

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

TransCanada Keystone Pipeline, LP
30-Inch Crude Oil Pipeline/Cavalier to Sargent
Counties
Siting Application

Case No. PU-06-421

SECOND SUPPLEMENTAL ORDER

May 30, 2008

Preliminary Statement

On February 21, 2008 the Commission issued Findings of Fact, Conclusions of Law and Order (Order) granting to TransCanada Keystone Pipeline, LP (Keystone) Certificate of Corridor Compatibility No. 101 and Route Permit No. 111 for a 218 mile, 30-inch crude oil pipeline (Keystone Pipeline) in Cavalier, Pembina, Walsh, Nelson, Steele, Barnes, Ransom, and Sargent Counties of North Dakota.

The Order required that:

1. Keystone file stream crossing plans with the Commission and approved prior to the start of construction for crossings of valuable fisheries that will not be horizontal directional drilled, and that
2. Keystone file a clearing plan with the Commission and approved prior to the start of construction should additional construction work space be needed at stream or river crossings and would like to clear more than an 85 foot width of trees

The Order also adopted tree and shrub mitigation specifications setting forth the procedures for the inventory, clearing, and replacement of trees and shrubs removed during construction of the Keystone Pipeline. The specifications provide that trees and shrubs may be inventoried by actual count or by sampling method. A sampling plan developed by the company must be filed with the Commission and approved prior to the start of construction.

On April 7, 2008 Keystone filed a motion requesting approval of stream crossing methods, approval of extra work space in forested areas, and approval of a Tree and Shrub Sampling Plan. Keystone also filed for clarification of inconsistency in the Order concerning tree clearing widths.

On May 13, 2008 the Commission held an Informal Hearing on these matters. The Informal Hearing was continued to May 21, 2008, and to May 27, 2008.

On May 27, 2008 TransCanada filed a motion requesting approval of two (2) route refinements to be contingent of Keystone obtaining voluntary acquisition of easements from affected landowners.

Clarification on Tree Clearing Widths

Paragraph 14 of the Commission's Order states:

"The width of the clear cuts through any windbreaks and shelterbelts shall be limited to 50 feet or less. The width of clear cuts through extended lengths of wooded areas shall be limited to 85 feet or less."

Item number 8 of the Tree and Shrub Mitigation Specifications states:

"The width of clear cuts through windbreaks, shelterbelts and all other wooded areas shall be limited to 50 feet or less unless otherwise approved by the North Dakota Public Service Commission."

The requirement as stated in paragraph 14 of the Commission's Order is the specific requirement of the Commission in the permit issued to Keystone, and is controlling over the more general statement contained in the Tree and Shrub Mitigation Plan. It was determined that there is no actual inconsistency and the application of these two provisions were fully discussed and explained.

Additional Work Space in Forested Areas

Keystone's April 7, 2008 filing included site specific drawings depicting additional temporary work space in forested areas at certain stream or road crossings shown below:

MP 13.12 Unnamed Creek
MP 16.13 Tributary to Tongue River
MP 17 Unnamed Creek
MP 21.44 Unnamed Creek
MP 22.7 Unnamed Creek
MP 23.7 Cart Creek
MP 24.7 Unnamed Creek
MP 29.4 North Branch Park River
MP 31.8 Unnamed Creek

MP 33.3 Unnamed Stream and Middle Branch Park River
MP 34.8 Unnamed Creek
MP 35.3 Unnamed Creek
MP 36.3 Unnamed Creek
MP 37.2 Unnamed Creek
MP 38.1 Unnamed Creek
MP 42.7 Unnamed Stream
MP 46.4 North Branch Forest River
MP 49.2 Unnamed Stream
MP 54.8 Middle Branch Forest River
MP 107.1 Bored Crossing of 5th Street NE
MP 123.6 Bored Crossing of 11th Street SE
MP 212.6 Bored Crossing of 97th Street

Lois A. Gray provided both written and verbal testimony in support of Keystone's request.

On May 20, 2008 Keystone filed revisions to the following April 7 site specific drawings:

MP 13.12 Unnamed Creek
MP 22.7 Unnamed Creek
MP 33.4 Unnamed Stream and Middle Branch Park River
MP 35.3 Unnamed Creek
MP 36.3 Unnamed Creek
MP 37.2 Unnamed Creek
MP 38.1 Unnamed Creek
MP 42.7 Unnamed Stream
MP 49.2 Unnamed Stream

At the May 27, 2008 Informal Hearing, Keystone agreed that, at all stream crossings, it would maintain a setback or buffer from the stream bank to temporary workspace spoil areas of at least 25 feet.

On May 28, 2008 Keystone filed revisions to the May 20 site specific drawings listed above.

The additional temporary work space at stream crossings depicted on the site specific drawings is necessary to install the pipeline safely and with the least environmental impact to the stream.

Tree and Shrub Sampling Plan

Keystone has developed the Tree and Shrub Sampling Plan for Native Growth Areas to describe the methods Keystone will implement to count and document the woody vegetation to be removed during pipeline construction by the Keystone Project through Native Growth Areas.

Keystone provided this sampling plan to the ND State Forester who concurred with the recommendations of the Plan. Also, a concurrence was obtained from the USDA Forest Service.

A slight modification of the sampling plan was made to address the concerns of the Commission for random and representative sampling. The Tree and Shrub Sampling Plan for Native Growth Areas will accurately represent the quantity of trees and shrubs that will be replaced at a ratio of 2 to 1 after construction of the Keystone Project.

Stream Crossing Methods

Keystone has studied the feasibility of horizontal directional drilling (HDD) of the Tongue River and the South Branch Park River and determined that HDD crossings are feasible based upon the additional costs required to install the pipeline for a depth and length under the river bed to prevent exposure due to potential stream scour and lateral migration design requirements.

Keystone has studied the feasibility of HDD of the tributary to the Tongue River running through section 18, Township 161 North, Range 56 West, Pembina County; the North Branch Park River; Middle Branch Park River; North Branch Forest River; Middle Branch Forest River; and Goose River and determined that HDD of these streams is not feasible. Keystone submitted site specific drawings and an evaluation of the crossing method proposed at each river and stream crossing. Keystone met with North Dakota Game & Fish on March 4, 2008 regarding the stream crossing methods. By its March 28, 2008 email, the North Dakota Game & Fish confirmed that the crossing methods presented by Keystone at the meeting are acceptable.

The stream crossing methods and mitigation methods proposed by Keystone will protect aquatic species of the stream.

Two Route Refinements in Walsh County

The first proposed route refinement is in Walsh County from pipeline milepost 48.3 to milepost 49.8 (the Novak-Sticha reroute). TransCanada provided a copy of a waiver executed by Michael Kratochvil for the pipeline to be within 500 feet of his residence. The second route refinement is in Walsh County near pipeline mileposts 50 to 52 (the Capp reroute).

The May 19, 2008 affidavit of Loys A Gray stated that the 2 route refinements prevent Keystone's need to utilize eminent domain proceedings to acquire easements from landowners.

On May 27, 2008 Keystone provided Notice to State Agencies and Officials as identified pursuant to North Dakota Administrative Code Section 69-06-01-05, Notice to County Auditors and County Commissions pursuant to North Dakota Administrative Code Section 69-06-01-02, and Notice to State Senators and Representatives pursuant to North Dakota Administrative Code § 69-06-01-02 that they had until 5:00 p.m. on Thursday May 29, 2008 to file written comments with the Commission concerning the two refinements.

Keystone requests that the 2 route refinements be approved by the Commission contingent upon the filing of voluntary easements from the affected landowners. If the voluntary easements cannot be obtained and filed for a route refinement, that route refinement will not take effect. Keystone also indicates the reroutes are contingent upon completing cultural resource surveys.

By email dated May 28, 2008, the State Historic Preservation Office (SHPO) indicated that a portion of the proposed Novak-Sticha reroute was very recently inventoried for cultural resources and a newly recorded site--a stone foundation remnant--MAC-WA-01 (32WA260) was recorded in it. The SHPO states that this site warrants a formal evaluation regarding its significance and eligibility for the National Register of Historic Places if it is to be impacted and not avoided. The SHPO noted no concerns with respect to the Capp reroute.

Job Service North Dakota's May 28, 2008 letter indicated no comment on the project and no permits are required from Job Service.

At the Commission's May 29, 2008 Informal Hearing, Keystone indicated that additional information would be filed concerning the Capp reroute and requested that the Commission postpone its decision on the Capp reroute.

The issues to be considered in this proceeding are:

1. Will the location, construction, and operation of the proposed pipeline produce minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota?
2. Is the proposed pipeline compatible with the environmental preservation and the efficient use of resources?
3. Will the proposed pipeline corridor and route minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

The proposed Novak-Sticha reroute is compatible with the environmental preservation and the efficient use of resources and will result in minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.

Order

The Commission orders:

1. The width of the clear cuts through any windbreaks and shelterbelts shall be limited to 50 feet or less. The width of clear cuts through extended lengths of wooded areas shall be limited to 85 feet or less. This provision is controlling in this Order over the general requirement contained in the Tree and Shrub Mitigation Plan.
2. TransCanada Keystone Pipeline, LP's clearing plans filed April 7, 2008 and as amended on May 28, 2008 for additional construction work space at 22 locations are approved.
3. TransCanada Keystone Pipeline, LP's Tree and Shrub Sampling Plan for Native Growth Areas is approved and is attached to this order.
4. TransCanada Keystone Pipeline, LP's stream crossing plans are approved.

5. TransCanada Keystone Pipeline, LP's May 27, 2008 request for the route refinement referred to as the Novak-Sticha reroute is granted conditional upon the landowners granting voluntary easements to Keystone and the filing of the easements with the Commission and contingent upon completing cultural resource surveys.

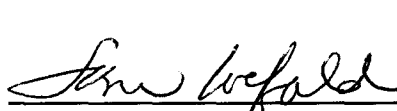
6. This Order is supplemental to the Commission's February 21, 2008 Findings of Fact, Conclusions of Law and Order and the Commission's May 23, 2008 First Amended Order.

7. TransCanada Keystone Pipeline, LP is issued First Amended Certificate of Corridor Compatibility Number 101 and Second Amended Route Permit Number 111.

8. First Amended Certificate of Corridor Compatibility Number 101 and Second Amended Route Permit Number 111 are effective for the life of the pipeline, but are subject to modification by order of the Commission if deemed necessary to further protect the public or the environment.

PUBLIC SERVICE COMMISSION


Tony Clark
Commissioner


Susan E. Wefald
President


Kevin Cramer
Commissioner

PUBLIC SERVICE COMMISSION
STATE OF NORTH DAKOTA

First Amended
Certificate of Corridor Compatibility Number 101

This is to certify that the Commission has designated a transmission facility corridor for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility corridor is designated by the Commission's February 21, 2008 Order in Case No PU-06-421 and is amended by the Commission's May 30, 2008 Order.

This certificate is subject to the conditions and limitations in that order.

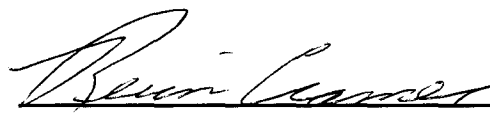
Bismarck, North Dakota, May 30, 2008.

ATTEST:

PUBLIC SERVICE COMMISSION



Executive Director



Commissioner

STATE OF NORTH DAKOTA

Second Amended Route Permit Number 111

This is to certify that the Commission has designated a transmission facility route for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility route is designated by the Commission's February 21, 2008 Order in Case No PU-06-421; is amended by the Commission's May 23, 2008 Order in Case No. PU-06-421 for route refinements; and is amended by the Commission's May 30, 2008 Order for a conditional route refinement.

This permit is subject to the conditions and limitations in those orders.

Bismarck, North Dakota, May 30, 2008.

ATTEST:

PUBLIC SERVICE COMMISSION



Executive Director



Commissioner



TransCanada

In business to deliver

KEYSTONE PIPELINE PROJECT

North Dakota

Tree and Shrub Sampling Methodology for Native Growth Areas

Revised May 2008

Tree/Shrub Inventory – Native Growth Areas

The Keystone Project will pass through approximately 214 miles of North Dakota. Evaluation of the route indicates that the project ROW will impact approximately 46 acres of trees (windbreak/shelterbelts, woodlots, riparian areas) spread out over about 180 different locations.

The North Dakota Public Service Commission's Order and Tree and Shrub Mitigation Specification directs the project to inventory all trees and shrubs located in windbreaks and shelterbelts. In compliance with this condition, Keystone will record the numbers and species of trees and shrubs in windbreaks and shelterbelts.

In addition, the Specification requires the project to either inventory native growth (forested) areas by direct count or to develop a sampling plan to determine the number of trees and shrubs that will be removed in native growth areas. The Project may elect to inventory the woodlots by direct counting. Alternatively, this Plan defines a sampling methodology to determine tree and shrub numbers in native growth areas. This Plan will be filed with the Commission and approved prior to the implementation of this sampling methodology.

Field Sampling Method

The inventory methodology will include a review of the aerial photographs along the project route to identify random plot sampling locations in native growth areas. Native growth (forested) areas occur in approximately 66 locations along the project route in North Dakota. In order to ensure that the sampling method properly represents the woody vegetation population, twenty of these locations (30 percent) will be selected for field sampling, based on the availability of landowner permission.

As part of this sampling methodology, the woodland sample sites will be stratified by county to ensure spatial variability is represented. In addition, Keystone will inspect each woodland site after the aerial photography review to classify the woodland communities by woodland type and by the dominance of vegetation in general height classifications (e.g., tall trees, tall shrubs, low shrubs, etc.). Following this classification, a stratified random sampling procedure will be used to ensure sample sites were proportional to the acreage of each woodland type.

For each field sampling location, Keystone civil survey teams will stake the edge of the project construction ROW. Biological survey teams will then establish two sample plots within the ROW limits (20 ft x 50 ft) and will clearly mark these plots with rope or flagging. The biological survey teams will record the approximate location of the sample plot, as well as the number and species of trees (>1" dbh), tall shrubs and short shrubs located within the plot boundaries. The tree and shrub count data from the sample plots will be provided to the project team to

determine the numbers of trees and shrubs the project will remove from all areas of the project.

Tree/Shrub Estimating Procedure

The project will determine the total area of anticipated construction clearing through forested areas by utilizing the project's high-resolution aerial photography overlain with the project workspace boundaries. The boundaries of the forested areas will be marked in the GIS system and a measurement of the area of disturbance through each native growth areas will be obtained. Data gathered on the ground from the tree/shrub plot samples will be extrapolated on an area-basis to establish the numbers of trees and shrubs cleared during construction of the project. For example, if 7 trees were counted in 1000 square foot sample area, the number of trees cleared on one acre of woodland would be projected to be 305 trees ($43,560 \text{ square feet in an acre} / 1000 \text{ square feet (sample area)} = 43.56 \times 7 \text{ (trees counted in 1000 sq ft sample area)} = 304.92 \text{ estimated trees per acre}$).

Conducting transects or sample plots and extrapolating the data to determine vegetation estimates over much larger areas is a common estimating tool for forest inventory and vegetation analyses. The methodology described above is designed to provide an accurate determination of tree and shrub numbers in native growth areas that will be cleared by the Keystone Project in North Dakota. If the area of trees and shrubs actually cleared differs from the area originally calculated, an updated estimate of trees and shrubs will be determined at the end of the project. The numbers of trees and shrubs identified by this inventory method will be used to determine the species and quantity of trees and shrubs to be replaced.