinois)* to Bulletin 811 *(Optimum Crap Productivity Ratings for Illinois* Soils) per the requirements of 62 IL Adm. Code Section 1816.Appendix A. Also, in the same Attachment, the land capability and land classification needs to be revised for the following map units.

Map	Capability Change		Classification Change	
Symbol	From	To	From	To
46	3W	2W	P	
48	3W	2W	SI	
113A	2W	2E	SI	
113B2	P			
113C	SI			
113C2	SI			
250C2	P			
250D	SI			
250D2	SI			
287A	2W	3W		P*
993A	2W	3W	P*	SI
993B2	2E	3E		SI
994A				SI
994B	2E	3E		SI
995	2W	3W		SI
8074	2E	2W		P

These changes are based on the USDA-NRCS publication *Prime Farmlands/important Farmlands in Illinois.*

The mining company has indicated that pre-mining drainage patterns and tile drainage will be re-established after subsidence has occurred over the longwall panels as part of the mitigation plan to remove trapped or standing water. However, the Post-Subsidence Map (Map 8) indicated that some wet areas or standing water will remain after drainage is re-established. Please explain this discrepancy.

As you know, the agricultural community has concerns over the potential impacts of longwall mining on surface and subsurface drainage systems and whether the capability exists to fully restore those systems post-mining. The Department asks that the applicant make use of the most current technology available to fully restore the affected drainage systems. In addition, the Department recommends that the applicant work with the Montgomery County Soil and Water Conservation District (SWCD) or the USDA Natural Resources Conservation Service (NRCS) on erosion control and drainage restoration issues. The applicant may also benefit from contacting the Illinois Land Improvement Contractors Association in terms of reaching local contractors that may be interested in doing drainage restoration work. The Montgomery County Soil and Water Conservation District and the USDA Natural Resources Conservation Service can be contacted at (217) 532-3610 (Ext. 3) and the Association can be contacted at (309)639-2015.

The mining company has indicated that the future refuse area (not to be affected) will be returned to agricultural production and that all other areas will have a land use of water, wetlands, residential or herbaceous wildlife habitat. The IDOA requests that the area of the soil stockpile storage area south of Slurry Pond #1 be returned to agricultural production instead of wildlife habitat.

The Mine will disturb 12 acres of wetlands and will replace the wetland acreage with 22 acres. Please indicate where the wetlands mitigation site is located on the post-mining reclamation map.

Response - See the responses to Appendix A, item nos. 13, 14 and 15.

Illinois Environmental Protection Agency

Comment -

1. Groundwater monitoring and reporting for the refuse disposal area should be modified in accordance with the following:

    a. Groundwater monitoring wells for the refuse disposal area should be located approximately 30-35 feet laterally from the edge of the embankment impoundment and screened in the first water bearing zone beneath the elevation of the bottom of the refuse disposal area. Monitoring Well Nos. MW22, MW23, MW24S and MW25S appear to be properly located if such wells are screened at the proper elevation. The Applicant should review the drill logs for these wells to determine if the screened interval is appropriately located for monitoring of the

refuse disposal area. The Applicant should propose additional wells for monitoring near the location of the existing wells which have inappropriately located screened intervals.

b. The groundwater monitoring plan for wells related to refuse disposal monitoring should be revised to include monitoring during six (6) separate sample events within one (1) year (approximately bi-monthly) prior to the placement of refuse to established background concentrations for each of the following parameters.

Antimony	Cyanide	Sulfate
Arsenic	Fluoride	Thallium
Barium	Iron	Total Dissolved Solids (TDS)
Beryllium	Lead	Vanadium
Boron	Manganese	Zinc
Cadmium	Mercury	pH
Chloride	Molybdenum	Alkalinity
Chromium	Nickel	Acidity
Cobalt	Selenium	Hardness
Copper	Silver	Static Water Level

c. A statistical representation of existing water quality (six background samples) must be established using the method outlined in Attachment I for refuse disposal related wells. This method should be used to determine the 95% confidence limit for each parameter identified in Item 1(b) above. The Applicant should provide a commitment that this statistical representation of background water quality will be performed with the results of the calculations submitted within ninety (90) days of completion of background monitoring.

d. Following completion of the six (6) background monitoring events, routine monitoring shall continue on a quarterly basis for all parameters identified in Item 1(b) above.

2. A four (4) foot earthen (clay) liner with a permeability of $1x10^{-7}$ cm/sec is proposed to be constructed beneath the refuse disposal area. The Applicant should provide specifics on the testing methods proposed to assure the permeability specifications are met with the liner material used. In addition, the Applicant should specify what quality control methods and procedures will be used during liner construction to verify liner design specification are met.

3. The Applicant should revise the Schedule A to reflect lakes which may be located in the downstream tributaries of all Outfalls.

4. Part IV(6)(A) of the application indicates that negative net neutralization potentials (NNP's) may be encountered in the coarse refuse material. The Applicant should indicate if this is anticipated in the overall coarse refuse composite and, if this is in fact the case, a plan for treating acid producing refuse should be provided.

5. To insure compliance with 62 111. Adm. Code 1816.46 regarding sedimentation ponds and impoundments, the Applicant should address or provide clarification for the following:

   a. Part IV(8)(F) of the application indicates sediment storage volumes were based on a soil loss factor of 0.035 ac-ft. of sediment storage per affected acre of drainage area. Although this is an appropriate soil loss factor, this factor is predictive of annual soil loss volumes. For long-term basins a minimum sediment storage volume factor of 0.1 ac-ft. of sediment storage per disturbed acre is required. The Applicant should revise the sediment basin designs utilizing the appropriate sediment storage volume for long-term basins. It is noted that this factor estimates the soil loss for a period of approximately 3 years and does not preclude the possible need for sediment removal for longer term basins.

   b. The basin design for Pond 001 appears to be for a 001 appears 100 year 6 hour design storm. The Applicant should provide design information for a 10 year 24 hour precipitation event in order to determine if a minimum ten (10) hour detention time is provided for this design storm event.

   c. The basin design for Pond 002 appears to be for a design storm of 100 year recurrence interval. The Applicant should provide design information for a 10 year 24 hour precipitation event in order to determine if a minimum ten (10) hour detention time is provided for this design storm event.

   d. The basin design for Pond 004 does not appear to provide the minimum ten (10) hour detention time for stormwater runoff when appropriate sediment storage in accordance with Item 5(a) above is considered. The Applicant should provide revised basin design for Pond 004 to provide appropriate sediment storage volume and detention time.

   e. The basin design for Pond 005 appears to be for a 100 year 6 hour design storm. The Applicant should provide design information for a

10 year 24 hour precipitation event in order to determine if a minimum ten (10) hour detention time is provided for this design storm event.

f. The basin design for Pond 006 does not appear to provide the minimum ten (10) hour detention time for stormwater runoff when appropriate sediment storage in accordance with Item 5(a) above is considered. The Applicant should provide revised basin design for Pond 006 to provide appropriate sediment storage volume and detention time.

g. The basin design for Pond 007 appears to indicate a runoff volume of 0.00 ac-fl. The Applicant should provide revised basin designs for Pond 007 utilizing a 10 year 24 hour precipitation event and insuring that the appropriate runoff volume is depicted.

6. A sanitary wastewater treatment system does not appear to have been discussed. The Applicant should provide a description of the sanitary wastewater treatment system and submit appropriate design plans unless such system design is to be submitted to the Illinois Department of Public Health in accordance with those regulations. If the system will have a surface discharge detailed plans will be required in accordance with 62 Ill. Adm. Code 1784.1 1(b)(6).

The mine related activities, as proposed, are required to be permitted in accordance with 35 Ill. Adm. Code: Subtitle D of the Illinois Pollution Control Board Rules and Regulations. Since this application is considered to be an application for such permit from this Agency, please notify us of any action taken by your Office.

Response - See the responses to Appendix A, item no. 44.

U.S. D. A. Natural Resource Conservation Service

Comment - I have reviewed the Hilisboro Energy LLC's application for a coal mining permit for their Deer Run Mine, submittal number No. 399. Following are comments regarding sections of Part II- Premining Information, Part IV - Operations Plan and Part V - Reclamation Plan.

In the applicant's response to Part 11.6.1, the land classifications of the listed soils should be updated to reflect the corrections to Attachment 1L6.A.2, noted below.

In Attachment 11.6.A.2, the table Productivity Yield Data should be corrected as follows to reflect land classification and capability data contained in the USDA NRCS publication Prime Farmlands Important Farmlands.

Soil Symbol	Land			
	Classification		Capability	
		updated		updated
46	- - -	- - -	3w	2w
113B2	- - -	P	- - -	- - -
113C	- - -	SI	- - -	- - -
113C2	- - -	SI	- - -	- - -
127B	- - -		1	2e
250C2	- - -	P	- - -	- - -
250D	- - -	SI	- - -	- - -
250D2	- - -	SI	- - -	- - -
287A	- - -	P*	2w	3w
993A	P*	SI	- - -	- - -
993B2	- - -	SI	2e	3e
994A	- - -	SI	- - -	- - -
994B	- - -	SI	2e	3e
995	- - -	SI	2w	3w
8074	- - -	P	2e	2w

The soils occurring within the project occur on broad drainage divides with little relief. They consist primarily of somewhat poorly and poorly drained soils, with very slow to moderately slow permeability and often with relatively high amounts of sodium (Na) present in the subsoil.

Part IV3.B.7.b., Plan describes a planned and predictable surface subsidence following coal removal. The primary impact of subsidence to agricultural land is expected to be the disruption of established surface and subsurface drainage.

Considering the pre-mine surface topography of the permit area and the relatively shallow depth to the seasonal high water table, the disruption of drainage could create wet and/or ponded areas in low-lying parts of the subsidence troughs. Wetness in these areas could result from excess surface runoff or where the water table maintained a constant elevation as the elevation of the soil surface dropped.

The Operations Plan describes possible methods to mitigate the effects of the disruption of field drainage. Several soil-related limitations are present affecting the practices used to restore surface and subsurface drainage. They include, but are not limited to, soil compaction, low permeability, and high sodium content in the soil subsoil. These limitations should be considered in the planning and implementation of any drainage practice. In addition, consideration should also be given to potential impacts on water quality, and on existing or restored wetlands.

Response - See the responses to Appendix A, item nos. 13 and 59.

Public Comments

An informal conference regarding Hillsboro Energy, LLC, Deer Run Mine, Application No. 399 was held on February 20, 2008 at the VFW Post 1306 in Taylor Springs, Illinois. A public hearing was held on March 19, 2008 at the same location.

Many of the comments were similar in nature. The primary issues addressed were:

* Concern about the possible contamination of surface and ground water
* Concern about possible adverse impact of dust, noise, and air pollution
* Concerns about subsidence mitigation to both land and structures
* Concern about impacts to public roads from subsidence

The Department has considered and evaluated all comments, written and oral, concerning the affects of mining. The major issues raised by commentors are addressed below.

Comment 1: The Right to Enter affidavit states that the applicant has or will possess the right to enter surface property to correct subsidence impacts to drainage. Does this mean the applicant seeks to enter private property adjacent to subsided panels for the purpose of draining accumulated water? If so, what is the authority that bestows this right, and will there be a requirement for compensation to affected owners for present and future inconveniences?

Response: In order to properly correct drainage interruptions over subsided longwall panels, the applicant may need to enter adjacent property to complete drainage restoration work down stream. The right to subside the surface may or may not include the right of access to make repairs over or adjacent to the planned subsidence area. This regulatory agency cannot adjudicate title. Therefore, the affidavit is required to assure that the rights necessary to complete mitigation has or will be obtained prior to subsidence creating the need for mitigation. The Department can prohibit longwall mining if the ability to complete the required land mitigation is not possible based on lack of access rights. The application contains an analysis of various drainage ways above the longwall area including anticipated waterway profiles after subsidence. This provides an estimate of the potential areas requiring down stream mitigation. The Department will monitor the applicant's progress in obtaining access rights and will take appropriate action if it becomes evident that access rights are limiting or prohibiting effective drainage mitigation.

Comment 2: The permit application is inconsistent in its representation of length of the long-wall panels. Several of the maps represent the center panels as stopping before undermining occurs at the prison and cemetery located at the western end of the shadow area. However, Map 4, which has a more current date, shows the panels as now extending under those features.

Response: Map No. 4 is the Hydro-Geological Map. Each map has a purpose to display various information. The applicant does show line projections of room and pillar entry development for both the mains and longwall head gate and tail gate entries but does not provide detail on the stopping point. The Department regards Map No. 6 U.G., "Underground Operations Map" as the clear representation of each longwall panel's stopping point. Map 8, "Post Subsidence Map" defines the limits of planned subsidence. The prison is not in the planned subsidence area. The County Farm Cemetery is not over the area of full extraction but is within the projected angle of draw. Based on the projected subsidence, less than 0.5 feet of subsidence is anticipated at the cemetery.

Comment 3: The application only states that planned subsidence allows surface structures to be adequately secured to withstand such an event. What happens when they do not?

Response: All structures within the area of planned subsidence require damage minimization efforts unless the owner waives this procedure in writing (62 Ill. Adm. Code 1817.121(a)(3)). Regardless of the level of success achieved by the damage minimization practices, the permittee is required to repair, replace or compensate the owner of structures for material damage resulting from

subsidence (62 Ill. Adm. Code 1817.121(c)(2). The success of damage minimization only lessens the potential expense the company would incur to achieve compliance with 62 Ill. Adm. Code 1817.121(c)(2).

Comment 4: The company responded several times in the permit application that "unplanned subsidence is not applicable in this application." Obviously, the question of what would be done if unplanned subsidence occurs was not addressed.

Response: In response to Appendix A, Item No. 54, the application was modified to address areas of unplanned subsidence over the north south main entries and has provided response to Part IV of the application accordingly.

Comment 5: Hillsboro Energy LLC was unable to answer the question of how long it will take to bring the subsided land back to a "pre-mining" status for farming, etc. How can we (the owners) be expected to make a reasonable and fair judgment of our costs when considering a settlement if this question cannot be accurately answered by the company?

Response: The requirement to restore pre-mining capability to surface lands in a timely manner is dependent on a number variables. Some areas can experience drainage restoration between growing seasons immediately after subsidence is complete while others may be dependent on subsidence of adjacent areas and execution of a larger scale drainage restoration plan. Regardless of the time to achieve final reclamation, the permittee has committed to compensation for crop loss in the interim (See Part IV(3)(B)(7), page 8 of the application). Land owners should document crop loss and contact the Department if compensation for crop loss is not being received.

Land damages must be mitigated. Compensatory settlement beyond that provided for temporary crop loss or for land taken out of production to accommodate placement of permanent drainage ways is not required.

Comment 6: My family will see eroding ditches to drive and farm around, leaning grain bins that can't possibly by fixed, machine sheds ruined, water wells probably ruined, silos and Harvestors destroyed and our houses will never be the same.

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(1)&(2) requires repair of damage to surface lands, repair or compensation for all damage to structures and facilities. Replacement of damaged drinking, domestic and residential water supplies is required by Section 1817.41(j). Required documentation of pre-subsidence conditions of land, structures and water supplies assures

appropriate return to pre-subsidence conditions. Bond or liability insurance is required to assure the mitigation requirements are met. The history of the regulation of subsidence in Illinois since 1983 shows that repair of subsidence damage is achieved and the un-repairable damages envisioned by the commentor are not the end result of subsidence.

Comment 7: On Map No. 2, note that the east end of the panels will adversely affect the drainage and water flow into Coffeen Lake.

Response: The east end of the longwall panels will subside a tributary that leads to Coffeen Lake. The applicant has demonstrated that mitigation of this stream tributary can be achieved. The end result will be no appreciable change in the amount of runoff reporting to Coffeen Lake after subsidence.

Comment 8: These photos were taken in Macoupin County where flat, fertile fields were subsided, and now show the wide expanses of water during a dry season. This was a house that has been subsided, and these bricks were supposed to be put around the foundation, and it's been sitting there for about six years. It's not been finished.

Response: The operation cited in Macoupin County and photos presented of impaired drainage are taken prior to completion of subsidence mitigation. The property is controlled by the mining company. Drainage mitigation of the northern longwall panels was purposely delayed due to the fact that a larger drainage plan would be more effective after the completion of a series of longwall panels. Because the property is controlled by the company, the Department allowed a delay so that the disturbance created by the mitigation work would be less. Similarly, the homes in this area were purchased by the company and therefore the company can choose to do as they wish with their structures.

Comment 9: When this drainage occurs in these subsided areas, we would like to know if the pre-existing grade will be maintained. If not, what will the minimum grade be in those areas? Usually right now it's about 1.5 feet per thousand feet. We would like to see that maintained, if possible.

Response: Planned subsidence will change the contour of the land. Slopes in the vicinity of the gate road entries will be altered due to differential settlement. The receiving waterways will need to be deepened over the gate entries (longwall chain pillars) and graded downstream to allow positive flow. In the application under Part IV(3)(B)(7), the company indicates they will work with land owners, the NRCS, and engineering firms to develop a comprehensive

regional plan. It would be practical to maintain overall ditch slopes where possible. Any increase in local ditch slope would need to be evaluated to assure flow velocities are in check and, where necessary, energy dissipaters installed.

Comment 10: You see those bottom panels there, where it says LW Panel 22. The question I have, you can go to that panel and the next one above it, next one above it. When those areas are subsided inside of there, below that bottom panel, according to our calculations, we're going to have to dig possibly four to six feet deep to drain that water, is that legal? We're going to be on another person's farm draining this water.

Response: In order to properly correct drainage interruptions over subsided longwall panels, the applicant may need to enter adjacent property to complete drainage restoration work down stream. The right to subside the surface may or may not include the right of access to make repairs over or adjacent to the planned subsidence area. This regulatory agency cannot adjudicate title. Therefore, the affidavit is required to assure that the rights necessary to complete mitigation has or will be obtained prior to subsidence creating the need for mitigation. The Department can prohibit longwall mining if the ability to complete the required land mitigation is not possible based on lack of access rights. The application contains an analysis of various drainage ways above the longwall area including anticipated waterway profiles after subsidence. This provides an estimate of the potential areas requiring downstream mitigation. The Department will monitor the applicant's progress in obtaining access rights and will take appropriate action if it becomes evident that access rights are limiting or prohibiting effective drainage mitigation.

Comment 11: All that water predominantly comes south. If they mine that panel, they pick up, go to the other end, but they can't take that water out of there, because they haven't mined the panel below it yet, so there's no use to dig any surface ditches. So I assume they are just going to let that stand full of water, mine the next panel out, and then let that water come into that. We're going to have a lot of water backed up in those existing panels that can't be drained until mining is completed.

Response: If the situation described by the commentor occurs the permittee will be required to pay for crop loss until the mitigation can be completed.

Comment 12: We just want to make sure that the Illinois drainage law will be followed legally, which states you cannot change or alter any water flow as it is now.

Response: There is no indication that the result of mitigation will change the direction of water flow. The Department does not have the authority to administer the Illinois Drainage Law. The Department suggests that any inquiries concerning the Illinois Drainage Law be directed to the local Soil and Water Conservation District or a drainage district.

Comment 13: In the re-contouring and drainage of agricultural areas what legal rights does the mining company have in regard to deepening drainage ditches on adjacent land and/or in changing the direction of the natural flow?

Response: Please see response to Comments 10 and 12.

Comment 14: We would like to know how long is the water going to be allowed to stand in these reclamation areas.

Response: The requirement to restore pre-mining capability to surface lands in a timely manner is dependent on a number of variables. Some areas can experience drainage restoration between growing seasons immediately after subsidence is complete while others may be dependent on subsidence of adjacent areas and execution of a larger scale drainage restoration plan. Regardless of the time to achieve final reclamation, the permittee has committed to compensation for crop loss in the interim (See Part IV(3)(B)(7) page 8 of the application). Land owners should document crop loss and contact the Department if compensation for crop loss is not being received.

Comment 15: When we cut through the un-subsided land between the panels to relieve this surface water, approximately how wide will those ditches be when you include the side slopes?

Response: The width and depth of the waterways that are necessary will vary with topography and the amount of subsidence that occurs. Deepening existing ditches will also involve a wider top width. The permittee has committed to compensation for land taken out of production to achieve drainage restoration (See Part IV(3)(B)(7) page 8 of the application).

Comment 16: Most tile is laid on a fairly flat grade. So if 95 percent of the subsidence occurs immediately, and if the other 5 percent subsidence occurs after the tile

is installed, that can really throw a tile system off a kilter. We don't know if that's really a viable option.

Response: Permittees are encouraged to not initiate mitigation until subsidence is completed. If tiles are installed prematurely and fail to continue to function due to additional settlement, the permittee will be required to conduct additional repair work.

Comment 17: Who actually takes the responsibility to sign off when all of this drainage repair work is done?

Response: This Department is responsible for continued oversight of subsidence mitigation. Landowners who have concerns with either the adequacy of mitigation plans or the success of mitigation work should first express those concerns to the permittee and contact the Land Reclamation Division if subsequently not satisfied. When necessary, the Department will require remedial action to further correct any problems that exist.

Comment 18: In his presentation, Mr. Dennison said he did not plan to close any roads. Does this mean that absolutely no roads will be closed, or does this mean that no planning has been done ahead of time in case some of them do need to be closed? I don't see how some of those roads can be used the whole time that this mining activity is going on, if we're going to have subsidence of five to six feet. How will they be used during that time period?

Response: Many Illinois public roads have been subsided by longwall mining. However, the majority of these roads were subsided without any need for temporary closure. The applicant has committed to securing agreements with the appropriate authority with jurisdiction over the roads to be subsided or provide a detailed damage minimization plan for Departmental approval. For clarity, the Department has conditioned the permit to obtain the agreements and also clarified that any proposed change to a unilateral plan would be subject to a significant revision and public review. See Condition M. Ultimately, any temporary road closure that might occur during subsidence or while repairs are being implemented after subsidence would be at the discretion of the road authority.

Comment 19: If Route185 had to be closed, where would it be rerouted, and also for how long? If 185 would need to be closed, then who calls for the hearing for the

closure? Would it be IDOT? Would it be IDNR? Would there be a hearing if this road needed to be closed for each one of these five panels?

Response: As a state-maintained road, Route 185 would fall under the jurisdiction of the Illinois Department of Transportation (IDOT). If its necessary to close 185, the decision would be made by IDOT and they would determine whether or not a hearing would be held.

The Department has regulated the impacts of longwall mining since 1983. In that time many Illinois public roads have been subsided by longwall mining. The vast majority of these roads were subsided without any need for temporary closure. The applicant has committed to securing agreements with the appropriate authority with jurisdiction over the roads to be subsided or provide a detailed damage minimization plan for Departmental approval. For clarity, the Department has conditioned the permit to obtain the agreements and also clarified that any proposed change to a unilateral plan would be subject to a significant revision and public review. See Condition M. Ultimately, any temporary road closure that might occur during subsidence or while repairs are being implemented after subsidence would be at the discretion of the road authority.

Comment 20: Who will pay for the maintenance of any detours or any damage to some of our roads in the county?

Response: The permittee is liable for all issues regarding the costs of road repairs and associated costs.

Comment 21: What is going to happen to the homes and farm buildings in the shadow area?

Response: Structures that are within the area of planned subsidence will experience varying degrees of damage based on their location within the subsidence profile and construction of the structure. The regulations at 62 Ill. Adm. Code 1817.121(a)(3) requires the permittee to first take steps to minimize material damage to such structures unless the owner consents to no minimization efforts or the cost would exceed the anticipated cost of repair. Regardless of the level of damage minimization implemented, 62 Ill. Adm. Code 1817.121(c)(2) requires the repair or compensation for all damage to structures and facilities. Required documentation of pre-subsidence conditions of structures assures appropriate return to pre-subsidence conditions. Bond or liability insurance is required to assure the mitigation requirements are met.

Comment 22: Mr. Dennison's comment differ from the brochure supplied by our state agency, where it says, "Land damage with subsidence must be returned to a condition capable of maintaining the uses which the land was capable of supporting before subsidence damage." Mr. Dennison said the land will be restored to "reasonable foreseeable uses." What's the real definition of what's going to happen to the land? And who is going to decide what is the definition of "reasonable foreseeable uses"?

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(1) states that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence damage." The Department is ultimately responsible for determining what "reasonably foreseeable uses" are and the success of mitigation.

Comment 23: I wish that if the company has subsidence rights and they know them, I wish they could produce them so that we could at least know where we stand.

Response: The regulations at 62 Ill. Adm. Code 1778.15(f) state that "All applications for shadow area shall contain a notarized statement by a responsible official of the applicant attesting that all necessary mining rights, including the right to subside, if applicable, have been or will be obtained prior to mining." The Department does not have the authority to require the disclosure asked for in this comment.

Comment 24: The application is just full of fluff. It lacks substantial answers to a lot of questions.

Response: The Department agrees that additional information was necessary before the permit could be issued. The Department's modification letter can be found in Appendix A.

Comment 25: Will the bond cover damage to houses offsite or groundwater?

Response: The bond is in place to ensure that the permit area is reclaimed. If damage resulting from subsidence is not corrected within 90 days, the company must either post a bond or show that there is liability in place to cover the damages pursuant to 62 Ill. Adm. Code 1817.121(c)(3).

Comment 26: Mr. Dennison said that if he did nothing, only 10 percent of the drainage would be affected. I'd like to know where all this water is going to go if we don't do something. Can you explain how you arrived at this 10 percent figure because when it piles up on what I call the high points, I don't see where it's going to go.

Response: The percent of acreage requiring drainage restoration is dependent on the local topography and panel orientation. The regulations at 62 Ill. Adm. Code 1817.121(c)(1) require drainage restoration regardless of its percent of the total.

Comment 27: I don't quite believe that the subsidence will be as uniform as they say, and I'd like you to explain how they can sink so even like you stated.

Response: A great deal of surface subsidence measurements have occurred not only in Illinois but also other states using this method of mining. The accumulation of data indicates that the projected subsidence profiles are realistic. The collected survey data is compared to geology, coal depth and coal thickness to develop correlations. This allows for adequate projections of subsidence. The permittee will however conduct surface monitoring to confirm the accuracy of projections and make adjustments if deemed appropriate by the Department.

Comment 28: I know there's a gas line that goes along Route185, but the map doesn't show the correct location since it goes down my property, and then it goes away from the highway.

Response: See the response to Appendix A, item no. 49.

Comment 29: Mr. Dennison said that the coal company is going to pay for all damages. It sounds to me like they are going to appraise the property, and if the appraisal is less than what the damages are, they'd just give you the appraisal, but you made the statement you would pay for all damages.

Response: Concerning land damage, the regulations at 62 Ill. Adm. Code 1817.121(c)(1) require that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence damage." Impacts to land such as drainage

interruptions must be corrected. Land damage cannot be compensated for in leu of making repairs.

Concerning structural damage, several options are availed to the permittee at 62 Ill. Adm. Code 1817.121(c)(2). The threshold of compensation would be based on the pre-subsidence appraised value. If the company elected to compensate, the amount the Department would require would be based on a repair estimate up to the appraised value of the structure.

Comment 30: Will the chain pillars subside? If at some point they do fail, what is that going to do for the drainage issue, and then how will we address that, if that's some time down the road when they're out of the country?

Response: The design of chain pillars involves minimal extraction. Therefore, once the adjacent longwall panels have passed, additional subsidence from pillar failure is unlikely. The Department is not aware of any residual subsidence of chain pillars that have re-affected surface drainage over longwall areas mined since 1983. If subsidence were to occur at a future date, the amount of vertical subsidence would be limited based on the limited void space remaining in the chain pillar extraction areas. Regardless of the timing of subsidence, the federal Office of Surface Mining has determined that the permittee remains liable for subsidence damage in perpetuity.

Comment 31: Some of the first panels to be mined are examples of how disruptive to even non-farmers it's going to be. Several miles of road, which is a major route to the prison, will be impassable.

Response: Many Illinois public roads have been subsided by longwall mining over the past 25 years. The vast majority of these roads were subsided without any need for temporary closure. The applicant has committed to securing agreements with the appropriate authority with jurisdiction over the roads to be subsided or provide a detailed damage minimization plan for Departmental approval. For clarity, the Department has conditioned the permit to obtain the agreements and also clarified that any proposed change to a unilateral plan would be subject to a significant revision and public review. See Condition M. Ultimately, any temporary road closure that might occur during subsidence or while repairs are being implemented after subsidence would be at the discretion of the road authority.

Comment 32: Where longwall mining has taken place, tests have indicated a rise in radon levels. Has this been tested, and what are the results of increasing levels of

radon after longwall mining? Radon is the second leading cause of lung cancer. Are you required to test for radon, before, during and after longwall mining?

Response: The Department is not aware of any studies comparing pre- and post-subsidence radon levels. The Department has no regulations concerning radon gas.

Comment 33: You say longwall mining is a proven method; then why do you feel the subsidence will need to be monitored?

Response: Most states do not require monitoring as part of the performance standards. Because of the importance of land restoration in Illinois, having accurate projections is extremely helpful in analysis and planning of mitigation. The correlations developed from past monitoring of longwall subsidence are a good tool in predicting subsidence. However, nothing is better than site specific data. This data is required of all startup longwall mines to confirm the accuracy of predictions and to make adjustment to predictions if necessary.

Comment 34: A time limitation needs to be set for drainage work to be completed. Who will make the decision as to how this is accomplished? What input does the landowner have?

Response: The requirement to restore pre-mining capability to surface lands in a timely manner is dependent on a number of variables. Some areas can experience drainage restoration between growing seasons immediately after subsidence is complete while others may be dependent on subsidence of adjacent areas and execution of a larger scale drainage restoration plan. Regardless of the time to achieve final reclamation, the permittee has committed to compensation for crop loss in the interim (See Part IV(3)(B)(7) page 8 of the application).

The landowner is encouraged to actively participate in the planning of mitigation. This Department is responsible for continued oversight of subsidence mitigation. Landowners who have concerns with either the adequacy of mitigation plans or the success of mitigation work should first express those concerns to the permittee and then contact the Land Reclamation Division if subsequently not satisfied.

Comment 35: Will the person or persons responsible for adjusting crop injury be an independent agent? What are the property owner's rights to challenge decisions?

Response: In response to application Part IV(3)(B)(7)(b), the permittee proposes to compensate at the average yield the property has provided historically. This can also be compared to county wide yield averages. If a dispute arises over the amount, a plan for third party arbitration is provided in response to Part IV(3)(B)(7)(c) of the application.

Comment 36: With structure subsidence, will appraisals be done by an independent agent? What are the property owner's rights to challenge the figures? Structures should be appraised at replacement costs. A time limit should be set for repairs or replacement.

Response: See the responses to Appendix A, item no. 59. In response to Part IV(3)(B)(7)(a) of the application, the permittee proposes to utilize a certified appraiser. If a dispute arises over the appraisal amount, a plan for third party arbitration is provided in response to Part IV(3)(B)(7)(c). The regulations at 62 Ill. Adm. Code 1817.121(c)(2) requires the permittee to "compensate the owner of the damaged structure for the full amount of the decrease in value resulting from the subsidence related damage."

Comment 37: Drainage plans for the mined panels are totally inadequate. The dominant soils in the proposed panels to be mined are Cowden, Oconee, Tamalco, and some Herrick and Virden. All these soils have a heavy clay subsurface. These panels will all be dropped from their natural topographic elevation by the removal of the underlying coal vein or by approximately 5 to 7 feet. Any natural and tile drainage existing will be ruined. This means that the rainfall on these panels will quickly collect and cause ponding so they can no longer be used for agriculture. Proposed panels will be 1200 feet wide and about two miles long. This is approximately 300 acres.

There is only one way these panels can be drained in a timely way for any profitable agricultural pursuit: They must be pattern tiled to a basin and the water must be pumped up from the basin to the natural surface and expelled to a natural drainage way.

The tile needs to be continuous plastic with the tributaries at least 8 inches in diameter and the main receiver tile at least 10 to 12 inches in diameter, so that the system will not be compromised with a small amount of subsidence after the initial drop in the mined panel. The tributary tile should be approximately

150 feet apart in Herrick and Virden soil types and the tributary tile should be not more than 100 feet apart in Cowden, Oconee, and Tamalco soils , because of slower natural drainage in these soils.

Response: See the responses to Appendix A, item no. 59. The modified response to Part IV(3)(B)(7)(b) of the application acknowledges the need for a regional drainage plan that incorporates the use of drainage tile in the restoration plan. The Department will not allow the permanent use of mechanical pumps to control drainage. The applicant will need to continue gravity flow drainage work down stream to a point where it can discharge naturally.

Comment 38: In the permit it shows how the coal company plans to drain the longwall panels. This plan is to dig new ditches which will have to be dug through our property. The coal company has not discussed this with the owners yet. How can IDNR approve this permit when such details are not complete? If this is approved the coal company can do and will do what they want to. Also these ditches will have to be in place long before the last panel is sunk or none of the previous panels will drain. These issues have not been addressed in the permit.

Response: See the response to Appendix A, item no. 59. In order to properly correct drainage interruptions over subsided longwall panels, the applicant may need to enter adjacent property to complete drainage restoration work down stream. The right to subside the surface may or may not include the right of access to make repairs over or adjacent to the planned subsidence area. This regulatory agency cannot adjudicate title. Therefore, the affidavit is required to assure that the rights necessary to complete mitigation has or will be obtained prior to subsidence creating the need for mitigation. The Department can prohibit longwall mining if the ability to complete the required land mitigation is not possible based on lack of access rights. The application contains an analysis of various drainage ways above the longwall area including anticipated waterway profiles after subsidence. This provides an estimate of the potential areas requiring down stream mitigation. The Department will monitor the applicant's progress in obtaining access rights and will take appropriate action if it becomes evident that access rights are limiting or prohibiting effective drainage mitigation.

Comment 39: I would like the Department to formally consider and request a plan from the company to minimize this pooling process, or identify alternative means to use the pooling process to positively impact other areas, such as channeling water to the Coffeen Lake area.

Response: A plan to mitigate pooling of water is contained in the application. Drainage will be restored to the same down stream receiving streams including the watershed reporting to Coffeen Lake.

Comment 40: I would recommend that the Department ask the company to provide examples of any similar operations they have conducted themselves or by other related entities and present examples of how the company interacted with the public on land purchases and restoration of the land to original use. I believe this would give the citizens and the department a basis to determine if the company will in fact be able to act in a responsible manner.

Response: The Department does not have the regulatory authority to require the information addressed in this comment. Each application received is reviewed on its own merits.

Comment 41: An inventory of structures and property lines should be required prior to any mining operations on a landowner's property.

Response: A pre-subsidence condition survey of all structures and facilities is required pursuant to 62 Ill. Adm. Code 1817.121(a)(2)(A). Property boundaries are displayed on Map 2, Identification of Interests Map. There is no requirement to survey property lines.

Comment 42: A time frame to complete all reclamation processes should be in place and penalties imposed for noncompliance.

Response: Time frames for the completion of reclamation are addressed at 62 Ill. Adm. Code 1817.100. Violations and penalties are imposed where the Department finds that reclamation and mitigation are not in compliance with the appropriate regulatory requirements.

Comment 43: Public infrastructure such as roads, bridges and water lines should be either mined around as much as possible or relocated. Any damage will be paid for by the company and the Department must reassure citizens by providing examples of sanctions for noncompliance and examples of solved noncompliant issues.

Response: The Department does not have the regulatory authority to require the recommendations put forth by this comment. The commentor is correct in stating that the permittee is responsible for all damage resulting from

subsidence pursuant to 62 Ill. Adm. Code 1817.121(c)(2). Past longwall mining in Illinois has successfully occurred under infrastructure such as state and local roads, major pipelines, power lines and rail lines. All planned subsidence in the state has been successfully mitigated.

Comment 44: Where does the Department get the authority to permit longwall mining under heavily traveled State Highways?

Response: There is no prohibition from longwall mining under public roads. The permit as approved contains steps to assure the subsidence impacts to roads will be addressed appropriately. The applicant has committed to securing agreements with the appropriate authority with jurisdiction over the roads to be subsided or provide a detailed damage minimization plan for Departmental approval. For clarity, the Department has conditioned the permit to obtain the agreements and also clarified that any proposed change to a unilateral plan would be subject to a significant revision and public review. See Condition M.

Comment 45: How do the regulations specify that any re-routing of public roads will be handled? Who will decide where the re-routed IL 185 will go? Who will decide if the roads in that area will handle the heavy truck traffic? Why isn't this in the permit application? How long will the re-routing be required? Will the public have any input into this?

Response: Similar Illinois state roads such as IL 149 and IL 148 were subsided by longwalled mining and traffic was not rerouted. Public roads can only be re-routed with the consent of the local road authority with jurisdiction over the road. Should it be determined to be necessary, specifications as to location and durability of the road would be stipulated by the road authority. Comments concerning the opportunity for public involvement in this process should be directed to the applicable road authority.

Comment 46: Where in the permit does it specifically state precisely how each and every situation is to be handled. Please provide me with specific documentation showing all mitigation efforts in the State of Illinois for drainage caused by longwall coal mining subsidence. In other words, I Insist that you prove to me that there has been mitigation and that it has been successful and that all of the affected land has been returned to pre-subsidence production.

Response: The permit process cannot state precisely how each and every situation will be handled. The Department finds that Permit No. 399 contains an acceptable

subsidence control plan to address issues as they arise during the term of the permit.

Concerning past history, longwall mining has occurred in 11 mining operations spanning six Illinois counties. Approximately 33,000 acres have experienced longwall subsidence. The locations of these operations and maps of the underground mining plans are available to the public. Subsidence mitigation of drainage has occurred in operations under the jurisdiction of this Department. Past and ongoing inspections by this Department confirm that the performance standards at 62 Ill. Adm. Code 1817.121 have and continue to be met.

Comment 47: Please explain what will be done by the coal company to compensate land owners for the loss of crop income, present and future? Why is it left up to the individual landowners to have to deal with the coal companies?

Response: See the responses to Appendix A, item no. 59. In response to application Part IV(3)(B)(7)(b), the permittee proposes to compensate at the average yield the property has provided historically. This can also be compared to county wide yield averages. If a dispute arises over the amount, a plan for third party arbitration is provided in response to Part IV(3)(B)(7)(c). Compensation would be provided for temporary losses experienced until mitigation of drainage is successfully completed. Future loses would only occur in areas permanently taken out of production to accommodate widened or newly established waterways. Land owners should document crop loss and contact the Department if compensation for crop loss is not being received.

Comment 48: Why doesn't the Department require the use of the subsidence model developed by the US Bureau of Mines, US Corps of Engineers and the coal industry?

Response: The model selected by the permittee for subsidence projections is the Subsidence Deformation Prediction System (SDPS). The Department accepts the use of this model for several reasons. The Office of Surface Mining funded an update of this model to accommodate mid-west geology and available subsidence data. The current SDPS model incorporates additional monitoring data profiles including data more local to the Hillsboro Energy shadow area. This additional data was not in existence at the time the U.S. Bureau of Mines model was developed. The SDPS model is an appropriate tool for the intended purpose.

Comment 49: The computer program used to predict the subsidence profiles and post subsidence contours is dependent on assumptions and information provided by HEL. Repeatedly in the permit application, the topography of the mining area is referred to as "gently rolling." There is not a distinction among flat (0-4% slope) land and various other degrees of slope. To preserve farm land for crop production, there cannot be a depression in the soil that does not drain or be at an extended below terrain level (the large bath tub effect). Even HEL admits that field measurements will be taken on the first two panels to verify the assumptions made to construct the profiles and contours.

Response: The Department accepts the use of SDPS as a tool for projecting subsidence profiles. Comments made about pre-existing slope ranges are not an input parameter in the model. Actual surface contours are adjusted in contouring software based on the profile output of SDPS. As with many engineering modeling tools, field results can differ from modeled results. Therefore, the Department has consistently required new longwall operations to accumulate site specific data to confirm the accuracy of modeled projections. This additional step assures future projections are as accurate as possible.

Comment 50: The one room country schools were in session at the time the coal rights were sold 100 years ago, so the rights are still in place. It would be the same situation with country churches, or the sites where they stood. Coal mines should not be allowed to mine under them.

Response: The regulations at 62 Ill. Adm. Code 1778.15(f) require, "All applications for shadow area shall contain a notarized statement by a responsible official of the applicant attesting that all necessary mining rights, including the right to subside, if applicable, have been or will be obtained prior to mining." The applicant has provided the required affidavit.

Comment 51: Dams and bridges are surely damaged by subsidence. Do you replace bridges on farms, or do you just eliminate the streams so you don't have to? Are farm ponds ever replaced, or is the water so polluted that they are useless to raise fish, or water livestock? Where can you show us a restored farm pond?

Response: Dams and bridges are considered structures and 62 Ill. Adm. Code 1817.121(c)(2) requires that "The permittee must promptly repair or compensate the owner for material damage resulting from subsidence caused to any structure or facility that existed at the time of the coal extraction under or adjacent to the materially damaged structure..."

Man-made farm ponds are considered structures and therefore must be repaired, replaced or compensated for. Situations similar to the concerns expressed in this comment have occurred in previously mined and subsided longwall areas. The Department is unaware of subsidence having caused "pollution" to a farm pond. Impacts are typically limited to surface cracking that requires repair. The locations of all operations using the longwall method and maps of the underground mining plan are available to the public for their review.

Comment 52: I believe that long wall mining will destroy the ground water sources, that draining of the 0% to 3% land slope is impossible, that grain farming will not survive as a way of life.

Response: The regulations require monitoring of drinking domestic and residential water supplies before and after subsidence. Past history in Illinois as well as independent research on subsidence effects on groundwater do not confirm the position that longwall mining will destroy groundwater resources. Likewise, mitigation of drainage has been successful. Areas with minimal slope prior to being impacted by subsidence will require additional effort to achieve drainage mitigation relative to more sloping topography. The Department contends that farmland can be restored to farmland with proper mitigation.

Comment 53: Does the company have agreements with road authorities to replace or repair damaged roads?

Response: The Department has conditioned the permit to require execution and submittal of agreements with road authorities. Please see Condition M.

Comment 54: The permit application shows county, township and state roads will be undermined. Will they be relocated? What measurers will be taken to ensure that the interests of the public and the affected landowners will be protected? How long before it will be reclaimed? Will it be reclaimed to pre-mining conditions? What are the estimated costs to reclaim to pre-mine conditions?

Response: Many Illinois public roads have been subsided by longwall mining over the past 25 years. The vast majority of these roads were subsided without any need for rerouting traffic. Public roads can only be re-routed with the consent of the local road authority with jurisdiction over the road. The applicant has committed to securing agreements with the appropriate authority with jurisdiction over the roads to be subsided or provide a detailed damage

minimization plan for Departmental approval. For clarity, the Department has conditioned the permit to obtain the agreements and also clarified that any proposed change to a unilateral plan would be subject to a significant revision and public review. Please see Condition M. Ultimately, any temporary road closure or rerouting of traffic that might occur during subsidence or while repairs are being implemented after subsidence would be at the discretion of the road authority. The cost of repairing roads would be determined at the time of repair in cooperation with the road authority.

Comment 55: What will be the angle of draw on the subsided areas?

Response: Please see the responses to Appendix A, item no. 50 and the modified response to Part IV(3)(B)(2) of the application.

Comment 56: Will mining be done within 500 feet of the old mine? If so what safety measurers will be taken to assure adequate safety and environmental protection?

Response: Mining is not proposed within 500 feet of any abandoned underground mining.

Comment 57: How soon will longwall subsidence show up on foundations?

Response: Subsidence movements can be detected as the longwall face advances up to and past a given point on the surface. Assuming this comment means when will subsidence impacts begin to visually affect a given foundation, the answer would be dependent on the type and construction of the foundation and the damage minimization efforts that are employed, if any. But, surface impacts could be seen as soon as a few days after the pass of the longwall face.

Comment 58: What will be the subsidence affects on the City of Hillsboro water supply lines and rural water lines?

Response: Waterlines within the area of planned subsidence may be impacted. Traditionally, pipelines are exposed during subsidence to minimize damage and to make repairs as necessary during and after subsidence. In response to Part IV(3)(B)(7)(c) of the application, the permittee discusses agreements with all utilities and buried pipeline authorities. Please see Condition M which requires the execution and submittal of the various agreements.

Comment 59: Will the Graham Prison be mined using longwall or room and pillar mining method? How much extraction is planned? How much subsidence is planned?

Response: Room and pillar mining is proposed under the Graham Prison. Minimal extraction is planned and adequate safety factors against failure are demonstrated. No subsidence is planned.

Comment 60: Which areas will be longwalled and which areas will be room and pillar in the 12,160 acres affected? Is Longwall considered retreat mining? What safety measurers are in place for miners.

Response: Areas of longwall mining and room and pillar mining are displayed on Map 6 UG, "Underground Operations Map." Longwall mining direction can be termed as advancing (i.e. moving away from the main entries) or retreating (i.e., moving back toward the main entries). This operation is a retreating method of mining with the longwall progressing from east to west. Based on terminology, high extraction retreat room and pillar mining is a different method of high extraction mining than longwall mining.

The Land Reclamation Division does not regulate miner safety. Miner safety is regulated by the Department's Mine Safety and Training Division and the federal Mine Safety and Health Administration.

Comment 61: What costs do your estimate to reclaim for septic, cable, electrical lines, ammonia lines, water pipes, private wells (both drinking and livestock use)? In what time frame?

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(2) requires that "The permittee must promptly repair or compensate the owner for material damage resulting from subsidence caused to any structure or facility that existed at the time of the coal extraction under or adjacent to the materially damaged structure. If repair option is selected, the permittee must fully rehabilitate, restore or replace the damaged structure. If compensation is selected, the permittee must compensate the owner of the damaged structure for the full amount of the decrease in value resulting from the subsidence related damage..."

The regulations at 62 Ill. Adm. Code 1817.41(j) requires the permittee to "promptly replace any drinking domestic or residential water supply that is contaminated, diminished or interrupted by underground mining activities conducted after January 19, 1996, if the affected well or spring was in

existence before the date the Department received the application for activities causing the loss, contamination or interruption." The definition found in section 1701.5 states that "'Drinking domestic or residential water supply' means water received from a well or spring and any appurtenant delivery system that provides water for direct human consumption or household use. Wells and springs that serve only agricultural, commercial or industrial enterprises are not included except to the extent that the water supply is for direct human consumption, human sanitation, or domestic use." Therefore, a well used for livestock would not meet the definition. See Part I(D)(1) and Addendum No. 1 to the application as modified in response to the Department letter found in Appendix A.

Comment 62: Please describe the physical conditions (for example, depth of cover, seam thickness, etc.) which may affect subsidence damage.

Response: Lithologic descriptions and cross sections as well as descriptions of geology can be found in Part III(2)(A), Attachment III.1.A.1, boring logs and cross sections A-A and B-B.

Comment 63: What will be done to drain or replace bottomland ground that is impacted by subsidence? How does the IDNR propose to deal with lowlands that are currently farmed that will be turned into swampland after longwall mining? In regard to "farmed wetlands," which have been tiled and drainage ditches dug, how will these be reclaimed? How will these bottomlands be drained after they have been dropped five feet by longwall mining? If a landowner or farmer cannot change wetlands, how can a coal company do it with mine subsidence?

Response: See the response to Appendix A, item no. 59. The applicant is not proposing to change any wetlands. All subsidence will be mitigated pursuant to 62 Ill. Adm. Code 1817.121(c)(1).

Comment 64: Describe the monitoring which will be necessary to determine when subsidence begins and how substantial it is.

Response: See Attachment IV.3.B.2 of the application.

Comment 65: Describe what will be done to reduce or prevent subsidence related damage.

Response: See Part IV(3) and Addendum No. 1 to Part II.A of the application as modified in response to the Department's letter found in Appendix A.

Comment 66: When subsidence is not planned what measurers will be taken to minimize subsidence and related damage?

Response: See Part IV(3)(C) of the application, Subsidence Unplanned, as modified in response to the Departments letter found in Appendix A.

Comment 67: Describe what will be done to reduce or prevent subsidence related damage.

Response: See Part IV(3)(B), Planned Subsidence, and Addendum No. 1 of the application as modified in response to the Department's letter in Appendix A.

Comment 68: Describe measurers to be taken to mitigate or remedy subsidence damage.

Response: See Part IV(3) and Addendum No. 1 to the application as modified in response to the Department's letter found in Appendix A.

Comment 69: Are the maps showing location of previously mined areas accurate? Could subsidence occur with activities over that area?

Response: The outlines of previously undermined areas were taken from the best available information, the Illinois State Geological Survey's mined out area maps. Subsidence, unrelated to the mining activities under Permit No. 399, is possible over all previously mined areas.

Comment 70: The application refers to "wetland classification" when some of the ground in the areas to be mined is not wetlands. Is this an effort to down-play the value of our land, so the applicant won't be responsible for "fixing it?" Will the coal company try to get out of fixing wet spots or small lakes after subsidence because they classify them as wet spots in the premining information?

Response: The commentor appears to be referring to wetland delineation related to the permit area, not the shadow area. For planned subsidence areas, the regulations at 62 Ill. Adm. Code 1817.121(c)(1) require that "The permittee

must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence damage." Classifications of areas in the permit area are unrelated to areas in the shadow area. Land use impacted by planned subsidence within the shadow area must be repaired as required by the regulations.

Comment 71: What impact does subsidence have on large trees? If trees are damaged or die within five years, on the farmsteads and the woodlands, after longwall mining, will the mine company replace them, even though it will take years before they will be as valuable as original trees?

Response: The Department has regulated the impacts from longwall mining since 1983. Subsidence, in general, does not impact tree growth. Vast acreage in Illinois has experienced subsidence with little impact on trees. The exception would be if trees are inundated for a lengthy period of time. Monitoring of subsided areas for this potential problem is an on going process during the active operation and the Department will take appropriate action if mitigation is delayed and could result in tree loss. Timely mitigation should preclude tree mortality.

To the extent that damage to trees can be attributed to subsidence and considered "material damage" under Section 1817.121(c)(1), mitigation would be required.

Comment 72: Will the mining company replace or repair land and a bridge broken by longwall mining on private property, leading to a home, from the public road? Will an alternative detour be provided while repair work is being done?

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(1)&(2) required the repair of damage to surface lands and the repair or compensation for damage to structures and facilities. If a detour is needed, the Department would require that access is maintained.

Comment 73: What will the coal company do about section markers that are moved by subsidence? How will they be replaced correctly? Will they be responsible for having them re-surveyed?

Response: See the response to Appendix A, item 61.

Comment 74: Subsidence will result in damage to surface structures such as buildings, roads, utility poles and underground pipelines. What will be the cost of repairing all that damage and who will bear the cost?

Response: The regulations at 62 Ill. Adm. Code 1817.121(c) require the permittee to repair damage to surface land and to repair or compensate for damage to structures and facilities. Cost estimates cannot be made until subsidence actually occurs.

Comment 75: Subsidence removes prime farmland from production for many years. It doesn't make sense to remove so many acres of prime farmland from production, especially at a time when the governor is promoting ethanol.

Response: The regulations require that land damage be repaired in a timely manner but do not prohibit the subsidence of prime farmland.

Comment 76: Pertaining to reclamation, who determines what is "not economically and technologically feasible" to reclaim? What rubric is used? Room and pillar mining has many state and federal regulations, why does longwall have very few and they are vague? It says the permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible. This is arbitrary.

Response: To date, no operator of either a room and pillar or a longwall mine has proposed to not repair because it was not technologically or economically feasible to do so. If an operator pursued this avenue, a substantial and convincing argument would need to be made. This Department would determine the validity of any request to not perform subsidence repairs.

Comment 77: Our soil is 0-2% slope; how can you assure proper drainage after subsidence from longwall mining?

Response: See the response to Appendix A, item no. 59.

Comment 78: IDNR is the permitting body, but what are you prepared to do when the surface owner has a dispute with the coal company? You already gave approval for the permit, so what legal recourse do I have? What will IDNR do for the landowner if the company doesn't restore the land to premining conditions?

Response: In nearly all environmental programs, the permitting agency and the regulatory agency are one and the same. The fact that the Department issues a permit does not preclude it from enforcing the regulations. If subsidence damage is not repaired in compliance with the regulations, the Department can take enforcement action, if necessary, to require that the work be done.

Comment 79: What will happen to my well, pond, septic system, after the longwall panel goes through? Who pays for the damage? What will happen if water levels do not recover to premining conditions? How quickly will the water be replaced? If my well is destroyed and I must connect to a rural water supply, will the mining company assume the water bill forever?

Response: Damages that may occur to wells, ponds, or septic systems are dependent on the location relative to the longwall subsidence. Shallow wells in unconsolidated material typically are unaffected while water elevations in deeper wells can drop for a period of time. Commitments concerning water replacement are detailed in Addendum No. 1 to the application, Part I(D). Wells are surveyed before and after subsidence to determine if a loss has occurred. The application as modified addresses drinking, domestic and residential water supplies concerning condition surveys, and water replacement requirements.

The regulations at 62 Ill. Adm. Code 1701.APP.A, address water replacement as follows: "'Replacement of water supply' means, with respect to protected water supplies contaminated, diminished, or interrupted by coal mining operations, provision of water supply on both a temporary and permanent basis equivalent to premining quantity and quality. Replacement includes provisions of an equivalent water delivery system and payment of operation and maintenance costs in excess of customary and reasonable delivery costs for premining water supplies.

> "Upon agreement by the permittee and the water supply owner, the obligation to pay operation and maintenance costs may be satisfied by a one-time payment in an amount that covers the present worth of the increased annual operation and maintenance costs for a period agreed to by the permittee and the water supply owner.
>
> "If the affected water supply was not needed for the land use in existence at the time of loss, contamination, or diminution, and if the supply is not needed to achieve the postmining land use, replacement requirements may be satisfied by demonstrating that a suitable alternative water source is available and could feasibly be

developed. If the latter approach is selected, written concurrence must be obtained from the water supply owner."

Comment 80: If mining occurs under our dwelling will we be forced to move, for how long and who pays?

Response: Whether the occupant of a dwelling impacted by subsidence is required to move is dependent on a number of variables that must be evaluated on a case-by-case basis. Historically, some occupants remain in the structure during the subsidence with damage minimization efforts in place, while others relocate for a period of time. If the occupant is required to temporarily move from the dwelling those costs would be covered by the permittee.

Comment 81: Since the Underground Operations is mapped and submitted as part of the permit application and furthermore in Part IV-Page 10 in response to topic (C) Subsidence Unplanned, a description of the mining procedure under the prison is given. Why then is it not recorded by section and township like all the other areas to be mined under and the total acreage?

Response: There is no requirement to itemize acreage to be undermined by section and township. Map 6 SF "Underground Operations Map" clearly shows areas of room and pillar mining and areas of longwall extraction. This map is sufficient to correlate surface features and boundaries such as township, section and range designations.

Comment 82: Will structures impacted by subsidence be appraised at current values or replacement costs? Does the permittee have the right to not repair my buildings if the cost of repair is more than the appraised value? What if I disagree with the appraised value? What is the landowner's recourse if he does not agree with the permittee's plan to repair drainage? What will be the guideline for timely repairs and/or replacement of damaged structures following subsidence?

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(2) requires that "The permittee must promptly repair or compensate the owner for material damage resulting from subsidence caused to any structure or facility that existed at the time of the coal extraction under or adjacent to the materially damaged structure. If repair option is selected, the permittee must fully rehabilitate, restore or replace the damaged structure. If compensation is selected, the permittee must compensate the owner of the damaged structure for the full amount of the decrease in value resulting from the subsidence related

damage..." Per the regulatory language, the upper limit of compensation or repair would be the "value" not the estimated replacement cost. The permittee would be able to compensate for the full appraised value in lieu of repairs if the permittee chooses. If the owner of the structure disagrees with the appraised value, Part IV(3)(B)(7)(c) of the application details an arbitration process.

The regulations at 62 Ill. Adm. Code 1817.100 governs timely repair of subsidence damages. Permanent repairs should not be made until residual subsidence movements are complete. If a landowner is not satisfied with the timing of repair, replacement or compensation, they should contact this Department.

Comment 83: What law will allow for the alteration of stream flow for mining operations? If impact occurs what will be the course of action?

Response: There are no perennial streams within the approved shadow area of Permit No. 399. Alteration of stream flow is not proposed. Only re-establishment of impaired surface drainage is proposed.

Comment 84: What are the guidelines and who is responsible for determining compensation for crop acreage taken out of production?

Response: See the responses to Appendix A, item nos. 57 and 59. If there is a dispute over the degree of damage or the amount of compensation, the landowner should contact the Department and pursue arbitration as outlined in Part IV(3)(B)(7)(c) of the application .

Comment 85: Who will conduct pre- and post-subsidence structure surveys? Will it be an independent agency? Will property owners be given the right to challenge the survey results?

Response: See the response to Appendix A, item no. 57 and Part IV(3)(B)(7)(a-c) of the application. The property owner can challenge the survey results through arbitration.

Comment 86: Related to water loss, if third party arbitration is required, who pays for the arbitration and who appoints the arbiter?

Response: See the response to Appendix A, item no. 57 and Part IV(3)(B)(7)(c) of the application.

Comment 87: How can the Department allow a private company to damage private property when it is not for the good of the general public?

Response: The regulations do not prohibit planned subsidence but at 62 Ill. Adm. Code 1817.121(a)(1) require that those employing this method of mining "adopt mining technology that provides for planned subsidence in a predictable and controlled manner."

Comment 88: If there is subsidence damage after the mine closes how will this type of damage be addressed? If subsidence damage occurs after the mine is closed who is responsible for repairing the damage?

Response: The federal Office of Surface Mining has determined that the permittee is liable for subsidence damage in perpetuity. Regardless of the method of mining, or the length of time until subsidence occurs, the permittee remains liable for subsidence damages.

Comment 89: After longwall mining, what will happen to the springs in my pasture that I use to water my cattle?

Response: Impacts to a spring would be dependent on the location of the spring in relation to the longwall panel.

The regulations at 62 Ill. Adm. Code 1817.41(j) requires the permittee to "promptly replace any drinking domestic or residential water supply that is contaminated, diminished or interrupted by underground mining activities conducted after January 19,1996, if the affected well or spring was in existence before the date the Department received the application for activities causing the loss, contamination or interruption." The definition found in section 1701.5 states that "'Drinking domestic or residential water supply' means water received from a well or spring and any appurtenant delivery system that provides water for direct human consumption or household use. Wells and springs that serve only agricultural, commercial or industrial enterprises are not included except to the extent that the water supply is for direct human consumption, human sanitation, or domestic use."

Therefore, a spring used for livestock would not meet the definition. The Department could not require replacement of a spring based on its use.

Comment 90: Will my livestock have to be moved during mining, and if so who pays for their removal and upkeep until they return?

Response: The Department is unaware of a situation occurring where it was necessary to relocate livestock during subsidence. Any concerns over livestock during the pass of the longwall should be discussed with the company in advance of subsidence.

Comment 91: How will wells, streams and ponds be repaired and what time frame will repairs be completed in?

Response: Wells that meet the definition enumerated in response to Comment No. 89 are required to be monitored and replaced if necessary. See Addendum No. 1 as approved in Permit No. 399. Stream flow will be restored. See the approved stream flow restoration plan, Attachment IV.3.B.6 of the application. Man-made farm ponds are considered structures and therefore must be repaired, replaced or compensated for.

Comment 92: Does the term "higher and better use" apply to subsided areas?

Response: No.

Comment 93: Please discuss the dimensions and locations of the existing or proposed dams, impoundments, spoil and waste pile, air and water pollution control facilities and CCW. (I.e. Refuse disposal area close to residential/hospital area or CCW producing flyash located near schools.)

Response: There are no existing or proposed refuse impounding structures (dams) in the permit area. The dimensions and locations of coarse refuse, slurry refuse and sediment ponds are displayed on Map 6 S.F. "Surface Facilities Map." Additional engineering details are provided in Attachments to Part IV of the application. The disposal of Coal Combustion waste is not proposed in Permit No. 399.

Comment 94: According to Hillsboro Energy all they plan to do is drain the ground after subsidence. This is not premining conditions. All we will have is bathtub affect and ridges and severe loss of productivity. When the ground is brought back to premining conditions will the same acreage produce the same bushels?

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(1) required that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence damage [emphasis added]." Proper drainage restoration will return areas to farming capability. There is no requirement to monitor the yield in the shadow area. See also the response to Appendix A, item no. 59.

Comment 95: These mines can destroy water tables, allowing the water to run away or be diverted so that people's wells are rendered dry or polluted. There is no fixing this problem. It will take decades for this to repair itself if it ever does.

Response: Shallow wells in unconsolidated material typically are unaffected while water elevations in deeper wells can drop for a period of time. Commitments concerning water replacement are detailed in Addendum No. 1 to the UCM-1 application, Part I(D). "For all underground operations: Replacement of impacted water supplies." Wells are surveyed before and after subsidence to determine if a loss in quality or quantity has occurred. The application as modified addresses drinking domestic and residential water supplies concerning condition surveys, and water replacement requirements.

Comment 96: If farmland is made lower than nearby creeks, the water will run into the fields.

Response: See the response to Appendix A, item no. 59.

Comment 97: Oaks do not like their roots to be disturbed, and will die over a few years. The forest land cannot be drained as the farmland can be. Our forests will become swamps. The trees in the hollows will die and rot, wildlife will be put under increased stress, and the mosquitoes will thrive. Those who rent their land for hunting will be out of business. Tourism will be hurt. The beauty we paid dearly to enjoy will be lost.

Response: Subsidence, in general, does not impact tree growth. A large number of acres in Illinois have experienced subsidence with little impact on trees. The exception would be if trees are inundated for a lengthy period of time. Monitoring of subsided areas for this potential problem is an on going process during the active operation and the Department will take appropriate action if mitigation is delayed and could result in tree loss. Timely mitigation should preclude tree mortality.

Comment 98: If forest areas are longwalled the water will be taken from underneath the trees and they die from the top down.

Response: See responses to Comments 71 and 97.

The Department has regulated the impacts from longwall mining since 1983. In that time the type of tree die off described in the comment has not been an issue at other longwall mines in Illinois. Trees routinely survive the subsidence intact and with no detrimental effects.

Comment 99: I would like to see where bottom ground has been fixed so that it will produce again like it did before.

Response: Low-lying areas typically require more extensive efforts to achieve positive drainage than is required in upland areas. The applicant has proposed to perform down stream mitigation in major waterways to allow proper flow in bottom land areas. See the approved stream flow restoration plan, Attachment IV.3.B.6 of the application.

Comment 100: Subsidence is not supposed to happen on park land.

Response: There is no prohibition from subsiding park land. The federal Office of Surface Mining has determined that the prohibitions enumerated under 62 Ill. Adm. Code 1761.11 do not apply to subsidence.

Comment 101: Has the Department done any studies to determine if this type of drainage proposed in the application is indeed the most correct method to use? Is the Department prepared to require such a study before issuance of any permit to mine?

Response: The Department has not performed studies, but studies have been conducted by other entities. The Department has regulated the impacts from longwall mining since 1983 and relies on the experience of staff members in evaluating subsidence mitigation. The applicant has proposed state of the art drainage mitigation methods, and in the Department opinion studies are not necessary.

Comment 102: I don't see any plan to document the location of property lines, fence lines, other boundary markers, section corner makers, or survey benchmarks in the shadow area prior to mining.

Response: See the response to Appendix A, Item no. 61. Property boundaries are displayed on Map 2, Identification of Interests Map.

Comment 103: There should be a detailed inventory or all the structures, water supplies, impoundments, farmland, roads and bridges and so on with detailed cost estimates for repairs and a commitment for corresponding performance bonds for those corrections.

Response: Surveys of structures and water supplies are required by 62 Ill. Adm. Code 1817.121(a)(2). See Part IV(3)(B)(7) of the application. Detailed cost estimates for repairs are not required by the regulations. The regulations at 62 Ill. Adm. Code 1817.121(c)(3) detail bond or liability insurance requirements concerning subsidence damage.

Comment 104: These centennial homes are listed with the State of Illinois.

EDWARDS MONTGOMERY HILLSBORO EASTFORK 1888
ERNST MONTGOMERY HILLSBORO EAST FORK 1878
FATH MONTGOMERY HILLSBORO EAST FORK 1869
FREDENBERGER MONTGOMERY DONNELLSON EAST FORK 1849
HUBER MONTGOMERY HILLSBORO EAST FORK 1895
HUBER MONTGOMERY HILLSBORO EAST FORK 1866
HUBER MONTGOMERY HILLSBORO EAST FORK 1880
LAWS MONTGOMERY DONNELLSON EAST FORK 1849
REEVES MONTGOMERY DONNELLSON EAST FORK 1904
URBANCEK MONTGOMERY COFFEEN EAST FORK 1859
WHITE MONTGOMERY COFFEEN EAST FORK 1865
WISDOM MONTGOMERY EAST FORK EAST FORK 1854

None are shown on your map. Will they be subsided? Do you plan to subside the homes as well as the acres? What measurers will be taken to protect them from subsidence? What is the cost of reclamation of these historic homes and buildings?

Response: The criteria for qualifying as a centennial farm is family land ownership for a minimum of one hundred years and is not based on age of homes or other structures. Being listed as a centennial farm by the Illinois Department of

Agriculture is not a criteria for listing structures to the National Register of Historic Places.

The homes and structures for the entire permit and shadow area have been evaluated. Photographs for the standing structures within the shadow area were reviewed by both the Illinois Historic Preservation Agency (IHPA) and the Cultural Resource Management Program, IDNR. Based on that review several residences and outbuildings were identified as potentially significant structures and possibly eligible for inclusion onto the National Register of Historic Properties. A field evaluation was conducted by IHPA and IDNR and it was determined that four barns and three residences were potentially eligible for the National Register of Historic Places. Prior to subsidence a detailed description and assessment of each structure will be required. This documentation will mitigate the adverse effects associated with planned subsidence. In addition, an archaeological field survey was conducted to identify potentially eligible archaeological sites that may be located within non-subsidence areas proposed for surface development. Five archaeological sites were identified. None of these sites were determined eligible for inclusion onto the National Register of Historic Places.

Comment 105: What certified engineer prepared the geological cross sections? Please explain the following:

* Nature, depth, thickness of coal seam, each stratum on overburden and the stratum immediately below the coal seam.
* Which map shows the coal crop lines and the strike meaning and depth of coal to be mined?
* What is the anticipated final surface configuration of the permit area? (30 CFR 779.25).

Response: See the responses to Appendix A, item no. 1. Engineering certifications were provided for the application in Attachment I.10.B. Gary W. Reigns, David H. Kimmle, Jeremy J. Connor and Guy R. Hunt provided the engineering certifications.

Crop lines of the coal to be mined are not present in or adjacent to the permit area. The strike and dip are displayed on Map 12, "Seam Structure Base Map."

Please see Map 7 "Mining Reclamation Map," Map 6 S.F. "Mining Operations Map" Part V Attachment V.1.C.3 as well as Part V description of reclamation for final configuration of the permit area.

Comment 106: What measurers will you use to seal or manage mine openings, holes or wells?

Response: See Part V(G) of the application.

Comment 107: Please describe plans for all ponds, impoundments, banks and dams prepared by an engineer or geologist.

Response: See Part IV(6), IV(7) of the application.

Comment 108: Was a stability analysis done on the coal waste refuse?

Response: Two forms of coal waste are proposed to be generated at this facility: dry coarse refuse and slurried fine refuse. The permittee must comply with the construction requirements of 62 Ill. Adm. Code 1817.81 through 84. The dry coarse refuse is configured as a "pile." The slurried fine refuse will be disposed of in an incised slurry cell and therefore will not be held with an above grade impounding structure. A "stability analysis on the coal waste refuse" is not necessary for the proposed configuration.

Comment 109: Please discuss descriptions, including maps and cross sections of stream channel or other diversions to be constructed within the permit area. (30 CFR 780.29 and 816.43).

Response: No stream diversions are proposed. All other ditch designs are detailed in Attachment IV.7.D. of the application.

Comment 110: Was a stability analysis done on the impounding structure and by whom. (30 CFR 780.35)

Response: The regulation cited is a federal OSM regulation, but the state equivalent, 62 Ill. Adm. Code 1780.35, pertains to surface mining permit applications and deals specifically with the disposal of excess spoil. This regulation does not apply to underground mines. However, no impounding structure meeting the applicable criteria is proposed in this application.

Comment 111: Please give a detailed description of each road or other transportation facility including specifications and appropriate geotechnical analysis. (30 CFR 780.37).

Response: The regulation cited is a federal OSM regulation, but the state equivalent, 62 Ill. Adm. Code 1780.37, pertains to surface mining permit applications and deals specifically with transportation facilities. This regulation does not apply to underground mines. The equivalent underground regulation is Section1784.24. Part IV(5) concerning support facilities and related attachments the application addresses applicable parts of this regulation.

Comment 112: Discuss how the construction of dams using coarse coal for refuse piles and impounding structure will be constructed and regulated? (30 CFR Sec. 817.84)

Response: The regulation cited is a federal OSM regulation. The state equivalent is 62 Ill. Adm. Code 1817.84. The approved refuse disposal area does not incorporate an impounding structure made of coarse refuse and therefore this section does not apply.

Comment 113: What is the potential impact of subsidence due to past or future mining below the fill?

Response: It is unclear what fill the commentor is referring to. If the "fill" referred to is a refuse disposal areas, the refuse disposal area is not currently undermined and are not proposed to be undermined.

Comment 114: Describe the materials to be utilized in the fill.

Response: It is unclear what "fill" the commentor is referring to.

Comment 115: Will coal slurry impoundments be securely constructed to avoid accidents? How many will be in the permit area?

Response: There is one area of coal slurry disposal. The coal slurry will be incised and not have an impounding structure. See the response to Appendix A, item 42.

Comment 116: Part II- Page 4 - 9) asks for information on plant communities. Strangely, the response includes information about farming practices, industrial and uses,

and fish and wildlife habitat. That information may be helpful, but is out of place, here.

10) asks for a description of "the cultural, archeological and historic resources". According to the response, the results of a Phase I Cultural Resources Survey have been sent to IDNR Cultural Resources Group. Mines and Minerals, by contrast, will have to do without, it seems.

Response: See the response to Appendix A, item no. 16.

Comment 117: Page 5 -10)1)b) asks for "a plan detailing the manner in which additional information will be gathered by the applicant to enable the Department to identify and evaluate such resources (currently unknown)." The response is "Not applicable." This demands justification. Does applicant claim to know, now, that nothing might be discovered by future research?

Response: See the response to Appendix A, item no. 16.

Comment 118: Part II - Page 6 - The applicant's response to 12) includes, "There are no known Indian burial grounds." This may depend on the definition of "known". Known to whom? What process was used to discover this lack of knowing? Which native American tribes were asked?

Response: See the response to Appendix A, item no. 16.

Comment 119: Has there been an archaeological survey down on the actual mine site?

Response: See the response to Appendix A, item no. 16.

Comment 120: There are 75 centennial farms in Southern Montgomery County. These are registered in the State of Illinois, and there are a number of other Historical homes. Do you mine under these, and what do you do about the damage?

Response: See the response to Appendix A, item no. 16. The criteria for qualifying as a centennial farm is family land ownership for a minimum of one hundred years and is not based on age of homes or other structures. Being listed as a centennial farm by the Illinois Department of Agriculture is not a criteria for listing structures to the National Register of Historic Places.

The homes and structures for the entire permit and shadow area have been evaluated. Photographs for the standing structures within the shadow area were reviewed by both the Illinois Historic Preservation Agency (IHPA) and the Cultural Resource Management Program, IDNR. Based on that review several residences and outbuildings were identified as potentially significant structures and possibly eligible for inclusion onto the National Register of Historic Properties. A field evaluation was conducted by IHPA and IDNR and it was determined that four barns and three residences were potentially eligible for the National Register of Historic Places. Prior to subsidence a detailed description and assessment of each structure will be required. This documentation will mitigate the adverse effects associated with planned subsidence. In addition, an archaeological field survey was conducted to identify potentially eligible archaeological sites that may be located within non-subsidence areas proposed for surface development. Five archaeological sites were identified. None of these sites were determined eligible for inclusion onto the National Register of Historic Places.

Comment 121: The archeological survey should only be held in confidence if it is on public land per 1773.13.

Response: Provisions for confidentiality of archeology are under the authority of the Illinois Historic Preservation Agency.

Comment 122: Why is the response to Part II page 5 of the application referring to cultural resources "Not applicable?" Where may we find the cultural resources survey which the application indicates are in "a separate volume to IDNR Cultural Resources Group?" Under what authority is this information enabled to be held as confidential? Part II, page 5 - Why is the response of N/A proper for the question of providing a plan detailing the manner in which additional information will be gathered to enable the Department to identify and evaluate archeological resources?

Response: See the response to Appendix A, item no. 16.

Comment 123: According to 62 IL Adm. Code 1773.15 (c) (10), the Department cannot approve a permit, unless the permit affirmatively demonstrates that "The operations would not affect the continued existence of endangered or threatened species or result in destruction or adverse modification of their critical habitat, as determined under the Endangered Species Act of 1973 (16 USC 1531 et seq.)"

The Illinois Natural Heritage database listing of Endangered and Threatened Species by County shows eight species listed for Montgomery County: Swamp Metalmark, Blazing Star, Royal Catchfly, Eastern Blue-eyed Grass, Ear-leafed Foxglove, Buffalo Clover, Henslow's Sparrow and Bald Eagle.

The Henslow's Sparrow is known to have been nesting at the Bremer Audubon Sanctuary, west of Hillsboro, and it moves into grassland areas. CREP grassland acres, that include significant prairie, exist in the Coffeen Lake IDNR Upland Management Area, which is in the proposed boundary of the mine shadow and will be affected by subsidence due to undermining from Deer Run Mine.

Also, it would appear that permit Map #3, Environmental Resources, is incomplete or incorrect, as no indication of the forest or fish and wildlife habitat at the Coffeen Lake Upland Management Area is indicated. About 100 acres of forest and about 200 acres of prairie are in the preserve. IDNR obtained the Cranfill Preserve in 2006, and the area is now called the Upland Management Area for the Coffeen Lake State Fish and Wildlife Area. Funding for this land acquisition included $250,000. of state wildlife incentive grant funds, which are federal funds. Wetland restoration ponds are on the site, and it appears that at least one of the ponds is in the mine shadow area.

It is unclear from the permit whether or not a US Fish and Wildlife Endangered species consultation has been initiated or finalized concerning species found in the permit and shadow areas. It appears that any reference to endangered or threatened species only occurs in reference to the permit area, not the shadow area. It also appears that the applicant, Hillsboro Energy, has determined the presence or lack of presence of endangered and threatened species without any reference to the expertise behind such statements. The applicant also states that an integrated wildlife habitat enhancement plan will be in place during reclamation. Again, there is no mention of a professional agency or corporation creating such a plan, and the plan should be included in detail as part of the permit. Currently there is a one paragraph description of the plan, which is insufficient.

Response: The requisite finding at 1773.15(c)(10) has been made following procedures recommended by both the U.S. Fish Wildlife Service and the U.S. Office of Surface Mining. The Department notes that this finding pertains to federally listed species. None of the species listed by the commentor are federally listed. Although not the subject of the 1773.15(c)(10) finding, the applicant has further addressed the blazing star, royal catchfly, eastern blue-eyed grass, ear-leafed foxglove, buffalo clover, Henslow's sparrow, swamp metalmark, and bald eagle, (see the responses to Appendix A, item no. 5) as these species are listed under the Illinois Endangered Species Protection Act. The

Department required the applicant to address the federally endangered Indiana bat, as the species could potentially occur in the permit area at some time during the life of the permit (see the responses to Appendix A, item no. 3).

The applicant was required to further address the Henslow's sparrow (see the responses to Appendix A, item no. 5). The applicant was required to further address subsidence and subsidence mitigation of the Coffeen Lake IDNR Upland Management Area (see the responses to Appendix A, item no. 6).

The Coffeen Lake State Fish and Wildlife Area is not within the scope of Map #3, Environmental Resources. That map identifies land uses within the permit area and immediate adjacent area. The Coffeen Lake State Fish and Wildlife Area is more than ½ mile from the southeast limits of this map. Land use maps of the shadow area are not required. Map #3 is neither incomplete nor incorrect in this regard. Mitigation of subsidence damages to the Coffeen Lake State Fish and Wildlife Area are addressed elsewhere (see the responses to Appendix A, item no. 6). Federal funding used for the purchase of this area has no bearing on this permit as this permitting action is a State action. A programmatic consultation under Section 7 of the Federal Endangered Species Act was conducted in 1995 by the U.S. Office of Surface Mining which covers this permitting action. The U.S. Fish and Wildlife Service issued a Biological Opinion on September 24, 1996. That biological opinion stipulated procedures to be used for consulting on individual State issued permits. Those procedures have been followed with respect to application No. 399. The resource information requirements at Section 1784.21 apply to permit areas and adjacent areas, not to shadow areas. The applicant was required to readdress several state listed species and was also required to provide information on the expertise used to determine status of these species relative to the 399 permit area and adjacent areas (see the responses to Appendix A, item no. 5).

The referenced description of the wildlife habitat reclamation plan found on page 9 of Part V is adequate for the purpose of answering the application question. More details are found elsewhere in the application such as species and planting rates and configuration of land uses. Many coal companies and consultants used by coal companies have personnel knowledgeable and experienced in wildlife habitat creation as part of mine reclamation.

Comment 124: I would like to know when a wildlife study will be done to ascertain what birds and animals are in that prairie, and also, why isn't a federal environmental impact study being done? There are federal monies involved here. These are CREP lands. That's federal funds, and we have threatened

species. Other species that we don't know the status of in that area include Blazing Star Plant, Royal Catchfly, Eastern Blight Grass, and other plants.

Response: The applicant provided basic wildlife habitat information such as habitat types and locations and vegetation descriptions of each habitat type. Additional information was required to address several species including blazing star and royal catchfly (see the response to Appendix A, item no. 5). The Department could find no data on Eastern Blight Grass and is unsure of what exactly the commentor is referring to. A federal environmental impact study is not being done because the subject state permitting action of a private industry activity, developing a privately held coal reserve, on non-federal surface lands, has no federal action which would trigger NEPA compliance. The Department notes that much of the same type of information required by a NEPA Environmental Impact Study is included in Illinois program permitting process.

Comment 125: How can there be any consideration given to the proposed damage to the Cranfill Preserve? Since this is partially funded by Federal Funds, the Department should require an Environmental Impact Study on this issue. If you choose not to, please explain why you cannot.

Response: The applicant was required to further address subsidence and subsidence mitigation of the Coffeen Lake IDNR Upland Management Area [i.e. the "Cranfill Preserve"] (see the response to Appendix A, item no. 6). The Department does not have the authority to require an Environmental Impact Study. An Environmental Impact Study is a requirement of the National Environmental Policy Act (NEPA) which pertains to certain federal actions. This state permitting action of a private industry activity, developing a privately held coal reserve, on non-federal surface lands, has no federal action which would trigger NEPA compliance. The Department notes that much of the same type of information required by a NEPA Environmental Impact Study is included in our permitting process.

Comment 126: Wildlife and endangered species will die out due to water loss. Many of the species we have today depend on fresh water supplies. Frogs, crayfish, salamanders, dragonflies, snapping turtles, many kinds of reptiles, furbearing animals, deer, otter and many others depend on water. When it is polluted with mine waste, it's bound to kill endangered species. Because these species abound in the bottomlands, where there is much moisture, they will die out.

Response: The Department is not anticipating any catastrophic water loss as described by the commentor. The applicant is required by 62 Ill. Adm. Code 1817.41 to

minimize disturbance of the hydrologic balance. (see Appendix C of these findings). The Department is aware of devastating environmental impacts of mining due to unregulated mining in the nineteenth and early twentieth centuries. The current regulations developed in the current era of environmental regulation prohibit devastating effects on the hydrologic balance and on wildlife resources. The mining and reclamation plan as modified by the applicant are consistent with the current regulations. Pollution of waters of the state resulting from coal mining is very tightly regulated to prevent the types of damages referred to by the commentor. Many examples exist where healthy, diverse, and dense wildlife populations exist on areas mined in the past 50 years.

Comment 127: The Department should verify that the wildlife information in the application is up to date and adequate.

Response: The Department determined that more wildlife information was needed and required modification of the application to include additional information. See responses to Appendix A, item nos. 3, 4, 5 and 6.

Comment 128: Regarding 1773.15(c)(1), there is no mention of the Coffeen Lake Upland Management Area in the application. Since this area was purchased, in part, with federal Wildlife Incentive Grant funds, and has 200 acres of federally funded CRP lands, how can an environmental impact study by requested for this permit?

Response: The permittee did identify on Map 2A that IDNR owns the subject tract. The Department does not have the authority to require an Environmental Impact Study. An Environmental Impact Study is a requirement of the National Environmental Policy Act (NEPA) which pertains to certain federal actions. This state permitting action of a private industry activity, developing a privately held coal reserve, on non-federal surface lands, has no federal action which would trigger NEPA compliance. The Department notes that much of the same type of information required by a NEPA Environmental Impact Study is included in our permitting process.

Comment 129: Neither the Coffeen Lake Upland Management Area or the Coffeen Lake State Fish and Wildlife Area appear on any of the maps in the application

Response: The permittee did identify on Map 2A that IDNR owns the subject tract. The applicant was required to further address subsidence and subsidence

mitigation of the Coffeen Lake IDNR Upland Management Area. See the responses to Appendix A, item no. 6.

Comment 130: There are woodlands and undeveloped lands included in the permit area. The Henslow sparrow, and endangered species, has been seen three times in the general area of Hillsboro. The Royal Catchfly and Blaze Star plant have also been identified within a few miles of the area. Will those habitats be saved for the endangered species?

Response: The applicant was required to provide additional information regarding the Henslow's sparrow, royal catchfly, and blazing star. See responses to Appendix A, item no. 5.

Comment 131: Are all plants in the area wetland species? Was a collection done or how were the plants named?

Response: The applicant provided lists of plant species for both upland and wetland areas of the proposed permit area. Wetland species were observed in the field as part of a routine wetland delineation. Upland plants were identified in the field and listed. No collection was done to the knowledge of the Department.

Comment 132: Please provide a list of fish and wildlife found in the permit and shadow area?

Response: A "list" of fish and wildlife per se is not required. Section 1784.21 requires each application to include fish and wildlife resource information, the scope and level of detail to be determined by the Department. The Department determined in this case that the applicant would be required to identify major habitat types and characterize the vegetation in those habitat types. Fish and wildlife species found would be those characteristic of those habitat types in that part of the State. Additionally, based on Department review and input during the permitting process , the Department required the applicant specifically to address a number of federally and state listed threatened or endangered species. See responses to Appendix A, item no. 5.

Comment 133: What facilities or plan do you have to protect wildlife?

Response: Section 1817.97(a) requires the operator, to the extent possible using the best technology currently available, to minimize disturbances and adverse impacts on wildlife and enhance such resources where practicable. Some of the measures used to meet this requirement include the following: scheduling

tree clearing activities to minimize effects on the federally endangered Indiana bat, avoiding wetland habitats where possible, mitigating wetland habitat loss through creation of wetlands after mining, identifying threatened and endangered species in the permit and adjacent areas and providing for their protection and enhancement as part of the permit plan, reclaiming the site emphasizing wildlife habitat creation including created wetland habitats, developed water resources, wooded wildlife habitat, and herbaceous wildlife habitat, selection of vegetation species known to be beneficial to wildlife, and hydrologic safeguards to prevent siltation off site through sediment control measures, intensive water quality monitoring (and treatment when needed) to prevent degradation of aquatic habitats off site, and mitigation of any damages resulting from the subsidence of the Coffeen Lake Upland Management Area.

Comment 134: What is the fish and wildlife protection and enhancement plan? (30 CFR 780.16).

Response: The protection and enhancement plan includes those measures that will be used to protect fish and wildlife during mining and those measures to enhance fish and wildlife during the reclamation phase. These measures are required to the extent possible using the best technology currently available. Protection measures in this permit include: scheduling tree clearing activities to minimize effects on the federally endangered Indiana bat, avoiding wetland habitats where possible, identifying threatened and endangered species in the permit and adjacent areas and providing for their protection as part of the permit plan, hydrologic safeguards to prevent siltation off site through sediment control measures, and intensive water quality monitoring (and treatment when needed) to prevent degradation of aquatic habitats off site. Enhancement measures in this permit include: mitigating wetland habitat loss through creation of wetlands after mining, reclaiming the site emphasizing wildlife habitat creation including created wetland habitats, developed water resources, wooded wildlife habitat, and herbaceous wildlife habitat, selection of vegetation species known to be beneficial to wildlife, and mitigation of any damages resulting from the subsidence of the Coffeen Lake Upland Management Area.

Comment 135: Part I, Page 1 - Application asks, "List the Mine Health and Safety Administration (MSHA) number(s) for all mine associated structures that require MSHA approval." The response was: "N/A" Without a statement of the circumstances which show the question to be not applicable (the presumed meaning of N/A), the response should either report all such structures, or be deemed incomplete.

Response: The permit application form is employed for multiple functions, not just initial mine permits. Since application No. 399 is the initial permit for the Deer Run Mine, no construction of mine structures has been initiated. Therefore, MSHA has not yet assigned numbers to either the mine or proposed structures. MSHA numbers are assigned by MSHA base on their regulations and requirements.

Comment 136: Page 2 - Michael J. Beyer apparently asserts, by implication, that he is authorized to sign the application. No independent information is provided, in or with the application, which supports that assertion. Does OMM know that there actually is such a person, and that he is who he says he is, and has the standing he claims? Public evaluation of this information is not facilitated.

Response: Michael J. Beyer is designated as Hillsboro Energy, LLC's authorized representative by Foresight Management, LLC, the manager of Hillsboro Energy, LLC, in Part I Attachment 1-6A of the application.

Comment 137: At 1) 0)1), no operator's address, telephone No., or identification number is provided. Unless there is to be no operator, the application is incomplete.

Response: Part I 1C, page 2, of the application states that Hillsboro Energy, LLC will be the operator. Part I 1C, states that this information is to be provided if the operator is different from the applicant.

Comment 138: Page 3 - At 1)F), the territory of the permit is "as shown on the permit map." However, there is no guidance here to the map location, in the application or elsewhere, making the map's usefulness in a review problematic.

Response: There are numerous maps filed with the text application which delineate both the permit area and shadow area. These maps may be viewed at the Montgomery County Clerk's office or at the Illinois Department of Natural Resources office. Also, the application and maps may be down loaded from the IDNR web page (idnr.state.il.us).

Comment 139: At 1) F), the mine address given is incomplete, even if truly known.

Response: The mine address should have been left blank. The partial address is the street address of Hillsboro Energy, LLC's office in Hillsboro. The mine does not yet exist; therefore, it does not have an address.

Comment 140: Page 4 - At 2) A), what is referred to by "the mineral property to be mined?"

Response: The mineral property to be mined is the coal resource which is proposed to be extracted under the mining permit.

Comment 141: What are the minerals to be mined? What are their respective locations?

Response: This permit application is for a coal mine. See General Reference Map and Underground Operations Map for the location of the proposed shadow area and the proposed underground mining operations.

Comment 142: How would a reviewer have access to "that Certain Coal Mining Lease Agreement?"

Response: This agreement is a private business document and is not submitted with the application so, it is not a public record.

Comment 143: Reference is made to "Attachment Part 1.2.A. For inexperienced but concerned reviewers, an explanation somewhere of the nature of the information on that Attachment, in its first two columns, "Parcel No." and "Map Number" would be helpful.

Response: The information presented in Attachment Part I(2)(A) is the required information.

Comment 144: Page 4 - At 3)B), required is a "statement of all lands, interest in lands, options or pending bids on interest held or made by the applicant - -" Reference is made to Attachment Part 1.3.B. That Attachment is titled, appropriately, "Applicant's Interest in Lands in the Permit Area and Contiguous to Permit Area." The following schedule, however, does not state, for the several parcels listed, which type of interest the applicant holds, if any, for each of the parcels. Eliciting this information seems to be the point of the requirement--i.e., is the applicant truly in the game, or not?

Response: The applicant is only required to provide a statement of the lands for which an interest is held or pending not a statement of the type of interest. See 62 Ill. Adm. Code 1778.13(h).

Comment 145: At 4), required is that there be provided "name and address of any purchaser of record under a real rate contract of the property for the permit area." Again, the point of the requirement seems to be to discover whether or not the Applicant truly has rights to the minerals and/or the associated lands, by means of an appropriate document showing ownership interest. Reference is again made to Attachment Part L3.B. The attachment, however, shows for each listed parcel no information other than the Owner Name having to do with type of interest asserted.

Response: The applicant is required to provide only the name and address of any purchaser of record. See 62 Ill. Adm. Code 1778.13(f).

Comment 146: Page 5 - Required is the name and contact information "(f)or the resident agent who will accept service for the applicant." Presumably, "resident" means local, at or near the facility proposed to be permitted. However, the address given for the entity listed is in Delaware, which hardly seems "resident."

Response: A resident agent is an entity that will accept service of process for the applicant. The agent does not have to live near the mine site.

Comment 147: In the response at 6)A)1), reference is made to Attachment 1.6.A. for Consent to Company Action by Foresight Reserves LR (presumably, the action to appoint Michael J. Beyer as Authorized Person). At 6)A)4) on the following Page 6, that entity (Foresight Reserves LP) is said to be the "100% Owner of Applicant." However, that Attachment asserts, on behalf of Foresight Management LLC, that Foresight Management LLC is the manager of Company (Hillsboro Energy LLC) -- NOT Foresight Reserves LP -- and approves the appointment of "Mike Beyer as an Authorized Person of Company." Even though all these entities may be located in the several drawers of the same desk, their controlling relationships need clarification, in case the permit is issued and follow up action by Illinois appears needed.

Response: The owner of the applicant can designate a manager for the applicant. This is a common management tool for a limited liability corporation. The manager of a limited liability corporation can appoint an authorized person to represent the corporation. See the response to Appendix A, item no. 8 for clarification.

Comment 148: Page 7 - Required at 6)6) is information about "each surface coal mining and reclamation operation" owned or controlled by the applicant now or within the preceding five years. The response is N/A. Presumably, this means Hillsboro Energy LLC has run no such operation lately, if ever. Its capabilities for doing so call for Department examination, and imposition of appropriate safeguards.

Response: The Department has reviewed and verified with the Federal Applicant Violator System the ownership and control of the applicant and found no previous mining operations under its control.

Comment 149: The requirement at 7) is similar to that at 6)6), and my comment is similar to that for 6)6).

Response: The Department has reviewed and verified with the Federal Applicant Violator System the ownership and control of the applicant and found no previous mining operations under its control.

Comment 150: Hillsboro Energy should be required to give a full list of the companies under them and associated with them.

Response: The applicant is required to provide a statement of their ownership and control. This information has been provided. See Part I (5), (6), (7) and (8) of the application.

Comment 151: The table of contents lists Attachment 1.4 - Purchaser of Record for permit area. There is no such sheet attached.

Response: The purchaser of record, Montgomery Land Company, LLC, is listed in the response to Part 1(4) of the application. See the responses to Appendix A, item no. 9 for clarification.

Comment 152: Who is the owner of Deer Run Mine and where does he live? I would like the names and addresses of all companies and company officials involved with this project. How extensive of an investigation has been carried out to determine who is actually involved in this permit request?

Response: Hillsboro Energy, LLC is the owner of the Deer Run Mine. The office is located at 925 South Main Street, Hillsboro Illinois. The applicant is required to provide a statement of their ownership and control. This

information has been provided. See application questions Part I(5),(6), (7) and (8).

Comment 153: Question 9 on page 8 addresses the violation history of the applicant. It is answered N/A. What verification is there that all of the principals involved have in fact not been involved in any violations? Has Mr. Dennison or his engineers had charges of mining violations against them in the last ten years? Have any of the people employed by Colt Coal Company had a permit revoked within the last four years? Has there been an investigation of all persons involved in the chain of ownership, and what documentation is there that verifies an investigation and the results? The ownership and control information is incomplete as there is no listing of each officer, partner, principle, director or principle shareholder. The names, addresses and telephone numbers of these individuals are not listed. Although Hillsboro Energy LLC can claim to not own or control any mining operation which had a state or federal permit suspended or revoked or forfeited bond in the past five years, it did not exist in that period of time. People involved in the ownership may have been involved in cases where permits were revoked or suspended. Part I, page 2, at 1)C)1), no operator's address, telephone number or identification number is provided. Unless there is to be no operator, the application is incomplete. This applies to operations on page 8, 9 and 10, regarding violation history of applicant... All questions should be answered in full.

Response: Hillsboro Energy, LLC and the ownership of Hillsboro Energy, LLC have no outstanding violations as verified by the Federal Applicant Violator System.

Hillsboro Energy, LLC is the owner of Deer Run Mine. See Application page 1. Foresight Reserves, LP is the owner of Hillsboro Energy, LLC. See Application Page 5. The application is attested to as being true and accurate by Hillsboro Energy, LLC's designated representative. See Application Page 2. LLC's have members and do not usually have officers or directors. Hillsboro Energy, LLC provided the owner member and the general partner of the owner member. Any questions or complaints concerning LLC's not being required to have officers and directors should be directed to the Illinois Secretary of State.

Part I(1)(C) of the application states that Hillsboro Energy, LLC will be the operator. Part I(1)(C), states that this information is to be provided if the operator is different from the applicant. See Page 1 of the application for the permittee's address, phone number and identification number.

Comment 154: Does Mr. Dennison have a document that gives him legal right to enter all farms to be mined? Have surface owners given Colt Coal Company written legal consent to extract coal by the room and pillar and/or longwall method? Can you provide copies of conveyance which allow longwall mining on all these surface owners? The answer to Part I 10A states the applicant has the documents to enter and begin surface coal mining and reclamation operations, but provides no record of or identification of these documents. The answer is not clear and there is pending litigation to determine if the owner of the coal rights has an unimpeded right to subside surface property.

Response: The applicant is Hillsboro Energy, LLC. The applicant identifies the document providing the right to enter, mine and reclaim in the response to Part I (2)(A) of the application. The applicant provides the appropriate affidavits in response to Part I(10)(A) of the application. The applicant has provided all required information. The litigation is outside the purview of the Department.

Comment 155: The application declares that the applicant has or will possess the right to subside the various parcels. The applicant should be required to submit to the Department all of these various documents before any permit is issued and before any mine related activities of any type are allowed to take place.

Response: The regulations at 62 Ill. Adm. Code 1778.15(f) require, "All applications for shadow area shall contain a notarized statement by a responsible official of the applicant attesting that all necessary mining rights, including the right to subside, if applicable, have been or will be obtained prior to mining." The information desired by the commentor goes beyond what the Department has legal authority to require.

Comment 156: Part I, page 7 - In response to questions regarding surface coal mining and reclamation operations controlled or owned by the entity, N/A is given. Why is this response acceptable? If the term refers to above ground facilities it should require all questions be answered.

Response: Hillsboro Energy, LLC does not own or control any surface coal mining operations as verified by the Federal Applicant Violator System.

Comment 157: The permit application does not contain a complete and accurate hydrologic characterization of existing conditions in the proposed permit, shadow and potentially impacted adjacent areas. The permit application does not identify all of the important components of the ground- and surface water hydrology,

natural and anthropogenic, in the areas of concern. When the permit application does identify such components, it does not individually characterize those components sufficiently to establish the existing seasonal variations in the quantity and quality of their water. Generally, the application does not quantify the existing directions and rates of water movement within, or existing exchanges among, components of the hydrology. In instances where such exchanges are described, the interpretation offered is inconsistent with the limited site data. The application does not quantify the existing seasonal variation in those rates and exchanges, or characterize the results of those exchanges. Hence, the permit application does not describe the existing hydrologic balance of the areas of concern.

Response: See responses to Appendix A, item no. 21 and 22. Hurst-Roche Engineers, Inc., on behalf of Hillsboro Energy, LLC conducted two separate hydrogeologic investigations on the proposed permit and shadow areas. Commentors are directed to Part III and Part VII - Appendix of the original permit application and Part VII of the modification response for additional information regarding the hydrology of the site.

Comment 158: The permit application does not contain complete and defendable predictions of the hydrologic conditions during and post mining in the areas of concern. The permit application does not identify all of the important future elements of the ground- and surface water hydrology, natural and anthropogenic, in the areas of concern. When the permit application does identify such components, it does not individually characterize those components sufficiently to predict reasonably the future seasonal variations in the quantity and quality of their water. The application does not quantify predictions of the future directions and rates of water movement within, or future exchanges among, components of the hydrology. The application does not quantify predictions of the future seasonal variation in those rates and exchanges, or characterize the results of those predicted exchanges. Hence, the permit application does not describe the future hydrologic balance of the areas of concern.

Response: See response to Comment 157 above.

Comment 159: The permit application contains a summary of the probable hydrologic consequences that is inaccurate, incomplete, and erroneous. It is due to poor understanding of geological, hydrogeological, and geochemical principles that will influence the hydrologic consequences of the proposed operations.

Response: See response to Comment 157 above.

Comment 160: The permit application contains inadequate characterization of soil, rock, and water in the areas of concern to establish a reasonable list of constituents to be monitored for baseline and compliance monitoring under SMCRA. The constituents to be monitored appear to have been selected based upon the minimum lists provided in the application form and a presumption that the natural materials to be disturbed and the processing chemicals will contain no toxins, no toxic forming materials, and no sources of acidity other than pyritic sulfur. This list of constituents for monitoring needs to be established by demonstration relative to site-specific materials and processes that are part of a complete characterization, not by presumption.

Response: See response to Comment 157 above.

Comment 161: The permit application contains inadequate ground- and surface water monitoring plans. Monitoring locations are inappropriately positioned and/or insufficient in number for both plans. The parameters being monitored are potentially inadequate, as discussed above. The plans do not include a description of how the monitoring data will be used or interpreted to demonstrate that damage to the hydrologic balance within the permit area is being minimized and material damage outside the permit area is being prevented. The plans do not establish limits, thresholds, or trends for each parameter, exceedence of which would trigger enforcement by the agency, citizens, or courts and remedial action. There is no description of remedial actions that would be triggered by such enforcement.

Response: See response to Comment 157 above and Appendix C of this permit findings document.

Comment 162: The permit application does not contain adequate descriptions of the materials, construction methods, and verification processes for building the "impervious" base for the coal storage area. The permit application does not contain a definition of what "impervious" means. The permit application does not appear to describe a comparable "impervious" base for the refuse storage area, an area that should be underlain by liners that will protect underlying groundwater resources.

Response: See the response to Appendix A, item no. 20 and/or Attachment IV.6.D for specifications on the construction and testing of the liner.

Comment 163: The permit application does not contain adequate descriptions of the materials, construction methods, and verification processes for building the soil cover for the coarse refuse storage area. The permit does not provide an assessment of the rates of water and oxygen infiltration through the soil cover, the rate of leachate generation, the composition of that leachate, the period of time that the leachate will continue to form, and the means by which that leachate will be monitored and managed for the period of its production.

Response: The application in Parts III, IV and V, as modified, contain sufficient detail on the liner under the refuse area, quality of the soil materials to be removed for later soil cover, soil thickness replacement, and the committal for the subsequent submission of actual refuse data after it is generated from the mine. The Department requires analyses of actual refuse in order to calculate site specific liming requirements before any covering is initiated. See Permit Condition J. The Department has many years of practical experience based on the findings of scientific research by numerous universities assessing lime requirements to impede acid formation from coal refuse. The covering of the coal refuse would not occur for numerous years after mining starts. Refuse placement and compaction, soil covering, lime application and water quality review are routine monitoring activities done by field and technical staff.

Comment 164: The permit application does not provide any estimate or projection of the composition of the initial water quality in the coal to be mined, the rates of water production from the mine as mining progresses, the impacts of dewatering the mine (including pumping related to the mine entrance through the shallow sediments), or the changes in water quality as the mine and collapsed areas are subject to mine leakage and oxidation of roof and floor rocks. The permit application does not provide any estimate or any data relative to the head in the mine after pumping ceases and a post-mining equilibrium is reached. It does not provide any discussion or any data related to the final post-mining water composition. It does not provide any discussion or any data related to what that head and composition means with respect to other elements of the hydrologic balance and water resources in the areas of concern.

Response: See response to Comment 157 above. If water needs to be pumped from underground, the water not consumed in the daily operational needs will report to an NPDES discharge point before leaving the permit area. The post-mining head will ultimately approximate pre-mining head once in-mine pumping ceases. Any change in post-mining water quality relative to the shadow area will be addressed thought the requirement of 62 Ill. Adm. Code 1817.121(a)(2). The Department finds that enough information has been provided to determine the probable hydrologic consequences.

Comment 165: The permit application provides interpretations of groundwater flow patterns, hydraulic conductivities and groundwater quality in the unconsolidated section that are unsupported by data within the application, contradicted by data within the application, or inconsistent with acceptable methods of interpretation.

Response: See the response to Appendix A, item no. 21. See the applicant's response to modification question 21 and/or Part III of the modification response.

Comment 166: The pre-mining survey of the shadow area water supply is incomplete and lacking in essential information addressed in 62 Ill. Adm. Code 1784.14(B)(1). Not all water sources of all residents in the shadow area and within ½ mile are identified and characterized. According to HEL, (on page 1 of the addendum) only 49 residents responded to its inquiry. Of the respondents in the shadow area, 23 residents or 46.9 % reported using ground water as their primary source of water. Seven residents within ½ mile of the shallow area reported using a well or cistern for their primary water supply. On the second page, "Out of the approximately 49 residents who responded to the water survey, 7 residents within the shadow area reported using ground water as their primary source of water and 17 residents within ½ mile of the shadow area reported using a well or cistern for their primary water supply." HEL's conclusion is: "The absence of wide spread reliance an ground water for domestic use in such rural areas is indicative of the limited availability and poor quality of the ground water resources in the vicinity of the mining operation." Does the rationale of "little or no use and poor quality of ground water" establish the premise that longwall mining could do no damage to already problematic water sources?

Response: See the response to Appendix A, item nos. 23 and 28. See the applicant's response to modification question 23 and 28 and/or Parts VI(A) and VI(B)(1) of the application as modified . The applicant conducted a water users survey and compiled the results they received in Parts VI (A) and VI(B). As a result of this survey, it appears that all domestic wells in the area are shallow (e.g., in unconsolidated materials) and should not be negatively impacted by the mine or mining operations.

Comment 167: No where did the well survey ask the number of wells of each landowner or their cisterns. Please verify the number of water use surveys that were sent out. Are all the ground and surface water inventories on the maps?

Response: See response to Comment 166 above. Additionally, it appears that of those landowners who elected to respond to the users survey, multiple wells were

noted in their responses. Wells not revealed as part of the initial mail survey will be addressed via the pre-subsidence condition survey requirements. The quality and quantity surveys will be used to determine if a loss in quality or quantity has occurred for the shadow area.

Comment 168: The statement that minor stream flow alterations are necessary to construct the mine facilities and allow mining of the area does not describe what is going to happen to several streams in the area. "After reclamation is complete the permanent impoundments should result in lower flood peaks and larger base flows in named and unnamed tributaries of Middle Fork Shoal Creek, East Fork Shoal Creek and Miller Creek." In HEL's reclamation plan, a portion of the soil replacement will come from borrow areas in the vicinity of the refuse disposal areas or from material dredged from local lakes or stream channels. This would cause potential dire effects on our streams and water ways. This cannot be allowed.

Response: Minor stream flow alterations are necessary, but these actions should not adversely impact the larger streams in the area. The watersheds of Middle Fork Shoal Creek, East Fork Shoal Creek and Miller Creek are quite large compared to the relatively small size of the permit area.

Permanent impoundments are no longer proposed. Please see the approved Map No. 7, Mining Reclamation Map (Post-Mining Land Use Map).

Dredging of local lakes is no longer proposed. Please see the response to Appendix A, item no. 43(B)

Comment 169: Impacts in Permit and Adjacent Area Regarding Shoal Creek Watershed Structure No. 5

* What proves that there will be no impacts on the dam at Shoal Creek Watershed Structure No. 5, or the functionality of this water retention area from mine activities?
* Will the water in this facility be tested for mine contaminants, including arsenic, chromium, and other heavy metals, and for ph levels?

Response: Shoal Creek Watershed Structure No. 5 is outside the permit area. No underground mining will occur near this structure, therefore, there is no potential impacts on the dam.

Groundwater monitoring wells that surround the refuse disposal area will be tested for these parameters for a minimum of six sampling events prior to refuse disposal and for a minimum of six sampling events once the mine closes. pH levels will be monitored on a quarterly basis from all wells for the life of the mine.

Water sampling will be conducted at the approved NPDES discharge points, which are located upstream of the Shoal Creek Watershed Structure No. 5. There is no requirement to monitor this off-permit water body.

Comment 170: The application states that Hillsboro Energy will provide a suitable alternate water supply of equivalent quantity and quality as the original supply if any drinking, domestic, or residential water supplies are adversely affected due to subsidence caused by mining activities, yet the applicant asks to be excused from providing a pre-mining survey, which is required in 62 IL Adm. Code 1784.20 (a). How can the mine company provide an equivalent quantity and quality of water if it is impacted by subsidence, when they have no pre-mining data to use? How can a landowner of an affected well, stream, or other water structure be insured of receiving an equivalent quantity and quality of water, when, as the permit is currently written, the determination of damage will be based on a company expert, without any pre-mining survey? It would appear that the person who is impacted would have a distinct disadvantage, as if they disagree with the company expert, then third party arbitration or litigation are their only options, both of which could take significant time, effort, and personal funds.

Response: See the response to Appendix A, item no. 56. The applicant will not be excused from conducting a pre-mining survey.

Comment 171: The placement of the refuse pile in the Lake Hillsboro watershed is my concern. If it's proposed location could be moved outside of Lake Hillsboro's watershed, to another site on the mine's property that would eliminate any possibility of contamination to our water supply. Lake Hillsboro is used as a back up to Glen Shoals to supply water to the cities of Hillsboro, Coffeen, Taylor Springs, Shram City and to the Montgomery County Rural Water District. It also supplies water to the Graham Correctional facilities. Lake Hillsboro is not only a back up source but is also used in conjunction with Glen Shoals during the summer months. For that reason anything that could be done to eliminate any possibility of contamination would be beneficial to a great many people.

Response: See response to Appendix A, item no. 24. Hillsboro Energy, LLC will construct the refuse disposal area (and all associated ditches and ponds) so that surface water runoff is diverted away from Lake Hillsboro. Therefore, neither the Department nor Hillsboro Energy, LLC expects Lake Hillsboro to be negatively impacted.

Comment 172: Hillsboro Energy, LLC, states that it will provide water as needed. What guarantees are there that the water will be of a quality that even infants and the elderly can drink? What about the storage of this shipped water? Water cannot be pumped back into the wells that have gone dry as they will be unable to maintain water supplies. Why should the residents have to pay to construct storage units/facilities for ongoing long-term use? What guarantees do farmers, dairymen, hog producers, etc., have that there will be enough water as needed to handle their operational needs in a timely fashion?

Response: The regulations at 62 Ill. Adm. Code 1817.41(j) requires the permittee to "promptly replace any drinking domestic or residential water supply that is contaminated, diminished or interrupted by underground mining activities conducted after January 19,1996, if the affected well or spring was in existence before the date the Department received the application for activities causing the loss, contamination or interruption."

The quality of the water would be required to meet applicable drinking water standards. Part of the company's cost of replacing the water supply would include any required storage facilities.

The definition found in Section 1701.5 states that "'Drinking domestic or residential water supply' means water received from a well or spring and any appurtenant delivery system that provides water for direct human consumption or household use. Wells and springs that serve only agricultural, commercial or industrial enterprises are not included except to the extent that the water supply is for direct human consumption, human sanitation, or domestic use."

Therefore, a well used for livestock would not meet the definition. The Department could not require replacement of a spring based on its use.

Comment 173: An aquifer in Clinton County, Illinois, was contaminated by seepage from a gob pile. The waste pile from the Mobil-Exxon Coal Mine was not required to have a liner to protect the ground water. My questions are these:

* Is the coal mine not being held responsible for the damage?

* Is Illinois Department of Natural Resources, who issued this permit giving permission to locate this waste pile over the aquifer, not also responsible for this as well?

* What is going to be done to guarantee this will not happen in Montgomery County?

Response: Yes, the mine owner/operator continues to be responsible for the site.

Yes, the Department (as well as the IEPA) continues to monitor and assess the site.

A liner will be installed below the refuse disposal area to prevent this situation from occurring.

Comment 174: PART III - Page 1 - At i)A), the response includes the news that "minor surficial aquifers - occur - in northeast to southeast trending belts." How this differs from north to south trending belts may not be significant.

Response: The comment has been noted and forwarded to the applicant.

Comment 175: 1)0) asks for, 'the generalized water yield, supply, and potential use of these (varied) aquifers." The response contains useful information, it seems, although apparently not based on site investigation, revealing what uses are made of such aquifers.(However, see response following to 2)A)l), for the report that, "Yields are low in the range of 10 gallons per minute. Use of these resources has been limited to small domestic and farm supplies." Of course, where a low flow well supplies a need adequately, its loss may be significant to its user -- low yield or whatever.

Response: The applicant acknowledges that some residents utilize low-flow wells as their primary source of drinking water. The applicant is required to protect domestic, drinking water supplies and in the unlikely event that a well is impacted, is required to restore or replace the drinking water supply.

Comment 176: Page 3 - 2)B)1) asks for the location on a map and the ownership of "existing wells, springs, and other ground water resources." The response, in part, is a reference to Attachment IV.3.B.5.c. The information shown is clearly incomplete; its usefulness, accordingly, is less than satisfactory.

Response: The applicant provides a discussion of these resources in Part III and Part VII of the modification response and the features are depicted on the Hydro-Geological Map (Map 4).

Comment 177: 2)B)2) ask for a description of seasonal ground water quality, including certain specified quantifiable characteristics. The response (on Page 4) includes a reference to Schedule B Attachment III.2.B.2., and the note, "Future sampling will be used to describe seasonal variations in groundwater quality." In short, not enough is known at time of permit application to sufficiently characterize the ground water at the site. Thus, any change in ground water quality attributable some day to the mining operation could not be determined. There is not a comprehensive baseline to measure against.

Response: See the response to Appendix A, item no. 25 and Part VIII-Attachments B & C of the application. See response to Comment 157 above.

Comment 178: Page 4 - 2)B)3) requires "a description of seasonal ground water quality including at a minimum - the elevation of potentiometric surface of the coal to be mined -". The response begins, 'The location of the potentiometric surface of the coal to be mined is undetermined." The "minimum" information required is thus not yet available.

Response: See the response to Appendix A, item no. 26 and/or Part III of the modification response. See response to Comment 157 above.

Comment 179: 2)C)2)a) asks for surface water quality and quantity information on water bodies previously listed just above. The response refers to Attachment III.2.C.2. That attachment has no information on the sampling site locations, which limits its usefulness.

Response: See the response to Appendix A, item no. 23. See response to Comment 157 above.

Comment 180: 2)D)1)a) asks, "Will the proposed surface coal mining and reclamation operations have adverse impacts to the hydrologic balance." 3 ½ pages of Response follow, in which is included: "Therefore, the proposed activities are not expected to have significant adverse impacts on the hydrologic balance." This is because facilities and operations have been located and designed to minimize changes. Good design is much to be desired, but can't assure desired results. Otherwise, structures would never fail, and capacities would never be exceeded.

Response: The comment has been noted and forwarded to the applicant.

Comment 181: More leaching is not needed from the waste or gob piles that this coal mine will produce, especially since there is no requirement for an impermeable liner, under liner, not only for gob piles, but elsewhere on the mine property where rainwater will leach in the carcinogenic chemicals into the subsoil and ultimately into the water supply.

Response: An engineered liner has been proposed to be installed below the refuse disposal area, the clean coal storage areas and any ponds and/or ditches that receive runoff from coal refuse or coal storage areas to limit/minimize leaching and infiltration.

Comment 182: Heavy metals are present in the water from the Albers mine. Notice there is extremely high levels of arsenic, lead, mercury and thallium. These metals are not normally tested for, and the people do not want them in their water supply. Concentrations of elements in the coal waste are all high, including aluminum, arsenic, iron, lead, manganese and sulfur. Montgomery County residents whose property will be affected do not want these chemicals to leach into the water supply or the ground.

Response: See responses to Comments 169 and 181 above.

Comment 183: The application claims they are not going to have any runoff of the gob piles. How are they going to do that?

Response: The rules do not require that all the water be permanently contained on the property. The water does have to be contained on the property until discharged through a sediment structure that is sampled to ensure water that leaves the site is in compliance with applicable standards.

Comment 184: Who will pay the federal loans back and other debt once Montgomery County Water Company consumers are disconnected? These issues are not addressed in the permit. Yes, there are water lines in the permit area owned by MCWC.

Response: The regulations at 62 Ill. Adm. Code 1817.180 requires that all underground mining activities be conducted in a manner which minimizes damage, destruction or disruption of services of water and sewage lines that pass over, under or through the permit area, unless otherwise approved by the owner of such services.

Comment 185: Will the water customers be reimbursed for their hook up fees? These issues are not addressed in the permit.

Response: If a private water supply is damaged beyond repair, the applicant has committed to providing a new water supply. This may include drilling a new well or obtaining public water. The regulations at 62 Ill. Adm. Code 1817.41(j) state that the permittee must promptly replace any drinking, domestic or residential water supply. The regulations at 62 Ill. Adm. Code 1701, Appendix A defines "replacement of water supply" as including ". . . payment of operation and maintenance costs in excess of customary and reasonable delivery costs for premining water supplies."

Comment 186: If the intent of HEL is to preserve and maintain existing water resources in the permit and shadow area, HEL must do a comprehensive survey to establish location and characteristics of wells, springs, and aquifers.

Response: A water user survey was conducted. In addition, the applicant contacted the Illinois State Geologic and Illinois State Water Surveys for well records.

Comment 187: Mr. Dennison mentioned that the waste impoundment will have a 4 foot fully compacted clay liner. Please explain what is meant by "fully compacted." WHO will insure that this is in fact what will be done? Why isn't this waste impoundment treated like a waste landfill? Why isn't there a requirement for an impermeable membrane on top of the clay liner?

Response: Standard engineering practices for soil compaction/liner construction will be followed. Testing will be conducted during construction to ensure the soils are being properly compacted and those test results will be available to the Department upon our request. See the response to Appendix A, item no. 20 and/or Attachment IV.6.D of the application for specifications on the construction and testing of the liner.

Comment 188: Nowhere does IEPA say that they conducted the analysis that all SMLCRA requirements related to the hydrologic balance have been met. I believe that neither IDNR nor the mine have the people or the incentive to conduct such an analysis. For instance, the permit application should have a section entitled "Affirmative Demonstration Mining Operation will PREVENT Damage Outside the Permit Area," that is, in the entire shadow area.

62 IAC 1773.15 c "No permit application or application for a significant revision of a permit shall be approved unless the application affirmatively demonstrates and the Department finds, in writing, on the basis of information set forth in the application or from information otherwise available that is documented in the approval, the following: 5)... the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area."

IEPA refers to the water treatment plant. This seems to conflict with 62 IAC 1817.41 Hydrologic Balance Protection a) last sentence. "Mining and reclamation practices that minimize water pollution and changes in flow shall be used in preference to water treatment. Also, it is virtually a certainty that the mining operations in the permit area and the shadow area will change the flow of the groundwater and surface water and this is not discussed in any detail in the application or in IEPA's comment letter.

It seems IDNR isn't even concerned about reviewing a permit application to determine whether mining operation will prevent damage to the hydrologic balance (groundwater or surface water) because the preceding sentence of the rule states: "The Department shall require additional preventative, remedial, or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented if the current approved plan is not sufficient to assure this protection." So is IDNR thinking that if mine operations damage the groundwater and or surface water then the mine can go into remedial action indefinitely even continuing for centuries after the mine closes, as IDNR has allowed elsewhere? IDNR doesn't seem to be even trying to meet the rule to prevent damage to water resources apparently because IDNR can pretend to have the mine "remediate" the problem after the damage is done.

IEPA goes into what is necessary for construction control on the liner beneath the "gob pile" (waste impoundment) but never comments on the construction of the cap. I don't understand how that construction control would apply to liner that is 4 feet thick as the mine is quoted as saying at the meeting. And if construction control is needed for the liner beneath the waste impoundment landfill, why doesn't IEPA address a cap which consists of an uncompacted 4

foot deep soil cover. Is IEPA recognizing that the waste impoundment is temporary; has IEPA ever even reviewed the removal of a waste impoundment before? Pursuant to: 30 CFR Sec. 817.56 Postmining rehabilitation of sedimentation ponds, diversions, impoundments, and treatment facilities. Before abandoning a permit area or seeking bond release, the operator shall ensure that all temporary structures are removed ...[48 FR 44006, Sept. 26, 1983]), and

30 CFR Sec. 817.84 Coal mine waste: Impounding structures. New and existing impounding structures constructed of coal mine waste or intended to impound coal mine waste shall meet the requirements of Sec. 817.81 (b)(1). Each impounding structure constructed of coal mine waste or intended to impound coal mine waste shall be designed, constructed and maintained in accordance with Sec. 817.49 (a) and (c). **Such structures may not be retained permanently as part of the approved postmining land use."**

There is no doubt the "gob pile" is an impounding structure and Sec. 817.49(a) is for the general impoundment construction and Sec. 871.49(c) is for Temporary Impoundments. My question to you is... has IEPA has ever reviewed or approved of the removal of a waste impoundment?

Response: The Department has conducted a review of the proposed reclamation plan. It is the Department's opinion that the initial construction of the refuse disposal area, as well as the reclamation of the refuse disposal area, has been adequately designed to protect groundwater.

The Department acknowledges the commentor's statements regarding the Illinois Environmental Protection Agency's (IEPA) role in reviewing this application. However, the IEPA is a separate regulatory agency. The Department does not have any control over the IEPA's program. The bulk of this question should be directed to the IEPA.

Comment 189: Is the coal waste area going to be placed near the viaduct that joins Hillsboro and Schram City? Will cleanup be provided for in case the coal waste shows up in the water in the viaduct?

Response: Coal refuse/coal waste is only permitted to be placed in the proposed refuse disposal area, located in the eastern portion of the permit area. Coal refuse materials will not be permitted to be located outside of the refuse disposal area.

Comment 190: The Appalachian Laboratories analyzed for acid-base accountability and sulfur forms found in samples taken from hole # 08-03-17-04. The samples were taken on 2/1/2007, received by the lab on 8/3/2007, and analyzed on 8/6/2007. By any laboratory protocol, that time delay before analyzing is not an acceptable practice. Is this an example of careless treatment by HEL of critical issues in the permit application?

Response: No, there is no "hold time" on this type of analysis. The acid-base accountability data and sulfur forms data would not change unless the cores were improperly stored and allowed to weather. The applicant safely stored the cores until the samples were sent to the laboratory. See the responses to Appendix A, item no. 27.

Comment 191: Hauling it in trucks, and piping it from town is not "restoring" it. Aquifers can be drained by longwall mining. This causes millions of dollars in damage, because pastures are useless in raising livestock without their water supplies.

Response: Area aquifers, as identified by the applicant, are shallow. Numerous studies have been conducted that demonstrate that these types of shallow aquifers should not be significantly impacted by longwall mining.

Comment 192: The Illinois Geological Survey shows major sand and gravel aquifers, proving the statement said by the coal company presenter, "Montgomery Co. has no aquifers", was totally wrong. Longwall mining can drain aquifers, leaving us with no supplies for farms.

Response: Major sand and gravel aquifers do exist in Montgomery County along major stream beds and do not appear to be laterally extensive and are reportedly variable in permeability, are scattered and are discontinuous. There do not appear to be major sand and gravel aquifers present within the proposed permit area.

Comment 193: In Part III of the application there is a listing of public water supply sources which do not appear to include the old Hillsboro Lake. It should be listed as a potential source of public water because it would have to be used if a catastrophic event prevented use of Glen Shoals. Information needs to be added as to what contaminants, if any, can reach the old Hillsboro Lake.

Response: See the responses to Appendix A, item No. 24. By all existing records, Lake Hillsboro does not currently serve as a public water supply for any community. See Response to Comment 171 above.

Comment 194: What are they going to do with the water from the refuse?

Response: Water from the refuse disposal area will move to Pond 005, where it will discharge via NPDES point 005. Water in the sediment ponds will be recycled by the mine for use in the preparation plant. Eventually, this water will discharge to the Shoal Creek Watershed Structure No. 5 lake.

Comment 195: They have not applied for EPA permits with respect to water nor have they applied for the NPDES permit.

Response: The NPDES permit has been applied for, jointly with the Department's permit. Review of the NPDES application is conducted by the IEPA.

Comment 196: When the tributaries to Shoal Creek dry up I don't believe the company will provide water forever.

Response: There has been no evidence presented that would suggest that tributaries to Shoal Creek will "dry up."

Comment 197: What hydrologic studies have been done to document subsidence impact on the Coffeen Lake watershed and McDavid Branch creek? How complete are the cumulative hydrologic impact assessment data regarding the McDavid Branch and Coffeen Lake? I maintain that your application is incomplete and inadequate with the hydrological studies in it.

Response: There is no requirement for a hydrologic study to document subsidence impacts on Coffeen Lake. The applicant did prepare pre- and post-mining stream profiles. See response to Comment 198 concerning McDavid Branch.

Comment 198: McDavid Branch Creek that runs through the Cranfield Preserve. It is now the upper management section of the Coffeen Lake. That is a rather major stream that goes into Coffeen Lake. What happens when that's subsided? Will subsidence of part of McDavid Branch creek impact water flow to Coffeen Lake?

Response: The east end of the longwall panels will subside a tributary that leads to Coffeen Lake. The applicant has demonstrated that mitigation of this stream tributary can be achieved. The end result will be no appreciable change in the amount of runoff reporting to Coffeen Lake after subsidence.

A plan to mitigate pooling of water is contained in the application. Drainage will be restored to the same downstream receiving streams including the watershed reporting to Coffeen Lake.

Comment 199: Where is the location of the water supply intake and surface water discharges within affected hydrologic area.

Response: The water supply intake for the mine operations is located within the permit area, as are the approved NPDES points. Please see the Surface Facilities Map (Map 6 S.F.) for the precise locations of these structures.

Comment 200: Will coal combustion byproducts be used in the reclamation of the land after longwall mining? Will coal combustion waste be disposed of at this facility? Are there federal or state regulations regarding this?

Response: The State of Illinois does regulate the usage of both coal combustion by-products and coal combustion wastes at a coal mine. This permit application does not request the use or disposal of coal combustion materials.

Comment 201: How can you measure hydrology accurately with only aerial photographs? When were the photos taken?

Response: Hydrology has not been "measured" with aerial photographs. Hydrologic aspects of the permit area were investigated and studied by various means, including the two hydrogeologic investigations conducted by Hurst-Roche Engineers, Inc.

Comment 202: How will local streams that feed the Shoal Creek watershed and Big Four Reservoir be protected from contamination from the run-off water on the gob pile? How will the wells and the aquifers be protected from contamination of the heavy metals that are always a present danger with the mining of coal? What plans are being made to contain chemical runoff pollution, especially during start-up?

Response: No surface water will discharge off-site without first passing through an NPDES monitoring point.

Along with the installed liner, a network of installed groundwater monitoring wells, will determine any impacts to groundwater. If impacts are detected, remediation of those impacts would be required. During start-up, sediment

ponds and ditches will be constructed to control sediment and other run-off from discharging the site uncontrolled.

Comment 203: How thorough was the hydro-geologic investigation conducted by Hurst-Rosche Engineering, Inc., and what did it consist of?

Response: See Parts III and VII of the application.

Comment 204: Has the applicant drilled any wells in the permit or shadow area to determine if the well yields provided in the application are correct?

Response: The applicant has installed twelve groundwater monitoring wells within the proposed permit area. Additional wells were drilled in the shadow area. The applicant has conducted in-situ aquifer testing on some of these wells to determine the aquifer properties.

Comment 205: Part III, page 10 - The application states that water levels will be lowered after subsidence but alludes that yields will be greater because of increased permeability. How can a supposed increase in yield be a benefit if the water level is lower than the depth of wells currently in use?

Response: Wells can be re-drilled or deepened if necessary. Increased yields will allow users to consume more water at one time without running a well dry or waiting for it to recharge.

Comment 206: How much water will the processing plant use and where will it come from? If municipal water sources are used for coal processing and if there is a reduction of the water supply due to drought conditions, will the mine operation be required to limit their usage?

Response: A mine of this size typically needs ten to twenty million gallons of water per day to run its operation. Of this amount, one to two million gallons of water per day will actually be consumed by the operations (meaning the majority of the water will be recycled). The water used by the facility will come from a variety of sources which include the permitted sedimentation ponds and the Shoal Creek Watershed Structure No. 5. Any use of municipal water would be a business contract between the applicant and the owner of the municipal supply. The contract would not be subject to this Department's review.

Comment 207: Do the maps list all the surface water, springs and subsurface water which may be encountered during mining? Will these natural resources be restored or reclaimed and what is the cost? What will be done to reclaim groundwater after subsidence?

Response: Yes.

If a surface water body or groundwater resource is impacted, the mine will be required to restore. The cost of such restoration is unknown at this time.

Groundwater is not expected to be impacted due to subsidence.

Comment 208: Please provide baseline hydrologic data and explain.

Response: See Part III and Part VII of the application.

Comment 209: Discuss the preliminary hydrologic and geologic information. When was it done and by whom.

Response: Hurst-Roche Engineers, Inc. conducted two site investigations regarding the hydrogeologic aspects of the permit area. Hillsboro Energy, LLC also conducted core drilling in the permit and shadow areas to determine the geologic and hydrogeologic setting of the area.

Comment 210: How do you determine the probable hydrologic consequences of mining and what are the probable hydrologic consequence of mining?

Response: The Department does an assessment of the information submitted by the applicant. Appendix C of this permit findings document contains the Departments assessment of the probable hydrologic consequences.

Comment 211: Discuss the effects on hydrology outside permit area but within impacted area.

Response: See Appendix C of the permit findings document.

Comment 212: What alternative water sources are available?

Response: Public water supplies of the City of Hillsboro, City of Litchfield, City of Witt, City of Fillmore and the Montgomery County Water Company.

Comment 213: What is the cumulative hydrologic impact assessment? Who prepared it?

Response: The cumulative hydrologic impact assessment (CHIA) is the permit finding prepared by the Department. See Appendix C of the permit findings document.

Comment 214: What is your plan to protect the hydrologic balance?

Response: The applicant has installed a network of groundwater monitoring wells and will install a liner beneath the refuse disposal area, coal storage areas and the ponds and ditches that receive run-off from these areas. Surface water will be monitored at NPDES points located throughout the permit area.

Comment 215: What is your surface and groundwater monitoring plan? (30 CFR 780.21)

Response: Groundwater monitoring will be conducted on a quarterly basis throughout the life of the mine.

Surface water monitoring will be conducted at the NPDES points whenever these points are discharging.

Comment 216: Were surveys made of all springs, seepage and groundwater flow?

Response: Yes.

Comment 217: Give the location and quality of subsurface water.

Response: Shallow groundwater in the area appears to occur at approximately 20 to 30 feet below ground surface in unconsolidated materials.

Deeper aquifers are reported but the quality does not appear to be suitable for consumption due to high mineral contents. Additionally, the reported yields and aerial extent of these aquifers appear to be limited.

Comment 218: Has any concern been raised regarding the Coffeen Lake dam and any possible impacts from subsidence affecting adjacent areas?

Response: The Coffeen Lake dam is not within the shadow area of the proposed permit.

Comment 219: Please find a way to obtain the coal other than the "longwall method" of mining.

Response: The Department does not determine the method of mining to be used. This is proposed by the applicant. The regulations do not prohibit the use of the planned subsidence method of mining.

Comment 220: The reason for these hearings was to get feedback from the local citizens concerning the proposed Deer Run Coal Mine and its pending permit. Instead, we got as the opening act at both meetings, Roger Dennison defending his position as figurehead of Hillsboro Energy, taking issue with different people of the community with whom he doesn't agree or necessarily appreciates the opinion of, concerning negative issues of this mine and its permit. Then we got a lengthy speech from Phil Gonet, President of the Illinois Coal Association.

I feel that the public was denied their just due on the commenting period at the hearing on March 19. Mr. Dennison was allowed entirely too much time, over 65 minutes to present a sales pitch without answering any questions. Mr. Dennison had already delivered a 40minute presentation at the Informal Conference. Due to the length of the hearing many of the people were forced to leave due to travel and no posted order to speak.

Please explain to me, in detail with references to Illinois and/or IDNR Statutes/Regulations, the prescribed format for both the Informal Conference and Public Hearing on the Deer Run Mine. Is there a prescribed format or was the format set by your Office. WHY any and ALL Questions presented at the Public Hearing either could not or would not be answered?

In Section 1773.13C, it does not require that the company attend an informal conference, but Section 1773.14D does provide that the applicant shall appear at any hearing held pursuant to Section 1773.14. The implication of this distinction is that the permit applicant may reasonably be expected to respond to inquiries at the public hearing after having been notified of the comments received at any informal conference. After all, a company has the burden of proof as to its permit application. Both rules require that a record shall be made and retained as part of the permit application proceeding. To me, the verbatim transcript of a hearing at any -- at which the applicant refuses to answer questions or inaccurately responds to public comments, would justify a denial of the permit application. In contrast, however, the Department cannot be expected to make a definitive factual determination so early in the process. Lastly, as already requested, the Department must hold

at least one public hearing "if the issues in question are not resolved by the informal conference" in accordance with Section 1773.14(a).

It appears that the Department has failed to comply with its own regulations that should govern the conduct of coal mining application hearings. I recommend that the application not be approved until after another hearing is held, in order to properly inform the public during a give and take format.

Where are the people whose lives, property and livelihood are threatened by the prospect of the unwanted longwall mine supposed to go to get answers to their entirely reasonable questions? Please explain to me why you and your department continue to put up roadblocks for people to get information?

Of key concern is the apparent lack of cooperation by the IDNR or Hillsboro Energy to answer any questions regarding this specific permit during the informal conference or the public hearing. Answering questions after the meeting ultimately limits the number of people that hear the information and therefore does not fill the needs of the community

Response: The regulations at 62 Ill. Adm. Code 1773.13(c)(2)(D) concerning an informal conference state that "The conference shall be conducted by a representative of the Department, who shall accept oral or written statements and any other relevant information from any party to the conference." Section 1773.14(d)(2) states that "The hearing officer shall allow the county board, the applicant, and any interested persons to present data, views, or arguments."

The purpose of both the informal conference and the public hearing is to allow any and all interested parties to provide comments on the application which the Department then uses during its review of the application.

Section 1773.14(d)(3) states that "Every effort will be made to allow all persons who wish to make a statement to do so." This includes the applicant and pro-mining interests as well as those who are opposed the proposed mining. All parties were allowed to make statements and no one was denied the right to do so.

The Department attempts to answer questions concerning the application process at both informal conferences and public hearings, but it would be inappropriate for Department personnel to respond to specific questions concerning a pending application since review of the application has not been completed.

Citizens can always submit questions to the Department in writing. These questions are then responded to after the appropriate personnel have had opportunity to review the questions and concerns expressed.

Comment 221: Sierra Club believes that there are far too many questions and concerns with far too few substantive answers to issue this permit for Deer Run mine in Montgomery County. We request that this permit be denied until all questions are suitably answered, until such time that ALL required permits are obtained and until such time that current lawsuits regarding the ownership of mineral rights are settled. We also request that IDNR reconsider the petition of Catherine Edmiston regarding suitability of this land to be mined. Please outline the legal reasoning for not reviewing the petition to deem these areas unsuitable for mining.

Response: The Department agrees that changes to the application were needed and subsequently the applicant was required to modify the application. Please see Appendix A. Issuance of the Surface Coal Mining and Reclamation Permit does not preclude the applicants need to secure all required permits before mining related operations begin.

The lawsuit regarding the ownership of mineral rights is outside the purview of the Department. The application contains the affidavit required by 62 Ill. Adm. Code 1778.15(f) stating that all necessary mining rights, including the right to subside, if applicable, have been or will be obtained prior to mining.

The Department received several Lands Unsuitable for Mining Petitions from Ms. Edmiston concerning longwall mining in southern Montgomery County. The petitions were all nearly identical.

The petitions all sought a lands unsuitable for mining designation based upon longwall mining operations. It is the Department's opinion that longwall mining is not a surface coal mining extraction method, and that the Department is not authorized to review lands unsuitable for mining petitions that do not relate to surface coal mining operations.

The petitions do not state any right to petition for designating an area unsuitable on the regulatory basis of surface coal mining operations. For this reason, the Department determined that under 62 Ill. Adm. Code 1764.13(b), the information provided in the petition is incomplete. The subject petitions do not satisfy the "injury in fact" test as required by 62 Ill. Adm. Code 1764.13(a).

Comment 222: Unfortunately, the permit application of HEL does not convey the necessary facts and planning strategy either. Since approval of permit #399 by IDNR depends on fulfilling the mandatory regulations, it is apparent that these requirements have not been met by HEL. This statement is validated by the permit application with obsolete or incorrect data, incomplete or nonexistent surveys with respect to water and soil analyses, non-disclosure of rights to mineral and or land subsidence, inadequate handling of toxic and polluted liquids and solids, and inappropriate preparedness for environmental emergencies.

Response: The Department agrees that the application as originally submitted was not eligible for issuance. That is why, pursuant to 62 Ill. Adm. Code 1773.19(a), on May 30, 2008, the Department issued its decision requiring the applicant to modify the permit application. Upon review of the modification made by the applicant, the Department determined that, pursuant to Section 1773.15(c)(1), the permit application as modified is accurate and complete and all requirements of the Federal and State Acts and the regulatory program have been met.

Comment 223: I am opposed to the longwall method of mining being planned at the edge of Hillsboro. I do not think the trade-off of some fairly short term jobs is worth destroying cropland. The history of coal mining has been roughly 19 to 20 years per mine which I consider fairly short term jobs, and then the miners leave the area even though there is still coal to be mined.

Response: The main thrust of this comment is outside the purview of the Department. The regulations at 62 Ill. Adm. Code 1817.121(c)(1) require that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence damage." The cropland will not be destroyed.

Comment 224: The county is evidencing an increased rate in cancer among its residents as reported by the American Cancer Society. Another mine, regardless of the filters, etc. used, will still be exposing the residents to additional toxins. Noise pollution will be an ongoing concern with the ventilation required for longwall mines.

Response: The regulations under the statue are designed to protect the health, safety and general welfare of the people. The Department does not have specific regulations concerning cancer or noise.

Comment 225: IDNR is not an adjudicating body but nonetheless permits the mine with the only recourse to the resident(s) for the company's failure to follow through will be in civil court.

Response: The regulations require the repair of damage to both land and structures. Failure to comply with the regulations places the permittee in jeopardy of enforcement action by the Department. The regulations also provide citizens the right to request an inspection of the mine if they believe that a violation exists.

Comment 226: Page 10 - 15.At 1)A) affidavit is required "regarding applicant's legal right to enter and begin surface coal mining and reclamation operations - -". In response, reference is made to Attachment Part 1.10.A. However, the two affidavits comprising that Attachment merely assert, without reference to any specific lands, that "applicant has or will possess - - a legal right to conduct planned subsidence coal mining and reclamation operations - -, and "to conduct underground mining operations –.". "Documents — — — " it is said "will be provided to the Department on request." Well and good. But, not good enough. A fair inference is that Applicant does not as yet possess such rights to the extent worth their mention. The present Application is thus premature, and could properly be rejected as incomplete - - and should be. Further, as a response to the Department's request for relevant information, Attachment Part 1.10.A. is so flagrantly inappropriate that the whole Application should be shelved.

Response: The applicant identifies the document providing the right to enter, mine and reclaim in the response to Part I(2)(A) of the application. The applicant provides the appropriate affidavits in response to Part(I)(10)(A) of the application. See 62 Ill. Adm. Code 1778.15.

Comment 227: At 10)6), the requirement is "Complete certification for engineering aspects of the application. - Except as otherwise provided all maps, plans and cross-sections included in the permit application - In response; there is reference to Attachment Part 1.10. That Attachment is indeed an ENGINEERING CERTIFICATION, which seems to cover the requirement, but without any specific identification of what attachments and supplements to the Application, or what "plans", are the subject of the certification. In this vagueness, there is undue risk here for someone - for the certifying engineer,

for the State, or for residents to be affected by execution of the plan of operation which is to use the design work by the certifying engineer.

Response: See the responses to Appendix A, item no. 1. Engineering certifications were provided for the application in Attachment I.10.B. Gary W. Raines, David H. Kimmle, Jeremy J. Connor and Guy R. Hunt provided the engineering certifications.

Comment 228: Part I - 12)C)1) requires, in part: "Describe the measures to be used to insure that the interest and landowners affected will be protected." No such measures are described, other than assorted consultations. No action is proposed, to follow public hearings, if any, or the obtaining of "the necessary input and approvals (unspecified) from the owners of public roads - - "etc.

Response: See the response to Appendix A, item no. 12. The Department has made the required finding concerning activities within 100 feet of the road (see Part III(A) of this decision document).

Comment 229: Part I - At 1 2)A), applicant is asked whether the proposed permit area or shadow area includes area designated unsuitable for surface coal mining - The response is No. Verification of that response's accuracy is needed.

Response: The applicant's response is correct.

Comment 230: Page 11 - 12)B)4), the response is "No," to the question, "Does proposed permit area - include any public roads, which are to be removed, relocated or temporarily closed?" That the plan of operation is workable in that situation needs verification.

Response: The applicant's response is correct.

Comment 231: Part II - Page 4 - 7) Requires, "a description of the existing land uses and land classifications under local law, if any, for the proposed permit and adjacent areas. The response is, "Currently no known laws pertaining to land use and land classification are applicable to the proposed permit and adjacent areas within Montgomery County, Illinois." This view would be surprising to the Montgomery County Assessor, and to the Illinois Department of Revenue.

Response: The question in the application refers to local zoning requirements. The Department is unaware of any such requirements concerning the area included in the proposed permit area.

Comment 232: I hope you will only listen to positive influence for this permit since the opposition had their chance when this was brought to a county vote and they lost. I can go on with all the positive effects this will have on our county including:

New jobs, which will then boost our economy
Increased county revenue due to the coal royalty payments
Increase in collected sales taxes
Increase in the property tax base for the county

These are just a few positives. Also after our recent snow of 11 inches and rain totaling over 2 inches or more in some areas of the county, there is a lot of flooded areas. The mine subsidence and drainage may be an improvement to the flat areas in our county.

Response: Comment forwarded to applicant.

Comment 233: Burning of coal is the number one creator of CO_2, which causes global warming. How do you justify issuing a permit that will adversely affect our world for centuries?

Response: The concerns expressed are outside the purview of the Department.

Comment 234: Can the township trustee board require the mining operator to post bonds for public roads and bridges that are to be subsided?

Response: The concern expressed is outside the purview of the Department.

Comment 235: If personal property and/or personal injury occurs from damaged roads that have not been closed, who is held responsible? Does the bond required by the permit cover personal injury or damage to the public traveling township roads and bridges?

Response: The Department assumes this would be a personal liability issue. The bond posted is for reclamation of the permit area should the permittee fail to do so.

Comment 236: Could townships potentially assume more liability as a result of mining subsidence?

Response: The concerns expressed are outside the purview of the Department.

Comment 237: The water table under the gob pile at the Monterey No. 2 Mine is ruined for miles around the pile. IDNR is pumping 50,000 gallons of polluted water from the gob pile into the Kaskaskia River daily; adults and children are having major health problems; dust is blowing off the gob pile all the time; and nearby residents must buy all their water. IDNR's solution is to cover the pile with 900 semi-truck loads of limestone (suppose to be four feet of limestone but only amounted to two feet).

Response: The information supplied in this comment is anecdotal and inaccurate. The company is not pumping 50,000 gallons of polluted water to the Kaskaskia River daily. Water is discharged to the river periodically, but not daily, and the discharge meets the standards required by the IEPA. There are no documented health cases attributed to the mine. The refuse disposal area is reclaimed and revegetated and no air pollution from the area has been documented by IEPA. The water quality of adjoining landowners wells has not been impacted by the mine. Finally, the mine was required to cover the refuse area with various rates and thicknesses of agricultural lime and soil, not four feet of limestone as stated by the commentor.

Comment 238: I urge IDNR to require that there be no gob pile on the surface. A second set of conveyors should be added and the gob returned to the mine cavity along with all fly ash.

Response: The Department does not have the regulatory authority to require coarse refuse be disposed of underground. Currently it is not technologically feasible to dispose of coarse refuse in the manner described.

Comment 239: Where will the real estate taxes come from after the land is ruined by subsidence?

Response: The regulations under the statue are designed to maintain the tax base. Specific assessments are subject to the local taxing authority. The regulations at 62 Ill. Adm. Code 1817.121(c)(1) require that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses

which it was capable of supporting before subsidence damage." The cropland will not be ruined.

Comment 240: Why is this a surface mining permit, but there's this underground component, but there's no regulation of the surface area over that undermined area. What are the regulations that regulate underground mining in the shadow area?

Response: The application is titled "Application for a Surface Coal Mining and Reclamation Operations Permit - Underground Operations." The application consists of two components - the permit area where the surface facilities will be located and the shadow area which is the area of underground extraction. The shadow area is not the permit area and is not covered by the reclamation bond. It is not controlled by the regulations of a permit area. Its regulated by 62 Ill. Adm. Code 1817.121 and 1817.122.

Comment 241: Is there actually money that is held in perpetuity for problems that might arise in the future to reclaim the land. Does IDNR hold that money? How is there a guarantee that problems that occur in the future, if they were surface water, drinking water, farmland, roads, anything like that, the money is going to be there in the future?

Response: Bond is not held in perpetuity. Bond is held for the reclamation of the permit area until the reclamation is complete and the applicable performance standards are met. The Department also regulates the shadow area for mitigation of subsidence. The coal company can either hold liability insurance to cover any areas impacted by subsidence, or alternatively, a bond can be required after the subsidence damage occurs pursuant to 62 Ill. Adm. Code 1817.121(c)(3). The two distinct areas, permit and shadow area, are handled differently in the regulations in terms of bonding. The federal Office of Surface Mining has determined that the permittee remains liable for subsidence damage in perpetuity.

Comment 242: For the permit area, the bond that they hold for the reclamation of the site. How long does that last?

Response: Reclamation is initiated after mine closure. Bond is held until the permittee meets all the performance standards that are in the regulations.

Comment 243: For the shadow area, either the liability insurance or the bond for the shadow area, how long does that last?

Response: The liability insurance is held as long as the permit is in force. If there are subsidence problems many decades after the closure of a mine, such as in room and pillar mining, the Department will have to pursue the companies and try and have them reclaim it.

Comment 244: Is IDNR in regular contact with the other agencies, such as the IEPA or even your own water division or the Army Corp of Engineers, or -- I guess that's it, about where their permitting processes are and who decides first and how does that all work together.

Response: IEPA and Department of Agriculture make comments on this permitting process. They are requested to make comments, and they are involved in this permitting process. Many of those agencies have their own permitting processes. The Department's permitting application is a joint application, which initiates the NPDES permit process at the Illinois EPA. The two permitting processes are independent. The Department will issue a permit if the company meets all the regulatory requirements of the program.

Comment 245: Who decides what is technologically and economically feasible for restoring the subsided land?

Response: No company to date has ever tried to claim that subsidence damage was not technologically or economically feasible to perform. If they do make that case, they would have to make it to our Agency and prove that what they are trying to do is not either technologically or economically feasible. The Department would make the ultimate decision.

Comment 246: If we get into a legal confrontation with the coal company, say something that is not to our standings or to what we agree to, if we can't come to agreement, the surface owner and the coal company, I was told that IDNR is a permitting body that goes by the regulations. Can you tell me, if we come to that fact, I was under the impression that it would become a civil matter, because IDNR cannot get involved in a legal dispute between land owner and a coal company.

Response: Under the regulations, the Department cannot adjudicate title. That means the Department does not interpret deeds and documents. The Department implements the regulations for mitigation of subsidence and enforcement of

the regulations. If there is a legal dispute over property it would be decided in civil court.

Comment 247: If you do agree to a third party, do you deny your right, then, to pursue it to a court system, correct?

Response: No.

Comment 248: Since the Act at 7.02(b)(3) says that an area can be declared unsuitable for mining if mining would affect renewable resource land resulting in substantial loss of productivity or food or fiber, why isn't this statute being adhered to?

Response: A valid lands unsuitable for mining petition was not filed prior to the filing of an administratively complete application for a permit.

Comment 249: The permit application indicates that there will be mining under the state owned facilities at Graham Prison. It's my understanding that mining under state facilities was not permitted. If this is so, has there been a variance granted to permit this, and if so, if the variance was granted, who permitted it?

Response: The Graham Prison is located over room and pillar mining with a subsidence control plan to prevent the likelihood of subsidence. There is no out right prohibition to mine under state facilities. The regulations at 62 Ill. Adm. Code 1817.121(d) indicates "Underground mining activities shall not be conducted beneath or adjacent to public buildings and facilities; churches, schools, and hospitals; impoundments with a storage capacity of 20 acre-feet or more or bodies of water with a volume of 20 acre-feet or more, unless the subsidence control plan demonstrates that subsidence will not cause material damage to, or reduce the reasonably foreseeable use of such features or facilities...." The Department finds that the proposed subsidence control plan under the prison is conservative and will prevent the likelihood of subsidence occurring. In the unlikely event subsidence did cause damage to this facility, the permittee would be responsible for repair, replacement or compensation for the material damage pursuant to 62 Ill. Adm. Code 1817.121(c).

Comment 250: How long will water monitoring continue?

Response: The monitoring will continue until the bond is released.

Comment 251: How are they going to determine if the water discharge is within limits even after the permit is expired and the bond is expired and the pile is still there? I know you say it's reclaimed, but if it's still being discharged, how can we determine that there is not some adverse pollution leaving the site if the monitoring will cease after, what, 10 years or 15 years?

Response: The regulations at 62 Ill. Adm. Code 1817.41(c)(3) and 1817.41(e)(3) provide that ground water and surface water monitoring "shall proceed through mining and continue until bond release."

Comment 252: Releasing the bond does not eliminate the pile.

Response: The pile will not be removed, but will be reclaimed to the land uses approved in the permit.

Comment 253: How are they going to reclaim the pile.

Response: The reclamation plan requires that the pile have a limestone addition and be covered with soil, seeded and vegetated.

Comment 254: The laws and the regulations that IDNR is following in order to regulate what's going on may not be up-to-date enough to handle this situation. The government agency should decide that this needs more research than just following the normal rules and regulations.

Response: The Department does not have the authority to follow the procedure suggested in this comment.

Comment 255: I believe the details of the air and water pollution controls at the surface facilities are insufficient and should not be approved by the IDNR or EPA.

Response: The Department has determined that the application meets the requirements of the regulations.

Comment 256: How will IDNR handle the changes made in the conservation practices of the affected farms? These are not addressed in the permit. There is no documentation that the landowners have been contacted about such changes.

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(1) require that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence damage."

Comment 257: By far my biggest concern is in the wording in this permit and how it will affect our civil rights as property owners and as Americans. In this permit it states that if this permit is passed by your department it becomes a legal binding contract and gives the coal company power to do what is in this permit. Let me try to clear this up some, in the permit, in Part I -Applicant Information, Attachment 16.A Consent to Company Action. On page 2, second paragraph, "RESOLVED FURTHER, that Mike Beyer shall have the power to seek appropriate court orders, injunctions, and judgments which maybe deemed necessary if a third party refuses to comply with actions taken by him under this document, including the power to sue any party who fails to comply with actions Company has authorized in this document, and to seek actual, punitive and any other appropriate damages on Company's behalf;"

Response: The statement quoted above simply indicates that the company has granted Mr. Beyer the right to act on its behalf. Approval of the permit does not diminish the rights of third parties.

Comment 258: The present regulations regarding public roads seem to be easily maneuvered by HEL to achieve its agenda. Ashmore Trail is one of the roadways that will be affected by mining operations. The fact that there will be a mining operation under Route 185 needs to be examined and a public hearing held. IDNR must enforce the intent and purpose of the regulations regarding public.

Response: The regulations found at 62 Ill. Adm. Code 1761.11(d) apply to surface coal mining operations, not to the area of underground extraction.

Comment 259: An environmental study should be conducted in order to understand the impact of the mining operation on the environment. This should include the effect on soil contamination, soil use after mining, water tables, water quality

in wells and groundwater. The effect upon the health of local residents should be included in the study.

Response: While an environmental impact study is not required, the concerns expressed in this comment - specifically soil and hydrology issues - have been taken into consideration in the Department's review of the application. The regulations under the statue are designed to protect the public.

Comment 260: Location of the pile should be moved as far away from local residents, hospital and nursing home facilities. This will limit exposure to contaminates and also limit general inconvenience to local residents. The coal company will either purchase mining property or coal rights of direct impact, but they do not typically purchase neighboring properties that can be affected by airborne or runoff pollutants.

Response: The Department has determined that the location of the refuse pile meets the requirements of the regulations.

Comment 261: There should not be any nuisance pollution such as dust and contaminated or discolored water runoff passed onto other citizens property when they will have no recourse except though the EPA and those regulations may not cover any nuisance under the act or will require expensive litigation from citizens to enforce compliance.

Response: The application addresses step to be taken by the applicant to control dust. The quality of runoff water from the permit area is addressed in the regulations of both the Department and the IEPA. Failure to meet these requirements will result in enforcement action by the appropriate agency.

Comment 262: The permit process should identify time frames for solutions to the property once the mining is complete and assume that the property cannot be reclaimed to its original use. Will the property be merely abandoned?

Response: The application contains a reclamation plan for how the permit area will be reclaimed and the regulations stipulate the time frame for completing the reclamation. The site will not "be merely abandoned."

Comment 263: What will become of the waste pile? Will the property be suitable for new residential or commercial construction?

Response: The reclamation plan calls for the refuse pile to be reclaimed to fish and wildlife habitat.

Comment 264: Why is it legal to place the mine within a mile of a Hospital, Health Club, two Clinics, a Doctor's Office and a Nursing Home.

Response: The regulations prohibit surface coal mining operations within 300 feet of a dwelling or any public building, school, church, community or institutional building, or public park. Beyond that distance there are no regulatory prohibitions.

Comment 265: What gives the coal companies the authority to destroy the surface estates of people who live in the rural areas?

Response: The regulations do not provide such authority to the mining company.

Comment 266: The coal can easily and profitably be extracted via the room and pillar.

Response: Comment forwarded to applicant.

Comment 267: Flat land cannot be drained without using a series of pumps. Who will maintain and see to the operation of these pumps 20 or 30 years from now?

Response: Pumps will not be used as a means of repairing lands impacted by subsidence.

Comment 268: Illinois Drainage Laws say I can not change the point of entry from my property to adjoining property. I must maintain the integrity of natural drainage pathways. So tell me how does Hillsboro Energy get to change natural drainage ways along with different points of entry.

Response: The applicant must possess the right to impact drainage on adjoining properties prior to doing so.

Comment 269: I have a drainage ditch right beside my home. Sometimes we get much rain that rises quickly along the banks. Will there be a way to keep the coal waste

from getting into my ditch, and in other ditches. Will the coal waste get into our basements during such rainy conditions? Coal refuse would be difficult and time-consuming to clean up. Will the coal waste get into the yards that have standing water?

Response: The regulations do not allow coal waste to leave the permit area. In the unlikely event coal waste was to leave the permit area, the permittee would be responsible for cleaning-up activities.

Comment 270: Have the mine officials done research on the mines long since mined out in Schram City?

Response: The applicant is required to show the location of closed underground workings within the permit, shadow area and adjacent areas.

Comment 271: The waste pile(s) should be either covered or kept moist in order to limit any air borne pollution from the pile(s). Inhalation of coal dust is not healthy and any contaminates in the material become lodged in the respiratory system.

Response: The response to Part IV(8) of the application adequately addresses fugitive dust control.

Comment 272: I did not hear whether most of the coal will be taken out by truck or by rail. We have many large trucks that use Route 16. What about the noise level? Is this mine going to work around the clock?

Response: The issue raised in this comment is outside of the purview of the Department.

Comment 273: HEL's response of "no" to the question whether there is any urban development in the areas surrounding the proposed mining operations is difficult to understand. In fact within close proximity to the refuse disposal area, there stands a hospital, nursing home, school, and other urban sites. There will be particulate air pollution migrating to these residents.

Response: This question is related to whether a permit is required from the Department's Office of Water Resources. They have indicated that this response is appropriate.

Comment 274: HEL's request for a variance to affect within 100 feet of the outside right of way of Ashmore Trail should have also included the many roadways and bridges leading to the farms of landowners. Will longwall mining affect highway 185, 16, or 8?

Response: The regulations found at 62 Ill. Adm. Code 1761.11(d) apply to surface coal mining operations, not to the area of underground extraction.

Any roads affected by subsidence will be repaired. The applicant has committed to securing agreements with the appropriate authority with jurisdiction over the roads to be subsided or provide a detailed damage minimization plan for Departmental approval. For clarity, the Department has conditioned the permit to obtain the agreements and also clarified that any proposed change to a unilateral plan would be subject to a significant revision and public review. See Condition M. Ultimately, any temporary road closure that might occur during subsidence or while repairs are being implemented after subsidence would be at the discretion of the local road authority.

Comment 275: Eugene and Dorothy Eddington, Dale and Sally Miller, Aaron and Sandy Bertolino have had to repair their own water systems damaged by gas drilling, and pay for it out of their own pockets. Is this the way mining will deal with the damage? Several peoples wells were affected and are still affected from core drilling that was done in 2004.

Response: If regulated activities conducted by the permittee impact neighboring properties, the permittee will be required to implement whatever remediation is required by law.

Comment 276: John T. Scott, licensed appraiser mailed you an estimate some time ago, regarding loss of long range productivity of land, if 27,000 acres of bottomland is turned into swampland by longwall mining. Back in 2005, he estimated the loss in crops, and business to farm suppliers at $75,000,000. Now that crops have doubled in price, that loss would be well over $100 million. This doesn't even consider the other 75 thousand acres of farmland in southern Montgomery Co. and its losses. You can see, damage to the Southern half of Montgomery Co. will add up to billions of dollars over the years.

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(1) require that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and

reasonably foreseeable uses which it was capable of supporting before subsidence damage."

Comment 277: Why did the mines close at Carlinville, Farmersville, and Virden? They did not run out of coal? The mining company just wants to replace union workers with non-union jobs.

Response: The issue raised in this comment is outside of the purview of the Department.

Comment 278: After longwall mining, the ground cannot be returned to its ability to harvest adequate crops that our family and many other hard working families had manicured for centuries. No one is taking into consideration of the after effects of such mining.

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(1) require that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence damage."

Comment 279: In the long run I believe the land will be raped and left destroyed. The tax base will be destroyed and Montgomery County will be left to wither and die. What they do will last maybe twenty years and then they will leave and everything will be left in a big mess. Then the next generation will have to try to farm the land and fight the company to get it so they can make a living from it. This will not just effect the people in the immediate area., but all of the county, the land value, and homes will go down in value. The small amount of jobs it creates will be a drop in the bucket that the destruction will do.

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(1) require that "The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence damage."

Comment 280: The first time I drove to Galatia I commented on their hilly roads. I said I was very glad I didn't have to drive those everyday. I didn't realize those "hills"

were from the longwall collapses. It is VERY inconvenient for the people who live and work there. Much of the cropland has been convened to pasture because it can no longer be farmed. Roads ARE disrupted it is an everyday battle for the people who live and work there.

Response: The Department has been inspecting the mine at Galatia on a monthly basis since it was opened in 1983. We are unaware of cropland being converted to pasture "because it can no longer be farmed" as claimed by the commentor.

It is true that when roads are impacted by subsidence that it can create a temporary disruption for area residence, but roads are repaired and returned to the specifications required by the applicable road authority.

Comment 281: The Litchfield to Carlinville county road is closed forever. The original plan was that the road was to be closed two years max. Well we are in our fifth or sixth year now of closure and it will never be fixed. The owners of the Monterey Mine were to return the land as the way it was prior to mining in the wall mining. This hasn't happened either.

Response: Concerning Litchfield Road, it should be noted that many Illinois public roads have been subsided by longwall mining over the past 25 years. The vast majority of these roads were subsided without any need for temporary closure. Roads south of Litchfield Road were also subsided and are open to the motoring public. Litchfield Road was unique in that the local road authority desired to also straighten the road and thus relocate stretches of the road to new locations to eliminate horizontal curves. Ultimately, any temporary road closure that might occur during subsidence or while repairs are being implemented after subsidence would be at the discretion of the road authority.

The surface lands over the Monterey longwall operation are controlled by the mining company. Although ownership does not relieve a company of the obligation to meet the performance standards at section 1817.121(c)(1), mitigation of the northern longwall panels were purposely delayed due to the fact that a larger drainage plan would be more effective after the completion of a series of longwall panels. Because the property is controlled by the company, the Department allowed a delay so that the disturbance created by the mitigation work would be less. The drainage restoration plan is currently being completed.

Comment 282: No way should radioactive waste be left on or in a gob pile on the surface of the land especially if there is a better process.

Response: No radioactive waste will be left on or in the gob pile.

Comment 283: The public notice of the informal conference should have been published in the Hillsboro paper.

Response: The regulations require that the informal conference be "advertised by the Department in a newspaper of general circulation in the locality of the proposed surface coal mining and reclamation operation." The informal conference was advertised in the Litchfield News-Herald which meets this requirement.

Comment 284: If you can't create wetlands, how is this permitted in the mine site area that you're going to return the area to wetlands and wildlife habitat which at this time is now crop land.

Response: The Department is unaware of any prohibitions on the creation of wetlands.

Comment 285: There will be many hazardous elements including sulfur dioxide, contaminating the air, water and soil coming from the coal refuse disposal area.

Response: Impacts to air quality are regulated by the IEPA. Potential impacts to the water quality are addressed in Appendix C. The Department has regulated underground coal mines since 1978. In that time the Department has not noted impacts to soil from hazardous elements from coal refuse disposal areas.

Comment 286: IDNR is actually receiving money for each ton of coal that is mined.

Response: The Department does not receive money from each ton of coal mined. The federal Office of Surface Mining levees a tax on coal companies based on their production. These moneys go into a national fund out of which the Abandoned Mined Lands Program is funded. The Department's Abandoned Mined Lands Division receives a grant from the Office of Surface Mining based on the projects they propose to reclaim. The size of the grant is not based on the amount of tax generated from coal mined in Illinois. These grant monies are for reclamation of lands mined prior to the enactment of the federal Surface Mining Control and Reclamation Act.

Comment 287: Can the township trustee board require the mine operator to post bonds for public roads and bridges that are in the subsided area?

Response: The issue raised in this comment is outside of the purview of the Department.

Comment 288: Does the bond required for the permit cover personal injury or damage to public roads?

Response: No.

Comment 289: Are the townships potentially assuming more liability as a result of the subsidence?

Response: The issue raised in this comment is outside of the purview of the Department.

Comment 290: How is planning for subsidence the same as minimizing subsidence?

Response: The regulations do not require the permittee to minimize subsidence. At 62 Ill. Adm. Code 1817.121(a)(3) states that, "If a permittee employs mining technology that provides for planned subsidence in a predictable and controlled manner, the permittee must take necessary and prudent measures, consistent with the mining method employed, to **minimize material damage** [emphasis added] to the extent technologically and economically feasible to structures and facilities..."

Comment 291: In Illinois there is a statutory duty to prevent surface subsidence. In addition SMCRA calls for state permits for underground mining to require the permit holder to implement measures to minimize damage.

Response: Section 4.02 of the Surface Coal Mining Land Conservation and Reclamation Act states that "Each operator shall adopt measures consistent with known technology in order to prevent subsidence causing material damage to the extent technologically and economically feasible, maximize mine stability, and maintain the value and reasonably foreseeable use of surface lands, except in those instances where the mining technology used requires planned subsidence in a predictable and controlled manner [emphasis added]..."

Comment 292: Since most of the soils in the shadow area are wetland soils, could they be left as wetlands after subsidence without being considered new wetlands?

Response: No.

Comment 293: Is the informal conference being used as a hearing for public roads?

Response: While no request was made to use the informal conference as a hearing for public roads, it did serve that purpose since comments concerning the roads were entered into the record and considered by the Department.

Comment 294: How does the IDNR ensure that there will be financial backing in the future to fix any problems? How long are the bonds good for? Is it for five years or is it forever?

Response: Bonds are held on the permit area until reclamation is completed.

Comment 295: Will the slurry impoundment be securely constructed to avoid accidents? How many slurry impoundments will there be in the permit? Where would we find the regulations regarding slurry ponds?

Response: The slurry cell is completely incised. No above grade impoundment is being approved under permit No. 399 at this time. Although not proposed under Permit No. 399, regulations regarding the engineering design of above grade impoundments can be found at 1817.49 and 1817.84.

Comment 296: Will the Department be able to monitor, manage and reclaim whatever needs to be done with this permit?

Response: Yes.

Comment 297: Public health and safety will be impacted if roads are closed because ambulances may not be able to get the victims fast enough.

Response: This issue is under the jurisdiction and responsibility of the appropriate road authority.

Comment 298: What part of the Deer Run Mine process requires water? Is the needed water of several different qualities? What are they? What would be the typical total daily withdrawal of water for use? What would be the proportion of the total withdrawals allocated to each part of the production process? What would be the proportions of each water quality type?

Response: The mine uses water in a variety of ways: in the preparation plant, to control dust on roads, and for personal use (bathhouse/potable water).

No specific water quality is known. It can be assumed that the water used for personnel will be potable, while water for dust control and the preparation plant may not need to be of the same quality.

Typical consumption of water at a mine of this size is one to two million gallons per day.

The proportion of water withdrawal allocated to the different uses at the mine site is an operational issue that the Department does not regulate.

Since no specific water quality is known, the amount is undetermined.

Comment 299: The application indicates water will be withdrawn from Shoal Creek Watershed No. 5. Who owns that lake, who is steward of that lake, and what gives a private entity the right to withdraw water from what was initially a lake constructed with public funds?

Response: Montgomery Land Company, LLC, an affiliate of the applicant is the owner of Shoal Creek Watershed Structure No. 5Lake and has the rights to the water.

Comment 300: Why doesn't the land owner have the right to say what will be done to his land?

Response: If the permittee does not have the right to subside the surface, the landowner can choose to maintain subsidence rights and not allow the surface to be subsided. For areas where the permittee has the necessary rights, the regulations require the land to be restored per 62 Ill. Adm. Code 1817.121(c). If a land owner does not agree with the proposed plan to comply with this regulatory requirement, the owner should contact the Department to determine what steps can be taken.

Comment 301: A commentor noted that the application indicates that if borrow areas are used as a source of cover material, these areas would be graded to approximate original contour. It was then asked how this would be possible since borrow areas usually become pits.

Response: The response to Appendix A, item no. 39 indicates that no borrow will be required.

Comment 302: Why doesn't the Department make the permit application "searchable files"?

Response: Applications are received in hard copy form. The Department scans the application for web publication. Scanned documents are simply images of the original documents. Scanned documents are not searchable. To convert the scanned documents to a searchable file might result in an end product which may not be an accurate reproduction of the original application.

Comment 303: A commentor stated that a reference was made to obtaining materials for reclamation by dredging local lakes and stream channels and asked which lakes and steams would be dredged and when would it take place. It is also asked if this material is stockpiled, where would that be and how would it be transported to the site.

Response: In response to Appendix A, item no. 43 reference to using dredge material has been removed.

Comment 304: One commentor noted that in response to Part V, page 1 (page 388 - question 1)A)) the application states that when "permanent cessation of operations occurs," if variances of extensions are necessary, timely requests will be made to the Department for approval. It was then asked if these requests would be made public. It was also asked if "permanent cessation of operations" refers to the currently proposed mine site permit area or does it include future expansion operations by this company.

Response: Requests for time extensions are not considered revisions to the permit as defined in 62 Ill. Adm. Code 1774.13 and so are not filed with the county clerk prior to review by the Department. The statement in the application refers to this application.

Comment 305: The commentor also stated that the response addressed above refers to Section 1817.62 concerning blasting, but that the rest of the application indicates there will be no blasting.

Response: See the responses to Appendix A, item no. 10.

Comment 306: What is the air quality monitoring program and fugitive dust control plan? (30 CFR 780.15)

Response: The regulation cited is a federal regulation referring to surface mining permit applications. The state equivalent pertaining to underground mining permit

applications, 62 Ill. Adm. Code 1784.26, does not require an air quality monitoring program. See Part IV(8) of the application concerning the fugitive dust control plan.

Comment 307: Discuss in detail the plan for completing each step in reclamation?

Response: See Part V(1)(A) of the application.

Comment 308: What measures are you taking to assure compliance with Clean Air and Clean Water Acts? (30 CFR 780.18).

Response: See Part V(1)(H) of the application concerning the Clean Air Act and Part III and Part IV(7) of the application concerning the Clean Water Act.

Comment 309: Is the final schedule of detailed design plans in the permit application?

Response: See Part V(1)(A) of the application.

Comment 310: Do the maps show all township, county and state roads and the 100-foot buffer zone?

Response: Township, county and state roads are shown on maps included with the application. The applicant is not required to differentiate the 100-foot buffer zone on the maps.

Comment 311: Discuss the location of coal storage, cleaning and loading areas.

Response: See Part IV(6)(J)(1) of the application.

Comment 312: Where do you propose location of topsoil, spoil and waste piles? Why is it so close to the hospital?

Response: See Part IV(2) of the application. No surface coal mining operations may be conducted within 300 feet of public building.

Comment 313: Where do you propose location of water diversion, collection, conveyance, treatment, storage and discharge facilities?

Response: See Part IV(7) of the application.

Comment 314: Where is the location of excess spoil fill areas? (30 CFR 779.24 and 25).

Response: The use of excess spoil is not proposed.

Comment 315: Who is the certified engineer that prepared the maps? Please provide the following:

Boundaries of lands and names of both surface and subsurface owners.
Boundaries of lands over which applicant has legal rights to mine.
Boundaries of lands proposed to be affected.
Location of all buildings within 1,000 feet of permit area.
Location of surface and subsurface man-made features such as power lines pipelines, septic system, ammonia, cable, water lines, private wells for drinking and household use.

Response: See the response to Appendix A, item no. 1 concerning the engineer(s).

See the response to Appendix A, item no. 1. All required information is shown on Underground Operations Map.

Comment 316: What are the boundaries of reference areas for determining revegetation success?

Response: The application does not propose to use reference areas.

Comment 317: Does IDNR provide necessary waivers or approvals if mining is proposed within 300 feet of an occupied dwelling or 100 feet of a public road or cemetery?

Response: The Department has the authority to allow surface coal mining operations within 100 feet of a public road pursuant to 62 Ill. Adm. Code 1761.11(d). Pursuant to Section 1761.15 the owner of the dwelling must provide the waiver consenting to surface coal mining operations within 300 feet of a dwelling. Section 1761.11(g) does not provide for a waiver to the 100-foot buffer zone of a cemetery.

Comment 318: Please supply information regarding climate, including seasonal precipitation, wind velocity, and seasonal temperature ranges. (30 CFR 779.18)

Response: The regulations cited (30 CFR 779.18) is a federal requirement not found in the state regulations.

Comment 319: What vegetation information are you using to adequately predict potential for reestablishing vegetation? (30 CFR 779.22)

Response: The federal regulations do not contain 30 CFR 779.22, and 62 Ill. Adm. Code 1779.22 was repealed.

Comment 320: I fully support the permit for the Deer Run Mine and can see no negative affects that it could possibly have.

Response: Comment forwarded to applicant.

Comment 321: If Hillsboro Energy LLC sells the mine to another entity will the county lose the royalty?

Response: The issue raised in this comment is outside of the purview of the Department.

Comment 322: Does the State program provide the same level of protection as federal rule 30CFR 733.12(a)(2)?

Response: The rule reference is a requirement of the federal Office of Surface Mining oversight of the State program. Any inquiries based on this regulation should be directed to that office.

Comment 323: Part II (H), page 4 - This topic refers to actual start of mining and acres affected. There is no record of the sections by number or actual acreage to be involved as was indicated for the mine site surface facilities.

Response: There is no requirement to itemize by section and township acreage to be undermined. Map 6 S.F. "Underground Operations Map" clearly shows areas of room and pillar mining and areas of longwall extraction. This map is sufficient to correlate surface features and boundaries such as township, section and range designations.

Comment 324: Does the permit area and/or shadow area include areas designated unsuitable for surface coal mining and reclamation operations? What determines that mining under prime farmland is proper, using the longwall method? What studies have been done to validate that mining these types of areas does not violate the Lands Unsuitable for Mining regulation.

Response: No. The regulations do not prohibit longwall mining under prime farmland. The Department has determined that the Lands Unsuitable for Mining provisions of the regulations do not apply to areas impacted by the underground extraction of coal.

Comment 325: Part II (E)(1) & (2) - The response N/A is not a proper response. Without proof of studies by a qualified body this is a response that should not be allowed.

Response: It is assumed the commentor is referring to Part II(10)(E)(1)&(2) of the application. See response to Appendix A, item nos. 6 and 16.

Comment 326: Where is the information for 12B, on page 6 of Part II of the application? This question requires "the elevation and location of all monitoring stations used to gather data for water quality and quantity, fish and wildlife, and air."

Response: See Hydro-Geological Map (Map 4) and Part VII, Appendix B of the application.

Comment 327: The application states that the reclaimed lands will be suited for pasture, but later states that grazing is not proposed. Isn't grazing the primary use of pasture and if the reclaimed land is called pasture, what else would be its use?

Response: These areas are to be reclaimed to fish and wildlife habitat. Also see the responses to Appendix A, item nos. 4, 7, 14 and 17.

Comment 328: Describe the post-mining land use and how it will be achieved. Include comments of surface owners and state and local agencies. (Premining forest lands or crops on prime farmland to pasture or swampland is not a higher or better use.)

Response: See the responses to Appendix A, item no. 14.

Comment 329: The reclamation section discusses the requirements to reclaim a structure 75 feet high with a base diameter of 7,430 feet. It appears sections 1817.49, 1817.83 and 1817.84 address this type of structure. If this is the case, how can a structure of this type be retained permanently as part of the postmining land use?

Response: The regulations at 62 Ill. Adm. Code 1817.49 has varying requirements based on the size of a given above grade impounding structure. As proposed, the structure in question is not an impounding structure. The 75 foot tall structure is a refuse pile. Therefore section 1817.83 does apply but 1817.84 does not. The refuse pile will not be retained as a final land use, but will reclaimed to fish and wildlife habitat.

Comment 330: What will be the final disposition of the material that structures have been impounding? Will this material be moved off site? Part V, page 8 B)2) states that the slurry cells will be removed by covering with coarse refuse or other appropriate material. How can covering slurry cells be called removal? If it must be removed off site how will it be transported?

Response: As indicated in the application, the slurry cell will be covered "with coarse refuse or other appropriate material to prevent future impoundment of water or slurry." The material will not be removed from the site. The applicant's use of the phrase "slurry cells will be removed" is a misnomer. What is meant is that the incised slurry cells will no longer impound water.

Comment 331: The regulations define a refuse pile as a surface deposit of coal mine waste that does not impound water, slurry or other liquid material, therefore the mixing of flue gas desulphurization sludge should not be allowed in a refuse pile.

Response: The permit application does not request the mixing of flue gas desulphurization sludge in the refuse pile.

Comment 332: What is a "gob-pile" and what regulations apply to its construction?

Response: A gob pile is an area used for the disposal of coarse coal refuse. Applicable regulations are found at 62 Ill. Adm. Code 1817.81, 1817.83, and 1817.87.

Comment 333: What is described as a gob pile or refuse disposal area meets the definition of an impoundment or impounding structure. For the purposes of permanent reclamation, just placing four feet of cover over an impoundment is not in compliance with Section 1817.49(a) & (c).

Response: Pursuant to 62 Ill. Adm. Code 1817.84 impounding structures constructed of coal mine waste or intended to impound coal mine waste shall meet the requirements of Section 1817.81. The applicant is not proposing to construct an impounding structure at this time.

Comment 334: How much will noise, dust and other contaminants affect those confined to institutions in the shadow area, such as the Hillsboro Hospital, a nursing home and the prison? Can they mine under a nursing home? Will those people be moved while mining is going on close to their buildings? Will the coal company be responsible for the expense involved?

Response: The Department does not regulate noise. Dust suppression is addressed in the approved permit. The hospital is not within the proposed mining area. The prison is not in the area of planned subsidence. There is no known nursing home within the approved shadow area of Permit No. 399. There should be no need to move anyone from the facilities as no impacts are proposed nor anticipated.

Comment 335: The gob pile is to be situated across from the Hillsboro Hospital, a nursing home facility and a residential area. The particulate matter blowing from the pile contains many contaminants including sulfur dioxide and, therefore, pose a health risk.

Response: The application address step to be taken by the applicant to control dust.

Comment 336: Is blasting used to loosen coal for longwall mining? How often does that occur?

Response: No.

Comment 337: Part V, page 1 - The application indicates that reclamation will be completed in accordance with Section 1817.62. This rule deals with blasting not reclamation. This part also makes reference to Section 1817.01 and 1817.113. There is no Section 1871.01. What facilities do you have for storage and handling of explosives? Describe your monitoring system in the blasting plan.

What are the blasting parameters (pattens, size, number, depth, sequence, etc.) For the permit area?

Response: See the responses to Appendix A, item no. 10. Blasting is not proposed in this application.

Comment 338: Does IDNR give approval to blast within 500 feet of active underground mine? Discuss the surface effects of blasting less than 500 feet. What effect does it have on old mines?

Response: Blasting is not proposed in this application.

Comment 339: I would also like to ask why so much land that is currently used for cropland, is not being reclaimed to pre-mining use? On page 8, Part V (version 1/10) of the permit application, it is indicated that 601 acres will be reclaimed as "low capability lands."

Response: See the responses to Appendix A, item no. 14 and Appendix D of the application.

Comment 340: Part II- Page 2 - At 6) the applicant is directed: "Provide a narrative of land capability and productivity of the proposed permit area prior to mining which shall provide an analysis of 1)The capability of the land to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover and hydrology. The response (on Page 3) appears to be straight out of the USDA soil survey, which, with regard to reliability, has some merit. However, nothing is said in this response about topography, vegetative cover, or hydrology. Each of these is of critical significance when surface subsidence is in prospect, and the nature of damage remediation must be investigated.

Further, little is said about potential urbanization, as a land use, and any difficulties arising from subsidence in converting to that use.

Changes in the shape of the land surface can be expected to alter drainage patterns, with impacts which need evaluation on the East Fork of Shoal Creek and on the water bodies to which it is tributary. Similarly, the courses and quantities of sub-surface waters, after subsidence, can be expected to have been altered, with impacts perhaps needing remediation of a degree possibly up to restoration.

Response: See the response to Appendix A, item no. 14. In addition the permit area is not planned to be subsided.

Comment 341: Part II - Page 7 - 13)B) asks whether, on the Soil Resources map, there are shown any units correlated (classified?) as prime farmland, and, if so, to provide their acreage. The response is, "Refer to Attachment 11.6.A.2. That Attachment, whatever its uses, says nothing about Prime Farmland.

Response: The prime farmland is identified in the referenced attachment.

Comment 342: If we permit prime farmland to be destroyed via subsidence it will never again produce food and fiber.

Response: See the responses to Appendix A, item no. 59.

Comment 343: Deer Run Mine does not plan to restore any cropland in the support facilities area. This amounts to the loss of all 495.3 acres of productive cropland plus an additional loss of 70.3 acres of forest land within the support facilities area. This is unacceptable based on Section 1817.133 Post-Mining Land Capability. All of these lands can be reclaimed to their pre-mining condition and/or be reclaimed with at least four feet of suitable root medium cover. It is understood that the covered refuse areas can not be returned to cropland but they can be covered with root medium material rather than "covered with four (4) feet of non-toxic" material. These covered refuse areas with four (4) feet of root medium would be compatible with the surrounding cropland. All of the root medium for reclamation can be borrowed and stockpiled from the proposed refuse disposal areas. Borrowing the root medium prior to any refuse disposal will increase the capacity of the refuse area and reduce the loss of cropland after mining.

Response: See the responses to Appendix A, item no. 14.

Comment 344: Deer Run Mine did not provide any information concerning the quality (soil pH, P, K and texture (% sand, % silt. % clay) or quantity of the available borrow material from the refuse disposal area. This information was excluded and/or not required because of the mine's desire not to restore any cropland or place root medium quality material over the refuse area for reclamation. Deer Run Mine may need this root medium as a liner for the refuse area to protect the groundwater. If groundwater protection is a concern, Deer Run Mine could use an artificial liner and use the root medium for reclamation. Deer

Run Mine needs to provide quality and quantity information concerning the available borrow material from the refuse disposal areas.

Response: Soil boring information is available in Section III of the application. Also see the responses to Appendix A, item no. 18.

Comment 345: It is my understanding that the courts have permitted exemptions from prime farmland requirements for many underground mine surface support facilities in the past. Many of those mines were opened several years ago and had no available areas for borrow except prime farmland areas. The proposed Deer Run Mine should not be grouped with other existing mines for exemption from prime farmland requirements. All the prime farmland acreage should be accounted for and restored.

Response: See the responses to Appendix A, item no. 14.

Comment 346: In the planned subsidence areas, Deer Run Mine only proposes the use of enlarged drainage ditches as a way to correct cropland drainage problems resulting from planned subsidence. Due to the wider and deeper drainage ditches additional cropland acres will be lost. The use of large diameter pipe should be incorporated into the overall surface drainage plan to reduce the loss of cropland. The proposed surface drainage plan will not correct the sub-surface drainage problems that will result from planned subsidence. A sub-surface tile drainage system must be designed as a part of the overall drainage plan for these planned subsidence areas to restore the cropland to pre-mining capability.

Response: See the responses to Appendix A, item no. 59.

Comment 347: Deer Run mine needs to demonstrate that they can technically restore the pre-mining capability of the cropland in both the support areas and planned subsidence areas before this mine permit is issued. The destruction of Illinois' most valuable resource (cropland) which provides us food, fiber and energy on an annual basis in exchange for the one time removable, on another valuable Illinois natural resource (coal) does not make any long term sense. The coal needs to remain in Illinois natural resource until it can be demonstrated that coal can be mined without destroying the pre-mining capability of the cropland in both the support areas and planned subsidence areas.

Response: See the responses to Appendix A, item no. 59.

Comment 348: HEL does not address the post-mining use of 864.3 acres of cropland in the shadow area. If the intent is to reclaim the cropland to its pre-mining capability, HEL should conduct soil analyses and crop yields to facilitate reclamation. Also, HEL did not use the Illinois State Geological Survey data to examine surface subsidence on flat fertile Illinois prime farmland.

Response: See the responses to Appendix A, item no. 59.

Comment 349: Land studies for crop yields should be compiled in order to have a base line of the expected yields after mining if a property is expected to be reclaimed for this purpose.

Response: See the responses to Appendix A, item nos. 13 and 59.

Comment 350: What crop statistics have been used to quantify the effect of longwall mining subsidence on the flat farm fields of Montgomery County?

Response: See the responses to Appendix A, item no. 13. The Department requires the use of reference document Bulletin 811 from the University of Illinois.

Comment 351: What definitive information do you possess which proves that there will absolutely be no ill effects on crop production from the longwall mining subsidence.

Response: See the responses to Appendix A, item no. 59.

Comment 352: The preservation of farm land as a valuable natural resource was not addressed. On Attachment V.2.A, the pre-mining cropland acreage is listed as 495.3 and 0.0 acres on the post-mining land use. This lost cropland is located within the permit area, but the post-use of 864.43 acres of cropland in the 1000-foot buffer area was not addressed. Longwall mining destroys flat farm land that cannot be technically or economically revived to a productive natural resource.

Response: The 1000 foot buffer area is outside the permit area and is general reference information. As it is outside the permit area, no questions are asked about it. Also, see the responses to Appendix A, item no. 14.

Comment 353: How can bottomland be restored to its original productivity after it is dropped five feet in longwall mining? My field grows corn that made 200 bushels to the acre in 2005 and 2007....where do you know of a "reclaimed bottomland field" that will do that?

Response: See the responses to Appendix A, item no. 59.

Comment 354: The crop yield figures contained in the application seem to be very low when compared to the actual current production.

Response: See the responses to Appendix A, item no. 13.

Comment 355: What standards will be used to ensure that the land is restored to its former productivity?

Response: See the responses to Appendix A, item no. 13.

Comment 356: Why isn't the Department requiring certified soil testing to determine the productivity and also the structure of the soil? The structure of the soil in these areas to be subsided must be determined in order to establish the best methods to be employed for drainage.

Response: See responses to Appendix A, item no. 13. In addition, soil structure information is available in the Natural Resource Conservation Service (NRCS) published soil survey.

Comment 357: The application states that "No pest or disease control other than typical agronomic practices employed for production of agricultural crops." Since this is not proposed to be returned to agricultural production, what exactly does this mean?

Response: The Department finds no conflict in this statement. The response is self explanatory.

Comment 358: Why is there no provision for the undisturbed land that has been used for buildings and facilities at this mine site to be returned to productive cropland instead of unproductive wetlands and wildlife areas?

Response: The post-mining land uses proposed in this application are acceptable land uses. See Appendix D of this permit finding document for further discussion of this issue.

Comment 359: What technical experience and proof does Hillsboro Energy have to show that 0% to 3% slope prime farmland can be returned to previous levels of crop productivity once they have been longwall mined and subsided?

Response: See the responses to Appendix A, item no. 59.

Comment 360: How much of the cropland found on the mine site will be returned to its original land use? The regulations require it be returned to a higher or better use.

Response: See the responses to Appendix A, item no. 14 and Appendix D of this permit finding document.

Comment 361: How many acres in the permit and shadow area are classified as prime farmland? What are the laws regulating longwall mining under prime farmland? How much of the shadow area is 0-2% slope? How much longwall mining has been done on 0-2% slope in Illinois? How much of this land has been restored to premining condition? What percentage of cropland has been lost in the restoration process?

Response: The requested soil information for the permit area is found in Attachment II.6.A.2. See also the responses to Appendix A, item no. 13. The permit is subject to the Surface Coal Mining Land Conservation and Reclamation Act. There are no sections specific to longwall mining under prime farmland. Soil and slope information is available to the public from the NRCS. Approximately 25 thousand acres have been undermined by longwall mining in the last 30 years. Some of these acres were undoubtedly 0-2 % slopes and do not have restoration issues associated with them.

Comment 362: How many soil samples were taken per acre and how are these meager numbers justified?

Response: Soil sample information is available in the Soil Resources Map and soil core information is available in the application and provide adequate information for the Department to assess existing conditions and the applications.

Comment 363: Does your soil survey include a description and analysis of the present and potential productivity of existing soils? (30 CFR 779.21) Will you be using the overburden or materials to supplement or substitute topsoil? If you substitute topsoil will it be equal to or more suitable for sustaining vegetation than the existing topsoil?

Response: Soil information is presented on the Soil Resources Map. Also see the responses to Appendix A, item no. 13. No topsoil substitution is proposed.

Comment 364: Please provide a description of pre-mining condition, capability, and productivity of land within permit area? (30 CFR 779.22)

Response: The information is provided in Part II of the application and also see the responses to Appendix A, item no. 13.

Comment 365: How many locations of all the core samples and borings are listed in the permit?

Response: The information is provided on the Soil Resources Map and the Hydro-Geological Map (Map No. 4).

Comment 366: What is your plan for backfilling, soil stabilization, compaction and grading?

Response: The information is provided in Part V of the application.

Comment 367: What is your revegetation plan including a schedule, seed mixtures, planting methods, mulching techniques and measures for determining success?

Response: The information is provided in Part V of the application.

Comment 368: Detail all the potentially acid and toxic-forming strata within permit area.

Response: The information is provided in Parts III and IV of the application.

Comment 369: Can the reclamation be accomplished as required by rules? What is cost to reclaim prime farmland? What method? What time frame?

Response: The Department has determined that the required reclamation can be achieved. See the main body of this permit finding. Information concerning costs, methodology and time frames are found in Part IV and V and the applicant's responses to the modification letter.

Comment 370: What are the area and structural geology of permit and adjacent area, including lithology of the strata?

Response: The information is provided in Part III of the application

Comment 371: Give a narrative description of the geology of the permit area and the shadow area.

Response: The information is provided in Parts III and IV of the application

Comment 372: Discuss the analysis of logs describing information from drill holes.

Response: The information is provided in Parts III and IV of the application

Comment 373: Give chemical analysis of each stratum within overburden, the coal seam, and the stratum immediately below coal seam.

Response: The information is provided in Parts III and IV of the application

Comment 374: What is the character of the bedrock?

Response: The information is provided in Parts III and IV of the application

Comment 375: Are there any adverse geologic conditions?

Response: The information is provided in Parts III and IV of the application.

Comment 376: The rules call for a reconnaissance inspection to determine whether prime farmland exists within permit area. (30 CFR 785.17 (b)). Which method will you use...on site inspection or existing soil survey to identify and locate prime farmland? Who will be doing the survey?

Response: The information is provided in Part II of the application. The soil map submitted is from the soil map prepared by the NRCS.

Comment 377: How many acres are considered prime farmland? What method to determine productivity level before subsidence and after subsidence? (30 CFR 785.17 (b)(3). Who makes this determination?

Response: The information is provided in Part II of the application. See the responses to Appendix A, item no. 13. The Department will make the assessment if land capability has been adequately restored.

Comment 378: Describe the soil survey including a description of soil mapping units and representative soil profile? Who does the soil survey?

Response: The information is provided in Part II of the application. The soil map submitted is from the soil map prepared by the NRCS.

Comment 379: Discuss the chemical and physical properties of soil in the permit area and shadow area.

Response: The information is provided in Part II of the application. See also the responses to Appendix A, item no. 59.

Comment 380: Discuss the a soil reconstruction plan?

Response: The information is found in Parts IV and V of the application. See also the responses to Appendix A, item no. 59.

Comment 381: Do you compare the soil properties with agricultural school studies or other scientific data for areas with comparable soils, climate and management, etc.? Discuss the difference and identify the source.

Response: See the responses to Appendix A, item no. 13.

Comment 382: Please identify your source of information on pre-mining productivity of soil, including average yields of food, fiber, forage or wood products obtained under high levels of management?

Response: See the responses to Appendix A, item no. 13 and Part II of the application.

Comment 383: The regulatory authority must consult with SCS, NRCS, and Dept. of Agriculture which shall review and comment on application and suggest revision as necessary. (30 CFR 785.17 (d) Identify the authority and when did they get the application. When is it due?

Response: The SCS is the prior agency name for NRCS. Copies were forwarded to the NRCS and Illinois Department of Agriculture (IDOA) on January 7, 2008. Comments were received from them on March 17, 2008 and February 15, 2008, respectively. Their comments are found in Appendix B of this finding.

Comment 384: For the general liability policy, I believe is what we were referring to earlier about the longwall or the subsidence. If I understand it correctly, in the permit, $2 million is the limit. And those typically last a year, are renewed year to year, with a 30-day expiration notice. If that were to happen, like you said, 20 years down the road, then are there funds being set aside to help take care of this?

Response: The coal company can either hold liability insurance to cover any areas impacted by subsidence, or alternatively, a bond can be required after the subsidence damage occurs pursuant to 62 Ill. Adm. Code 1817.121(c)(3). The two distinct areas, permit and shadow area, are handled differently in the regulations in terms of bonding. The federal Office of Surface Mining has determined that the permittee remains liable for subsidence damage in perpetuity. Funds are not set aside to pay for the repair of subsidence that may occur in the future.

Comment 385: I would ask the department to consider requiring the company to provide a bond, or self insure by fund escrow, itself against claims for unresolved damages caused during operations that remain unresolved or unpaid beyond

one year from the date of completed site specific operations. I would ask the department to explain how this performance would be guaranteed in the event of a company dissolution or bankruptcy.

Response: The Department has required the applicant to post the bond required by law and does not have the regulatory authority to go beyond those requirements. Once the mine closes and reclamation is complete the bond is released. If subsidence occurs after final bond release the Department would pursue whatever entity still exists to require repairs. If no such entity exists then there would be no one to perform the repairs. This is the advantage to planned subsidence. Since subsidence occurs simultaneous to mining being done repair work can be accomplished while the company is still on site and available to do the work.

Comment 386: The coal company has to use bonds to "cover" their liability? Who determines the dollar amount of the bonds? Is this bond posted at the beginning of site development? Are there to be separate bond posting for reclamation and other aspects of mine site development? Will the mine operator be required to post a cash bond with the Department or will a bonding agent be employed? Will the amount of bond required be determined in today's dollars, or will inflation be considered? Will the cost of replacing drainage tiles be included in the reclamation or performance bond? Describe the areas to be bonded. What is the formula? Please provide a detailed cost estimate for reclamation with supporting data in both permit area and shadow area. What is the dollar amount of the bond?

Response: Part V of the application provides a reclamation cost estimate. This is an estimate required in the application, but the Department determines the final bond amount. It has required a bond of $10,375,000.00 for the permit area.

The bond is determined based on current cost, but the Department has the authority to periodically review those cost and make adjustments as necessary.

The permit area is the area bonded. Subsidence is bonded as it occurs or is covered by liability insurance. Tiles impacted by subsidence are covered in this manner.

Comment 387: If a cash bond is posted and the bond is placed in an escrow account, who will benefit by the interest generated?

Response: If a cash bond is posted, it is deposited as a treasury draft in which the State Treasurer and the state would receive any interest earned.

Comment 388: Please explain to me why a cemeteries can be subsided? We have Illinois law that doesn't allow vandalism of cemeteries, but we let the coal companies get by with damaging graves of an entire country cemetery! When people bought those lots they thought they would be stable land for their loved ones.

Response: If the permittee has the legal right to subside a cemetery, the Department does not have regulatory authority to prevent it.

The only known cemetery within the approved shadow area is the County Farm Cemetery. This cemetery is not over the area of full extraction but is within the projected angle of draw. Based on the projected subsidence, less than 0.5 feet of subsidence is anticipated at the cemetery. The company has committed to employing a professional monument company to prepare for subsidence and make necessary repairs. The regulations at 62 Ill. Adm. Code 1817.121(c)(2) requires that "The permittee must promptly repair or compensate the owner for material damage resulting from subsidence caused to any structure or facility that existed at the time of the coal extraction under or adjacent to the materially damaged structure..." Based on the location of the cemetery relative to the subsidence profile, flooding is not anticipated but would be corrected if drainage interruptions occurred.

The federal Office of Surface Mining has determined that the prohibitions of Section 522(e) of SMCRA (the federal law) - which correspond to Section 7.01 of the state Act - do not apply to subsidence due to underground mining. This interpretation was challenged in court and the U.S. DC Circuit Court of Appeals has ruled that this interpretation is valid.

Comment 389: If the mine is allowed to go under cemeteries, are they planning to do so and what will happen to the stones after subsidence? What would be done about flooding of a cemetery?

Response: The only known cemetery within the approved shadow area is the County Farm Cemetery. This cemetery is not over the area of full extraction but is within the projected angle of draw. Based on the projected subsidence, less than 0.5 feet of subsidence is anticipated at the cemetery. The company has committed to employing a professional monument company to prepare for subsidence and make necessary repairs. The regulations at 62 Ill. Adm. Code 1817.121(c)(2) require that "The permittee must promptly repair or compensate the owner for material damage resulting from subsidence caused

to any structure or facility that existed at the time of the coal extraction under or adjacent to the materially damaged structure..." Based on the location of the cemetery relative to the subsidence profile, flooding is not anticipated but would be corrected if drainage interruptions occurred.

Comment 390: The County Farm Cemetery with 80 people in it (oldest being 1978). Do you plan to subside it? If so, what will it cost for reclamation to replace coffins or relocate? Not just reposition headstones.

Response: The regulations at 62 Ill. Adm. Code 1817.121(c)(2) require that "The permittee must promptly repair or compensate the owner for material damage resulting from subsidence caused to any structure or facility that existed at the time of the coal extraction under or adjacent to the materially damaged structure..." The cost of reclamation would be determined after subsidence occurs.

Comment 391: Miller Bear Creek Cemetery with 43 people buried the oldest being Dora Schluckebier 1/23/1878. Section 18 of East Fork Township. The rules say a buffer zone is 100 horizontal feet but if you mine 500 feet under the cemetery, how much will it subside?

Response: This cemetery is not in the shadow area.

Comment 392: Pursuant to the FOIA, 5 ILCS 140/1 et seq., Sierra Club requested "copies of all records generated by, or in the possession of, the Illinois Department of Natural Resources, Office of Mines and Minerals (including the Office of the Director) regarding Hillsboro Energy's proposed facility." Sierra Club also requested that any fees for locating, duplicating, or transmitting these documents be waived because they would "primarily benefit the general public." 5 ILCS 140/6. And the Sierra Club requested that "if [the above requests were] denied in whole or in part, [that IDNR issue] a formal determination which explicitly refers to the statutory basis for [its] denial and which describes Sierra Club's rights to appeal within [IDNR]."

IDNR received the above FOIA requests on February 8, 2008. IDNR deferred its response to the Sierra Club's FOIA request. IDNR did not explain why it was necessary to defer its response, rather it simply inserted language from 5 ILCS 140/3(d)(vi) ("The request for records cannot be complied with by the public body within the time limits prescribed by paragraph (c) of this Section without unduly burdening or interfering with the operations of the public body").

Eventually IDNR did respond to the initial request. But, in granting the request for documents, IDNR charged the Sierra Club $102.20. Sierra Club's fee waiver request was denied without explanation. Moreover, IDNR did not fully comply with the Sierra Club's FOIA request: reports, parts of emails, CD's with pictures were all missing—again without explanation. For all practical purposes IDNR denied Sierra Club's FOIA request "in part." IDNR did not issue a formal determination and did not provide a statutory basis for this partial denial.

By these actions, IDNR has acted contrary to the declared public policy of Illinois and frustrated the goals of the FOIA. The materials requested by the Sierra Club were necessary for citizens to fully participate in the recent public hearings with IDNR regarding the status of the Deer Run Mine Application. By delaying and denying without explanation Sierra Club's FOIA requests, citizens of Montgomery County were denied, by their government, an opportunity to "fully and freely" discuss the mine application; were obstructed from information that is essential to "making informed political judgments;" and were prevented from "monitoring government to ensure that it is being conducted in the public interest." 5 ILCS 140/1.

Sierra Club requested that a repository be created at the county clerk's office for all of the FOIA material. To date, only the application and the comments received by IDNR are kept at the repository—something which IDNR had already done prior to Sierra Club's request.

When questioned about the above by a Sierra Club Staff Member, the IDNR Land Reclamation Division Supervisor, Scott Fowler, responded that all of the information was available at the county clerk's office. But, only the application and the comments—which were at the county clerk's office prior to Sierra Club's FOIA request—can be found there. By its inaction regarding the repository request, IDNR has blocked the people of Illinois from accessing the information and materials they are due.

Response: Requests for documents under the state Freedom of Information (FOIA), 5 ILCS 140, are not administrated by the Department's Office of Mines and Minerals. All objections to document availability procedures or fees under FOIA may be appealed pursuant to Sections 8, 9 and 10 of the FOIA, 5ILCS 140/8-10. Timely appeal was not filed accordingly; Sierra Club had been deemed to have waived its right to appeal under FOIA, 5ILCS 140 et. al.

APPENDIX C
Hillsboro Energy, LLC, Deer Run Mine
Assessment and Findings of Probable Cumulative Hydrologic Impacts

The applicant must submit a determination of probable hydrologic consequences of the proposed mining and reclamation operations, both on and off the permit area, as required by 62 Ill. Adm. Code 1784.14(e).

Pursuant to 62 Ill. Adm. Code 1773.15(c) (5), the Department must make an assessment of the probable cumulative impacts of all anticipated coal mining on the hydrologic balance in the cumulative impact area, in accordance with 62 Ill. Adm. Code 1784.14(f), and find in writing that the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area.

The following assessment and findings are intended to fulfill the above requirements.

I. GENERAL INFORMATION - The proposed Deer Run Mine permit (Permit No. 399) is for an underground coal mining operation consisting of approximately 5,618 acres, which includes 803.5 acres used as surface support facilities. The surface support facilities will include a coal preparation plant, reclaim tunnels, parking lots, access roads, drainage control structures, office buildings, changing rooms, assembly rooms, warehousing facilities, storage facilities, elevator facilities, ventilation facilities, refuse disposal areas, overland conveyors, screens, crusher, power distribution facilities, power lines, water lines, rail loop and loadout facilities, stockpile areas and other associated facilities. Hillsboro will extract the Herrin No. 6 Coal Seam at a depth ranging from 440 to 550 vertical feet from the surface, utilizing both room and pillar, and longwall mining methods within the 4,815 acres of shadow area. The areas utilizing room and pillar mining are designed to prevent subsidence while the longwall mining areas will have planned subsidence.

The proposed permit area is located in parts of Sections 7, 8, 17, 18, of Township 8 North, Range 3 West, and Sections 12 and 13 of Township 8 North, Range 4 West of Montgomery County, Illinois. The site is surrounded by a mixture of privately owned properties, consisting of rural residences and/or agricultural lands and the residential/commercial areas of the town of Hillsboro, Illinois.

II. ASSESSMENT -

A. Cumulative Impact Area -

The Cumulative Impact Area (CIA) is that area, including the permit area, within which impacts resulting from the proposed operation may interact with the hydrologic impacts of all other past, current and anticipated coal mining on the surface and groundwater systems.

The proposed permit area is located in the glaciated upland area of south-central Montgomery County. It is situated within the upper reaches of several larger watersheds, known as the Shoal Creek (which includes the West Fork, Middle Fork and East Fork) drainage systems. Unnamed tributaries and associated branches pass through the permit area. The entire permit area eventually drains to Shoal Creek. There are no USGS gaging stations located on the Middle Fork Shoal Creek; which will eventually receive drainage from the proposed permit area. The closest USGS gaging station on Shoal Creek is near Pierron, Illinois. The drainage area of Shoal Creek is approximately 678 square miles (433,920 acres) at this USGS gaging station (05593945). This gaging station is over 30 miles south of the proposed permit area; therefore its use is inappropriate, given the large drainage area.

The Cumulative Impact Area for surface waters has been defined as the 3.93 square mile (2,517 acre) area which encompasses the Shoal Creek Watershed No. 5 Structure and Central Creek (See Map No. 1) and will include those areas of anticipated mining operations that may impact this assessment area. The watershed of Middle Fork Shoal Creek (which includes the unnamed tributary known locally as Central Creek), just below the confluence of the two streams, has been estimated to be approximately 88 square miles (56,320 acres). The proposed permit area is approximately 1% of the watershed of Middle Fork Shoal Creek, making impacts from the mine operation negligible due to the volume of water contributing to the stream at the confluence with Central Creek. Therefore, the surface water CIA was limited to the area depicted on Map No. 1. The applicant established a stream sampling point immediately downstream of the Shoal Creek Watershed No. 5 Structure on Central Creek. The Shoal Creek Watershed No. 5 Structure eventually discharges to the Middle Fork Shoal Creek approximately two miles downstream (to the northwest). Central Creek winds through the City of Hillsboro, where a majority of that city's surface water drainage is directed.

The Cumulative Impact Area for groundwater is proposed to be an approximately 1,290 acre area, which wholly encompasses the proposed permit area, the watershed of Structure No. 5, and a 48 acre tract of land located north of the proposed refuse disposal area (RDA), where groundwater has been identified to flow toward the northeast (See Map No. 1). The CIA has been selected based upon the Department's assessment of the possible hydrologic impacts which may occur as a result of mining operations. The subsurface hydrologic components considered in this assessment include all significant water-bearing units in and within the vicinity of the proposed permit area (See Map No.1). Historical mining in the area is not expected to be a source which would cumulatively add to expected impacts from the proposed mine. Because no other areas of future mining are known, no cumulative impacts to groundwater are expected due to the lack of a widespread, regional aquifer system.

Historical mining has occurred within the above-identified surface water CIA. However, the Department of Natural Resources, Office of Mines and Minerals Abandoned Mine Reclamation (AML) Division concluded that the Hillsboro Mine, which operated from 1888 to 1941, contained no hazards or problems which required reclamation, other than filling of the airshaft. According to AML personnel, there are no surface effects remaining, nor is there any unreclaimed refuse remaining. The surface effects area is currently occupied by a concrete plant. Therefore, the historical mine workings should not cumulatively add to the potential impacts from the Deer Run Mine.

The applicant reports the presence of an abandoned oil well within the proposed permit area. According to the Illinois State Geologic Survey (ISGS), this well was drilled in 1950 as a "dry" hole (i.e., non-producing). The well was plugged after drilling. No significant hydrologic impacts are expected from the presence of this abandoned borehole. The applicant states that if the borehole is encountered during construction activities, it will be properly handled.

It should be noted that the Illinois Environmental Protection Agency (IEPA) has previously conducted a study of the surface water in the vicinity of Hillsboro, Illinois in relation to a former zinc smelter site. The IEPA's study area included surface water sampling points along Central Creek (D2, D3 and D4) and Middle Fork Shoal Creek (A1, E1, C1, C2, C3 and OIL-02). The Central Creek data is from September 1985 and was not specifically conducted for mine-related parameters; however, the samples were analyzed for total metals. In addition to the 1985 data, the IEPA has collected surface water samples as recently as August 2007 from points along the Middle Fork Shoal Creek. This data indicates that coal mine-related metals (iron and manganese) have previously been detected in the streams in the area, although generally not at levels above applicable standards. Map No. 3 depicts the locations of each of the IEPA's surface sampling points. A summary of select sampling data is presented in Attachment A.

B. Geology –

Regional bedrock geology of the area consists of Pennsylvanian system formations. Sixty percent of the Pennsylvanian system strata are classified as sandstones, while most of the remainder of the strata is siltstones and shales. A small percentage of the remaining strata (approximately one percent) of the Pennsylvanian system are classified as coal and/or limestone units. Known significant geologic features that exist regionally include the Anvil Rock Sandstone Channel cutout area, which is located to the north-northeast of the proposed permit and shadow areas, but is not known to exist within them.

Unconsolidated deposits within the permit area are Pleistocene in age, and range from 110 to 115 feet thick and consist mainly of clays, but some gravels and discontinuous

sands also are present. Per the applicant, the discontinuous sand deposits do not generally perform reliably as a significant aquifer.

Site-specific geology, interpreted from the boring and corehole logs, submitted with the application indicates the depth to the Herrin No. 6 Coal Seam ranges from 443 vertical feet to 551 vertical feet with seam floor elevations ranging from 146 feet below MSL in the southwest corner of the shadow area to an elevation of 118 feet below MSL in the southeast corner. The regional dip of the Herrin No. 6 Coal Seam is less than one percent to the southeast. The Herrin No. 6 Coal is overlain by alternating shale and limestone layers. The roof material of the Herrin No. 6 Coal has been described as a thin black shale. The target coal seam is approximately seven and a half feet thick in the area.

C. Surface Water -

During active operations, surface runoff from affected areas will report to one of seven sediment ponds constructed for this operation. At the end of mining all sediment ponds will be removed and the land uses restored. Currently, no developed water resources exist within the proposed permit area, however several small ponds are present within the proposed shadow area.

Surface Water Quantity - Surface water flow will be affected as a result of the operations at the proposed facility. The applicant has plans for construction of multiple sedimentation ponds within the permit area. During mining these ponds will retain rainfall which previously ran off unabated to the receiving streams. This added detention time could have two possible effects. The first would be that the peak flows from storm events could be decreased because of added detention time afforded by these structures. The second possibility, related to the first, is that base flows of the receiving stream could be increased as the ponds would more slowly release water after rainfall events than before the ponds were in place.

The upper reaches of the unnamed tributaries to Middle Fork Shoal Creek are classified as intermittent streams. Shoal Creek is a perennial stream. Perennial streams, in a normal year, are streams, or parts of streams that flow continuously during all of the calendar year as a result of groundwater discharge or surface runoff. Intermittent streams are streams that flow periodically during a calendar year. The Middle Fork Shoal Creek has a zero 7Q10 flow for its entire length (Singh and Stall, 1973). A 7Q10 flow is defined as the lowest average flow that occurs for a consecutive seven-day period at a recurrence interval of 10 years.

The applicant collected flow data from three stream sampling points, (D-1, D-2 and D-3), January 2007 to September 2008. See Map No. 2 for location of the surface water monitoring points. During this monitoring time, each of the stream sampling points had

multiple periods of no-flow; however, some samples were collected from pooled water in the non-flowing streams. From the flow data submitted by the applicant, the unnamed tributaries do not flow on a regular basis, yet given the estimated drainage areas for each point, the streams would be considered to be intermittent.

The flow data for the site-specific monitoring points are provided in Table 1 below.

Table 1 - Surface Water Flow (cfs- estimated)

DATE	D-1	D-2	D-3
01/09/07	No Flow	0.1337	0
02/28/07	0	0.1448	0.011
03/29/07	0	0.111	0.011
04/25/07	0	0.022	0.004
05/31/07	0	0.011	0
06/27/07	0	0.022	0
07/26/07	No Flow	No Flow	No Flow
08/31/07	No Flow	No Flow	No Flow
09/27/07	No Flow	No Flow	No Flow
10/30/07	No Flow	No Flow	No Flow
Nov '07	No Flow	No Flow	No Flow
Dec '07	No Flow	No Flow	No Flow
Jan '08	No Flow	No Flow	No Flow
02/07/08	0.668	1.6	0.423
03/26/08	0.401	0.1337	No Flow
04/21/08	0.111	0.0557	No Flow
05/27/08	0.668	0.39	0.111
06/27/08	No Flow	1.17	1.60
07/30/08	No Flow	No Flow	No Flow
08/29/08	No Flow	6.24	0.2005
09/29/08	No Flow	0.4456	0.1225

Where the applicant reported "No Flow" or "0" flow, samples were collected from pooled locations. The pooled location for D-1 is the Shoal Creek Watershed Structure No. 5 pond; the pooled location for D-3 is a small pond located along the Big Four Reservoir Tributary at Schoolhouse Road.

The applicant intends to obtain water for the operation of the mine from a variety of sources. These include the existing freshwater lake, known as Shoal Creek Watershed Structure No. 5, the slurry cell(s), and sedimentation ponds. All water collected on-site will be re-circulated between the ponds and the preparation plant. Utilization of water from the Structure No. 5 lake will lower the amount available to downstream of this impoundment, but as indicated by the surface water data collected by the applicant, this impoundment currently discharges infrequently. Therefore, the amount to be diverted

from the lake should not negatively impact the hydrologic balance of the lake itself or of the downstream system. Lastly, the applicant states that any mine pumpage from mine dewatering will be added to the sediment ponds and utilized for prep plant water, although the applicant does not anticipate any large volumes of water will be produced by the mine.

The applicant states that there are no known large surface water bodies or lakes within the proposed mining area; nor are there any known springs within the proposed shadow area. Several small farm ponds are known to exist; however, the applicant states that none of these existing ponds are greater than 20-acre feet in size. The potential for water loss in the farm ponds exists within the shadow area, however, the applicant is required to repair or replace these structures if they are impacted by subsidence.

Another issue which must be addressed is the potential for stream alterations and flooding within the shadow area, which may result from the longwall mining subsidence. The applicant recognizes the potential for short-term stream alterations as well as the potential for flooding as a result of subsidence in Miller Creek, Bearcat Creek and McDavid Branch. Stream flows may be interrupted, causing water to pool in the existing stream channels or over bank flooding into low lying areas. Each of these streams is classified as intermittent streams. The applicant proposes to excavate, or dredge, stream channels to drain the subsided, flooded stream area back into its stream channel. Dredging of the chain pillars is also proposed. If this dredging is necessary it will allow for continued uninterrupted stream flow.

Surface Water Quality - Surface activities during slope/shaft development will expose buried strata to the atmosphere and have the potential to increase the total dissolved solids and total suspended solids in surface runoff. These development materials will be properly handled by the applicant. Handling plans include the use of the consolidated materials for road bases and any toxic materials will be stockpiled, covered with clay and kept for slope/shaft backfilling during reclamation. Sedimentation ponds will collect runoff from the permit area that would otherwise runoff unabated to the area's receiving stream. The sedimentation ponds will increase the retention time of water from the permit area after a precipitation event. This will allow the suspended solids to settle prior to discharge and lower the peak flows from the area. The concentration of suspended solids in the effluent should be no greater than the runoff from the existing land use of the property. The sediment ponds also provide an opportunity to provide water treatment, if necessary, prior to discharge.

Regional surface water quality for Middle Fork Shoal Creek watershed has been described in a report by Zuehls, et al. (1981). The report provides surface water quality results for a single monitoring station located on Middle Fork Shoal Creek. Data also exists for a monitoring station located on Shoal Creek, south of the proposed permit area. These monitoring stations are U.S.G.S. gaging stations located on Middle Fork Shoal Creek near Litchfield (05593750) and on Shoal Creek near Panama (05593800). The

monitoring station near Litchfield was sampled six times between 1979 and 1980, while the station at Panama was sampled 41 times from 1977 to 1980. Table 2 gives the range of results for each parameter monitored in the Kaskaskia River watershed, of which, the Middle Fork Shoal Creek is included.

Table 2 - Regional Surface Water Quality

	Station 05593750	Station 05593800
pH	7.3-7.9	7.4-8.7
Conductance	245-820	440-650
Alkalinity	156*	172*
Acidity	0*	0*
Sulfate	36-120	36-150
Total Iron	0.68-2.5	0.34-37
Total Manganese	0.31-0.98	0.14-3.5

*Mean value, no range provided; All parameters are reported in mg/l, except pH and Conductance (umho/cm)

Two segments of the Middle Fork Shoal Creek are included in the 2008 Illinois 303(d) List. The 303(d) list was developed to fulfill the requirements set forth in Section 303(d) of the Federal Clean Water Act and the Water Quality Planning and Management regulation at 40 CFR Part 130. The 303(d) process focuses on identifying existing water quality problems and developing restorative measures. The Waterbody Segments IL-OIL-01 and IL-OIL-03 are noted as either being fully supporting or not assessed for all use attainment parameters. Segment IL-OIL-01 is located upstream of Glen Shoals Lake and Segment IL-OIL-03 is located downstream of Glen Shoals Lake, along the Middle Fork Shoal Creek. Map No. 3 provides the location of Waterbody Segment IL-OIL-03. The facility has established three stream sampling points, none of which lie in the above Waterbody Segments analyzed by the IEPA. D-1 has monitored surface water conditions downstream of Structure No. 5, while D-2 and D-3 has monitored surface water conditions along the unnamed tributary, known locally as the Big Four Reservoir Tributary that eventually drains into Lake Hillsboro.

Surface water quality data of the small tributaries were collected by Hillsboro Energy, LLC both upstream and downstream of the proposed permit area. Hillsboro Energy, LLC collected samples from a total of three sites. The sampling period was initiated in January of 2007 and was finalized in September of 2008 and consisted of twenty-one sampling periods. During periods of no-flow (see Table 1), surface water quality data was collected from pooled water. Water quality from the surface water monitoring points is summarized in Table 3A below; Table 3B contains results from the pooled samples.

Table 3A - Area Specific Surface Water Quality

	D-1 (Downstream)			D-2 (Downstream)			D-3 (Upstream)		
	Min	Max	**Avg**	Min	Max	**Avg**	Min	Max	**Avg**
pH	7.46	8.8		7.4	8.0		7.7	8.0	
TDS	100	245	**175**	80	405	**280.35**	140	325	**241.67**
TSS	5	65	**22.28**	3	214	**28.43**	3	51	**22.67**
Acidity	-165	-20	**-89.57**	-230	-25	**-133.86**	-166	-33	**-107.67**
Alkalinity	34	192	**118.28**	44	292	**169.64**	52	248	**147.0**
Sulfate	8	26	**16.28**	3	66	**38.43**	20	37	**25.0**
Chloride	4.4	17.9	**11.75**	1.4	26.3	**16.17**	6.2	34.5	**18.5**
Iron (Total)	0.185	3.04	**1.05**	0.57	8.87	**2.40**	0.46	5.05	**2.14**
Manganese (Total)	0.094	0.688	**0.31**	0.094	1.17	**0.30**	0.016	2.61	**0.89**

Table 3B - Area Specific Surface Water Quality

	D-1 (Pooled)			D-3 (Pooled)		
	Min	Max	**Avg**	Min	Max	**Avg**
pH	7.57	9.0		6.99	8.22	
TDS	85	205	**134.0**	50	340	**226.11**
TSS	27	161	**83.6**	1	2222	**281.22**
Acidity	-58	-2	**-28.0**	-169	-4	**-93.33**
Alkalinity	26	74	**53.6**	20	290	**139.33**
Sulfate	7	21	**14.4**	3	37	**22.89**
Chloride	4.9	7.8	**7.06**	1.1	40.1	**16.02**
Iron (Total)	1.52	8.83	**6.23**	0.21	63	**10.16**
Manganese (Total)	0.199	0.344	**0.27**	0.018	5.38	**0.80**

All parameters are reported in mg/l except pH.

The surface water quality data for the tributaries, in comparison to the regional data collected above, indicates the flowing waters in these streams are lower in alkalinity, acidity, sulfates, iron, and manganese, when compared to the data collected from the Middle Fork Shoal Creek site. The surface water quality from the pooled samples indicates that all parameters, except pH and iron, are lower in the site-specific samples than in the regional data. Site-specific data shows that the streams are more alkaline than acidic in nature, even when pooled water was sampled.

Additionally, the Department has reviewed available surface water data for points above and below the confluence of Central Creek and Middle Fork Shoal Creek, points OIL-

HB-A1 and OIL-HB-E1, respectively. This data, obtained from the USEPA's EnviroMapper for Water web site, indicates that surface water located above the confluence of Central Creek and Middle Fork Shoal Creek is low in iron and manganese, has normal pH values and is otherwise of average quality. Data below the confluence of the two water bodies indicates that iron and manganese are higher than upstream, while pH values remain in the normal range. While no information on flow values were presented, it does appear that water quality changes seasonally.

No surface water will be discharged off-site without first passing through a sedimentation pond and/or an NPDES discharge point (outfall). The quality of the water that Hillsboro Energy proposes to discharge from the NPDES discharge points is within all applicable State and Federal effluent limits.

The coal refuse disposal area has been designed so that surface water runoff is collected either via external Ditch 005 which surrounds the RDA or the internal pond. Both the ditch and pond will discharge at NPDES point 005. No affected surface water runoff will discharge to the northeast or to the unnamed tributary of the Big Four Reservoir/Hillsboro Lake.

Within the proposed shadow area, several small ponds exist. Many of these ponds appear to be man-made and are presumably for farm (livestock) or aesthetic purposes. During active longwall mining, these ponds may experience temporary water loss (quantity), but no changes in water quality are expected. Any pond damage resulting from subsidence will either be repaired or the pond owner will be compensated by the coal company.

D. Groundwater –

Groundwater Quantity - The groundwater potential of the proposed permit and adjacent area has been described by Selkregg (1957). The chances for development of a reliable groundwater supply from the unconsolidated materials are described as fair to good. Logs supplied by the applicant indicate that throughout much of the area the unconsolidated material ranges from approximately 110 to 155 feet thick. The unconsolidated material is composed of clays, gravels and discontinuous sand deposits. Many of the surficial sand and gravel deposits are narrow and discontinuous. The bottomlands of the East Fork Shoal Creek, located to the east of the proposed permit area, have proven to be a reliable water source for local communities; however, these bottomland deposits are not readily present in the proposed permit area. According to Selkregg (1957), *"the drift is thin and water-yielding sand and gravel are rare in areas along Shoal Creek...southeast of Hillsboro."* The applicant reports that the Pennsylvanian-aged sandstone bedrock can usually only provide enough water for individual domestic and/or farm use. A total of twelve groundwater monitoring wells have been installed in the unconsolidated materials in and around the proposed permit area. The applicant provided a measurement of the hydraulic conductivity of the unconsolidated materials. In-situ hydraulic conductivity values were calculated on three

groundwater monitoring wells (MW24, MW25 and MW28). In addition, laboratory hydraulic conductivities were calculated from cores from three additional well borings (MW26, MW27 and MW30). The boring logs for each of these wells are included in the permit application. Calculated hydraulic conductivity values are presented in Table 4, below.

Table 4 – Calculated Hydraulic Conductivity

Well	Stratum	Hydraulic Conductivity	Test Type
MW24	Fine Sand	5.785×10^{-5} cm/sec	In-Situ
MW25	Fine Sand	7.108×10^{-5} cm/sec	In-Situ
MW26	Silty Clay	1.94×10^{-6} cm/sec	Laboratory
MW27	Silty Clay	3.04×10^{-7} cm/sec	Laboratory
MW28	Fine Sand	9.0×10^{-5} cm/sec	In-Situ
MW30	Silty Clay (10-11')	6.15×10^{-7} cm/sec	Laboratory
MW30	Clay Till (20-21')	1.14×10^{-7} cm/sec	Laboratory

The laboratory-calculated hydraulic conductivities were conducted on core samples collected when the wells were drilled. Per the laboratory data sheets, the materials tested in MW26, MW27 and the shallower zone of MW30 were clays; the deeper zone of MW30 has been classified as a silty clay till. Generally, hydraulic conductivities of silty sands/fine sands range from 10^{-5} to 10^{-3} cm/sec, while hydraulic conductivities of silts range from10^{-6} to 10^{-4} cm/sec and values for clays range from 10^{-9} to 10^{-6} cm/sec. (Fetter, 1988). The site-specific values are similar to this. The applicant states that there are no major aquifers in the proposed permit area or within the area adjacent to the proposed permit area. Minor aquifers may be present in the shallow Pennsylvanian-aged sandstones and limestones. However, these Pennsylvanian-aged formations generally have low permeabilities and porosities and tend to become more mineralized with depth, limiting their use. According to Selkregg (1957), these Pennsylvanian-aged sandstones are present at depths ranging from 70 to 120 feet below ground surface. Beyond these units, no other sources of groundwater are known. The applicant provided information that three residences located within the shadow area use a well as their primary water supply and another twenty wells located within one-half mile of the shadow area are used as a primary water supply. However, the applicant states that the majority of the residents in the vicinity of the permit area obtain their water supply from rural and/or municipal water systems. Three of the five municipal and industrial supplies located within ten miles of the proposed permit area are developed from surface sources. The City of Hillsboro, City of Litchfield and the Montgomery County Water Company obtain their water supplies from surface facilities. Two other public water suppliers, the City of Witt and the City of Fillmore, both of which are located nine miles from the proposed permit boundaries, obtain their water from groundwater wells. The applicant obtained water level measurements from some private wells located within and adjacent to the shadow area. Data collected from these wells, which were all identified by the applicant as "shallow wells," indicated that the water levels were within fifteen feet of the ground

surface. The applicant concludes that the groundwater associated with the uppermost aquifer is an unconfined aquifer and groundwater flow direction mimics the topography. The applicant has not obtained groundwater quality information from the existing residential wells; however the Illinois State Water Survey (ISWS) had limited quality data for two residential wells, located within one-half mile of the proposed permit area. This quality data was from a single sampling event in 1999.

The shallower of the two wells, whose total depth is listed at twenty feet, showed elevated levels of metals, similar to the results of the groundwater monitoring wells installed at the facility. The deeper well, at a total depth of 55 feet, showed a slightly better quality than the shallower well, but the same metals were present (mainly iron, manganese, magnesium and zinc) at levels above the applicable groundwater quality standards. Attachment B contains a summary of the ISWS data. It is unknown if the two wells sampled by the ISWS in 1999 remain in use today or the condition of the wells at the time the samples were collected. The applicant has installed and has collected background data from twelve monitoring wells, which are suitably located to intercept any potential mine impacts prior to them reaching the residential wells.

It can be assumed that the private shallow wells not only intercept very localized groundwater units within the unconsolidated materials, but likely also receive some form of surface water infiltration. Subsidence related impacts on these shallow wells may include a temporary lowering of the water table or physical damage to the well. However, given the amount of overburden between the Herrin No. 6 coal seam and the unconsolidated materials, the likelihood of impacts on these shallow wells is low. In addition, many of the shallow wells have been reported as being used for secondary uses only (gardening, lawn watering, stock watering, etc.). Booth and Spande (1991) found that water levels in shallow aquifers often recover to near pre-mining levels, shortly after subsidence occurs.

Hillsboro Energy is not proposing any consumptive uses of groundwater, therefore, no adverse impacts to groundwater quantity are anticipated as a result of operations in the proposed permit area. However, the activities in the permit area are not the only ones that should be considered. Planned subsidence of portions of the shadow area may have some impacts on the groundwater system which must be addressed. Subsidence can lead to increased hydraulic conductivities in the subsided area due to fracturing of overlying rock units (Owili-Eger, 1983). Booth and Spande (1991) determined that aquifer characteristics of an originally poor aquifer actually improve after mining. A study conducted in the early 1990's by the Illinois Mine Subsidence Research Program (IMSRP) concluded that local aquifers were enhanced via increased yields and increased hydraulic conductivities as a result of subsidence. IMSRP research indicated that higher pumping rates could be sustained with lower overall drawdown of the aquifer.

Pursuant to 62 Ill Adm. Code 1817.41(j), the operator will be required to protect drinking domestic and residential water supplies by documenting pre-mining quality and quantity

of water supplies and to provide adequate replacement for supplies impacted by underground mining activities conducted after January 19, 1996. The Department finds that planned subsidence operations have the potential of impacting the quality or quantity of a water supply. Therefore, all wells for which the operator has no specific agreement with individual landowners concerning post subsidence resolution of water supply issues, shall be monitored to acquire adequate seasonal data sufficiently in advance of any potential impacts.

The majority of private domestic wells in use within the proposed shadow area average 30 to 40 feet in total depth. Given an average extraction height of 7 ½ feet and using the applicants estimate that subsidence impacts could reach 40 times the mine height, the potential zone of impact would be 300 feet. The applicant states that there is approximately 310 feet of overburden present along with 110 to 155 feet of unconsolidated materials. Therefore, if the estimate of subsidence impacts is correct, none of the existing private water supply wells should see a decrease in water quantity or a change in water quality.

The applicant provided data on the water in the coal seam by installing three piezometers within the shadow area into the Herrin No. 6 seam. The applicant collected water level information and conducted in-situ conductivity testing of the coal seam via these piezometers. As would be expected, water within the coal seam is under confining conditions and the hydraulic conductivities ranged from $1x10^{-6}$ to $2x10^{-8}$ cm/sec. At the time of this writing, the head levels in the three piezometers had not yet stabilized, so the direction of groundwater flow within the coal seam remains undetermined. The applicant has proposed to continue monitoring the water levels and once equilibrium is established, will determine the direction of groundwater flow and hydraulic gradient within the coal seam.

Groundwater Quality - Hillsboro Energy has proposed monitoring twelve wells within the proposed permit area. Background groundwater quality data was collected monthly from September 2007 to September 2008. Groundwater monitoring of wells MW22, MW23, MW24, MW25, MW26, MW27, MW28, MW30, MW31, MW32, MW33, and MW34 will continue on a quarterly basis until final bond release. All of these wells have been completed in the unconsolidated materials; total depths of the existing wells range from approximately sixteen to approximately twenty-four feet below ground surface. The uppermost unconsolidated aquifer appears to contain a sand layer at approximately 20 to 25 feet below ground surface. The applicant states that this sand layer is not a consistently present aquifer throughout the area and is generally less than 5 feet thick. Hillsboro Energy installed five wells (MW22, MW23, MW24, MW25 and MW28) to specifically monitor the groundwater in the vicinity of the proposed refuse disposal area (RDA). See Map No. 2 for the groundwater monitoring well locations. The groundwater quality data is summarized in Table 5 below:

Table 5 - Groundwater Quality in the Proposed Permit Area

	MW22			MW23			MW24		
	Min	Max	**Avg**	Min	Max	**Avg**	Min	Max	**Avg**
pH	7.13	7.51		7.02	7.42		7.05	7.52	
TDS	408	496	**462.46**	370	496	**441.08**	410	612	**495.08**
Hardness	260	320	**284.62**	240	340	**295.38**	140	340	**258.46**
Acidity	-544	-230	**-281.54**	-338	-302	**-323.38**	-368	-212	**-270.31**
Alkalinity	242	532	**285.85**	310	344	**332.92**	228	354	**278.0**
Sulfate	85	150	**105.54**	8	103	**46.46**	59	162	**110.38**
Iron (Total)	34.9	587	**202.24**	28.8	1090	**207.75**	34.8	2550	**545.14**
Manganese(Total)	49.4	577	**195.57**	44	1120	**188.32**	66.2	3630	**531.03**
Chloride	32	54	**38.46**	37	49	**42.62**	16	52	**35.31**

	MW25			MW26			MW27		
	Min	Max	**Avg**	Min	Max	**Avg**	Min	Max	**Avg**
pH	7.15	7.46		7.13	7.56		7.2	7.56	
TDS	286	792	**397.38**	412	754	**508.77**	388	438	**411.85**
Hardness	180	420	**227.69**	260	420	**346.15**	280	360	**306.15**
Acidity	-614	-270	**-326.92**	-450	-200	**-366.62**	-300	-240	**-274.31**
Alkalinity	280	648	**336.0**	210	450	**372.62**	250	308	**282.46**
Sulfate	4	61	**32.38**	24	262	**81.69**	54	79	**66.15**
Iron (Total)	44	1790	**535.97**	9.73	503	**159.36**	46	526	**159.67**
Manganese(Total)	57.4	1280	**328.47**	55.8	790	**271.46**	57	474	**162.04**
Chloride	17	62	**24.38**	20	41	**28.46**	29	55	**36.23**

	MW28			MW30			MW31		
	Min	Max	**Avg**	Min	Max	**Avg**	Min	Max	**Avg**
pH	7.27	7.52		6.97	7.61		7.18	7.47	
TDS	302	486	**402.62**	456	680	**597.08**	428	1090	**574.92**
Hardness	260	400	**318.46**	260	320	**276.92**	280	440	**318.46**
Acidity	-438	-256	**-293.69**	-442	-264	**-377.69**	-528	-282	**-323.69**
Alkalinity	264	452	**300.46**	270	408	**383.23**	280	546	**329.23**
Sulfate	35	85	**57.69**	96	146	**122.54**	104	187	**126.38**
Iron (Total)	19.5	1200	**304.58**	74.4	666	**259.45**	16	943	**265.12**
Manganese(Total)	57.3	1730	**399.52**	92.4	1170	**288.11**	45.1	1020	**245.68**
Chloride	35	52	**40.23**	20	53	**33.23**	18	38	**22.62**

Table 5 - Groundwater Quality in the Proposed Permit Area (Con't)

	MW32			MW33			MW34		
	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
pH	6.89	7.39		7.12	7.44		7.16	7.47	
TDS	294	826	**709.38**	588	1300	**861.54**	444	820	**584.0**
Hardness	320	420	**396.92**	380	760	**487.69**	360	580	**415.38**
Acidity	-814	-326	**-410.77**	-726	-344	**-488.62**	-524	-312	**-357.38**
Alkalinity	348	816	**396.92**	352	732	**496.0**	320	520	**363.38**
Sulfate	158	290	**254.08**	126	267	**187.85**	81	140	**108.31**
Iron (Total)	52.4	673	**359.42**	15.4	592	**252.11**	29.2	1550	**425.86**
Manganese(Total)	121	1150	**599.62**	72	1030	**403.15**	83	2690	**606.69**
Chloride	19	33	**23.69**	60	179	**104.08**	29	95	**58.77**

All parameters in mg/l except pH.

The background groundwater quality indicates that total iron and total manganese grossly exceed the IEPA's Groundwater Quality Standards as defined in 35 Ill. Adm. Code 620. Typical mining-related parameters (sulfate and TDS) are below the applicable standards. TDS values are relatively low, which may indicate that the high levels of metals (iron and manganese in particular) are due to the collection of turbid (cloudy) samples and are not indicative of the metals presence in actual groundwater. The applicant has been instructed to sample all groundwater monitoring wells for total and dissolved metals to further analyze the true chemistry of the groundwater at the proposed permit area. Initial analytical data for dissolved metals, on samples collected in December 2008, showed that all metals were well below the groundwater standards, which indicates that the total metals collected at the site during background data collection, were on suspended materials in the groundwater and not from the groundwater itself.

At this time, no discernable pattern of seasonality is readily seen from the existing background data.

A potential source of impacts to groundwater quality would be from the disposal of coal processing waste material in the permit area. Coal refuse contains materials that can produce acidic conditions when oxidized. Hillsboro Energy has proposed 109 acres of coal refuse disposal within the proposed permit area. The coal refuse disposal will be in both coarse refuse rings and slurry cells.

To provide protection to the groundwater resources, Hillsboro Energy has committed to provide a four-foot soil liner at the base of the RDA and above the bedrock for all coal refuse disposal sites as well as at any sediment ponds and ditches which will receive coal storage and/or coal refuse runoff. The in-situ permeability of the soil, which the applicant classified as a "loam" and/or a "sandy lean clay" is calculated to be from $5.7x10^{-5}$ to $9x10^{-5}$ cm/sec; however the applicant states *"that the existing material at the planned depth of*

excavation may reach the required permeability of 1x10 $^{-7}$ cm/sec after recompaction." The applicant intends to construct an earthen liner to a four foot compacted thickness, with a minimum permeability of 1x10^{-7} cm/sec.

Once disposal in the RDA is complete, the disposed materials will be sampled and analyzed for acid-producing potential. A sufficient amount of lime will be spread on and incorporated into the coal refuse surface to neutralize any possible acid generation. The coal refuse will then be covered with four feet of non-toxic material and further reclaimed per the applicant's plan. Studies by Infanger and Hood (1980) and Hoving and Hood (1984) have shown that for even highly acidic material, free acid generation should not occur as long as the material is covered with alkaline producing material, and oxidation of pyritic material is prevented.

Monitoring wells MW22, MW23, MW24, MW25 and MW28 will monitor the disposal areas and must be sampled six times within the first year of operation and quarterly thereafter for the following parameters: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chloride, chromium, cobalt, copper, cyanide, and fluoride, lead, mercury, molybdenum, nickel, selenium, silver, thallium, phenol, vanadium, and zinc. In addition to the preceding list, these five wells, will also monitor for pH, total dissolved solids, hardness, alkalinity, acidity, sulfates, total and dissolved iron, total and dissolved manganese and water levels (in elevation.) The other wells at the proposed permit (MW26 and MW27 through MW34) will monitor for the latter list of parameters.

Pursuant to the Illinois Groundwater Quality Standards of November 1991, the applicant must meet the Coal Reclamation Groundwater Quality Standards of 35 Ill. Adm. Code 620.450(b), for groundwater below the RDA only. These standards require that total dissolved solids remain below 3,000 mg/L, pH between 6.5 and 9.0, and inorganic constituents (metals), with the exception of chlorides, iron, manganese and sulfates, remain below the standards listed in Section 620.410(a) for Class I waters, except for natural background (unless it is shown that Class II, 620.420(a), applies). Quarterly monitoring of the parameters listed above will continue during operations, and through final bond release, to monitor any quality changes. In conclusion, the applicant has designed a groundwater monitoring program which should detect adverse impacts in sufficient time to take mitigating action and prevent adverse impacts to the hydrologic balance.

E. Coal Processing Waste Disposal -

The proposed 109 acre RDA will be located in the eastern portion of the proposed permit area. The RDA will be constructed with an impermeable in-situ liner, meeting the minimum permeability of 1x10 $^{-7}$ cm/sec. The applicant intends to utilize the existing unconsolidated soil materials, re-compacted and analyzed via the Standard Proctor test to meet 95%.

The RDA is being designed as a non-impounding structure, with a ring of coarse refuse (gob) on the outer edge and the coal fines, or slurry, deposited in the center. The RDA will be excavated to a base elevation of 620 feet MSL. Current ground elevations within the proposed RDA are approximately 630 feet MSL. The excavated materials will be stockpiled within the proposed permit area for later use during reclamation activities.

CCW/CCB - No coal combustion waste is proposed to be deposited nor are coal combustion by-products proposed to be utilized at this mine site.

F. Historical and Active Coal Mines -

There are no current coal mining operations upstream/upgradient of the proposed Deer Run Mine. The Department is not aware of any future mining in close proximity to the proposed Deer Run Mine. To the immediate west and northwest of the proposed permit area the Hillsboro Mine operated as a modified room and pillar mine from 1888 to 1941. The Hillsboro Mine encompassed approximately 1,820 acres during its life; the town of Hillsboro is almost completely undermined by this room and pillar mine. No surface effects remain from this mine. The surface water CIA, as defined above, includes the former mine site. Additionally, to the southwest of the proposed permit area a small underground mine (approximately 210 acres in size) operated from 1908 to 1923. This mine, known most recently as the Indiana & Illinois No. 15 mine, is not included in either the surface or groundwater CIA's because it is too far away from the proposed permit area to add to any cumulative effect that the Deer Run mine may have.

III. FINDINGS -

A. Geology –

Per the Illinois State Geologic Survey (ISGS), the bedrock in south-central Illinois consists of layered beds of shale, sandstone, limestone, dolomite and coal. Laboratory analyses of the consolidated overburden (Corehole #08-03-17-04) indicate an ample presence of alkaline materials which will more than adequately be able to neutralize any acid or toxic-forming potential of the overburden materials. The units identified as potentially acid- or toxic-forming consist of the black shale immediately above and the thin black shale immediately below the Herrin No. 6 Coal. The floor of the No. 6 Coal is described as a typical underclay and is quite alkaline. The proposed mining operations consist of underground mining and potential sources of acid-forming materials (mainly the coal refuse materials) will be disposed of on the surface, with the exception of the shaft and slope development materials, which will be properly handled by the applicant. The applicant intends to stockpile any potentially acid-forming material encountered during development of the shaft/slope, properly cover the stockpile and adequately identify the material. During reclamation, this material will be used as backfill in the shaft/slope area. The applicant states that the overall net neutralization potential of the shaft/slope development materials is +57 tons per 1000 tons. The applicant utilized the industry standard for acid-forming material as anything exhibiting a net acid production

potential of greater than -5 tons per 1000 tons. The percentage of acid-forming materials to non-acid forming materials at the proposed mine is 6% to 94%; which means that the materials encountered are highly alkaline and the production of acid-forming materials should be minimal.

B. Surface Water –

Quantity – The permit area comprises a very small portion of the watershed that is to receive discharge from the proposed NPDES outfalls. The permit area encompasses 803.5 acres, while the CIA-defined watershed is 2,715 acres in size. The permit area represents approximately 29% of the total watershed size. While the permit area represents over a quarter of the total watershed size of the Shoal Creek Watershed Structure No. 5, no surface water will directly discharge to this structure without first passing through a controlled, monitored NPDES point. Additionally, the permit area is less than 2% of the Middle Fork Shoal Creek basin and any potential impacts to the Middle Fork Shoal Creek would be imperceptible. The applicant has proposed to utilize water from the Shoal Creek Watershed Structure No. 5 as supplemental makeup water for the preparation plant. This supplemental use will decrease the amount of water available to the current system, but should not have a substantial impact on the quantity of water within the structure itself nor should it substantially impact the amount of flow into Central Creek. As noted previously, Shoal Creek Watershed Structure No. 5 discharges infrequently to Central Creek. Over the 21 events the applicant sampled, 17 of those events there was no flow from Structure No. 5 to Central Creek. Additionally, water in Structure No. 5 will not be the sole source of preparation plant water. According to the National Climate Data Center, this area of Central Illinois receives approximately 41 inches of precipitation annually. The USGS estimates that the evapro-transpiration rates for Illinois are 67% of the annual average rainfall, or in this case roughly 27 inches per year. A mine of this size generally consumes one to two million gallons of water per day to adequately run the operation. As discussed above, the mine will obtain this water from multiple sources which include the constructed sediment ponds and when necessary the Shoal Creek Structure No. 5 lake.

The amount of water available for infiltration/runoff within the proposed permit boundaries and based on the above rainfall and evapro-transpiration rates is roughly 835,000 gallons per day. The amount of water available within the defined CIA is approximately 2.8 million gallons per day. Hillsboro Energy will utilize no more than 29 percent of the available waters within the CIA for their mine operations. This includes prep plant water, water for the fresh water lakes and sedimentation ponds, dust suppression, bathhouse water, and potable water. Underground mines in Illinois generally utilize on-site waters (from freshwater & sediment ponds, re-circulation systems, etc.). The mine intends to capture as much of the available surface water runoff as possible during the active life of the mine. The mine will have a temporary affect on the amount of available surface water; however, once the mine operations cease, all surface water will again be available to the current system.

Within the proposed shadow area, several small ponds exist. Many of these ponds appear to be man-made and are presumably for farm (livestock) or aesthetic purposes. During active longwall mining, the quantity of water in these ponds may be affected, but no changes in water quality are anticipated or expected. Any subsidence-related impacts to these ponds will be taken care of by the applicant. These ponds are considered structures and therefore, pond damage will either be repaired or the pond owner will be compensated for the impact.

Another issue which must be addressed is the potential for stream alterations and flooding within the shadow area, which may result from the longwall mining subsidence. In Attachment IV.3.B.6, the applicant commits to a streamflow restoration plan for Miller Creek, Bearcat Creek and McDavid Branch. The applicant recognizes the potential for short-term stream alterations as well as the potential for flooding as a result of subsidence. Stream flows may be interrupted, causing water to pool in the existing stream channels or over bank flooding into low lying areas. The applicant proposes to excavate, or dredge, stream channels to drain the subsided, flooded stream area back into its stream channel. The applicant has committed to obtain the proper and necessary rights and permits (including those from other Agencies) prior to causing subsidence that would require corrective action work on the streams. Typically, Illinois streams do not experience water loss due to subsidence; therefore, the Department believes the potential for water loss is negligible.

Quality - The effects of this operation on surface water quality should be negligible. Effluent from the NPDES discharge points is proposed to meet all applicable State and Federal standards and is compatible with that in the receiving stream. Adherence to these limits will ensure that adverse impacts will not occur to the surface water quality of the receiving stream as a result of the proposed operations.

C. Groundwater –

Quantity - Groundwater information that is available indicates that groundwater supplies in and adjacent to the permit area are limited. According to the Illinois State Geologic Survey (ISGS), the proposed permit area lies in an area labeled as *"fair to good"* for the probabilities of sand and gravel aquifers. Generally, these areas contain thin and discontinuous deposits of sand and gravel, which leads to the chances for obtaining large supplies of groundwater as *"poor to fair."* Cooperative Groundwater Report 6 (1981) reports that Montgomery County has had a long history of water shortages due to the lack of extensive water-yielding sand and gravel deposits, small amounts of water available from bedrock and groundwater at depths below approximately 250 feet being too mineralized for use.

The applicant is not proposing any consumptive uses of groundwater and planned subsidence mining should have a minimal impact on groundwater quantity within the shadow area. Therefore, since no consumptive uses of groundwater are proposed, there should be no adverse impacts to groundwater quantity. It should be noted that evidence

exists that hydraulic conductivity values in sandstone increase by one order of magnitude due to subsidence (DeMaris, 1996). Additionally, the IMSRP investigation of subsidence of the Mt. Carmel Sandstone aquifer indicated that subsidence changed the aquifer from a poor one into a *"potentially more productive aquifer."* This indicates that the availability of groundwater once subsidence occurs could be increased over current levels, thereby increasing the amount of groundwater available to domestic users.

Three residents within the shadow area and approximately twenty other residents within one-half mile of the proposed permit area or within the proposed shadow area report using groundwater wells as their primary source of drinking water. The depths of these residential wells range from eighteen feet to 80 feet, with most wells appearing to be approximately 25 feet deep and within the unconsolidated materials. Depth to bedrock ranges from approximately 112 to 168 feet. Given the depth of the proposed mining (444 to 551 feet deep), the projected subsidence impact area and the presence of at least 300 feet of overburden between the mined coal and the unconsolidated domestic wells, the groundwater quantity of these domestic wells should not have a significant long-term impact, if any at all.

With regard to quantity, underground longwall mining operations can affect the amount of groundwater available, on a short-term basis, to wells by lowering the static water level in the vicinity of the wells as groundwater fills the resultant subsidence fractures. In addition, the availability of groundwater can be affected by subsidence that can cause changes in permeability and porosity due to fracturing of the materials above the mined seam. Room and pillar development mining, which will be used as support for the longwall panels, is not expected to have any impacts on groundwater quantity.

Lastly, groundwater quantity below the lowest coal seam to be mined should not be affected by the proposed mining operations. The stratum immediately below the Herrin No. 6 Coal is a typical underclay which exhibits low permeability characteristics. The low permeability of the underclay should restrict the downward movement of water from the mine voids into the underlying strata. In addition to the above, there is no indication that any resident currently obtains drinking water from a source below the coal seam.

Quality - Groundwater quality potentially could be impacted by the coal refuse disposal operations within the permit area. However, the applicant has committed to the installation of an impermeable liner to minimize infiltration to the groundwater. Therefore, disposal in these areas, as described by the proposed plan, should not result in adverse impacts to the groundwater quality. The applicant's monitoring program has been designed to detect any adverse impacts on public or private supplies in time to take corrective measures.

Since the majority of residents in the vicinity of the proposed mine site obtain their drinking water from either rural or municipal water sources, the potential for groundwater impacts should be low. Potential impacts to users of domestic wells should be limited to

the short-term effects of lowering the water table only, though this is not expected to happen based on the vertical distance between the mine and the shallow domestic wells.

Groundwater quality should not be adversely impacted by the planned subsidence mining method. A lack of wide-spread sources and the relatively few private supplies which do exist, justify the proposed and approved program of groundwater monitoring. The applicant, however, has made a commitment to replace any private water supplies that may be impacted, even though none is expected.

With regard to quality, the long-term effects of the proposed underground mining operations on groundwater within the permit boundary and adjacent areas should be minimal. A slightly higher level of mineralization may temporarily affect post-mining groundwater quality within the permit and shadow areas. These increases should be well within water quality standards and should have negligible effects on the overall groundwater quality of the area.

D. Coal Processing Waste Disposal –

Currently, five groundwater monitoring wells have been installed to specifically monitor the groundwater in the vicinity of the proposed RDA. These compliance point wells will adequately monitor the shallow groundwater and will alert the applicant and the Department to any possible impacts, prior to those impacts reaching beyond the permit boundary. Once background data is collected, the applicant will monitor these wells on a quarterly basis until final bond release.

IV. Conclusion –

The surface water and groundwater monitoring programs are designed to provide sufficient lead time for notification of any potential impacts, as well as to provide ample time for the investigation and mitigation of any impacts prior to reaching off-site. Both the groundwater and surface water monitoring programs are dynamic and as such, the Department reserves the right to add monitoring parameters should the need arise. The applicant will be required to monitor the surface and groundwater throughout the life of the mine, up to and including the time of final bond release.

Neither the surface water nor groundwater will be materially damaged unless the quantity and/or quality of water is degraded, on a long-term or permanent basis, beyond applicable standards or a long-term or permanent loss of use is reported. Material damage occurs when the impact is immitigable. Neither the applicant nor the Department anticipates that this will occur.

Therefore, the assessment of probable cumulative hydrologic impacts of the proposed permit area finds that the proposed operations have been designed to prevent material damage to the hydrologic balance outside the proposed permit area.

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Attachment A

The following tables are a summary of surface water monitoring data collected by the Illinois EPA; not all available data is presented here. For complete data, contact the Illinois EPA's Bureau of Water, Surface Water Section.

Middle Fork Shoal Creek

Sample ID	Date	pH	Iron	Manganese	Sulfate
A1*	Sept. 1985	7.1	1.509	0.661	
	Aug. 2007		0.51	2.3	14.7
E1*	Aug. 2007		0.11	0.075	63.5
C1*	Aug. 2007		0.1	0.4	45.4
C2*	Aug. 2007		0.15	0.17	40
C3*	Aug. 2007		0.15	0.095	42
OIL-02*	April 1982	7.1	2.2	0.386	57
	May 1982	7.1	1.145	1.294	73

Central Creek

Sample ID	Date	pH	Iron	Manganese	Sulfate
D2*	Sept. 1985	7.3	0.237	0.324	
D3*	Sept. 1985	6.9	0.295	0.782	
D4*	Sept. 1985	7.4	0.333	0.531	

* Sample ID names have been abbreviated.

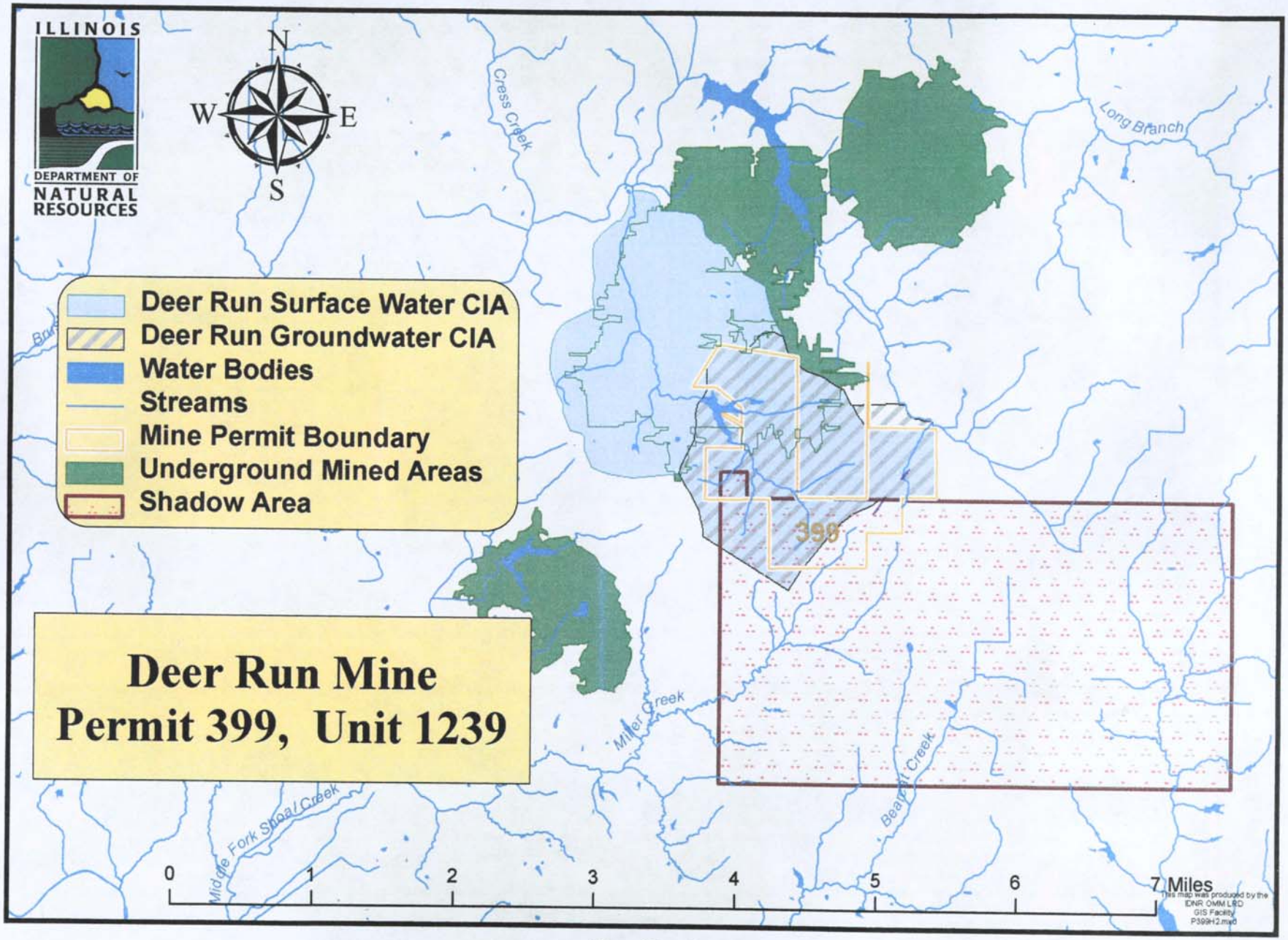
Attachment B

The following table is a summary of private well data collected by the Illinois State Water Survey; not all available data is presented here. For complete data, contact the Illinois State Water Survey.

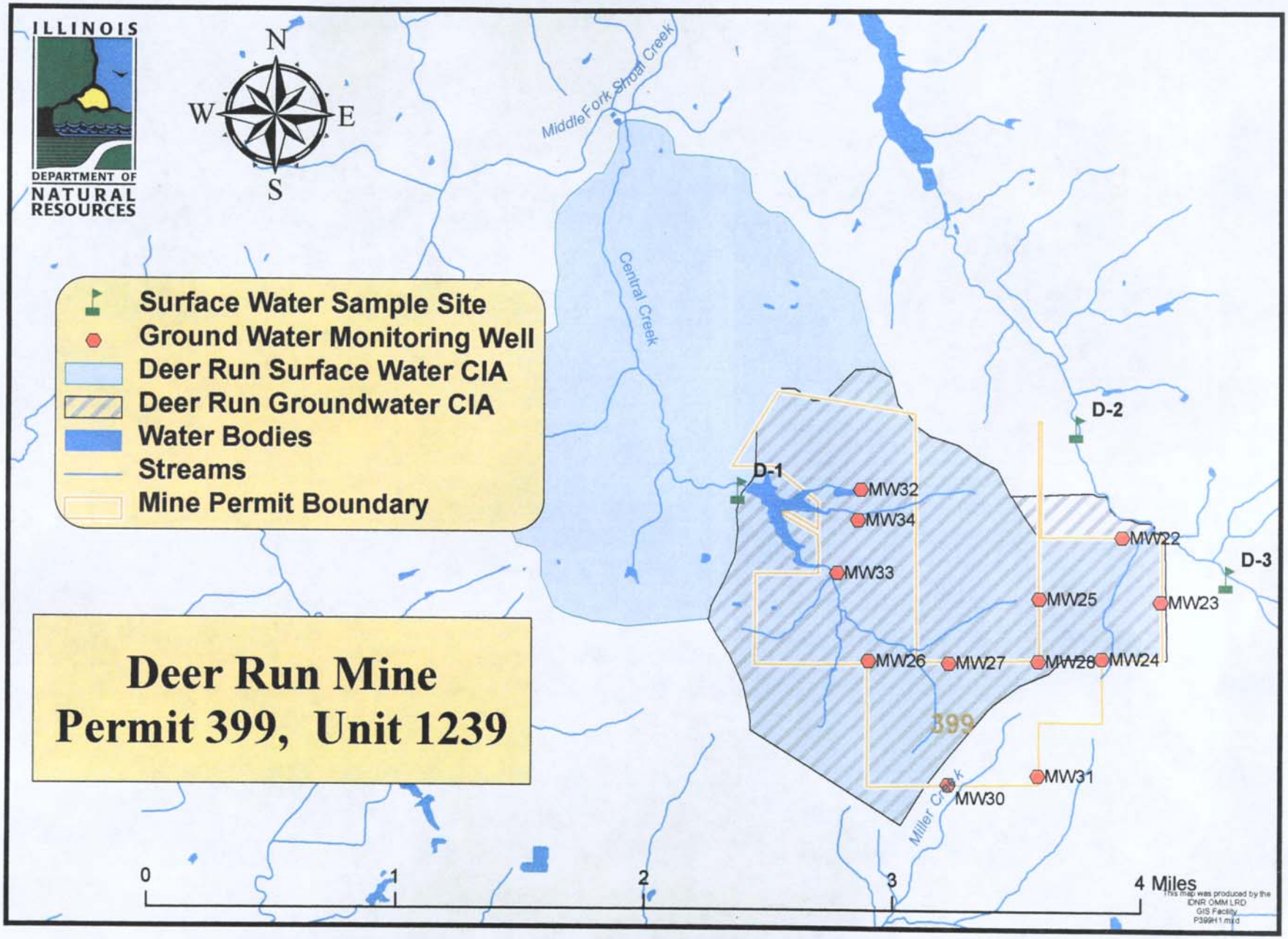
Well ID	pH	TDS (mg/L)	Alkalinity (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Manganese (mg/L)	Chloride (mg/L)
Well A	7.0	551	294	127	0.02	<0.01	36.3
Well B	7.1	475	267	38.9	<0.01	<0.01	76.5

Well A is 20 feet deep, location is noted as 13508N03W064H
Well B is 55 feet deep, location is noted as 13508N03W065H

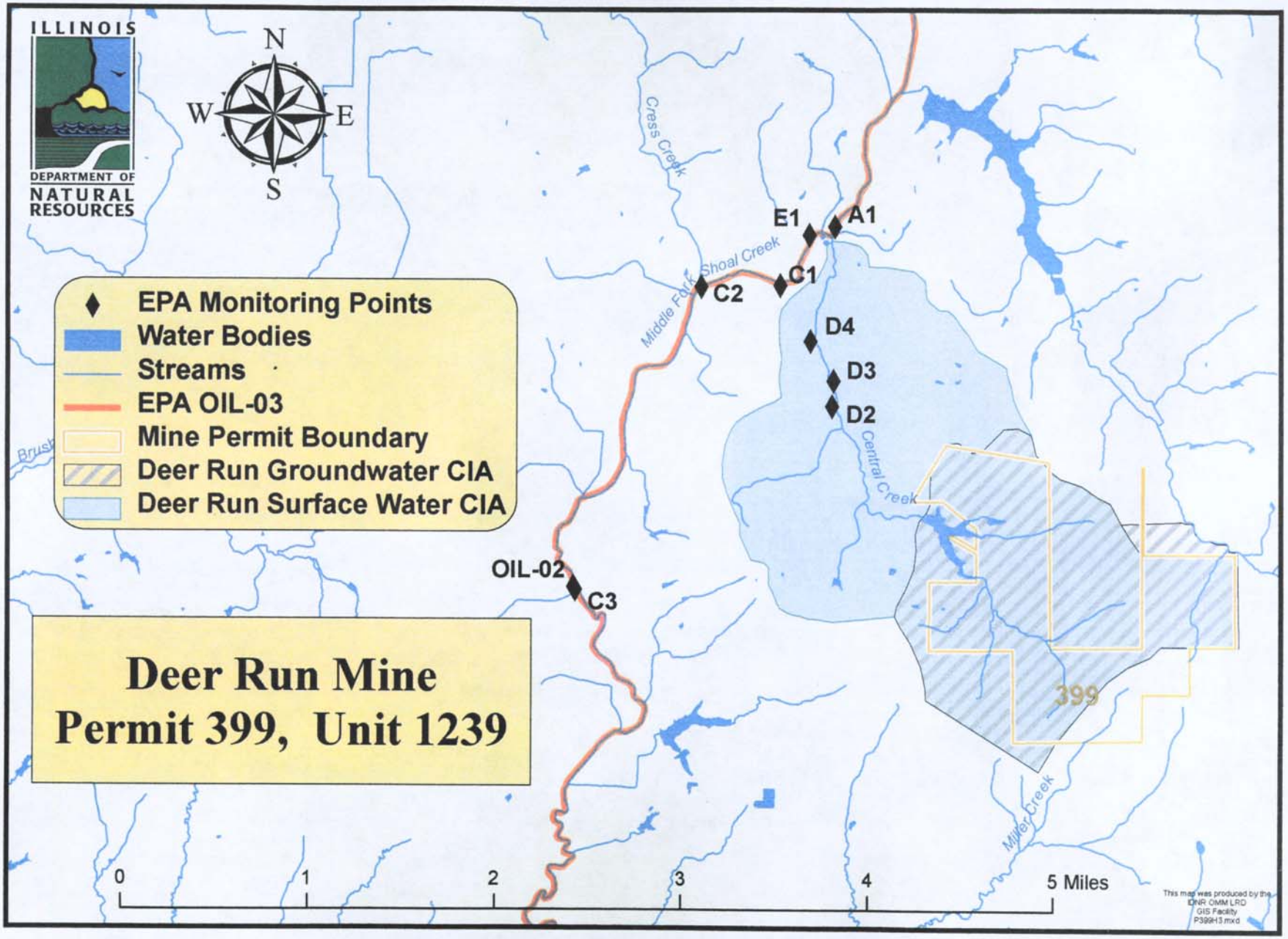
Both wells are located in East Fork Township


ILLINOIS
DEPARTMENT OF NATURAL RESOURCES
N
W
E
S
Cress Creek
Long Branch
Deer Run Surface Water CIA
Deer Run Groundwater CIA
Water Bodies
Streams
Mine Permit Boundary
Underground Mined Areas
Shadow Area
399
Deer Run Mine
Permit 399, Unit 1239
Miller Creek
Middle Fork Shoal Creek
Beaver Creek
0
1
2
3
4
5
6
7 Miles
This map was produced by the IDNR OMM L&D GIS Facility
P399H2.mxd

Map No. 1


ILLINOIS
DEPARTMENT OF NATURAL RESOURCES
N
W
E
S
Middle Fork Shoal Creek
Central Creek
Surface Water Sample Site
Ground Water Monitoring Well
Deer Run Surface Water CIA
Deer Run Groundwater CIA
Water Bodies
Streams
Mine Permit Boundary
Deer Run Mine
Permit 399, Unit 1239
D-1
D-2
D-3
MW32
MW34
MW33
MW22
MW25
MW23
MW26
MW27
MW28
MW24
MW31
MW30
399
Miller Creek
0
1
2
3
4 Miles
This map was produced by the IDNR OMM LRD GIS Facility
P399H1.mxd

Map No. 2


ILLINOIS
DEPARTMENT OF NATURAL RESOURCES
N
W
E
S
EPA Monitoring Points
Water Bodies
Streams
EPA OIL-03
Mine Permit Boundary
Deer Run Groundwater CIA
Deer Run Surface Water CIA
Deer Run Mine
Permit 399, Unit 1239
Cress Creek
Middle Fork Shoal Creek
Central Creek
Miller Creek
E1
A1
C1
C2
D4
D3
D2
OIL-02
C3
399
0
1
2
3
4
5 Miles
This map was produced by the IDNR OMM LRD GIS Facility P399H3.mxd

Map No. 3

APPENDIX D
DECISION ON PROPOSED POST-MINING LAND USE OF PERMIT AREA

Post-mining land use has been approved in accordance with the requirements of 62 Ill. Adm. Code 1817.133. The surface land areas affected by underground mining activities will be restored in a timely manner to conditions that are capable of supporting the uses which they were capable of supporting before any mining, or to higher or better uses achievable under the criteria and procedures of 62 Ill. Adm. Code 1817.133 or otherwise provided for under 62 Ill. Adm. Code 1823.11. The pre-mining and approved post-mining land uses on the permit area are as follows:

	Pre-mining	Post-mining
Cropland	665.30	298.60
Residential	1.80	1.80
Industrial/Commercial	1.10	7.40
Wildlife Habitat/Wetland	135.30	495.70
Total	**803.50**	**803.50**

The permit area will have a significant reduction in cropland. The majority of this loss is due to the covering of mine refuse and their post mining slope, and the significance of the time frames and disturbance by the support facilities, which are not conducive to a cropland use. The remaining areas will be significantly disturbed that a herbaceous wildlife will ensure long term stability.

The Department thus finds the land areas affected by surface coal mining activities will be restored in a timely manner to conditions that are capable of supporting the use which they were capable of supporting before mining or to higher or better use achievable under the criteria and procedures of 62 Ill. Adm. Code 1817.133. The plan of restoration submitted by Hillsboro does not present any actual or probable hazard to public health or safety nor does it pose any actual threat of water diminution or pollution as indicated in Appendix C, and the proposed land uses following mining are not impractical or unreasonable as all the post-mining land uses existed prior to mining and are found in the adjacent surrounding areas. The land uses are not inconsistent with any applicable land use policy or plan known to the Department and no objections were heard from any governmental agency with such authority. The plan does not involve unreasonable delay in implementation and is not in violation of any other applicable law known to the Department.

APPENDIX E
Threatened and Endangered Species
(under Endangered Species Act of 1973, 16 USC 1531 et seq.)
Finding, Section 1773.15(c)(10)
Hillsboro Energy, Deer Run Mine

In reviewing application No. 399 for potential effects on federally listed threatened and endangered species, the Department considered the following: status of the species, site specific resource information, direct and indirect effects, and cumulative effects.

Status of the Species

Identification of listed species which could potentially be effected by the proposed coal mining activity is derived from five primary sources: the applicant, the U.S. Fish and Wildlife Service (USFWS), the Illinois Office of Realty and Environmental Planning (OREP), the public, and Department records.

The applicant indicated that while no known breeding or wintering Indiana bat habitat existed in the permit area, the potential for bats to occur did exist. In the application (page 10 of Part V), the applicant proposed a no cut period which differed somewhat from the no cut period currently recommended by the Department. The issue was addressed in modification #3 of the modifications letter (Appendix A, item No. 3). The applicant responded by modifying the no cut period to be identical to the Department's recommendation.

No comments were received from the USFWS on this application.

OREP submitted comments dated October 9, 2007 and February 28, 2008 which identified no federally listed threatened or endangered species of concern to them.

Comments received at the informal conference and public hearing as well as written comments expressed concern about a variety of wildlife issues. No federally threatened or endangered species in addition to the Indiana bat were brought up.

Three types of habitats are generally considered for the Indiana bat: winter hibernation habitat (hibernacula) which includes caves and abandoned underground mine workings, maternity roosts which are trees with peeling bark under which females bear their young, and summer feeding habitat which includes upland and riparian wooded areas where feeding occurs.

Major causes of decline of the Indiana bat are associated with the hibernacula including blocked cave entrances, improper bat gate designs which impede bat flight into caves or impede proper air flow through caves, and human disturbance to hibernating bats (Indiana Bat Revised Recovery Plan, USFWS, 1999). Indiana bats are considered to be in hibernation from September 15 to April 15. Disturbance of an active maternity roost could also have significant negative

effects as a number of pregnant female bats are known to use the same tree to bear their single offspring.

The range of the Indiana bat covers most of the eastern United States. Recent population data comparing 1997 estimates with historic levels indicate that the range wide population is less than half of historical levels. Indiana bats have declined significantly in some states including Kentucky and Missouri, but have increased in some states, most notably Indiana. Population estimates show an increase of about 30% in Illinois from historical levels to the present (Clawson 2002, Clawson 2004, Rideout 2006).

Site Specific Resource Information

All of Illinois is considered to be within the range of the Indiana bat, although the species has not been known to occur in all counties. The bat is not known to occur in Montgomery County (Bat Conservation International et al. 1997), or at the Deer Run Mine site. Hibernacula or maternity roost sites are not known to occur at the site or in Montgomery County.

Because some wooded acreage does occur on the site (although a relatively minor acreage) the possibility or feeding or maternity roosting activity must be considered. The applicant has committed to a no cut period to avoid an inadvertent take of female or young Indiana bats as part of tree clearing operations. Tree removal will be limited to that time frame when bats are hibernating and therefore, will not be on the site. Destruction of potential feeding habitat will be mitigated by re-establishing wooded acreage after mining. The reclamation plan calls for re-establishment of 111 acres to wooded vegetation. Also the company has avoided disturbance of some wooded acreage.

There are no hibernacula associated with the proposed permit area and hibernation activity occurring on this site is highly unlikely. No comments were received by either USFWS or OREP to suggest hibernation habitat is likely at this site.

No critical habitat for any listed species was identified as associated with the proposed permit area by any party.

Direct and Indirect Effects

Take of an Indiana bat is a possible consequence of the proposed activities. This is most likely if an unidentified maternity roost tree is disturbed while occupied by female Indiana bats and/or their offspring. To minimize the likelihood of such a take, the Department has required the application be modified to restrict timber disturbance to that time of the year when the bats are not present (September 15 to April 15).

Feeding Indiana bats can be indirectly affected by removal of feeding habitat, even if such habitat is removed when the bats are not present. Removal of feeding habitat in these areas, even

if done when the bats are not present, could have indirect effects on the species until such time as this feeding habitat can be restored. This indirect effect can be mitigated by re-establishing wooded acreage after mining through tree planting or by developing permanent impoundments as feeding areas.

Hillsboro Energy has committed to the following measures to minimize disturbances and adverse impacts to Indiana bats.

1. The applicant has avoided disturbance to some wooded acreage.

2. The applicant has committed to re-establishment of 111 acres of woodland.

3. The applicant will honor the April 15 to September 15 "no cut" period to avoid a take of female and young Indiana bats.

Cumulative Effects

Cumulative effects under the Endangered Species Act are defined at 50 CFR Section 402.02 which states "Cumulative effects are those effects of future State, or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." In the case of a mining permit being issued by the State of Illinois to a private company to develop a privately owned coal reserve, there is no Federal action subject to consultation. Therefore, there are no cumulative effects to consider as that term is defined under Section 402.02. The Department nevertheless has considered other future State and private activities that are reasonably certain to occur within the adjacent area. The adjacent area consists primarily of agricultural lands, and municipalities, although a state highway, a state prison facility, and a state fish and wildlife area occur near the mine. The Department is not aware of any State or private activities that would affect the Indiana bat, that would reasonably be certain to occur in the area adjacent to the proposed permit area.

Summary

The Department considered the status of the species. The proposed permit area is within the range of the Indiana bat. Indiana bat habitat consists of hibernacula, maternity roost habitat and feeding habitat. Hibernacula are the most important of the three as disturbances of this habitat are associated with decline of the species. Although overall populations continue to decline, the Indiana bat population in Illinois is stable or increasing.

The Department considered site specific resource information. Federally endangered Indiana bats are not known to occur at this site or even in Montgomery County. Hibernacula are not

associated with the proposed permit area or adjacent area. No critical habitat exists in the proposed permit area or adjacent area.

Direct and indirect affects have been considered. The most significant threat to the Indiana bat from the proposed operation is a take due to disturbance of an occupied maternity roost tree. To prevent this, the Department has required modification of the application to prohibit timber disturbance from April 15 to September 15, the period when Indiana bats could potentially be present at the site. Effects to feeding habitat could include removal of trees. The best technology currently available for replacement of this feeding habitat is by planting trees during reclamation, which Hillsboro Energy has committed to do.

The Department has considered cumulative effects as defined under 50 CFR 402.02 and has considered future State and private activities reasonably certain to occur in the adjacent area and is not aware of any such activities which could adversely affect the Indiana bat.

Conclusions

Pursuant to Section 1816.97(a), the applicant has proposed to minimize disturbances and adverse impacts to the Indiana bat by implementing measures described above, using the best technology currently available. If these measures are followed, no take of an Indiana bat is expected nor is a take approved by this permitting action. The applicant is subject to the prohibition of taking a federally listed species in violation of the Endangered Species Act (16 USC 1531 et seq.) found at Section 1816.97(d). Failure of the applicant to implement the measures specified in the approved plan as part of this permit will subject the applicant to enforcement measures under Sections 1773.17(b), 1816. 97(a), and in the case of a take in violation of the Endangered Species Act, Section 1816.97(d).

After having considered the status of the species, site specific resource information, direct and indirect effects, and cumulative effects, and in the context of the applicant's commitments for measures to minimize disturbances and adverse impacts to Indiana bats and conditions imposed by the Department, the Department finds that the operation will 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 of 1973 (16 USC 1531 et seq.).

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