



**ROUTE PERMIT  
FOR CONSTRUCTION OF A  
HIGH VOLTAGE TRANSMISSION LINE  
IN  
LINCOLN COUNTY, MINNESOTA  
ISSUED TO  
NORTHERN STATES POWER CO. d/b/a XCEL ENERGY  
EQB DOCKET No. 04-84-TR-XCEL**

In accordance with the requirements of Minnesota Statutes Section 116C.575 and Minnesota Rules Chapter 4400, this Route Permit is hereby issued to:

**NORTHERN STATES POWER CO. d/b/a XCEL ENERGY**

Northern States Power Co., d/b/a Xcel Energy (hereinafter referred to as Xcel Energy), is authorized by this route permit to construct a new 115 kilovolt high voltage transmission line and associated facilities approximately 28 miles long between the Buffalo Ridge Substation, located south and east of Lake Benton in Lincoln County, Minnesota, to the new Brookings Substation in Brookings County, South Dakota, near the Western Area Power Administration's White Substation. The Minnesota portion of the project, approximately 18.6 miles long, shall be built along the route identified in this Permit and in compliance with the conditions specified in this Permit. Xcel Energy is also authorized to construct the Yankee Substation.

Approved and adopted this 17<sup>th</sup> day of March, 2005.

STATE OF MINNESOTA  
ENVIRONMENTAL QUALITY BOARD

Robert A. Schroeder, Chair



## **I. ROUTE PERMIT**

The Minnesota Environmental Quality Board hereby issues this Route Permit to Xcel Energy pursuant to Minnesota Statutes section 116C.575 and Minnesota Rules Chapter 4400. This permit authorizes Xcel Energy to construct a 115 kilovolt high voltage transmission line and associated facilities and the Yankee Substation in Lincoln County, Minnesota.

## **II. PROJECT DESCRIPTION**

The new alternating current high voltage transmission line authorized to be constructed under this Permit is a 115,000-volt (115 kilovolt or kV) line that will connect the Buffalo Ridge Substation in Lincoln County Minnesota, and the new 345/115 kV Brookings County Substation in Brookings County, South Dakota, which will be connected to the Western Area Power Administration's White Substation. The line will require new right-of-way that will vary in width from 45 to 75 feet for most of its length, although nearly all of the line will be located immediately adjacent to existing road rights-of-way. The Minnesota portion of the route is approximately 18.6 miles in length.

Xcel Energy is proposing to use single pole, galvanized steel, single and double circuit 115 kV davit arm structures. Certain portions of the route will be designed to accommodate existing single circuit and double circuit 34.5 kV wind feeder and other distribution lines as an underbuild on the 115 kV structures to consolidate lines. Near the Yankee Substation (extending eastward for one mile and north for a distance of up to two miles), the new structures will be designed to accommodate multiple circuit configurations to avoid transmission line congestion from any new or existing wind feeder lines and 115 kV or higher voltage transmission lines that will also tie into the Yankee Substation in the future.

Bundled (two) 795-kcmil 26/7 (Drake) aluminum core steel supported (ACSS) conductors will be used for each phase of the Buffalo to Brookings 115 kV transmission line. For lightning protection a 3/8-inch shield wire will be used.

This EQB Route Permit also authorizes Xcel Energy to:

1. Reroute approximately 0.2 miles of the existing Lake Yankton-Pipestone 115-kV Transmission Line to join with the Buffalo Ridge-Brookings County 115-kV Transmission Line and then double circuit the two transmission lines for 1.7 miles to intersect with the existing Lake Yankton Transmission Line and remove approximately 1.4 miles of the Lake Yankton-Pipestone 115-kV Transmission Line from the Hole-in-the-Mountain Wildlife Management Area and the Nature Conservancy's Hole-in-the-Mountain Prairie.
2. Improve Xcel Energy's Buffalo Ridge Substation to accommodate the new 115-kV transmission line.

3. Construct a new Yankee Substation located approximately midway along the 115 kV transmission line.
4. Relocate up to four 115 kV transmission line structures of the Lake Yankton - Pipestone 115 kV transmission line at the Buffalo Ridge Substation.
5. Relocate up to four 115 kV transmission line structures of the Lake Yankton - Pipestone 115 kV line where the re-routed double circuit 115 kV line intersects the Lake Yankton - Pipestone transmission line.

### III. DESIGNATED ROUTE AND SUBSTATION SITES

The route designated by the EQB in this Permit is comprised of route segments A, B, C, D, E and F as described below and shown on the map attached to this Permit (Attachment 1). The route width is 300 feet or 150 feet on each side of the centerline of the road that each route segment follows, except as noted in the route description below. Xcel Energy may acquire a 45 foot wide right-of-way, except where a 75 foot wide right-of-way is required as described below in Route Segments A and E. The Minnesota portion of the route is generally described as follows, beginning at the Buffalo Ridge Substation in Lincoln County and ending at the Minnesota/South Dakota border.

**Route Segment A.** Begins at the Buffalo Ridge Substation and follows Lincoln County Road (CR) 108 south for approximately one mile to CR 9. The route turns west to parallel CR 9 for approximately two miles until it intersects with US Highway 75. The route width for the last half mile of Route Segment A is 400 feet or 200 feet from the centerline of CR 9, where Xcel Energy may require a 75 foot wide right-of-way.

**Route Segment B.** Reroutes the existing Lake Yankton - Pipestone 115 kV transmission line to the south along the east side of US 75.

**Route Segment C.** Proceeds south along the east side of US Highway 75 until it intersects CR 9 (110<sup>th</sup> Street), where it turns west to parallel 110<sup>th</sup> Street until it intersects the existing Lake Yankton – Pipestone 115 kV transmission line.

**Route Segment D.** Proceeds west along CR 9 (110<sup>th</sup> Street), until it intersects 160<sup>th</sup> Avenue. At the intersection of 110<sup>th</sup> Street and 160<sup>th</sup> Avenue, Route Segment D proceeds north along 160<sup>th</sup> Avenue for one mile up to 120<sup>th</sup> Street.

**Route Segment E.** Begins at the intersection of 120<sup>th</sup> Street and 160<sup>th</sup> Avenue and proceeds north along 160<sup>th</sup> Avenue for two miles until it intersects 140<sup>th</sup> Street. At the intersection of 160<sup>th</sup> Avenue and 140<sup>th</sup> Street, the line turns west and proceeds along CR 119 (140<sup>th</sup> Street) for three miles until it intersects 130<sup>th</sup> Avenue. The last half mile of this three mile portion of Route Segment E will require a 75 foot wide right-of-way. At the intersection of 140<sup>th</sup> Street and 130<sup>th</sup> Avenue, Route Segment E proceeds north for two miles along 130<sup>th</sup> Avenue. At the intersection of 130<sup>th</sup> Avenue and 160<sup>th</sup> Street, Route Segment E turns west to follow 160<sup>th</sup> Street west for one mile until it intersects Lincoln

County State Aid Highway (CSAH) 1. At the intersection of 160<sup>th</sup> Street and Highway 1, Route Segment E will end at the Yankee Substation.

**Route Segment F.** Exits the Yankee Substation and proceeds north along CSAH 1 for two miles, then proceeds west along CSAH 13 for approximately 1.4 miles to the South Dakota Border.

**Substation Sites.** The MEQB authorizes Xcel Energy to construct the Yankee Substation on site number 5, located in the north east one quarter of section 5 of Verdi Township.

If Xcel Energy obtains the approval of the landowner(s) for site 3 in the southeast one quarter of section 31 in Drammen Township or site 4 in the northeast one quarter of section 6 in Verdi Township, site 3 or site 4 may be used for the Yankee Substation.

#### IV. PERMIT CONDITIONS

The Permittee shall comply with the following conditions during construction of the transmission line and associated facilities and the life of this Permit.

**A. Plan and Profile.** At least 14 days before right-of-way preparation for construction begins, the Permittee shall provide the EQB with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, cleanup, and restoration for the transmission line. The Permittee may not commence construction until the 14 days has expired or until the EQB has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the EQB, the Permittee shall notify the EQB at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

#### **B. Construction Practices.**

**1. Application.** The Permittee shall follow those specific construction practices and material specifications described in the Xcel Energy Application to the Minnesota Environmental Quality Board for a Route Permit dated August 10, 2004, and as described in section 8.0 of the Environmental Assessment unless this Permit establishes a different requirement in which case this Permit shall prevail.

**2. Field Representative.** At least ten days prior to commencing construction, the Permittee shall advise the EQB in writing of the person or persons designated to be the field representative for the Permittee with the responsibility to oversee compliance with the conditions of this Permit during construction. This person's address, phone number, and emergency phone number shall be provided to the EQB, which may make the information available to local residents and public officials and other interested persons.

The Permittee may change its field representative at any time upon written notice to the EQB.

- 3. Cleanup.** All waste and scrap that is the product of construction shall be removed from the area and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper, from construction activities shall be removed on a daily basis.
  - 4. Vegetation Removal.** The Permittee shall minimize the number of trees to be removed as part of the construction of the line, taking into account Permit Condition IV.H.1, which recognizes that the Permittee has obligations to comply with clearance requirements.
  - 5. Erosion Control.** The Permittee shall implement reasonable measures to minimize runoff during construction and shall plant or seed non-agricultural areas that were disturbed where structures are installed. Upon request, the Permittee shall submit to the EQB a copy of any Soil Erosion and Sediment Control Plan prepared for the Minnesota Pollution Control Agency as part of a storm-water runoff permit application.
  - 6. Temporary Work Space.** The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way.
  - 7. Restoration.** The Permittee shall restore all temporary work spaces, access roads, and other private lands affected by construction of the transmission line. Restoration must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within sixty days after completion of all restoration activities, the Permittee shall advise the EQB in writing of the completion of such activities.
  - 8. Notice of Permit.** The Permittee shall inform all employees, contractors, and other persons involved in the construction of the transmission line of the terms and conditions of this Permit.
- C. Periodic Status Reports.** Upon request, the Permittee shall report to the EQB on progress regarding finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than quarterly.
- D. Complaint Procedure.** Prior to the start of construction, the Permittee shall submit to the EQB the company's procedures to be used to receive and respond to complaints. The procedures shall be in accordance with the requirements set forth in Exhibit 1 attached to this Permit.
- E. Notification to Landowners.** The Permittee shall provide all affected landowners with a copy of this Permit at the time of the first contact with the landowners after issuance of this Permit.
- F. Completion of Construction.**

**1. Notification to EQB.** At least three days before the line is to be placed into service, the Permittee shall notify the EQB of the date on which the line will be placed into service and the date on which construction was complete.

**2. As-Builts.** Within 180 days of completion of the project, the Permittee shall submit copies of all the final as-built plans and specifications developed during the project.

**3. GPS Data.** Within sixty days after completion of construction, the Permittee shall submit to the EQB, in the format requested by the EQB, geo-spatial information (GIS compatible maps, GPS coordinates, etc.) for all above ground structures associated with the transmission lines and each substation connected.

#### **G. Electrical Performance Standards.**

**1. Grounding.** The Permittee shall design, construct, and operate the transmission line in such a manner that the maximum steady-state short-circuit current shall be limited to five milliamperes rms alternating current between the ground and any non-stationary object within the right-of-way including but not limited to, large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the short circuit current between ground and the object so as not to exceed one milliamperes rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code.

**2. Electric Field.** The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

**3. Interference with Communication Devices.** If interference with radio or television, satellite or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is prudently feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

#### **H. Other Requirements.**

**1. Applicable Codes.** The Permittee shall comply with applicable North American Electric Reliability Council (NERC) planning standards and requirements of the National Electric Safety Code (NESC) including clearances to ground, clearance to crossing utilities, clearance to buildings, right-of way widths, erecting power poles, and stringing of transmission line conductors.

**2. Other Permits.** The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of these permits. A list of the required permits is included in the permit

application and the environmental assessment. The Permittee shall submit a copy of such permits to the EQB upon request.

**3. Pre-emption.** Pursuant to Minnesota Statutes section 116C.61, subdivision 1, this Site Permit shall be the sole route approval required to be obtained by the Permittee and this Permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government.

**I. Delay in Construction.** If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this Permit, the EQB shall consider suspension of the Permit in accordance with Minn. Rules part 4400.3750.

**J. Special Conditions.**

**1. Permanent Right-of-Way Acquisition.** Where the transmission line parallels road or transmission line rights-of-way, Xcel Energy may acquire up to 45 feet of right-of-way, unless an agreement with a landowner allows acquisition of new right-of-way up to 75 feet.

**2. Removal of approximately 1.4 miles of the Lake Yankton – Pipestone 115 kV Transmission Line.** The Permittee must remove the portion the existing Lake Yankton – Pipestone 115 kV transmission line from the Hole-in-the Mountain Wildlife Management Area and the Nature Conservancy's Hole-in-the Mountain Prairie as described in the Route Permit Application dated August 10, 2004, and in the Environmental Assessment dated January 16, 2005. The Permittee shall advise the Department of Natural Resources and the Nature Conservancy on the removal plan and schedule at least 60 days prior to commencing removal of the transmission line.

**3. Interstate Telecommunications Cooperative, Inc.** Xcel Energy shall:

a. Meet with representatives of Interstate Telecommunications Cooperative, Inc., prior to any right-of-way acquisition, construction, or installation being commenced, and discuss any concerns with the location or engineering design of the 115 kV transmission line, including the avoidance of interference that exceeds existing standards which may be caused by the project;

b. Xcel Energy shall in consultation with ITC determine or predict the level of interference that may be produced by the transmission line before right-of-way acquisition, construction and installation commences; and

c. Xcel Energy 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 ITC has complied with any

obligations imposed on it pursuant to these standards. Upon request by the EQB, the Permittee shall report to the EQB on compliance with these standards.

## **V. PERMIT AMENDMENT**

This permit may be amended at any time by the EQB. Any person may request an amendment of this permit by submitting a request to the Chair in writing describing the amendment sought and the reasons for the amendment. The Chair will mail notice of receipt of the request to the Permittee. The EQB may amend the permit after affording the Permittee and interested persons such process as is required.

## **VI. TRANSFER OF PERMIT**

The Permittee may request at any time that the EQB transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer. The person to whom the permit is to be transferred shall provide the EQB with such information as the EQB shall require to determine whether the new permittee can comply with the conditions of the permit. The EQB may authorize transfer of the permit after affording the Permittee, the new permittee, and interested persons such process as is required.

## **VII. REVOCATION OR SUSPENSION OF THE PERMIT**

The EQB may initiate action to revoke or suspend this permit at any time. The EQB shall act in accordance with the requirements of Minnesota Rules part 4400.3950 to revoke or suspend the permit.

**Designated Route  
Buffalo Ridge  
to  
Brookings County  
115 kV Transmission Line  
Xcel Energy  
Windfarm Transmission  
Improvement Projects**

**Legend**

- Potential Locations for Proposed Yankee Substation
- Existing Substations
- White Substation (Western)
- Proposed Brookings County Substation (Xcel Energy)

**Potential Route Segments**

- |  |                  |  |   |
|--|------------------|--|---|
|  | A                |  | F |
|  | B                |  | G |
|  | C                |  | H |
|  | D                |  | I |
|  | E                |  |   |
|  | 345 kV Connector |  |   |

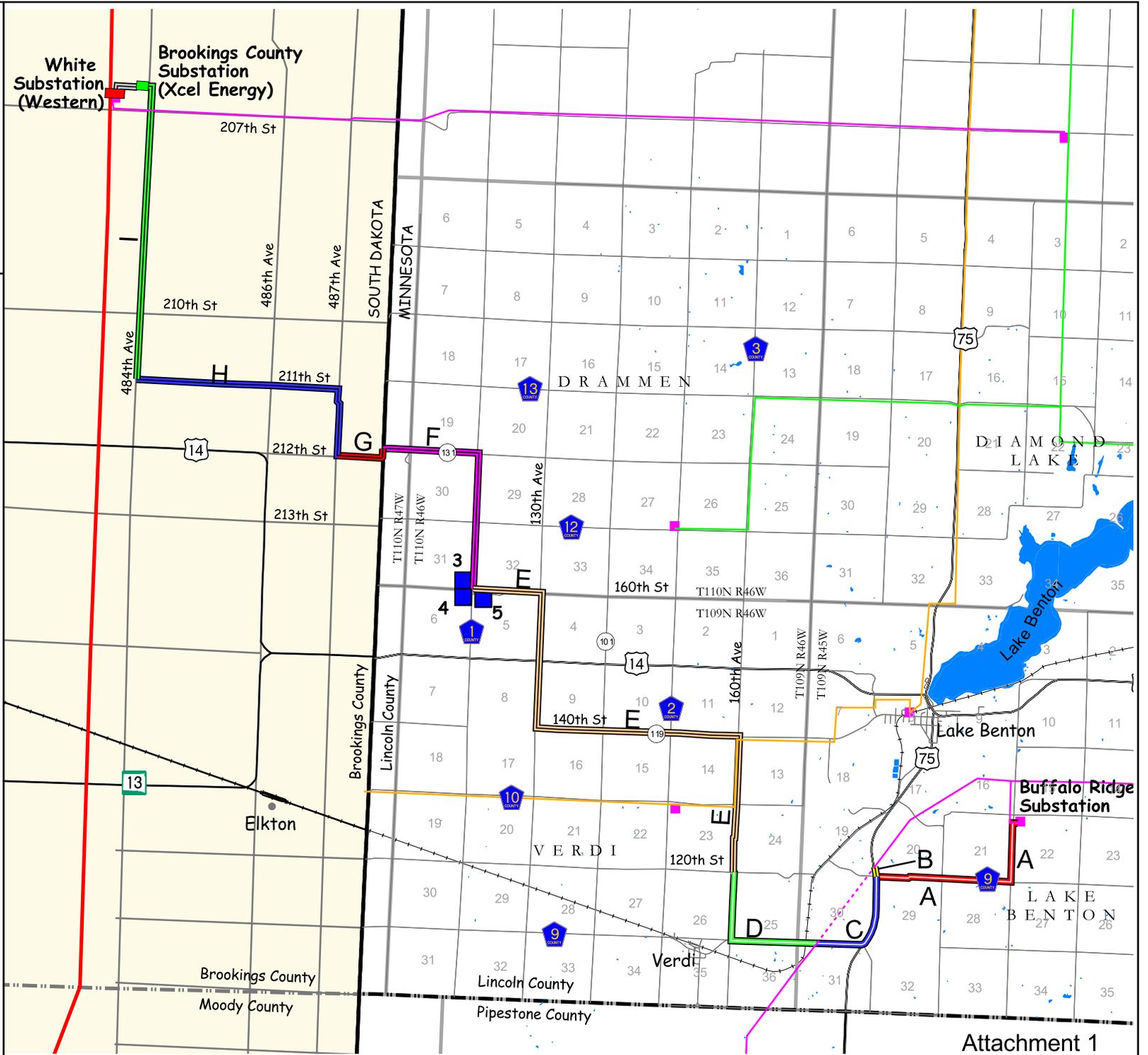
**Existing Transmission Lines**

- Less than 69 kV
- 69 kV
- 115 kV
- 115 kV - to be relocated with new 115 kv line
- 345 kV



0 1 2 Miles

1" = 2 miles



## EXHIBIT 1

### ENVIRONMENTAL QUALITY BOARD COMPLAINT REPORT PROCEDURES FOR HIGH VOLTAGE TRANSMISSION LINES

1. Purpose

To establish a uniform and timely method of reporting complaints received by the permittee concerning the permit conditions for right-of-way 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 right-of-way preparation, construction, cleanup and restoration. 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 right-of-way preparation, construction, cleanup and restoration 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 directed to this project. The following procedures will satisfy this requirement:

- 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 number (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 EQB and phone number.
  8. Final disposition and date.
- B. The permittee shall assign an individual to summarize complaints for transmittal to the EQB.

6. Requirements

The permittee shall report all complaints to the EQB according to the following schedule:

Immediate Reports - All substantial complaints shall be reported to the EQB by phone the same day received (or on the following working day for complaints received after working hours) at 651-296-5089.

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 Minnesota Environmental Quality Board, 300 Centennial Building, 658 Cedar St., St. Paul, MN 55155.

7. Complaints Received by the EQB

Copies of complaints received directly by the EQB from aggrieved persons regarding right-of-way preparation, construction, cleanup and restoration shall be promptly sent to the permittee.