

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5) Guardian Pipeline, LLC's authorization for the incidental take of the State threatened slippershell mussel (*Alasmidonta viridis*) and spike mussel (*Elliptio dilatata*) at stream crossings along the pipeline route (as described/shown in the conservation plan received by the Department on July 24, 2001) in Will, Kendall, DeKalb, and McHenry counties in Illinois is hereby granted, subject to the terms and conditions described in the attached Authorization and Implementing Agreement. The Illinois Department of Natural Resources has determined that this authorized take is incidental to the construction of a new underground pipeline to transport natural gas from Joliet, Illinois to Ixonia, Wisconsin.

Procedural History

The Natural Resource Group, Inc. (NRG) acting as environmental consultant for Guardian Pipeline, LLC (Guardian) prepared a conservation plan as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and Guardian's request for authorization for incidental take of slippershell and spike mussels were received by the Illinois Department of Natural Resources (Department) on July 24, 2001. Public notice of Guardian's request for authorization of incidental take of slippershell and spike mussels was published in the Edwardsville Intelligencer (Official State newspaper), Northwest Herald (McHenry County), Daily Chronicle (DeKalb County), The Record (Kendall County), and the Herald News (Will County) on October 3, 2001, as well as on October 10, and October 17, 2001. Public comments on Guardian's conservation plan were accepted by the Department until November 17, 2001. All comments received by the Department were provided to NRG (on behalf of Guardian) for their consideration. A "public comment analysis table" prepared by NRG, in response to all public comments received for this project, was received by the Department on December 6, 2001.

Compliance with the Endangered Species Protection Act

The Illinois Endangered Species Protection Act includes six criteria which must be met for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each criteria are listed below.

1. The taking will not be the purpose of, but will only be incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is to construct a new underground pipeline to transport natural gas from Joliet, Illinois to Ixonia, Wisconsin. In Illinois, the project will involve construction and installation of a new 36-inch-diameter pipeline and associated aboveground facilities (e.g., compressor station, meter stations, valve sites) in Will, Kendall, DeKalb, and McHenry counties. The Guardian pipeline route crosses 35 perennial streams in Illinois that potentially contain habitat for freshwater mussels. In the course of these construction activities, Guardian will relocate all observed mussels (listed or non-listed species) disturbed by construction, hence a technical "taking" of these species. Such taking is not the purpose of the activities proposed by Guardian, but is incidental to the carrying out of a lawful activity.

2. The parties to the conservation plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking.

The conservation plan prepared by NRG and received by the Department on July 24, 2001 stated that freshwater mussel surveys would be conducted prior to any pipeline construction activities for all perennial streams in the areas of direct impact, as well as the immediate downstream reaches (100 feet downstream). All mussels observed (listed or non-listed species) are to be relocated in order to minimize impacts. Mussel surveys will be conducted using standard survey techniques including searching by feel to methodically cover the area to be disturbed by the project (wading in shallow water, SCUBA in deeper water). All mussels found will be identified to species. Mussels will be relocated into areas of suitable habitat, in the same stream, preferably upstream of the construction site. Specifically, the transplant site will be close to the collection area and have similar to better water quality and substrate. Guardian has retained the services of Ecological Specialists, Inc. for conducting freshwater mussel surveys and relocations. Guardian will provide the Department with a report detailing the results of all mussel surveys and relocation efforts within 60 days of completing all surveys/relocations. In summary, mussel surveys and related relocations will occur only after Department authorization and prior to any construction activities.

3. The parties to the conservation plan will ensure that adequate funding for the conservation plan will be provided:

In an official correspondence to the Department dated March 4, 2002, NRG, on behalf of Guardian, verified that adequate funding exists to support and implement all mitigation activities described in the official Conservation Plan. The Guardian Pipeline project is regulated, and ultimately authorized, by the Federal Energy Regulatory Commission (FERC). All documents and correspondences for this project have been submitted to FERC by NRG. Under FERC rules, any and all natural resource commitments made by NRG (on behalf of Guardian) are binding and must be adhered to. Failure to meet such commitments allows FERC to deny and/or revoke authorization. As stated in the official conservation plan, "Guardian has retained the services of Ecological Specialists, Inc. for conducting freshwater mussel surveys and relocations. The survey and relocation costs are projected to be approximately \$38,500.00."

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of the survival or recovery of the endangered species or threatened species in the wild in Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois:

Construction and operation of the Guardian Pipeline project will not reduce the likelihood of the survival of state-listed threatened or endangered mussels in Illinois. Of the 35 streams crossed by the Guardian Pipeline project, information provided by the Department and a search of the Bivalve Collection Database of the Illinois Natural History Survey indicated that only a few streams have known occurrences of rare mussels. In the project area, the Department (1999) identified the slippershell mussel as occurring in Little Rock and Big Rock Creeks and the spike mussel as occurring in Big Rock Creek. The pipeline route crosses Little Rock Creek (MilePost 36.5) and several of its tributaries (MP 30.3, 32.5, 33.1, and 36.0). Although the route crosses

the West Branch of Big Rock Creek (MP 39.7) and several tributaries to the East Branch of Big Rock Creek (MP 43.4, 44.6, and 45.0), the project avoids direct disturbance to Big Rock Creek itself. There will be only minor, short-term impacts on potential mussel habitats. Relocating all mussels found during surveys will avoid long-term impacts on native mussel populations.

It should be noted that the freshwater mussel fauna of the Fox River and its tributaries in Illinois and Wisconsin was surveyed by Department staff during the summers of 1997-2001. A total of 3,585 live individuals comprised of 23 species were collected from 96 sampling stations. Of this total, 60 spike mussels and 31 slippershell mussels were collected.

As stated in the April 1996 Technical Report (working draft) titled - "Measures to minimize harm to *Lampsilis higginsii* [federally endangered Higgins Eye mussel] caused by passage of commercial navigation vessels in the upper Mississippi River" [prepared by the U.S. Army Corps of Engineers-Waterways Experiment Station]: Relocation is one of several methods that can be used to protect freshwater mussels. Relocation can be used to recolonize areas where previous populations were extirpated, to remove mussels from proposed construction sites, to boost numbers of endangered species, or to protect against high densities of the zebra mussel (*Dreissena polymorpha*). The survival of relocated mussels is closely linked to habitat quality.

Relocation sites should have the same conditions of substratum type and stability, and water velocity as the original habitat. Research from the federally endangered Higgins Eye mussel (*Lampsilis higginsii*) recovery team, under the guidance of the United States Fish and Wildlife Service, has determined that minimal mortality (<12%) and high recovery rate (>88%) were shown when aerial exposure of mussels was less than four (4) hours and when relocations were conducted in spring or autumn when air (12-18 C) and water temperature (15-23 C) were moderate.

Guardian has retained the services of Ecological Specialists, Inc. for conducting freshwater mussel surveys and relocations. This firm has extensive experience with freshwater mussels in the Midwest. The field personnel from Ecological Specialists, Inc. currently hold authorization under Section 5/3.22, Chapter 520 and Section 5/20-100, Chapter 515 of the Illinois Compiled Statutes to collect aquatic invertebrates. If so authorized, mussel surveys and any subsequent relocations are planned for spring 2002.

Further, to minimize the extent and duration of project-related disturbances to water-bodies and any potential for indirect impacts on mussels or mussel habitats, Guardian will implement its *Wetland and Waterbody Construction and Mitigation Procedures*. These procedures include requirements for environmental inspection and monitoring; development of a spill prevention containment and countermeasure plan; erosion/sediment control and prevention; and post-construction restoration and monitoring. A majority of perennial streams will be crossed using the dam and pump or flume construction methods which minimize the introduction of sediment into the water compared to the more conventional open-cut crossing method.

Throughout the permitting process with the U.S. Army Corps of Engineers, the Illinois Department of Natural Resources, and the Illinois Environmental Protection Agency, Guardian has addressed the potential impacts to Illinois streams and their associated biota (i.e. freshwater mussels) during pipeline construction. Guardian's stream crossing techniques (dam and pump/flume construction), associated mitigation measures, procedures, and plans were developed to avoid and/or minimize impacts to water bodies and their inhabitants. All of these

techniques are described in detail in the Final Environmental Impact Statement (FEIS) for the Guardian Pipeline project published by the Federal Energy Regulatory Commission (FERC). The FEIS was reviewed by Department staff as part of this authorization for incidental take.

5. Any measures required under Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.40(b)], will be performed:

Additional measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and Guardian's signature on this authorization indicates their commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application:

Public notice was printed in the *Edwardsville Intelligencer*, *Northwest Herald*, *Daily Chronicle*, *The Record*, and the *Herald News*. Comments were received by mail and e-mail through November 17, 2001. All comments received by the Department were provided to NRG (on behalf of Guardian) for their consideration. A "public comment analysis table" prepared by NRG, in response to all public comments received for this project, was received by the Department on December 6, 2001. A total of two (2) public comment letters were received by the Department and forwarded to NRG. Issues raised in the public comment letters were centered upon water quality, stream crossing construction techniques, and mitigation/restoration standards. The conservation plan was not altered as a result of public comments.

Authorization

It is the determination of the Department that the measures that would be implemented by Guardian at these sites would adequately minimize and mitigate for the anticipated taking (relocation) of a small number of slippershell and spike mussels due to the construction of a new underground natural gas pipeline from Joliet, Illinois to Ixonia, Wisconsin. Further, it is our opinion that the take (relocation) authorized herein would not diminish the likelihood of the survival of the slippershell mussel and spike mussel in the wild within the State of Illinois, the biotic community of which the species is a part or the habitat essential to the species' existence in Illinois.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.40(b)], this authorization is issued subject to the following additional terms and conditions:

1. This authorization is effective upon signature by the Department and shall remain in effect for a period of six (6) years after completion of the entire pipeline project, unless terminated as pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.80].
2. Freshwater mussel surveys shall be conducted prior to any pipeline construction activities for all perennial streams in the areas of direct impact, as well as the immediate downstream reaches (100 feet downstream). All mussels observed (listed or non-listed species) are to be relocated in order to minimize impacts. Mussel surveys will be conducted using standard survey techniques including searching by feel to methodically cover the area to be disturbed by the project (wading in shallow water, SCUBA in deeper water). All mussels found will be identified to species.

Mussels shall be relocated into areas of suitable habitat, in the same stream, preferably upstream of the construction site. Specifically, the transplant site will be close to the collection area and have similar to better water quality and substrate. Guardian shall provide the Department with a report detailing the results of all mussel surveys and relocation efforts within 60 days of completing all surveys/relocations.

3. Guardian, through a qualified environmental consultant, shall perform (or cause to be performed) surveys of all stream crossings where either slippershell (*Alasmidonta viridis*) and/or spike (*Elliptio dilatata*) mussels were removed and relocated. The purpose of these surveys is to determine if these listed species have recolonized areas impacted by the pipeline crossing. These surveys shall be conducted at the following intervals: Two (2) years after completion of the entire pipeline project, and at five (5) years after completion of the entire pipeline project. Guardian, through its environmental consultant, shall provide a copy of these survey reports to the Department within 60 days of survey completion.

4. All mussels encountered within the State of Illinois during this project shall be subject to the general U.S. Fish and Wildlife Service handling protocol for determining presence/absence of species as found in Section G of Federal Fish and Wildlife Permit, *Number: TE838055-8*, [effective 07/06/2001; expires 03/19/2003] issued to Ecological Specialists, Inc. [Heidi Dunn, Principal Officer] on 07/06/2001 by Lynn M. Lewis of the U.S. Department of the Interior-Fish and Wildlife Service. This permit allows Ecological Specialists, Inc. to conduct mussel surveys within the entire State of Illinois.

5. The effective period of this authorization may be altered by mutual agreement between Guardian and the Department.

6. This authorization may be revoked pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.80] if the Department finds that Guardian has failed to comply with any of these terms and conditions or has been responsible for the relocation of slippershell and spike mussels beyond that which is incidental to the construction of a new underground natural gas pipeline from Joliet, Illinois to Ixonia, Wisconsin.

7. The Guardian Official identified below is authorized to execute this agreement. Execution by Guardian's Official indicates acceptance of all terms and conditions described in this agreement.

For the IL. Department of Natural Resources



Kirby Cottrell, Director
Office of Resource Conservation

4/23/02

Date Signed

For Guardian Pipeline, LLC



Signature

JOHN D KOBASA
VICE PRESIDENT, BGR, OPER. & CONST
CMS GAS TRANSMISSION

Please print name and official title

4/10/02

Date Signed