BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS AND RECOMMENDATIONS OF THE MINNESOTA DEPARTMENT OF COMMERCE ENERGY FACILITY PERMITTING STAFF

DOCKET NO. IP6632/WS-07-389

Meeting Date: April 26, 2007…….Agenda Item # _____

Company: Moraine Wind II, LLC

Docket No. **PUC Docket Number: IP6632/WS-07-389**
In the Matter of a Site Permit Application for the up to 49.9 MW Moraine Wind II Project in the Minnesota Counties of Pipestone and Murray.

Issue(s): 1) Should the Commission accept, conditionally accept, or reject the Site Permit Application?

If the application is accepted, should the PUC:

2) Appoint a public advisor; 3) Make a preliminary determination on whether a draft site permit may be issued or should be denied and authorize a draft site permit for distribution and public comment?

DOC Staff: Adam Sokolski…….651-296-2096

Relevant Documents (in Commission Packet)

Application of Moraine Wind II, LLC……April 11, 2007

The enclosed materials are the work papers of the Department of Commerce Energy Facility Permitting Staff. They are intended for use by the Public Utilities Commission and are based on information already in the record unless otherwise noted.

This document can be made available in alternative formats, i.e., large print or audio tape by calling (651) 201-2202 (Voice) or 1-800-627-3529 (TTY relay service).

Documents Attached

1. Proposed Draft Site Permit

See eDockets (07-389) or the PUC website at:
http://energyfacilities.puc.state.mn.us/Docket.html?Id=19093 for project related documents.

Statement of the Issues

1) Should the Public Utilities Commission (the PUC or Commission) accept, conditionally accept, or reject the application of Moraine Wind II, LLC?

If the application is accepted, should the PUC:

2) Appoint a public advisor?

3) Make a preliminary determination on whether a site permit may be issued or denied and authorize a draft site permit?

Introduction and Background
The Applicant and Project Ownership

PPM Energy, an unregulated subsidiary of Scottish Power, has submitted the site permit application on behalf of its affiliate Moraine Wind II, LLC. Moraine Wind II, LLC, a Minnesota based Limited Liability Company, will own the Project including all equipment up to the low side of the 115 kV busbar at the Chanarambie substation.

Moraine Wind II, LLC, is a wholly owned affiliate of PPM Energy, Inc, of Portland Oregon. PPM Energy develops wind projects across the United States and natural gas generation operations in the western U.S. PPM owns and operates the 100 MW Trimont Wind Project in Jackson and Martin counties, the 150 MW MinnDakota Wind Project in Lincoln County, Minn, and Brookings County, SD, and the 51 MW Moraine I Wind Project in Pipestone and Murray counties.

Project Location

PPM Energy controls approximately 16,000 acres of land and wind rights within the proposed 27,000 acre project site. The project site is located in Pipestone and Murray counties, approximately 5 miles north of the towns of Lake Wilson and Woodstock. The site includes the portions of the following townships: Aetna, Ellsborough, Rock, Cameron, and Chanarambie.

The proposed site is comprised primarily of agricultural lands. It is anticipated that the area of direct land use for the turbines, associated facilities, and access roads would be approximately 16 – 27 acres. The Applicant has easements or options on the land and wind rights necessary within

the site to build the project. Land rights will encompass the proposed wind farm and all associated facilities, including but not limited to wind and buffer easements, wind turbines, access roads, electrical collection system, and transmission lines located on public roads when necessary.

The project area includes and is immediately adjacent to several existing and permitted, but not yet constructed, wind farms. Existing wind development in the area includes the Buffalo Ridge Phase 3, Woodstock, Chanarambie and Moraine I wind farms. Wind generating capacity from these facilities combined is approximately 245 MW. Two additional projects, Stoneray and Ridgewind, have been permitted and are expected to be built close to the Moraine II site within the next two years. Total wind generation in the area will exceed 430 MW if the Moraine II, Stoneray and Ridgewind projects are built.

Finally, between 2001 and 2003, the EQB issued a series of site permits, permit transfers, and amendments for what is now known as the Moraine I wind energy project. The Moraine I project is owned by PPM Energy. The project was planned for up to 130.5 MW built in three separate phases, however only the 51 MW Phase 1 was built. The site permits for the second and third phases have now expired. The Moraine II project includes most of the Moraine I site as well as additional lands outside of the Moraine I site, which is shown on Figure 5-3 of the Application. PPM Energy is planning, and the draft site permit requires, the Moraine Wind II project maintain considerable separation between the proposed turbines and all other existing and permitted wind turbines to prevent turbulence induced wake losses.

Moraine Wind II, LLC Project Description

The Applicants have not made a final selection of a wind turbine model and size. PPM Energy proposes to use utility grade wind turbines between 1.5 MW – 3.0 MW in nameplate generating capacity for the project. The Application provides data on four representative utility scale wind turbine models in the 1.5 – 3.0 MW range. A total of 16 – 33 turbines may be used depending on the final project design and the model of turbine selected. The towers will be between 80 meters (262 feet) and 105 meters (344 feet) in hub height. The rotor diameter of the turbines will be between 78 – 100 meters. The maximum overall height of the wind turbines is between approximately 119 meters (390 feet) – 150 meters (493 feet) above grade. Table 2-1 of the Application provides a side by side comparison of the turbine models under consideration.

The rotor consists of three blades mounted to a rotor hub. The hub is attached to the nacelle, which houses the gearbox, generator, brake, cooling system, and other electrical and mechanical systems. The rotor will make between 5.5 and 20.4 revolutions per minute, depending on the turbine model used.

The electrical collector system will consist of underground 34.5 kV collection lines and facilities providing step-up transformation.

Other project components include: all-weather class 5 access roads of gravel or similar materials, pad-mounted step-up transformers, concrete and steel tower foundations, a supervisory control and data acquisition system, meteorological towers, and an operations and maintenance building.

Energy from the project will be delivered to the Chanarambie Substation under the terms of its interconnection agreement with Xcel Energy.

At this time, the Moraine Wind II, LLC, project has not obtained a power purchase agreement for the sale of electricity generated by the project. PPM Energy indicates that the anticipated in-service date for the Moraine Wind II project is in the 2008 – 2009 timeframe.

Regulatory Process and Procedures

A Certificate of Need from the Minnesota Public Utilities Commission (PUC) is not required because the project does not exceed the Certificate of Need project size threshold.

A site permit from the Public Utilities Commission is required to construct a Large Wind Energy Conversion System (LWECS), which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. This requirement became law in 1995. The Minnesota Wind Siting Act is found at Minnesota Statutes Chapter 216F. The rules to implement the permitting requirement for LWECS are in Minnesota Rules Chapter 4401.

Application Acceptance. Minnesota Rule 4401.0460 states that: "Within 30 days after receipt of an application for a site permit, the PUC shall accept, conditionally accept, or reject the application." On April 11, 2007, PPM Energy, on behalf of Moraine Wind II, LLC, filed a LWECS Site Permit Application with the Public Utilities Commission. The required contents of a site permit application are specified in Minnesota Rule 4401.0450.

Public Advisor. Minnesota Rule 4401.0470 states: "Upon acceptance of an application for a site permit, the PUC shall designate a staff person to act as the public advisor on the project." The Commission can authorize the Department to name a staff member from the EFP staff as the public advisor or assign a PUC staff member.

Preliminary Determination. Minnesota Rule 4401.0500 Subpart 1. states that: "Within 45 days after acceptance of the application by the PUC, the PUC shall make a preliminary determination whether a permit may be issued or should be denied. If the preliminary determination is to issue a permit, the PUC shall prepare a draft site permit for the project. The draft site permit must identify the permittee, the proposed LWECS, and proposed permit conditions."

Issuing a draft site permit does not authorize a person to construct an LWECS. The PUC may change, amend or modify the draft site permit in any respect before final issuance or may deny the site permit at a later date. EFP staff will bring this matter back to the Commission for final action upon the conclusion of the public participation process.

DOC EFP Staff Analysis and Comments

The Moraine Wind II site permit application has been reviewed by DOC EFP staff pursuant to the requirements of Minnesota Rules Chapter 4401 (Wind Siting Rules). The application provides all of the information required by Minnesota Rule 4401.0450. Acceptance of the

application will allow staff to initiate the public review and participation process of Chapter 4401.

EFP staff used the information in the application and experience with other LWECS projects as a guide for evaluating whether a permit may be issued for the project or should be denied, pursuant to Minnesota Rules 4401 0500 Subpart 1. EFP staff finds that the available information is sufficient to conclude that it is appropriate to make a preliminary determination that a site permit may be issued for the project. EFP staff has prepared a draft permit identifying the permittee, the proposed LWECS, and proposed permit conditions. The proposed draft site permit is attached to these Comments and Recommendations. Commission approval of the draft site permit will allow for distribution of the draft site permit, initiation of the public review process and begin a formal public comment period.

Commission Decision Options

1) Application Acceptance

A) Accept the Moraine Wind II, LLC Site Permit Application for up to a 49.9 Megawatt Large Wind Energy Conversion System (LWECS).
B) Reject the Application as incomplete and issue an order indicating the specific deficiencies to be remedied before the Application can be accepted.
C) Find the Application complete upon the submission of supplementary information.
D) Make another decision deemed more appropriate.

2) Public Advisor

A) Authorize the Minnesota Department of Commerce Energy Facilities Permitting staff to name a public advisor for this project.
B) Appoint a PUC staff person as public advisor.
C) Make another decision deemed more appropriate.

3) Preliminary Determination and Authorization of a Draft Site Permit

A) Make a preliminary determination that a draft site permit may be issued; and approve the attached proposed draft site permit for the Moraine Wind II, LLC, project for distribution and public comment. Authorize EFP staff to initiate the public participation process found in Minnesota Rules 4401.0550.
B) Make a preliminary determination that a draft site permit may be issued; and amend or modify the attached proposed draft site permit for the Moraine Wind II, LLC, project for distribution and public comment. Authorize EFP staff to initiate the public participation process found in Minnesota Rules 4401.0550.
C) Make a preliminary determination that a draft site permit should be denied.
D) Make some other decision deemed more appropriate.

DOC EFP Staff Recommendation: Staff recommends option 1A, 2A, and 3A.

SITE PERMIT FOR

MORAINE WIND II

LARGE WIND ENERGY CONVERSION SYSTEM

IN
PIPESTONE AND MURRAY COUNTIES

ISSUED TO

MORAINE WIND II, LLC

PUC DOCKET NO. IP6632/WS-07-389

In accordance with Minnesota Statutes Section 216F.04 this Site Permit is hereby issued to:

MORAINE WIND II, LLC

Moraine Wind II, LLC, is authorized to construct and operate up to a 49.9-Megawatt Large Wind Energy Conversion System on the site identified in this Site Permit and in compliance with the conditions contained in this Permit.

This Permit shall expire on December 31, 2037

BY ORDER OF THE COMMISSION

_____

BURL W. HAAR
Executive Secretary

(S E A L)

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I. SITE PERMIT

This Site Permit for a Large Wind Energy Conversion System (LWECS) authorizes Moraine Wind II, LLC, (hereinafter "Permittee") to construct up to a 49.9-Megawatt LWECS and associated facilities in Pipestone and Murray Counties, on a site of approximately 27,000 acres in accordance with the conditions contained in this Permit. The site boundary is shown on the map that is attached hereto as Exhibit 1.

II. PROJECT DESCRIPTION

The up to 49.9 -Megawatt LWECS authorized to be constructed in this Permit will be owned and operated by Moraine Wind II, LLC. The project will consist of 1.5 – 3.0 MW wind turbines (or comparable utility grade wind turbines) with a combined nominal nameplate capacity of no more than 49.9 MW. Turbines are interconnected by communication and electrical power collection facilities within the wind farm. These facilities will include transformers and underground collector lines, and feeder lines that will deliver wind-generated power to the Chanarambie Substation located in Chanarambie Township in Murray County.

III. CONDITIONS

The following conditions shall apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning and all other phases of the LWECS. The PUC preserves all available remedies for violation of any of these Permit conditions, including revocation or modification of the Permit.

A. GENERAL CONSTRUCTION CONDITIONS

1. SITE PLAN

At least 60 days prior to commencing construction, the Permittee shall submit to the PUC a site plan for all turbines, roads, electrical equipment, collector and feeder lines and other associated facilities to be constructed and engineering drawings for site preparation, construction of the facilities, and a plan for restoration of the site due to construction. The Permittee may submit a site plan and engineering drawings for only a portion of the LWECS if the Permittee is prepared to commence construction on certain parts of the project before completing the site plan and engineering drawings for other parts of the LWECS. The Permittee shall have the right to move or relocate turbine sites due to the discovery of environmental conditions during construction, not previously identified, which by law or pursuant to this Permit would prevent such use. The Permittee shall notify the PUC of any turbines that are to be relocated before the turbine is constructed on the new site.

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2. FIELD REPRESENTATIVE

Prior to the start of construction and continuously throughout construction and site restoration, the Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this Permit. This person (or a designee) shall be accessible by telephone during normal business hours. This person's address, phone number and emergency phone number shall be provided to the PUC, who may make the number available to local residents and officials and other interested persons. The Permittee may change the field representative by notification to the PUC.

3. PRECONSTRUCTION MEETING

Prior to the start of any construction, the Permittee shall conduct a preconstruction meeting with the person designated by the PUC to coordinate field monitoring of construction activities.

4. NOTICE OF PERMIT CONDITIONS

The Permittee shall inform all employees, contractors, and other persons involved in the construction and ongoing operation of the LWECS of the terms and conditions of this Permit.

B. MITIGATION MEASURES

1. SITE CLEARANCE

The Permittee shall disturb or clear the site only to the extent necessary to assure suitable access for construction, safe operation, and maintenance of the LWECS.

2. TOPSOIL PROTECTION

The Permittee shall implement measures to protect and segregate topsoil from subsoil in cultivated lands unless otherwise negotiated with the affected landowner.

3. COMPACTION

The Permittee shall implement measures to minimize compaction of all lands during all phases of the project's life and shall confine compaction to as small an area as practicable.

4. LIVESTOCK PROTECTION

The Permittee shall take precautions to protect livestock during all phases of the project's life.

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5. FENCES

The Permittee shall promptly replace or repair all fences and gates removed or damaged during all phases of the project's life unless otherwise negotiated with the affected landowner. When the Permittee installs a gate where electric fences are present, the Permittee shall provide for continuity in the electric fence circuit.

6. DRAINAGE TILE

The Permittee shall promptly repair or replace all drainage tiles broken or damaged by activities of Permittee during all phases of the project's life unless otherwise negotiated with the affected landowner.

7. EQUIPMENT STORAGE

The Permittee shall not locate temporary equipment staging areas for site construction and restoration on cultivated land unless otherwise negotiated with the affected landowner. Temporary staging areas shall not be located in wetlands or native prairie.

8. ROADS

(a) Public Roads

Prior to commencement of construction, the Permittee shall identify all state, county or township roads that will be used for the LWECS project and shall notify the PUC and the state, county or township governing body having jurisdiction over the roads to determine if the governmental body needs to inspect the roads prior to use of these roads. Where practical, existing roadways shall be used for all activities associated with the LWECS. Where practical, all-weather roads shall be used to deliver cement, turbines, towers, assembled nacelles and all other heavy components to and from the turbine sites.

The Permittee shall, prior to the use of such roads, make satisfactory arrangements with the appropriate state, county or township governmental body having jurisdiction over roads to be used for construction of the LWECS for maintenance and repair of roads that will be subject to extra wear and tear due to transportation of equipment and LWECS components. The Permittee shall notify the PUC of such arrangements upon request of the PUC.

(b) Turbine Access Roads

The Permittee shall construct the smallest number of turbine access roads it can. Access roads shall be low profile roads so that farming equipment can cross them and shall be covered with Class 5 gravel or similar material. When access roads are constructed across streams and drainage ways, the access roads shall be designed in a manner so

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runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed.

(c) Private Roads

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.

9. SOIL EROSION AND SEDIMENT CONTROL

The Permittee shall develop a Soil Erosion and Sediment Control Plan prior to construction and submit the Plan to the PUC. This Plan may be the same plan submitted to the Minnesota Pollution Control Agency as part of a storm water runoff permit application. A goal of the Soil Erosion and Sediment Control Plan is to minimize soil erosion, to revegetate non-cropland and range areas disturbed by construction with wildlife conservation species, and wherever possible, to plant appropriate native species in cooperation with landowners.

The Soil Erosion and Sediment Control Plan shall address what types of erosion control measures will be implemented during each project phase, and shall at a minimum identify plans for grading, construction and drainage of roads and turbine pads; necessary soil information; detailed design features to maintain downstream water quality; a comprehensive re-vegetation plan to maintain and ensure adequate erosion control and slope stability and to restore the site after temporary project activities; and measures to minimize the area of surface disturbance. Other practices shall include containing excavated material, protecting exposed soil, and stabilizing restored material and removal of silt fences or barriers when the area is stabilized. The plan shall identify methods for disposal or storage of excavated material. Erosion and sedimentation control measures shall be installed prior to construction and maintained throughout the project's life.

10. CLEANUP

The Permittee shall remove all waste and scrap that is the product of construction, operation, restoration and maintenance from the site and properly dispose of it upon completion of each task. Personal litter, bottles, and paper deposited by site personnel shall be removed on a daily basis.

11. TREE REMOVAL

The Permittee shall minimize the removal of trees and the Permittee shall not remove groves of trees or shelter belts without notification to the PUC and the approval of the affected landowner.

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12. RESTORATION

The Permittee shall, as soon as practical following construction of each turbine, considering the weather and preferences of the landowner, restore the area affected by any LWECS activities to the condition that existed immediately before construction began, to the extent possible. The time period may be no longer than eight months after completion of construction of the turbine. Restoration shall be compatible with the safe operation, maintenance, and inspection of the LWECS.

13. HAZARDOUS WASTE

The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of hazardous wastes generated during any phase of the project's life.

14. APPLICATION OF HERBICIDES

The Permittee shall restrict herbicide use to those herbicides and methods of application approved by the Minnesota Department of Agriculture and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. The Permittee shall contact the landowner or his designee to obtain approval for the use of herbicide prior to any application on their property. The landowner may request that there be no application of herbicides on any part of the site within the landowner's property. All herbicides shall be applied in a safe and cautious manner so as to not damage crops, orchards, tree farms, or gardens. The Permittee shall also, at least ten days prior to the application, notify beekeepers with an active apiary within one mile of the proposed application site of the day the company intends to apply herbicide so that precautionary measures may be taken by the beekeeper.

15. PUBLIC SAFETY

The Permittee shall provide educational materials to landowners within the site boundaries and, upon request, to interested persons, about the project and any restrictions or dangers associated with the LWECS project. The Permittee shall also provide any necessary safety measures, such as warning signs and gates for traffic control or to restrict public access.

16. FIRE PROTECTION

The Permittee shall prepare a fire protection and medical emergency plan in consultation with the fire department having jurisdiction over the area prior to LWECS construction. The Permittee shall submit a copy of the plan to the PUC upon request.

17. TOWER IDENTIFICATION

All turbine towers shall be marked with a visible identification number.

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C. SETBACKS

1. WIND ACCESS BUFFER

Wind turbine towers shall not be placed less than 5 rotor diameters (RD) from the perimeter of the site on the north-south axis and 3 rotor diameters (RD) on the east-west axis where the Permittee does not hold the wind rights, without the approval of the PUC. Permittee acknowledges that properties within the project boundaries for which Permittee does not hold the wind rights will not be foreclosed from installing wind turbine generators on such property at a later date as a result of the issuance of this Permit, even if such turbine generators cannot be installed on such property in compliance with the setbacks set forth in the first sentence of this section.

2. RESIDENCES

Wind turbine towers shall not be located closer than 500 feet from the nearest occupied dwelling.

3. ROADS

Wind turbine towers shall not be located closer than 250 feet from the edge of the nearest public road right-of-way.

4. WILDLIFE MANAGEMENT AREAS

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be located in Waterfowl Protection Areas, State Wildlife Management Areas or Scientific and Natural Areas or in county parks. These areas may be used in establishing the wind access buffer required by paragraph III.C.1.

5. WETLANDS

Wind turbines and all associated facilities, including foundations, access roads, underground cable, and transformers, shall not be placed in public waters wetlands, as defined in Minnesota Statutes section 103G.005, subp. 15a.

6. NATIVE PRAIRIE

Upon request of the PUC, the Permittee shall, with the advice of the DNR and any others selected by the Permittee, prepare a prairie protection and management plan and submit it to the PUC and DNR Commissioner 60 days prior to the start of project construction. The plan shall address steps to be taken to identify native prairie within the project area, measures to avoid impacts to native prairie, and measures to mitigate for impacts if unavoidable. Wind turbines and all associated facilities, including foundations, access roads, underground cable and transformers, shall not be placed in native prairie unless

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addressed in the prairie protection and management plan. Unavoidable impacts to native prairie shall be mitigated by restoration or management of other native prairie areas that are in degraded condition, or by conveyance of conservation easements, or by other means agreed to by the Permittee and PUC.

7. OTHER

Wind turbines and all associated facilities, including foundations, access roads, underground cable, and transformers shall not be located within active sand and gravel operations, unless otherwise negotiated with the landowner with notice given to the owner of the sand and gravel operation.

D. PRECONSTRUCTION SURVEYS

1. BIOLOGICAL PRESERVATION SURVEY

The Permittee, in consultation with DNR and other interested parties, shall conduct a pre-construction inventory of existing wildlife management areas, scientific and natural areas, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas within the site and assess the presence of state- or federally-listed or threatened species. The results of the survey shall be submitted to the PUC and DNR prior to the commencement of construction.

2. ARCHAEOLOGICAL RESOURCES

The Permitee shall work with the State Historic Preservation Office (SHPO) at the Minnesota Historical Society and the State Archaeologist as early as possible in the planning process to determine whether an archaeological survey is recommended for any part of the proposed project. The Permitee will contract with a qualified archaeologist to complete such surveys, and will submit the results to the PUC, the SHPO and the State Archaeologist. The SHPO and the State Archaeologist will make recommendations for the treatment of any significant archaeological sites which are identified. Any issues in the implementation of these recommendations will be resolved by PUC in consultation with SHPO and the State Archaeologist. In addition, the Permitee shall mark and preserve any previously unrecorded archaeological sites that are found during construction and shall promptly notify the SHPO, the State Archaeologist, and the PUC of such discovery. The Permitee shall not excavate at such locations until so authorized by the PUC in consultation with the SHPO and the State Archaeologist.

If human remains are encountered during construction, the Permitee shall immediately halt construction at that location and promptly notify local law enforcement authorities and the State Archaeologist. Construction at the human remains location shall not proceed until authorized by local law enforcement authorities or the State Archaeologist.

If any federal funding, permit or license is involved or required, the Permittee shall notify the MHS as soon as possible in the planning process to coordinate section 106 (36 C.F.R 800) review.

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Prior to construction, construction workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If any archaeological sites are found during construction, the Permittee shall immediately stop work at the site and shall mark and preserve the site and notify the PUC and the MHS about the discovery. The PUC and the MHS shall have three working days from the time the agency is notified to conduct an inspection of the site if either agency shall choose to do so. On the fourth day after notification, the Permittee may begin work on the site unless the MHS has directed that work shall cease. In such event, work shall not continue until the MHS determines that construction can proceed.

3. ELECTROMAGNETIC INTERFERENCE

At least 60 days prior to beginning construction, the Permittee shall submit a plan to the PUC for conducting an assessment of television signal reception and microwave signal patterns in the project area prior to commencement of construction of the project. The assessment shall be designed to provide data that can be used in the future to determine whether the turbines and associated facilities are the cause of disruption or interference of television reception or microwave patterns in the event residents should complain about such disruption or interference after the turbines are placed in operation. The assessment shall be completed prior to operation of the turbines. The Permittee shall be responsible for alleviating any disruption or interference of these services caused by the turbines or any associated facilities.

The Permittee shall not operate the LWECS and associated facilities so as to cause microwave, television, radio, telecommunications or navigation interference contrary to Federal Communications Commission (FCC) regulations or other law. In the event the LWECS and its associated facilities or its operations cause such interference, the Permittee shall take timely measures necessary to correct the problem.

E. SITE LAYOUT RESTRICTIONS

1. WIND TURBINE TOWERS

Structures for wind turbines shall be self-supporting tubular towers. The towers may be between 80 meters (262 feet) and 105 meters (344 feet) above grade measured at the hub.

2. METEOROLOGICAL TOWERS

Permanent towers up to 100 feet high for meteorological equipment shall be free standing. Temporary meteorological towers, which are those that will be removed after completion of construction, and all meteorological towers over 100 feet high may be guyed if the landowner has given written permission and the guys are properly marked with safety shields.

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3. NOISE

The wind turbine towers shall be placed such that the Permittee shall comply with noise standards established as of the date of this permit by the Minnesota Pollution Control Agency at all times at all appropriate locations. The noise standards are found in Minnesota Rules 7030.0010 – 7030.0080. Turbines shall be moved or modified or removed from service if necessary to comply with this condition. The Permittee or its contractor may install and operate turbines, as close as the minimum setback required in this Permit but in all cases shall comply with PCA noise standards. The Permittee shall be required to comply with this condition with respect to all homes or other receptors in place as of the time of construction, but not with respect to such receptors built after construction of the towers.

4. FEDERAL AVIATION ADMINISTRATION

Towers shall be marked as required by the Federal Aviation Administration (FAA). There shall be no lights on the towers other than what is required by the FAA. This restriction shall not apply to infrared heating devices used to protect the wind monitoring equipment.

5. TURBINE SPACING

The turbine towers shall be constructed within the site as shown on the map attached as Exhibit 1. The turbine towers shall be spaced no closer than 3 rotor diameters (RD) for crosswind spacing (distance between towers) and 5 RD downwind spacing (distance between strings of towers). If required during final micro siting of the turbine towers to account for topographic conditions, up to 20 percent of the towers may be sited closer than the above spacing but the Permittee shall minimize the need to site the turbine towers closer.

6. FOOTPRINT MINIMIZATION

The Permittee shall design and construct the LWECS so as to minimize the amount of land that is impacted by the LWECS. Associated facilities in the vicinity of turbines such as electrical/electronic boxes, transformers and monitoring systems shall, to the greatest extent feasible, be mounted on the foundations used for turbine towers or inside the towers unless otherwise negotiated with the affected landowner.

7. ELECTRICAL CABLES

The Permittee shall place electrical lines, known as collectors, and communication cables underground when located on private property. Collectors and cables shall also be placed within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner. This paragraph does not apply to feeder lines.

8. FEEDER LINES

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The Permittee shall place overhead 34.5 kV electric lines, known as feeders, on public rights-of-way if a public right-of-way exists or the Permittee may place feeders on private property. A change in feeder line locations may be made as long as feeders remain on public rights-of-way and approval has been obtained from the governmental unit responsible for the affected right-of-way. When placing feeders on private property, the Permittee shall place the feeder in accordance with the easement negotiated with the affected landowner. Not withstanding any of the requirements in paragraph III.D. to conduct surveys before any construction can commence, the Permittee may begin immediately upon issuance of this permit to construct the 34.5 kV feeder lines that will be required as part of this project. The Permittee shall submit the site plan and engineering drawings required under paragraph III.A.1. for the feeder lines before commencing construction. Any guy wires on the structures for feeder lines shall be marked with safety shields.

The Permittee must fulfill, comply with, and satisfy all Institute of Electrical and Electronics Engineers, Inc. (IEEE) standards applicable to this project, including but not limited to IEEE 776, IEEE 519, and IEEE 367, provided the telephone service provider(s) have complied with any obligations imposed on it pursuant to these standards. Upon request by the PUC, the Permittee shall report to the PUC on compliance with these standards.

F. STUDIES

1. WAKE LOSS STUDIES

The Permittee shall provide to the PUC with the site plan required by paragraph III.A.1., the preconstruction micro siting analysis leading to the final tower locations and an estimate of total project wake losses. The Permittee shall provide to the PUC any operational wake loss studies conducted on this project.

2. NOISE

On request of the PUC, the Permittee shall submit a proposal to the PUC for the conduct of a noise study. Upon the approval of the PUC the Permittee shall carryout the study. The study shall be designed to determine the noise levels at various distances from the turbines at various wind directions and speeds.

G. DECOMMISSIONING/RESTORATION/ABANDONMENT

1. DECOMMISSIONING PLAN

Prior to commencement of construction, the Permittee shall submit to the PUC a Decommissioning Plan describing the manner in which the Permittee anticipates decommissioning the project in accordance with the requirements of Minn. Rules part 4401.0450, subp.13. The Permittee shall ensure that it carries out its obligations to

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provide for the resources necessary to fulfill its requirements to properly decommission the project at the appropriate time. The PUC may at any time request the Permittee to file a report with the PUC describing how the Permittee is fulfilling this obligation.

2. SITE RESTORATION

Upon expiration of this Permit, or upon earlier termination of operation of the LWECS, the Permittee shall have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead and underground cables, foundations, buildings and ancillary equipment to a depth of four feet. To the extent possible the Permittee shall restore and reclaim the site to its pre-project topography and topsoil quality. All access roads shall be removed unless written approval is given by the affected landowner requesting that one or more roads, or portions thereof, be retained. Any agreement for removal to a lesser depth or for no removal shall be recorded with the county and shall show the locations of all such foundations. All such agreements between the Permittee and the affected landowner shall be submitted to the PUC prior to completion of restoration activities. The site shall be restored in accordance with the requirements of this condition within 18 months after expiration.

3. ABANDONED TURBINES

The Permittee shall advise the PUC of any turbines that are abandoned prior to termination of operation of the LWECS. The PUC may require the Permittee to decommission any abandoned turbine.

H. REPORTING

1. PROJECT ENERGY PRODUCTION

The Permittee shall, by July 15 of each year, report to the PUC on the monthly energy production of the project and the average monthly wind speed collected at one permanent meteorological tower selected by the PUC during the preceding year or partial year of operation. The report shall include copies of any project production reports filed with the Midwest Independent System Operator (MISO), Midwest Area Power Pool (MAPP), the Federal Energy Regulatory Commission (FERC), or any other public regulatory agency. The Permittee shall describe the operational status and availability of the project and any major outages, major repairs, or turbine performance improvements occurring in the previous year.

2. WIND RESOURCE USE

Within three months after commercial operation begins, the Permittee shall provide the PUC with viewer access to its supervisory control and data acquisition (SCADA) system to allow the PUC convenient review of the following average hourly data for each hour of commercial operation in printed format or electronic format capable of computerized analysis as specified by the PUC:

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(a) The power output of each turbine;

(b) The wind speed and direction measured at all monitored heights at any temporary and permanent meteorological towers, connected to the SCADA system, owned or operated by the Permittee, in or within three miles of the project site boundary; and

(c) Temperature and any other meteorological parameters recorded at one permanent meteorological tower selected by the PUC.

Once the Permittee provides the initial access, the PUC shall be responsible for maintaining the remote viewer connection. The Permittee shall not be in violation of this Permit if remote connection is lost or the SCADA system goes down. In the event the PUC is not provided access to the SCADA system, the Permittee shall file a quarterly report (due January 15, April 15, July 15, and October 15) with the PUC with the same data specified above. After two years of commercial operation, the PUC may reduce or eliminate the requirements of this condition. The provisions of paragraph III.K.5. shall apply to the PUC's review of this data.

3. EXTRAORDINARY EVENTS

Within 24 hours of an occurrence, the Permittee shall notify the PUC of any extraordinary event. Extraordinary events include but shall not be limited to: fires, tower collapse, thrown blade, collector or feeder line failure, injured LWECS worker or private person, kills of threatened or endangered species, or discovery of an unexpectedly large number of dead birds or bats of any variety on site. In the event of extraordinary avian mortality the DNR shall also be notified within 24 hours. The Permittee shall, within 30 days of the occurrence, submit a report to the PUC describing the cause of the occurrence and the steps taken to avoid future occurrences.

4. COMPLAINTS

Prior to the start of construction, the Permittee shall submit to the PUC the company's procedures to be used to receive and respond to complaints. The Permittee shall report to the PUC all complaints received concerning any part of the LWECS in accordance with the procedures provided in Exhibit 2 attached to this Permit.

I. FINAL CONSTRUCTION

1. AS-BUILT PLANS AND SPECIFICATIONS

Within 60 days after completion of construction, the Permittee shall submit to the PUC a copy of the as-built plans and specifications. The Permittee must also submit this data in a geographic information system (GIS) compatible format so that the PUC can place it

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into the Land Management Information Center's geographic data clearinghouse located in the Office of Geographic and Demographic Analysis.

2. FINAL BOUNDARIES

After completion of construction, the PUC may determine a need to adjust the final boundaries of the site required for this project. If done, this Permit may be modified, after notice and opportunity for public hearing, to represent the actual site required by the Permittee to operate the project authorized by this Permit.

3. EXPANSION OF SITE BOUNDARIES

No expansion of the site boundaries described in this Permit shall be authorized without the approval of the PUC. The Permittee may submit to the PUC a request for a change in the boundaries of the site for the LWECS. The PUC will respond to the requested change in accordance with applicable statutes and rules.

J. AUTHORITY TO CONSTRUCT LWECS

1. WIND RIGHTS.

The Permittee shall advise the PUC of the obtaining of exclusive wind rights within the boundaries of the LWECS authorized by this Permit within 30 days of receiving such wind rights. The Permittee shall submit documentation of such exclusive wind rights if requested by the PUC.

2. OTHER PERMIT APPLICATIONS.

Nothing in this Permit shall be construed to preclude any other person from seeking a site permit to construct a large wind energy conversion system in any area within the boundaries of the project covered by this Permit if the Permittee does not hold exclusive wind rights for such areas.

3. PREEMPTION OF OTHER LAWS

Pursuant to Minn. Stat. § 216F.07, this Site Permit shall be the only site approval required for the location of this project, and this Permit shall supersede and preempt all zoning, building, and land use rules, regulations, and ordinances adopted by regional, county, local, and special purpose governments. Nothing in this Permit shall release the Permittee from any obligation imposed by law that is not superseded or preempted by law.

4. POWER PURCHASE AGREEMENT

This Permit does not authorize construction of the project until the Permittee has obtained a power purchase agreement or some other enforceable mechanism for sale of the

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electricity to be generated by the project. In the event the Permittee does not obtain a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the project within three years of the issuance of this Permit, the Permittee must advise the PUC of the reason for not having such power purchase agreement or enforceable mechanism. In such event, the PUC may determine whether this Permit should be amended or revoked. No amendment or revocation of this Permit may be undertaken except in accordance with applicable statutes and rules, including Minn. Stat. § 216F.05 and Minnesota Rules 4401.0700.

K. MISCELLANEOUS

1. PERIODIC REVIEW

The PUC shall initiate a review of this Permit and the applicable conditions at least once every five years. The purpose of the periodic review is to allow the PUC, the Permittee, and other interested persons an opportunity to consider modifications in the conditions of the Permit. No modification may be made except in accordance with applicable statutes and rules.

2. FAILURE TO COMMENCE CONSTRUCTION

If the Permittee has not completed the pre-construction surveys required in paragraph III.D. and commenced construction of the LWECS within three years of the issuance of this Permit, the Permittee must advise the PUC of the reason construction has not commenced. In such event, the PUC may determine whether this Permit should be amended or revoked. No revocation of this Permit may be undertaken except in accordance with applicable statutes and rules, including Minn. Stat. § 216F.05 and Minnesota Rules 4401.0700.

3. MODIFICATION OF CONDITIONS

After notice and opportunity for hearing, this Permit may be modified or amended for cause including but not limited to the following:

(a) Violation of any condition in this Permit;

(b) Endangerment of human health or the environment by operation of the facility: or

(c) Existence of other grounds established by rule.

4. REVOCATION OR SUSPENSION OF THE PERMIT

The PUC may take action to suspend or revoke this Permit upon the grounds that:

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(a) A false statement was knowingly made in the application or in accompanying statements or studies required of the Permittee, and a true statement would have warranted a change in the PUC's findings;

(b) There has been a failure to comply with material conditions of this Permit, or there has been a failure to maintain health and safety standards; or

(c) There has been a material violation of a provision of an applicable statute, rule or an order of the PUC.

In the event the PUC shall determine that it is appropriate to consider revocation or suspension of this Permit, the PUC shall proceed in accordance with the requirements of Minn. Stat. § 216F.05 to determine the appropriate action. Upon a finding of any of the above, the PUC may require the Permittee to undertake corrective measures in lieu of having the Permit suspended or revoked.

5. PROPRIETARY INFORMATION

Certain information required to be submitted to the PUC under this Permit, including energy production and wake loss data, may constitute trade secret information or other type of proprietary information under the Data Practices Act or other law and is not to be made available by the PUC. The Permittee must satisfy requirements of applicable law to obtain the protection afforded by the law.

6. TRANSFER OF PERMIT

The Permittee may not transfer this Permit without the approval of the PUC. If the Permittee desires to transfer this Permit, the holder shall advise the PUC in writing of such desire. The Permittee shall provide the PUC with such information about the transfer as the PUC requires to reach a decision. The PUC may impose additional conditions on any new Permittee as part of the approval of the transfer.

7. OTHER PERMITS

The Permittee shall be responsible for acquiring any other federal, state, or local permits or authorizations that may be required to construct and operate a LWECS within the authorized site. The Permittee shall submit a copy of such permits and authorizations to the PUC upon request.

8. SITE MANAGER

The Permittee shall designate a Site Manager who shall be the contact person for the PUC to contact with questions about the LWECS. The Permittee shall provide the PUC with the name, address, and phone numbers of the project site manager prior to placing

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any turbine into operation. This information shall be maintained current by informing the PUC of any changes, as they become effective.

9. NOTICE TO LOCAL RESIDENTS

The Permittee shall, within ten working days of receipt of this Permit, send a copy of the Permit to the office of the auditor of each county in which the site is located and to the clerk of each city and township within the site boundaries. If applicable, the Permittee shall also, within 10 working days of issuance, send a copy of this Permit to each regional development commission, local fire district, soil and water conservation district, watershed district, and watershed management district office with jurisdiction in the county where the site is located. Within 30 days of issuance of this Permit, the Permittee shall send a copy of the Permit to each affected landowner within the site. In no case shall the affected landowner receive the site permit less than five days prior to the start of construction on their property.

10. RIGHT OF ENTRY

The Permittee shall allow representatives of the PUC to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards:

(a) To enter upon the facilities easement of the site property for the purpose of obtaining information, examining records, and conducting surveys or investigations.

(b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.

(c) To sample and monitor upon the facilities easement of the property; and

(d) To examine and copy any documents pertaining to compliance with the conditions of this Permit.

11. MORE STRINGENT RULES

The PUC's issuance of this Site Permit does not prevent the future adoption by the PUC of rules or orders more stringent than those now in existence and does not prevent the enforcement of these more stringent rules and orders against the Permittee.

L. EXPIRATION DATE

This Permit shall expire on December 31, 2039.

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M. SPECIAL CONDITIONS

1. EFFECT

These Special Conditions shall take precedence over any of the other conditions of this Permit if there should be a conflict between the two.

2. FEDERALLY-ENDANGERED TOPEKA SHINER

To prevent sedimentation in streams inhabited by the federally-endangered (state special concern) Topeka shiner (*Notropis topeka*), the Permittee shall employ best management practices as described in Exhibit 3, when working in project area waters.

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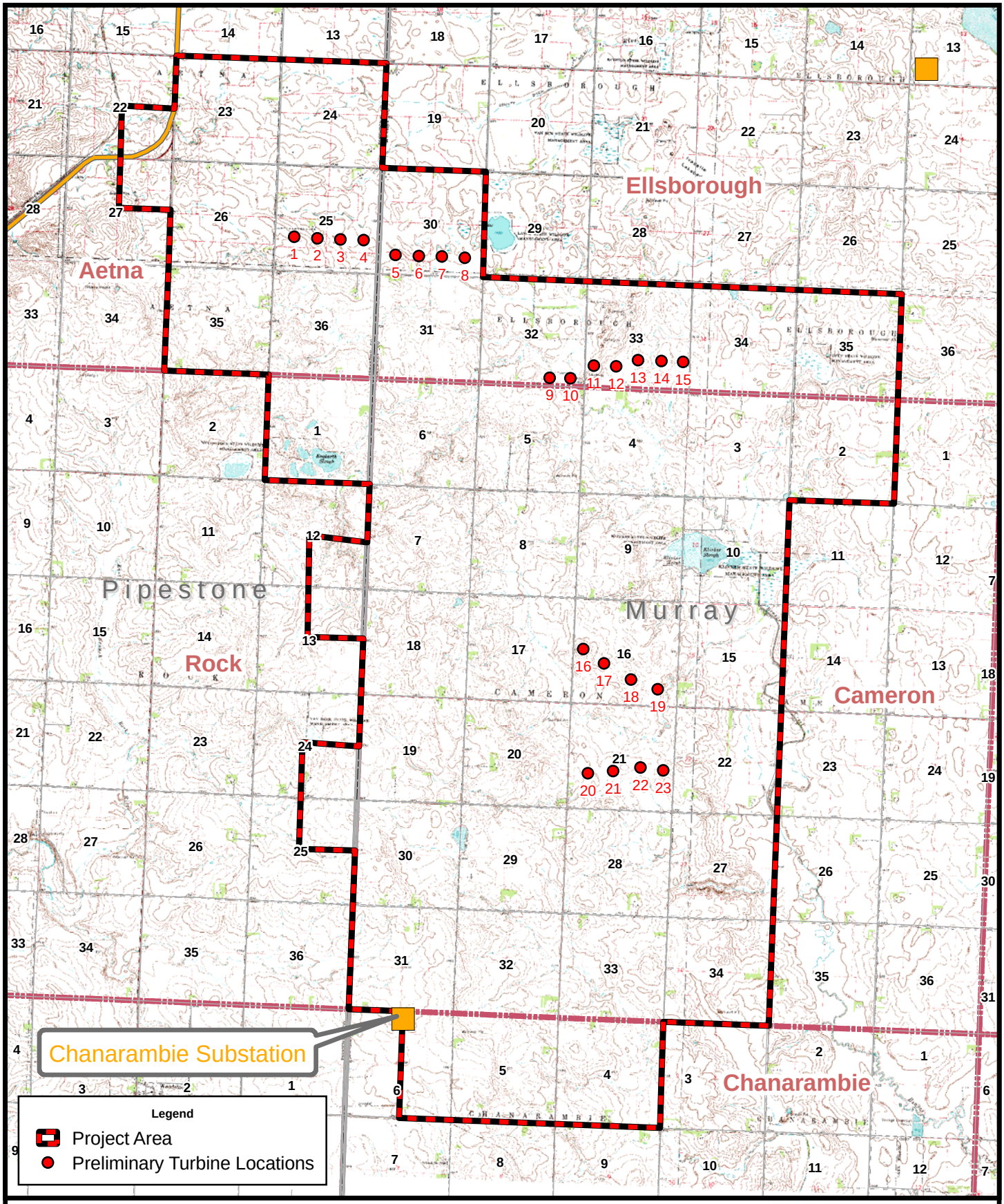

Turbine Locations are preliminary and may change before construction

0 0.5 1 2
Miles

Figure 1-3
Preliminary Site Layout Map
Moraine II Wind Project
PPM Energy
Murray & Pipestone Counties, MN

PPM Energy
A ScottishPower Company

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Map Document: (N:\GISProj\PPM\54322\map_docs\mxd\LWECSPermitApplication\Moraine_PreliminaryTurbineLayout.mxd)
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EXHIBIT 2

MINNESOTA PUBLIC UTILITIES COMMISSION COMPLAINT REPORT PROCEDURES FOR LARGE WIND ENERGY CONVERSION SYSTEMS

1. Purpose

To establish a uniform and timely method of reporting complaints received by the Permittee concerning the Permit conditions for site preparation, construction, cleanup and restoration, and resolution of such complaints.

2. Scope

This reporting plan encompasses complaint report procedures and frequency.

3. Applicability

The procedures shall be used for all complaints received by the Permittee.

4. Definitions

Complaint - A statement presented by a person expressing dissatisfaction, resentment, or discontent as a direct result of the LWECS and associated facilities. Complaints do not include requests, inquiries, questions or general comments.

Substantial Complaint - Any complaints submitted to the Permittee in writing that, if substantiated, could result in Permit modification or suspension pursuant to the applicable regulations.

Person - An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

5. Responsibilities

Everyone involved with any phase of the LWECS is responsible to ensure expeditious and equitable resolution of all complaints. It is therefore necessary to establish a uniform method for documenting and handling complaints related to this LWECS project. The following procedures will satisfy this requirement:

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A. The Permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:

1. Name of the Permittee and project.
2. Name of complainant, address and phone number.
3. Precise property description or tract numbers (where applicable).
4. Nature of complaint.
5. Response given.
6. Name of person receiving complaint and date of receipt.
7. Name of person reporting complaint to the PUC and phone number.
8. Final disposition and date.

B. The Permittee shall assign an individual to summarize complaints for transmittal to the PUC.

6. Requirements

The Permittee shall report all complaints to the PUC according to the following schedule:

Immediate Reports - All substantial complaints shall be reported to the PUC by phone the same day received or on the following working day for complaints received after working hours. Such reports are to be directed to Wind Permit Compliance at the following: 651-296-5089 or 1-800-657-3794. Voice messages are acceptable.

Monthly Reports – By the 15th of each month, a summary of all complaints, including substantial complaints received or resolved during the proceeding month, and a copy of each complaint shall be sent to Wind Permit Compliance, Minnesota Department of Commerce, 85 7th Place East, Suite 500, St. Paul, MN 55101-2198.

7. Complaints Received by the PUC

Copies of complaints received directly by the PUC from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation and maintenance shall be promptly sent to the Permittee.

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EXHIBIT 3

Recommendations for Construction Projects Affecting Waters Inhabited by Topeka Shiners (*Notropis topeka*) in Minnesota

U.S. Fish and Wildlife Service
Twin Cities Field Office
(612) 725-3548

Background

Topeka shiner (*Notropis topeka*) occurs throughout the Big Sioux and Rock River Watersheds in five counties in southwestern Minnesota (Figure 1). The U.S. Fish and Wildlife Service (Service) listed Topeka shiner as an endangered species in 1998 and designated critical habitat1[1] for it in 2004. The Endangered Species Act (ESA) prohibits the taking[2] of this species.

Endangered Species Act Requirements for Actions in Topeka Shiner Habitat

Federal Agency Actions

Federal agencies or their designated non-federal representatives must consult with the Service on any action that they fund, authorize, or carry out that may affect Topeka shiner or its critical habitat. If an agency proposes to implement an action that is likely to result in adverse effects to Topeka shiner, it must undergo formal consultation with the Service. If the agency determines that an action may affect Topeka shiners, but that those effects are not likely to be adverse, it may avoid formal consultation by receiving written concurrence on this determination from the Service.

Private or Local (Non-federal) Actions

Private landowners, corporations, state or local governments, and other non-federal entities or individuals who wish to conduct activities that might incidentally harm (or "take") Topeka shiners must first obtain an incidental take permit from the U.S. Fish and Wildlife Service (Service). To determine whether an action may require an incidental take permit, coordinate with the Service when planning actions that may affect streams or off-channel habitats in the Rock River or Big Sioux River watersheds in Minnesota. Contact the Service's Twin Cities Field Office (612/725-3548) for further information or see the following website for information regarding Endangered Species permits -- http://endangered.fws.gov/permits/index.html?#forms.

Project Recommendations

The following recommendations are provided to help design actions that would avoid or minimize adverse effects to Topeka shiner. These recommendations may not address every way in which proposed actions may affect this species and may not preclude the need for formal consultation for federal actions or for an incidental take permit for non-federal actions. Therefore, we highly recommend that you coordinate early in the planning process with the Service's Twin Cities Field Office (612/725-3548) when contemplating

[1] 1 See 69 Federal Register 44,736 (July 27, 2004) or http://www.fws.gov/midwest/endangered/fishes/index.html for further information about Topeka shiner critical habitat. 1 Revised 5/12/2005 USFWS Ecological Services

[2] 2 The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

any action that may affect streams or associated off-channel habitats (oxbows, abandoned channels, etc.) in the Big Sioux River or Rock River watersheds in Minnesota (Fig. 1).

1. Ensure that contractors and subcontractors understand all permit provisions that are necessary to avoid or minimize adverse effects to Topeka shiners.

2. Do not dewater stream reaches or temporarily divert streams for construction.

3. Do not conduct in-stream work before August 15 to avoid disrupting Topeka shiner spawning.

4. Follow all applicable requirements and best management practices for stormwater and erosion control – for example, requirements contained within stormwater permits from Minnesota Pollution Control Agency (MPCA). Useful resources for designing effective stormwater and erosion control include the MPCA Stormwater Best Management Practices Manual (see http://www.pca.state.mn.us/water/pubs/sw-bmpmanual.html) and the Minnesota Department of Transportation Erosion Control Handbook for Local Roads (see http://www.lrrb.gen.mn.us/PDF/200308.pdf). Other resources are available at http://www.pca.state.mn.us/water/stormwater/stormwater-c.html#factsheets. General suggestions for minimizing effects of erosion on Topeka shiners are shown below.

5. Minimize removal of riparian (streamside) vegetation; such removal should occur sequentially as needed over the length of the project.

6 Mulch areas of disturbed soils and reseed promptly.

7. Implement appropriate erosion and sediment prevention measures to the maximum extent practicable. Inspect devices frequently to ensure that they are effective and in good

8. Leave existing features, such as bridge abutments, retaining walls, and riprap, in place as much as is feasible.

9. Ensure that erosion prevention measures are in place and in adequate condition when leaving work site.

10. Design and install instream structures (e.g., box culverts) in a manner that will not impair passage of Topeka shiners and other fish species after construction is completed.

11. Do not operate motorized vehicles instream. Excavation, culvert placement, etc. should be conducted from streambanks outside of standing or flowing water.

12. Backfill placed in the stream shall consist of rock or granular material free of fines, silts, and mud. Machinery parts (i.e., backhoe buckets, etc.) shall be cleaned of all such material and free of grease, oil, etc. before their instream use.

13. Prevent materials and debris from falling into the water during construction. If materials or debris fall into the water or into riparian areas retrieve them promptly by hand or with equipment working from the banks.

14. If the project is modified, or if field conditions change, the applicant or agency representative should contact U.S. Fish and Wildlife Service before proceeding.

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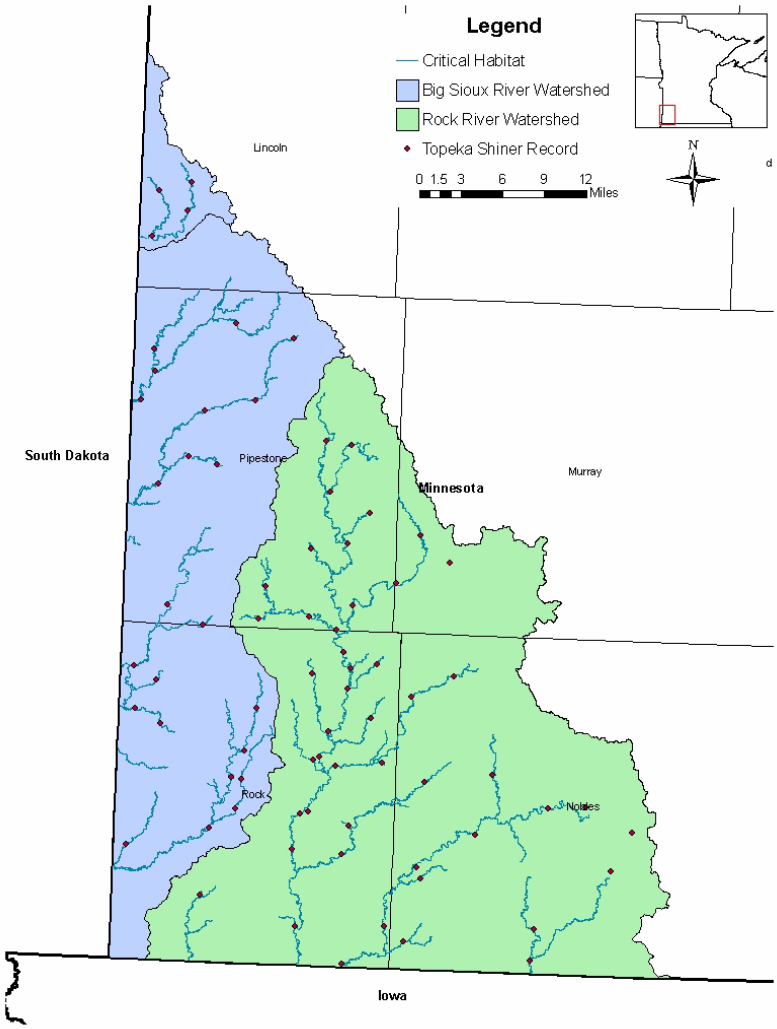

Figure 1. Recorded occurrences of Topeka shiner and officially designated critical habitat in Minnesota. [See 69 Fed. Reg. 44,736 (July 27, 2004) or http://www.fws.gov/midwest/endangered/fishes/index.html#topeka for further information about Topeka shiner critical habitat.] U.S. Fish and Wildlife Service (Service) designated critical habitat only in stream reaches where Topeka shiner had been recorded as of August 2002, when critical habitat was originally proposed. Surveys conducted after August 2002 have found Topeka shiners in additional locations, including some that the Service had not proposed as critical habitat. Therefore, some records shown above occur outside of officially designated critical habitat. Surveys for this species are limited and ongoing. Although Topeka shiners are likely to be found in additional sites not indicated on this map, it is unlikely that the species occurs outside of the Rock River or Big Sioux River watersheds. For information on potential Topeka shiner occurrence in a specific location, contact U.S. Fish and Wildlife Service (612/725-3548).