

**Sierra Club • Natural Resources Defense Council • Center for Biological
Diversity • Friends of the Earth • Bold Alliance •
Northern Plains Resource Council**

**Supplemental Comments of the Sierra Club, *et al.*, to the Department of
State on Environmental Review of the Keystone XL Pipeline and
Request for a Supplemental Environmental Impact Statement**

Submitted December 4, 2017

Via FedEx to:
U.S. Department of State
Bureau of Energy Resources, Room 4843
Attn: Keystone XL Public Comments
2201 C Street NW
Washington, DC 20520

Ms. Mary D. Hassell,
National Environmental Policy Act Coordinator
Office of Environmental Quality and Transboundary Issues
Bureau of Oceans and International Environmental and Scientific Affairs
United States Department of State
2201 C Street, NW
Suite 2727 Washington, DC 20520

On behalf of the undersigned organizations, we write to supplement our prior comments to the U.S. Department of State (“State Department”) on the outdated Final Supplemental Environmental Impact Statement (“Final SEIS”) for the TransCanada Keystone XL Pipeline, and hereby reiterate our request that the agency prepare a Supplemental Environmental Impact Statement (“EIS”). We also write to re-iterate that the State Department cannot allow any construction activities that would be inconsistent with the terms of the permit granted on March 23, 2017.

As we have explained in our prior comments requesting a new supplemental EIS,¹ the National Environmental Policy Act (“NEPA”) requires agencies to prepare a Supplemental EIS whenever there are substantial changes to the proposed project or whenever significant new information bearing on the project’s impacts has been made available. 40 C.F.R. § 1502.9. The State Department’s own regulations also require a supplemental EIS under these circumstances. 22 C.F.R. § 161.9(k).

In addition to the new information and changed circumstances described in our January 27, February 22, and March 13 and 17 comment letters, the changes described in this letter represent substantial changes and significant new information that has occurred since the release of the Final SEIS over three years ago in January 2014. Accordingly, NEPA requires the State Department to suspend the cross-border permit and prepare and circulate a new supplemental EIS for public review and comment.

I. The approval of the Mainline Alternative Route in Nebraska constitutes a significant change in the project.

It is evident from the correspondence between the State Department and TransCanada that the State Department based its approval of Keystone XL on assurances from TransCanada that the pipeline route through Nebraska would be the route evaluated in the 2014 Final SEIS. On January 31, 2017, the State Department inquired in a letter to TransCanada a letter about any potential changes made to the pipeline route since the issuance of the 2014 Final SEIS.² On February 3, 2017, TransCanada responded with confirmation that only “minor route refinements” had been made and that “none of these route refinements have changed the analysis or conclusions presented in the FEIS and FSEIS.”³

The State Department subsequently issued a cross-border permit⁴ that requires TransCanada to follow the Keystone XL “preferred route” as described in its application. The permit states: “The construction, operation, and maintenance of the United States facilities shall be in all material respects as described in the permittee’s application for a Presidential permit. . . .”⁵ However, the Nebraska Public Service Commission (Nebraska

¹ See, e.g., previous comments submitted on January 27, 2017, February 22, 2017, March 13, 2017, and March 17, 2017.

² Attached as Exhibit A.

³ Exhibit A, page 3.

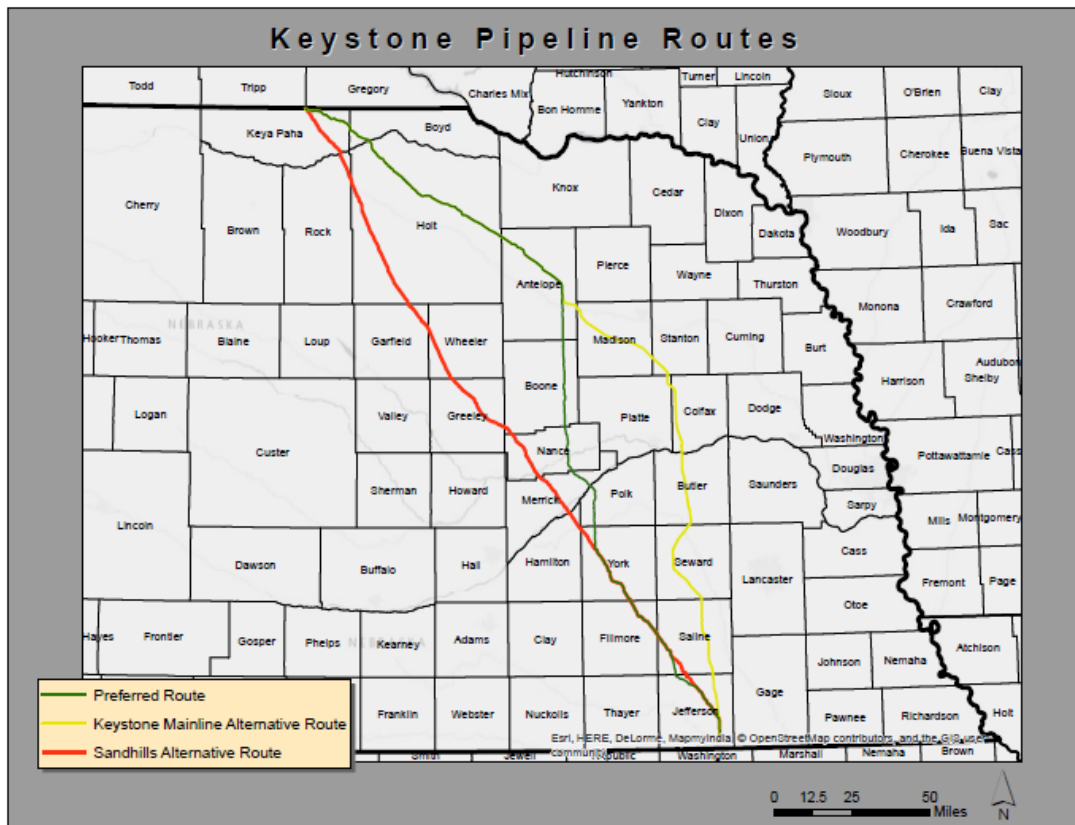
⁴ Attached as Exhibit B.

⁵ Exhibit B, page 2.

PSC) has now approved a route through the state that deviates from the route described in the application, thus violating the terms of the cross-border permit and rendering TransCanada’s representations to the State Department incorrect.

TransCanada cannot construct the pipeline along a new route without obtaining a new approval and permit from the State Department. Furthermore, the State Department must prepare a Supplemental EIS to evaluate the environmental impacts associated with the recently-approved pipeline route through the State of Nebraska, as that route was not evaluated in any prior EIS for Keystone XL, and constitutes a substantial change in the project pursuant to 40 C.F.R. § 1502.9.

On November 20, 2017, the Nebraska PSC approved the “Mainline Alternative Route” through the state.⁶ This route differs substantially from the “Preferred Route” evaluated in the January 2014 Final SEIS, as it extends the pipeline approximately 60 miles further east of the preferred route to partially co-locate along the existing corridor of TransCanada’s “Keystone I” pipeline.⁷



⁶ PSC Order, attached as Exhibit C.

⁷ Mainline Alternative Route map, available at http://www.psc.nebraska.gov/natgas/Keystone/KXL_Pipelines_February2017%20-%20Map.pdf and attached as Exhibit D.

This approved route crosses five counties not included in the Final SEIS, and has never been evaluated by the State Department or other federal agencies. This constitutes a major change in the pipeline route that has never before been considered in the Final SEIS.

In testimony submitted to the Nebraska PSC, TransCanada's own witness, Dr. Jon A. Schmidt, discussed some of the ways in which the Mainline Alternative Route would pose greater environmental impacts than the Preferred Route.

For example, the Mainline Alternative Route would have additional impacts on federally and state-listed threatened and endangered species as compared to the preferred route evaluated in the 2014 Final SEIS. In his rebuttal testimony, Dr. Schmidt stated that the Mainline Alternative Route crosses "the habitat ranges of four more threatened and endangered species... and those species are the Pallid Sturgeon, the Topeka Shiner, the Sturgeon Chub, and the Lake Sturgeon."⁸ As those species ranges were avoided in the preferred route, potential impacts to these populations have not been evaluated. In addition Dr. Schmidt's testimony contains a chart showing that the approved route would have additional impacts on the habitat of the threatened Northern Long-Eared Bat and Western Prairie Fringed Orchid as compared to TransCanada's preferred route.⁹

The approved route also disturbs additional land and sensitive areas, including 5.6 additional miles crossing highly erodible soils, 2.2 additional miles crossing Ecological Unusually Sensitive Areas, and one additional mile crossing through deciduous forest.¹⁰ It also "has 10 more Perennial Stream/River crossings than the Preferred Route."¹¹

Furthermore, additional facilities are required for the Mainline Alternative Route, including an additional pump station and associated electrical transmission lines.¹² These facilities were not evaluated in the 2014 Final SEIS.

Dr. Schmidt also describes how the Mainline Alternative Route would, "in addition to impacting landowners with the Keystone pipeline already on their property..., impact approximately 39 new tracts with approximately 30 new landowners."¹³ The environmental impacts to these tracts have not been analyzed, nor have these landowners been adequately informed as to the potential impacts to their property. These new impacts require the State Department to reevaluate the environmental impacts of the project in a Supplemental EIS.

In short, construction of the Mainline Alternative Route would violate the terms of the cross-border permit, which requires the route to be materially the same as that

⁸ Schmidt Rebuttal Testimony, attached as Exhibit E, pages 1-2.

⁹ Exhibit E, Table 2-1 (attached by TransCanada to Dr. Schmidt's Rebuttal Testimony)

¹⁰ *Id.*

¹¹ Exhibit E, page 16.

¹² Schmidt Direct Testimony, attached as Exhibit F, page 3.

¹³ Exhibit E, page 9.

analyzed in the environmental review documents. Further, the State Department must analyze any changes to the route in a Supplemental EIS.

II. The recent Keystone I Pipeline oil spill constitutes significant new information bearing on the impacts of Keystone XL.

On November 16, 2017, TransCanada's existing Keystone I Pipeline spilled at least 5,000 barrels of oil (roughly 210,000 gallons) onto a prairie near Amherst, South Dakota.¹⁴ Cleanup and environmental assessment efforts are ongoing. The Pipeline and Hazardous Materials Safety Administration has since stated: "Preliminary information indicates the failure may have been caused by mechanical damage to the pipeline and coating associated with a weight installed on the pipeline in 2008."¹⁵ This incident is indicative of the spill risk that the undersigned have repeatedly brought to the attention of the State Department in their filings, but which was not adequately assessed in the prior FEIS. The State Department must consider this spill as new information requiring an SEIS to evaluate the very real risk that Keystone XL poses from spills and leaks.

Moreover, this most recent spill is not an isolated incident. As described in a recent Reuters article, the pipeline has leaked "substantially more oil, and more often, in the United States than indicated in risk assessments the company provided to regulators."¹⁶ In a spill risk assessment provided by TransCanada before constructing the pipeline, the company estimated the chance of a leak of more than 50 barrels to be "not more than once every seven to 11 years over the entire length of the pipeline in the United States."¹⁷ And yet Keystone I has had three significant leaks in the seven years it has been in operation—the recent 5,000 barrel spill in November and two spills of about 400 barrels each in 2016 and 2011. As discussed in the 2014 Final SEIS, Keystone spilled or leaked at least 12 times in its first year of operation alone.

The size and frequency of these spills have proven TransCanada's spill projections for the Keystone Pipeline to be grossly inaccurate, which suggests the same is likely to be true for TransCanada's spill projections for Keystone XL contained in the 2014 Final SEIS. In light of this new information, the State Department should evaluate these incidents in detail and provide revised spill projections in a supplemental EIS for Keystone XL.

¹⁴ New York Times, *Keystone Pipeline Leaks 210,000 Gallons of Oil in South Dakota*, Nov. 16, 2017, available at <https://nyti.ms/2hF7go6>, attached as Exhibit G.

¹⁵ Reuters, *TransCanada ordered to run Keystone at reduced pressure*, Nov. 28, 2017, available at <https://www.reuters.com/article/us-transcanada-keystone-restart/transcanada-ordered-to-run-keystone-pipeline-at-reduced-pressure-idUSKBN1DS2KF>, attached as Exhibit H.

¹⁶ Reuters, *Keystone's existing pipeline spills far more than predicted to regulators*, Nov. 27, 2017, available at <https://www.reuters.com/article/us-usa-pipeline-keystone-spills/keystones-existing-pipeline-spills-far-more-than-predicted-to-regulators-idUSKBN1DR1CS>, attached as Exhibit I

¹⁷ *Id.*

III. The State Department's Final SEIS for, and approval of, the Alberta Clipper pipeline expansion constitutes new information requiring an SEIS.

In late 2012, Enbridge applied to the State Department for a revised cross-border permit that would allow the company to expand its Line 67 (or "Alberta Clipper") Pipeline from 450,000 bpd to 880,000 bpd.¹⁸ Since that time, the undersigned groups have repeatedly urged the State Department to evaluate the cumulative climate impacts of Keystone XL and Alberta Clipper together, along with other past, present and reasonably foreseeable pipeline projects.¹⁹ The State Department failed to conduct that analysis, either in the 2014 Final SEIS or in any subsequent document connected to its approval of Keystone XL in 2017. Instead, the State Department took a narrow view of Keystone XL and concluded that the approval or denial of any *one* pipeline project is unlikely to affect the rate of tar sands development and associated greenhouse gas emissions.

However, the State Department has since conducted an analysis of the cumulative climate impacts associated with approving both Keystone XL and Alberta Clipper, which constitutes significant new information. The State Department's Final SEIS for Enbridge's Line 67 Expansion, released on August 11, 2017,²⁰ describes the cumulative impacts of approving both the Line 67 Expansion and Keystone XL:

This SEIS considers the cumulative greenhouse gas impacts of the Proposed Action in conjunction with other proposed pipeline projects in the region, including the Keystone XL pipeline for which a Presidential Permit was approved March 23, 2017 (U.S. Department of State 2017). The Department estimates that the Keystone XL pipeline, if built, could potentially result in the emission of approximately 1.3 to 27.4 million metric tons CO₂-eq per year from the production, transport, refining and combustion of 830,000 bpd of WCSB heavy crude oil (U.S. Department of State 2014). *Therefore, the Proposed Action could, together with upgrades to Line 3 and the construction and operation of Keystone XL, result in a cumulative increase in greenhouse gas emissions of approximately 2.1 to 49.9 million metric tons CO₂-eq per year.* Note that these estimates assume full displacement of other crude oils by WCSB crude oil; emissions could potentially be higher if no displacement of other crude oils takes place, or if WCSB crude oil partially displaces other crude oils.²¹

On October 16, 2017, the State Department issued a cross-border permit for the Alberta Clipper expansion. The Department's approval of both projects could result in up to 49.9 million metric tons CO₂-eq per year, which further changes the environmental baseline upon which the Keystone XL 2014 Final EIS was based. The Department's

¹⁸ Application of Enbridge Energy, L.P., November 20, 2012, available at <https://www.state.gov/e/entr/applicant/applhttps://www.reuters.com/article/us-usa-pipeline-keystone-spills/keystones-existing-pipeline-spills-far-more-than-predicted-to-regulators-idUSKBN1DR1CSants/202433.htm>.

¹⁹ See, e.g., letters of January 29, 2014 and February 22, 2017.

²⁰ United States Department of State. (2017). *Final Supplemental Environmental Impact Statement for the Line 67 Expansion*. Available at: <https://www.state.gov/documents/organization/273539.pdf>

²¹ *Id.* at 6-86 (emphasis added).

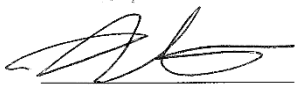
evaluation of the cumulative climate impacts of these two projects in the Alberta Clipper Final EIS demonstrates that it has the tools to conduct the analysis, and thus there is no justification for refusing to consider the same in a Supplemental EIS for Keystone XL.

As such, the State Department's approval of Alberta Clipper and the information in the Final SEIS for that project constitutes significant new information bearing on the impacts of Keystone XL that must be considered in a Supplemental EIS.

Conclusion

The recent developments discussed herein further undermine the 2014 Final EIS's conclusions about the environmental impacts of Keystone XL, and constitute both new information and changes to the project that require a Supplemental EIS pursuant to 40 C.F.R. § 1502.9 and 22 C.F.R. § 161.9(k).

Sincerely,



Doug Hayes
Senior Attorney
Sierra Club Environmental Law Program

Jaclyn H. Prange
Senior Attorney
Natural Resources Defense Council

Jared M. Margolis
Senior Attorney
Center for Biological Diversity

Jane Kleeb
President
Bold Alliance

Marcie Keever
Legal Director,
Oceans & Vessels Program Director
Friends of the Earth

Olivia Stockman Splinter
Director of Organizing and Campaigns
Northern Plains Resource Council

Exhibit A



United States Department of State

Bureau of Energy Resources, Washington, D. C. 20520

January 31, 2017

Mr. James P. White
TransCanada Corp.
Director, U.S. Regulatory Law – Liquids
1250 I Street, NW
Suite 225
Washington, DC 20005

Dear Mr. White:

On January 27, 2017, the U.S. Department of State's (State Department) Bureau of Energy Resources received a re-submitted application (Application) from TransCanada Keystone Pipeline, L.P. ("Keystone") to construct, connect, operate and maintain a crude oil pipeline facility at the U.S.-Canada border (Project). In furtherance of the State Department's consideration and determination of whether issuance of a Presidential permit for the Project would serve the U.S. national interest, the State Department requests written confirmation regarding the current route of the proposed pipeline and information regarding market demand and energy needs.

First, the Application specifies that the proposed route will be "essentially the route previously evaluated" by the State of Nebraska in 2012-13 and evaluated in the Final 2014 Supplemental Environmental Impact Statement (FSEIS). Please provide a current detailed map of the pipeline route to include revisions based on the portion of the alternative routing in Nebraska that "avoids the Sandhills region," and any other changes to the route as described in the 2012 application, including any changes based on proposed easements. Also, please provide a brief description of those changes. Please also include the cultural resource surveys that are referenced in the application and any new surveys associated with the route revisions.

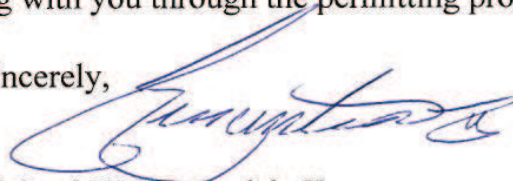
Second, the 2012 application included information regarding "firm, long-term contracts to transport in excess of 500,000 bpd of WCSB crude oil to existing PADD III delivery points," including 65,000 bpd with respect to the Bakken

Market Link Project. The re-submitted Application does not include specific information on continued market demand and energy needs. Please provide appropriate additional information to clarify the current market demand supporting the proposed project.

The State Department looks forward to your written confirmation on the above questions regarding the pipeline route, and market and demand information. We would also appreciate at your earliest convenience a copy of the application that complies with Section 508 of the Rehabilitation Act of 1973 for upload to the public website related to your Application.

We look forward to working with you through the permitting process.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard W. Westerdale II", written over a light blue horizontal line.

Richard W. Westerdale II

Director,
Office of Policy Analysis and Public Diplomacy
Bureau of Energy Resources

cc: Kristine L. Delkus, TransCanada Corporation

February 3, 2017



Richard W. Westerdale II
Director,
Policy Analysis and Public Diplomacy
U.S. Department of State
Bureau of Energy Resources
2201 C Street, NW – Room 4422
Washington DC 20520

**Re: TransCanada Keystone Pipeline, L.P.
Application for Presidential Permit for Keystone XL Pipeline Project**

Dear Mr. Westerdale:

This is in response to your letter of January 31, 2017, requesting additional information regarding the Application of TransCanada Keystone Pipeline, L.P. for a Presidential Permit, submitted on January 26, 2017.

With respect to your request for information regarding the proposed route, DOS recognized in the 2014 Final Supplemental Environmental Impact Statement (FSEIS) that, after the close of the NEPA process, “Keystone will make minor adjustments to the proposed pipeline alignment during final design based on additional information obtained from field surveys or landowners. These minor route variations (micro-alignments) could be implemented to address specific landowner concerns, avoid certain features (such as structures, wells, or irrigation systems), minimize impacts to environmental resources, or facilitate construction in such areas as steep terrain or waterbody crossings.”¹ Subsequent to the issuance of the FSEIS, Keystone continued with additional work to refine the Project route to minimize landowner, environmental and engineering concerns. All of these minor route refinements are within the survey corridor that was examined in the FSEIS. In Nebraska, Keystone also implemented certain additional route refinements to reflect the recommendations in the FSEIS and the 2012 Nebraska Department of Environmental Quality (NDEQ) Route Evaluation Report. Attached is a set of maps depicting the refinements to the route since the FSEIS was issued in January, 2014. These route refinements are consistent with the recommendations found in the FSEIS. None of these route refinements have changed the analysis or conclusions presented in the FEIS and FSEIS. Further attached are the reports of the cultural resource surveys referenced in the application.

With respect to your request for additional information regarding continued market demand and energy needs, the current market demand for Keystone XL is comparable to the environment that existed in 2012. The Keystone XL value proposition connects the world’s largest source of heavy crude oil production with the world largest refining complex capable of refining heavy crude oil. Alternative sources of heavy crude oil for U.S. Gulf Coast refiners from Mexico and Venezuela continue to produce

¹ (FSEIS, “Pipeline Route”, Section 2.1.1 see page 2.1-2).

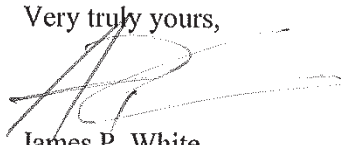
Coast refiners from Mexico and Venezuela continue to produce under uncertain conditions and are at risk of experiencing significant declines, as was the case when TransCanada first made application for the project.

TransCanada anticipates the volumes flowing on Keystone XL will be essentially equivalent to those represented in 2012. Given the passage of time since the permit was denied, we are updating the shipping contracts and would anticipate the core contract shipper group will be modified with the introduction of new shippers and reductions in volume commitments by other shippers. We expect this transition to be complete within a few months and see the demand for the project to be substantially similar to that which existed when TransCanada first applied for Keystone XL.

Additionally, the Section 508 compliant version of the Application was provided to you on January 31, 2017.

If you have any further questions regarding the Application, please advise.

Very truly yours,

A handwritten signature in black ink, appearing to read 'JP White', is written over a horizontal line.

James P. White
TransCanada Corp.
Director, U.S. Regulatory Law - Liquids

Exhibit B

PRESIDENTIAL PERMIT

AUTHORIZING TRANSCANADA KEYSTONE PIPELINE, L.P. ("KEYSTONE") TO CONSTRUCT, CONNECT, OPERATE AND MAINTAIN PIPELINE FACILITIES AT THE INTERNATIONAL BOUNDARY BETWEEN THE UNITED STATES AND CANADA

By virtue of the authority vested in me as Under Secretary of State for Political Affairs, including those authorities under Executive Order 13337, 69 Fed. Reg. 25299 (2004), the January 24, 2017 Presidential Memorandum Regarding Construction of the Keystone XL Pipeline, and Department of State Delegation of Authority 118-2 of January 26, 2006; having considered the environmental effects of the proposed action consistent with the National Environmental Policy Act of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.), Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1536), and other statutes relating to environmental concerns; having considered the proposed action consistent with the National Historic Preservation Act of 1966 (80 Stat. 917, 16 U.S.C. 470f et seq.); and having requested and received the views of members of the public, various federal and state agencies, and various Indian tribes; I hereby grant permission, subject to the conditions herein set forth, to TransCanada Keystone Pipeline, L.P. (hereinafter referred to as the "permittee"), a limited partnership organized under the laws of the state of Delaware, owned by affiliates of TransCanada Corporation, a Canadian public company organized under the laws of Canada, to construct, connect, operate, and maintain pipeline facilities at the international border of the United States and Canada at Morgan, Montana, for the import of crude oil from Canada to the United States.

The term "facilities" as used in this permit means the relevant portion of the pipeline and any land, structures, installations or equipment appurtenant thereto.

The term "United States facilities" as used in this permit means those parts of the facilities located in the United States. The United States facilities consist of a 36-inch diameter pipeline extending from the international border between the United States and Canada at a point near Morgan in Phillips County, Montana, to the first mainline shut-off valve in the United States located approximately 1.2 miles from the international border. The United States facilities also include certain appurtenant facilities.

This permit is subject to the following conditions:

Article 1. (1) The United States facilities herein described, and all aspects of their operation, shall be subject to all the conditions, provisions, and requirements of this permit and any amendment thereof. This permit may be terminated or amended at any time at the discretion of the Secretary of State or the Secretary's delegate or upon proper application therefor. The permittee shall make no substantial change in the United States facilities, the location of the United States facilities, or in the operation authorized by this permit until such changes have been approved by the Secretary of State or the Secretary's delegate.

(2) The construction, operation, and maintenance of the United States facilities shall be in all material respects as described in the permittee's application for a Presidential permit under Executive Order 13337, filed on May 4, 2012 and resubmitted on January 26, 2017, the Final Supplemental Environmental Impact Statement (SEIS) dated January 31, 2014 including all Appendices as supplemented, and any construction, mitigation, and reclamation measures included in the Construction, Mitigation, and Reclamation Plan (CMRP), Emergency Response Plan (ERP), Oil Spill Response Plan (SRP), and other mitigation and control plans that are already approved or that are approved in the future by the Department of State or other relevant federal agencies. In the event of any discrepancy among these documents, construction, connection, operation and maintenance of the United States facilities shall be in all material respects as described in the most recent approved document unless otherwise determined by the Department of State.

Article 2. The standards for, and the manner of, construction, connection, operation, and maintenance of the United States facilities shall be subject to inspection and approval by the representatives of appropriate federal, state and local agencies. The permittee shall allow duly authorized officers and employees of such agencies free and unrestricted access to said facilities in the performance of their official duties.

Article 3. The permittee shall comply with all applicable federal, state, local, and tribal laws and regulations regarding the construction, connection, operation, and maintenance of the United States facilities and with all applicable industrial codes. The permittee shall obtain requisite permits from relevant state and local governmental entities, and relevant federal agencies.

Article 4. All construction, connection, operation, and maintenance of the United

States facilities under this permit shall be subject to the limitations, terms, and conditions issued by any competent agency of the U. S. Government. The permittee shall continue the operations hereby authorized and conduct maintenance in accordance with such limitations, terms, and conditions. Such limitations, terms, and conditions could address, for example, environmental protection and mitigation measures, safety requirements, export or import and customs regulations, measurement capabilities and procedures, requirements pertaining to the pipeline's capacity, and other pipeline regulations. This permit shall continue in force and effect only so long as the permittee shall continue the operations hereby authorized in accordance with such limitations, terms, and conditions.

Article 5. Upon the termination, revocation, or surrender of this permit, and unless otherwise agreed by the Secretary of State or the Secretary's delegate, the United States facilities in the immediate vicinity of the international boundary shall be removed by and at the expense of the permittee within such time as the Secretary of State or the Secretary's delegate may specify, and upon failure of the permittee to remove, or to take such other appropriate action with respect to, this portion of the United States facilities as ordered, the Secretary of State or the Secretary's delegate may direct that possession of such facilities be taken and that they be removed or other action taken, at the expense of the permittee; and the permittee shall have no claim for damages by reason of such possession, removal, or other action.

Article 6. When, in the opinion of the President of the United States, the national security of the United States demands it, due notice being given by the Secretary of State or the Secretary's delegate, the United States shall have the right to enter upon and take possession of any of the United States facilities or parts thereof; to retain possession, management, or control thereof for such length of time as may appear to the President to be necessary; and thereafter to restore possession and control to the permittee. In the event that the United States shall exercise such right, it shall pay to the permittee just and fair compensation for the use of such United States facilities upon the basis of a reasonable profit in normal conditions, and the cost of restoring said facilities to as good condition as existed at the time of entering and taking over the same, less the reasonable value of any improvements that may have been made by the United States.

Article 7. Any transfer of ownership or control of the United States facilities or any part thereof shall be immediately notified in writing to the Department of State, including the submission of information identifying the transferee. This

permit shall remain in force subject to all the conditions, permissions and requirements of this permit and any amendments thereto unless subsequently terminated or amended by the Secretary of State or the Secretary's delegate.

Article 8. (1) The permittee is responsible for acquiring any right-of-way grants or easements, permits, and other authorizations as may become necessary and appropriate.

(2) The permittee shall hold harmless and indemnify the United States from any claimed or adjudged liability arising out of construction, connection, operation, or maintenance of the facilities, including but not limited to environmental contamination from the release or threatened release or discharge of hazardous substances and hazardous waste.

(3) The permittee shall maintain the United States facilities and every part thereof in a condition of good repair for their safe operation, and in compliance with prevailing environmental standards and regulations.

Article 9. The permittee shall take all necessary measures to prevent or mitigate adverse impacts on or disruption of the human environment in connection with the construction, connection, operation, and maintenance of the United States facilities. Such measures will include the actions and obligations agreed to by permittee in the CMRP and other mitigation, control plans, and special conditions found in the Final SEIS, including all Appendices as supplemented, all of which are appended to and made part of this permit, or that are approved in the future by the Department or other relevant federal or state agencies, and any other measures deemed prudent by the permittee.

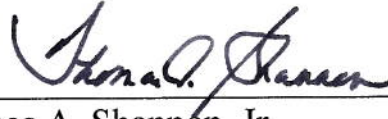
Article 10. The permittee shall file with the appropriate agencies of the United States Government such statements or reports under oath with respect to the United States facilities, and/or permittee's activities and operations in connection therewith, as are now, or may hereafter, be required under any laws or regulations of the United States Government or its agencies. The permittee shall file electronic Export Information where required.

Article 11. The permittee shall provide information upon request to the Department of State with regard to the United States facilities. Such requests could include, for example, information concerning current conditions or anticipated changes in ownership or control, construction, connection, operation, or maintenance of the U.S. facilities.

Article 12. The permittee shall provide written notice to the Department of State at such time as the construction authorized by this permit is begun, at such time as construction is completed, interrupted, or discontinued, and at other times as may be designated by the Department of State.

Article 13. This permit shall expire five years from the date of issuance in the event that the permittee has not commenced construction of the United States facilities by that deadline.

IN WITNESS WHEREOF, I, Under Secretary of State for Political Affairs, have hereunto set my hand this 23rd day of March, 2017 in the City of Washington, District of Columbia.



Thomas A. Shannon, Jr.
Under Secretary of State for Political Affairs

Exhibit C

Nebraska Public Service Commission

COMMISSIONERS:

ROD JOHNSON
FRANK E. LANDIS
CRYSTAL RHOADES
MARY RIDDER
TIM SCHRAM

EXECUTIVE DIRECTOR:

MICHAEL G. HYBL



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Fax: (402) 471-0254

NEBRASKA CONSUMER HOTLINE:
1-800-526-0017

November 20, 2017

CERTIFICATION

To Whom It May Concern:

I, Michael G. Hybl, Executive Director of the Nebraska Public Service Commission, hereby certify that the enclosed is a true and correct copy of the original order made and entered in the proceeding docketed OP-0003 on the 20th day of November, 2017. The original order is filed and recorded in the official records of the Commission.

Please direct any questions concerning this order to Nichole Mulcahy, Natural Gas Director, at 402-471-3101.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Seal of the Nebraska Public Service Commission, Lincoln, Nebraska, this 20th day of November, 2017.

Sincerely,

A handwritten signature in blue ink that reads "Michael G. Hybl".

Michael G. Hybl
Executive Director

MGH:da

Enclosure

cc: See attached service list



OP-0003 SERVICE LIST

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SECRETARY'S RECORD, NEBRASKA PUBLIC SERVICE COMMISSION

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Application) Application No. OP-0003
of TransCanada Keystone Pipeline,)
L.P., Calgary, Alberta, seeking)
approval for Route Approval of the) ORDER
Keystone XL Pipeline Project)
Pursuant to the Major Oil Pipeline)
Siting Act.) Entered: November 20, 2017

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BY THE COMMISSION:

B A C K G R O U N D

On February 16, 2017, TransCanada Keystone Pipeline, L.P., a Delaware limited partnership with its primary business address in Houston, Texas, ("Keystone" or "Applicant") filed an application with the Nebraska Public Service Commission ("Commission") seeking approval of a route for the Keystone XL Pipeline Project pursuant to the Major Oil Pipeline Siting Act¹ ("Siting Act" or "MOPSA"). The application contained information on three (3) proposed routes, one of which was designated as the Preferred Route, and two (2) others designated as alternative routes. Notice of the application was published in The Daily Record, Omaha, Nebraska, on February 20, 2017.

Petitions for formal and informal intervention were timely received by the Commission from various individuals and groups. On March 30, 2017, Keystone filed a Motion to Deny and Objections to Petitions of Intervention for certain petitioners.

¹Neb. Rev. Stat. §§ 57-1401 - 57-1413 (2016 Cum. Supp.).

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On March 31, 2017, the Hearing Officer entered an order granting petitions for intervention ("Intervention Order").² Formal Intervention was granted to 96 landowners along the proposed route of the pipeline, all represented by a single law firm ("Landowner Intervenors").³ One additional landowner appearing *pro se*, Mia Bergman, was also granted formal intervention.⁴

The Hearing Officer also granted formal intervention to certain other individuals and groups, but, pursuant to authority granted under the Administrative Procedures Act⁵ ("APA") and Commission rules and regulations, limited such interventions to the specific areas of interest asserted by such individuals and groups in their respective petitions for intervention.⁶

The Ponca Tribe of Nebraska ("Ponca") and the Yankton Sioux Tribe of South Dakota ("YST") (collectively "Cultural Intervenors") petitioned for intervention citing cultural, spiritual, and historical interests in the land to be impacted by the proposed pipeline. Although such an interest might not survive a traditional standing analysis⁷, the Siting Act requires the

² See Docket No. OP-0003, *In the Matter of the Application of TransCanada Keystone Pipeline, L.P., Calgary, Alberta, seeking approval for Route Approval of the Keystone XL Pipeline Project Pursuant to the Major Oil Pipeline Siting Act*, Order On Formal Intervention Petitions, (March 31, 2017).

³ Landowner Intervenors, all represented by The Domina Law Group PC LLO include: Susan Dunavan and William Dunavan, Bartels Farms, Inc., Johnnie Bialas and Maxine Bialas, Bonnie Brauer, James Carlson and Christine Carlson, Timothy Choat, Gary Choat Farms LLC, and Shirley Choat Farms, LLC, CRC, Inc., Daniel A. Graves and Joyce K. Graves, Patricia A. Grosserode a/k/a Patricia A. Knust, Terri Harrington, Donald C. Loseke and Wanda G. Loseke, Arla Naber and Bryce Naber, Mary Jane Nyberg, Kenneth Prosocki and Karen Prosocki, Edythe Sayer, Dan Shotkoski and Clifford Shotkoski, Leonard Skoglund and Joyce Skoglund, John F. Small and Ginette M. Small, Deborah Ann Stieren and Mary Lou Robak, Jim Tarnick, Terry J. Van Housen and Rebecca Lynn Van Housen, Donald D. Widga, Byron Terry "Stix" Steskal and Diana Steskal, Allpress Brothers, LLC, Germaine G. Berry, Karen G. Berry, Cheri G. Blocher and Michael J. Blocher, L.A. Breiner and Sandra K. Breiner, Jerry Carpenter and Charlayne Carpenter, CHP 4 Farms, LLC, Larry D. Cleary, Jeanne Crumly and Ronald C. Crumly, Ken Dittrich, Lloyd Z. Hipke and Vencille M. Hipke, R. Wynn Hipke and Jill Hipke, Richard Kilmurry, Bonnie Kilmurry, Rosemary Kilmurry, Beverly Krutz and Robert Krutz, LJM Farm, LLC, Carol Manganaro, Frankie Maughan and Sandra Maughan, Beverly Miller and Earl Miller, Edna Miller and Glen Miller, Milliron Ranch, LLC, Frank C. Morrison and Lynn H. Morrison, Larry D. Mudloff, J.D. Mudloff, and Lori Mudloff, Constance Myers a/k/a Constance Ramold, Nicholas Family Limited Partnership, Ann A. Pongratz and Richard J. Pongratz, Donald Rech, Schultz Brothers Farms, Inc., Connie Smith and Verdon Smith, Joshua R. Stelling, Richard Stelling and Darlene Stelling, Todd Stelling and Lisa Stelling, Arthur R. Tanderup and Helen J. Tanderup, TMAG Ranch, LLC, Tree Corners Farm, LLC, Dave Troester and Sharyn Troester, and Gregory Walmer and Joanne Walmer.

⁴ On June 12, 2017, The Domina Law Group PC, LLO filed a Notice of Appearance on behalf of Mia Bergman.

⁵ *Neb. Rev. Stat.* § 84-901 - § 84-920 (Reissue of 2014).

⁶ See *Neb. Rev. Stat.* § 84-912.02(3) and 291 NAC 1 § 015.01 (May 4, 1992).

⁷ Before one is entitled to invoke a tribunal's jurisdiction, one must have standing to sue, which involves having some real interest in the cause of action; in other words, to have standing to sue, one must have some legal or equitable right, title, or

Commission to consider evidence of the social impacts of the proposed pipeline route.⁸ Therefore, the Hearing Officer granted the Cultural Intervenors formal intervention, limited in scope to social and cultural concerns as expressed in their respective petitions.

Bold Alliance ("Bold"), the Sierra Club, Nebraska Chapter ("Sierra Club") and 36 other individuals and groups (collectively, "Natural Resources Intervenors") petitioned for intervention citing concerns for the environment and natural resources of Nebraska. Although such an interest might not survive a traditional standing analysis⁹, the Siting Act requires the Commission to consider evidence of the intrusion of the pipeline route on the natural resources of Nebraska, the irreversible and irretrievable commitments of land areas and connected natural resources, and the depletion of beneficial uses of natural resources.¹⁰ In addition, the Siting Act requires that the Commission consider methods to minimize or mitigate potential impacts to natural resources.¹¹ Therefore, the Hearing Officer granted the Natural Resources Intervenors formal intervention, limited in scope to the environmental and resource concerns expressed in their respective petitions.

Three labor unions, the Midwest Regional Office of the Laborers International Union of America ("LIUNA"), the International Brotherhood of Electrical Workers ("IBEW") Local Union No. 265, and the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, AFL-CIO ("UA") (collectively, "Economic Intervenors"), petitioned for intervention citing their members' potential economic interest in the construction and operation of the pipeline. Although such an expectancy interest might not survive a traditional standing analysis¹², the Siting Act requires the Commission to consider evidence of the economic impacts of the proposed pipeline route.¹³ Therefore, the Hearing Officer granted

interest in the subject matter of the controversy. *Marten v. Staab*, 249 Neb. 299 (1996); *SID No. 57 v. City of Elkhorn*, 248 Neb. 486, (1995); *City of Ralston v. Balka*, 247 Neb. 773, (1995). See also, *Frenchman-Cambridge Irr. Dist. V. Dept. of Natural Resources*, 281 Neb. 992(2011); *In re Application A-18503, Water Division 2-D.*, 286 Neb. 611 (2013).

⁸ *Neb. Rev. Stat. § 57-1407(4) (d) (2016 Cum. Supp.)*.

⁹ See FN 7 above.

¹⁰ *Neb. Rev. Stat. § 57-1407(4) (b) (2016 Cum. Supp.)*.

¹¹ *Neb. Rev. Stat. § 57-1407(4) (c) (2016 Cum. Supp.)*.

¹² See FN 7 above.

¹³ *Neb. Rev. Stat. § 57-1407(4) (d) (2016 Cum. Supp.)*.

the Economic Intervenors formal intervention, limited in scope to the economic concerns expressed in their respective petitions.¹⁴

The Hearing Officer directed each of the Cultural Intervenors, Natural Resources Intervenors and the Economic Intervenors, (collectively, "Specific Issue Intervenors") to work together within their designated groups and collaborate on their respective presentations of evidence and cross-examination for the proceeding.¹⁵ The Intervention Order also permitted each group of Specific Issue Intervenors to present the testimony of one (1) witness,¹⁶ with the option to present an additional witness to address the Mainline Alternative Route proposed by the Applicant. Finally, the Hearing Officer also granted petitions seeking informal intervention from Wrexie Bardaglio and Cindy Myers.¹⁷

On April 5, 2017, the Hearing Officer entered an order adopting a case management plan ("CMP") and giving notice of the public hearing, which was scheduled to begin on Monday, August 7, 2017. In keeping with standard Commission procedure, the CMP provided that all parties would be required to submit written pre-filed direct testimony for all witnesses they intended to present at the evidentiary hearing.

A planning conference was held on April 10, 2017, with representatives of the parties and the Commission.

On April 10, 11, and 12, 2017, Motions to Reconsider the Hearing Officer's March 31, 2017, Order on Interventions were filed by Bold, Sierra Club, YST, Kimberly Craven, and Ponca, respectively. Bold's April 10, 2017, Motion for Reconsideration also contained a Motion to Continue the April 10, 2017, planning conference. On April 13, 2017, the Hearing Officer entered an order denying those motions.

On April 25, 2017, Bold and Sierra Club filed Motions for Further Reconsideration of the March 31, 2017, Order on Interventions. On April 27, 2017, the Hearing Officer entered an order denying those motions.

The Commission held public meetings in York, O'Neill, Norfolk, and Ralston, Nebraska, on May 3, June 7, June 28, and

¹⁴ *Neb. Rev. Stat. § 57-1407(4) (d) (2016 Cum. Supp.)*.

¹⁵ See March 31, 2017, Hearing Officer Order, *supra*.

¹⁶ Later revised to provide for two witnesses per Specific Issuer Intervenor Group. See FN 19.

¹⁷ *Id.* and See Order Entering Case Management Plan, Scheduling Telephonic Planning Conference, and Notice of Hearing, (April 5, 2017).

July 26, 2017, respectively, for the purpose of receiving public input as permitted under the Siting Act.¹⁸ The Commission received over 450 oral and written comments during the four (4) days of public meetings.¹⁹

On May 10, 2017, the Hearing Officer entered an order clarifying some dates within the CMP and granting each group of Specific Issue Intervenors the opportunity to provide the testimony of one additional witness in the proceeding.²⁰

On May 22, 2017, Bold, Sierra Club, the Landowner Intervenors, and the Cultural Intervenors filed a Joint Motion requesting an extension of time for Intervenors to file the direct testimony of witnesses from May 30, 2017, to June 7, 2017. On May 23, 2017, Keystone filed a response to the Joint Motion for an extension that did not oppose the extension, but requested additional modifications of discovery and other filing dates in the CMP to correspond with the requested extension of the Intervenors. On May 24, 2017, the Hearing Officer granted the Motions and modified the filing deadlines contained within the CMP as requested.

On May 30, 2017, Landowner Intervenors filed Motions to Compel responses to certain discovery requests from Keystone.²¹ Oral arguments on the Motions to Compel were held on June 9, 2017. On June 14, 2017, the Hearing Officer entered an order granting in part and denying in part the Motions to Compel.

On June 27, 2017, Landowner Intervenors filed a Second Amended Petition for Formal Intervention. The amendment did not seek to add petitioners to, or remove petitioners from, formal intervention in the proceeding, but only supplemented legal arguments contained within the Landowner Intervenors' initial Petition and First Amended Petition for Formal Intervention. On June 30, 2017, Keystone filed a Motion to Strike and Objections to the Landowner's Second Amended Petition. On July 6, 2017, the Hearing Officer granted Keystone's Motion to Strike.

¹⁸ Neb. Rev. Stat. § 57-1407(2) (2016 Cum. Supp.).

¹⁹ The Commission also received hundreds of thousands of emails and letters from the public regarding the proceeding. All such comments received prior to end of business August 11, 2017, were made a part of the record, See Exhibits PSC-11 & PSC-12.

²⁰ See Docket No. OP-0003, *In the Matter of the Application of TransCanada Keystone Pipeline, L.P., Calgary, Alberta, seeking approval for Route Approval of the Keystone XL Pipeline Project Pursuant to the Major Oil Pipeline Siting Act, Order Granting Motion To Withdraw, and Modifying Case Management Plan And Intervention Order*, (May 10, 2017).

²¹ Landowner Intervenors initially filed the Motion to Compel on May 22, 2017, they subsequently amended the Motion and refiled on May 30, 2017.

On July 2, 2017, the Landowner Intervenors invoked their statutory right to require that the formal rules of evidence apply to the proceeding.²²

On July 6, 2017, Bold, Sierra Club, and the Cultural Intervenors filed a Joint Petition for Declaratory Ruling seeking to know the impact of a Legislative bill enacted on April 24, 2017,²³ and the "evidentiary weight" the Commission intended to give public comment made a part of the record pursuant to the Siting Act.²⁴ On July 12, 2017, the Hearing Officer entered an order declining to issue a declaratory order, on the grounds that the legislative bill had no effect on the proceeding, because Keystone's application was filed before the legislation took effect. The Order also stated that the Commission would determine the relative weight to be assigned to matters on the record as part of its eventual deliberative process.²⁵

On July 12, 2017, the Commission issued a Notice of Appointment of retired Lancaster County District Judge Karen B. Flowers to act as Hearing Officer, to rule on procedural and evidentiary matters and preside at the evidentiary hearing. However, Judge Flowers was not assigned any responsibility for the issuance of an advisory opinion or other participation in the final determination of the Commission in this proceeding.

On July 24, 2017, prehearing motions regarding pre-filed direct testimony and other evidentiary matters were filed by Keystone and Landowner Intervenors. Landowner Intervenors also filed a Motion for Specific Findings of Facts. Various parties filed written Responses to the prehearing motions.

On July 24, 2017, petitions for informal intervention were timely received from, the Consumer Energy Alliance, the Port to Plains Alliance, the South Dakota Oil & Gas Association, the Association of Oil Pipe Lines, the Nebraska Chamber of Commerce & Industry, the American Petroleum Institute, the National Association of Manufacturers, and Lisa May.²⁶ Also on July 24, 2017, Landowner Intervenors filed a Motion to Strike and Disallow Late Petitions for Intervention. On July 26, 2017, the Hearing Officer entered an order granting the petitions for informal intervention and denying the Landowner Intervenors' Motion. Three (3) of the

²² See *Neb. Rev. Stat.* § 84-914 and *Neb. Rev. Stat.* § 27-1101(4)(c).

²³ LB 263, 105th Leg., 1st Sess. (Neb. 2017).

²⁴ *Neb. Rev. Stat.* § 57-1407(2) (2016 Cum. Supp.).

²⁵ See Docket No. OP-0003, Order Denying Request for Declaratory Ruling, July 12, 2017).

²⁶ See 291 NAC 1 § 015.02A (May 4, 1992). Commission rules require that petitions for informal intervention be filed no later than fifteen (15) days before the hearing in the proceeding commences.

petitioners included a written statement, the Hearing Officer also gave the other parties to the proceeding until August 2, 2017, to file any objections to the written statements filed by the informal intervenors. No objections were received.

A Prehearing Conference was held on July 31, 2017, during which arguments were made to the Hearing Officer on all the outstanding motions. On August 2, the Hearing Officer entered an order granting in part and denying in part the Objections and Prehearing Motions.²⁷

On August 4 and 5, 2017, Bold, Sierra Club, and the Cultural Intervenors filed motions and objections to preserve certain objections to decisions of the Hearing Officer regarding testimony. All the Motions were overruled by the Hearing Officer during the evidentiary hearing.

An evidentiary hearing on this matter was held August 7-10, 2017, at the Cornhusker Marriott Hotel in Lincoln, Nebraska.

E V I D E N C E

All direct testimony in this proceeding was pre-filed according to the CMP. Only those witnesses that other parties desired to cross-examine were called to testify orally at the hearing.

Keystone Witnesses

Keystone filed direct and/or rebuttal testimony of ten (10) witnesses, all of whom were subject to cross-examination and testified orally at the hearing.

Mr. Tony Palmer, the President of TransCanada Keystone Pipeline GP, LLC, and TransCanada Keystone, LLC, filed direct testimony in this matter. Mr. Palmer's testimony was accepted into the record as Exhibit KXL-2. Mr. Palmer testified TransCanada Keystone Pipeline GP, LLC, is the managing partner of the Applicant, and TransCanada Keystone, LLC, is the majority owner of the Applicant. Both entities together own 100% of the Applicant.²⁸ Mr. Palmer stated the general partner is responsible to oversee the development and implementation of the Keystone XL Project.²⁹

²⁷ See Docket No. OP-0003, Order Granting In Part, Denying In Part, Objections and Motions To Strike Direct Testimony, (August 2, 2017).

²⁸ Application OP-0003 Transcript, 61:4-21, 87:4-7, and 186:20 - 187:8. (Hereinafter "Tr page number:line number").

²⁹ Exhibit KXL-2, at p. 1.

Mr. Palmer testified he is not a director or an employee of the Applicant. Mr. Palmer further testified that the Applicant would be primarily responsible for all reclamation costs associated with the Keystone XL project and in the event any other party has any responsibility, may seek compensation from that party.³⁰ Mr. Palmer further testified that neither Keystone nor any of its affiliates will apply for, or seek, any tax deductions, exemptions, credits, refunds, or rebates under the Nebraska Advantage Act in relation to the Keystone XL project.³¹ Finally, Mr. Palmer stated that Keystone does not consider selling the route, if approved, to be an option.³² Mr. Palmer further discussed the methodology utilized by Keystone to determine the Preferred Route, which was to draw the "shortest footprint" from Hardesty, Alberta, to Steele City, Nebraska, akin to the "hypotenuse on an equilateral triangle."³³

Keystone next called Mr. Paul Fuhrer, a Project Manager for TransCanada Corporation. Mr. Fuhrer's direct testimony was accepted into the record as Exhibit KXL-3. Upon cross-examination, Mr. Fuhrer testified his degree was in construction management and while has been exposed to many different disciplines in his work for TransCanada he was not an engineer, geologist, hydrologist, or biologist.³⁴ Mr. Fuhrer stated the pipeline general elevation will be four feet below the surface of the land to top of pipe.³⁵ Mr. Fuhrer confirmed the Preferred Route would cross five waterbodies utilizing horizontal directional drilling ("HDD"), consisting of the Keya Paha, Niobrara, Elkhorn, Loup, and Platte Rivers. He further testified that for each HDD crossing the top of the pipe would be a minimum of 25 feet below the river bed.³⁶

Mr. Fuhrer stated he was knowledgeable and responsible for the construction of both the pipeline and the five pumping stations along the proposed route. He testified that each pumping station would utilize approximately eight to ten acres of land.³⁷ Additionally, he testified that shut-off valves would be placed along the pipeline, with the location and frequency of valves varying based upon hydraulics of the pipeline and other factors.³⁸

³⁰ TR 143:14-19; Exhibit KXL-2, p. 4.

³¹ TR 155:6-19 and 157:22 - 158:5.

³² TR 188:3-9.

³³ TR 182:24 - 184:6.

³⁴ TR 190:19 and 192:4-11.

³⁵ TR 202:18-23.

³⁶ TR 235:10 - 237:13.

³⁷ TR 216:20 - 217:5.

³⁸ TR 250:12-20.

Upon questioning from Commissioners, Mr. Fuhrer stated that during installation the pipeline would be bent to follow the contour of the land, including up and down hillsides.³⁹ He testified the weight of the pipeline when filled would keep it in place in more fragile soils. He further stated the Applicant will continuously monitor the entire length of the pipeline and will be responsible to provide recontouring as necessary to re-cover any portion of the pipeline that may be exposed when the land shifts due to reasons such as wind or water erosion.⁴⁰ Mr. Fuhrer testified he has little experience dealing with fragile soils, although he stated he has had some experience on projects in locations with small amounts of top soil.⁴¹

Dr. Ernie Goss, Professor of Economics at Creighton University and principal of the Goss Institute, testified on behalf of Keystone. Dr. Goss filed direct and rebuttal testimony in this matter, with his testimony being accepted into the record as Exhibits KXL-4 and KXL-10 respectively. Dr. Goss had prepared a report called a "socio-economic analysis" of the impacts of the Keystone XL Pipeline on the State of Nebraska and the counties through which the Preferred Route crossed. Dr. Goss's analysis was contained within his pre-filed direct testimony and his report was filed as Appendix H to Keystone's application. Dr. Goss concluded the pipeline project would constitute an economic benefit to Nebraska and the counties along the Preferred Route and contribute to both state and local Nebraska taxes.⁴²

Upon cross-examination, Dr. Goss testified that his report was prepared initially for the Consumer Energy Alliance ("CEA") in January of 2013 and later used by Keystone in its application.⁴³ Dr. Goss testified he brought the dates and figures forward from the 2013 report to the 2017 report, but the methodologies of both reports were the same.⁴⁴ In the report, Dr. Goss testified he used IMPLAN software to forecast the number of jobs and economic impact of the project.⁴⁵ When questioned about the limitations of IMPLAN-specifically advisories regarding IMPLAN not having the ability to determine whether jobs or output are new or already existing-Dr. Goss agreed that in cases where that was an issue, it is a limitation.⁴⁶ Dr. Goss recalled being paid by CEA for his

³⁹ TR 266:18 - 267:15.

⁴⁰ TR 269:1 - 271:22.

⁴¹ TR 267:23 - 268:6.

⁴² See Exhibit KXL-4 and Exhibit KXL-1, Appendix H, pp. 340-343.

⁴³ TR 276:8-25.

⁴⁴ TR 298:14 - 299:4.

⁴⁵ TR 291:13-17.

⁴⁶ TR 293:5-16.

report, but could not recall billing Keystone for the report, or how much he was compensated for the report.⁴⁷ Dr. Goss testified the report was not peer-reviewed, but prepared for a general, non-economist, audience.⁴⁸ Dr. Goss also confirmed that the pipeline would be considered a fixed asset and would depreciate out after 15 years and not be a taxable asset after that time. He did qualify that replacements such as pump stations, additions, or other maintenance on the pipeline would potentially add taxable value that would also depreciate.⁴⁹

The Applicant next called Ms. Sandra Barnett, an Environmental Specialist for TransCanada Corporation, to testify on behalf of Keystone. Ms. Barnett filed direct testimony in this matter, with her testimony being accepted into the record as Exhibit KXL-5. Ms. Barnett testified she works on environmental issues for TransCanada Corporation's liquid pipeline facilities, including the Keystone XL Pipeline Project.⁵⁰ Ms. Barnett's pre-filed direct testimony stated she was responsible for the portions of the application that dealt with compliance with Nebraska's Oil Pipeline Reclamation Act, minimizing and mitigating potential environmental impacts and impacts to natural resources and general mitigation and reclamation plans.⁵¹ Ms. Barnett testified regarding the commitment of Keystone to return the land to equivalent capability after construction, by working with the affected landowners.⁵²

Ms. Barnett confirmed the construction right-of-way will be 110 feet wide and the post-construction permanent easement will be 50 feet wide.⁵³ Ms. Barnett further testified that Keystone will reclaim and revegetate the right-of-way to return it "as close as we can make it" to pre-construction condition.⁵⁴ Ms. Barnett stated that if there is a dispute between Keystone and the landowner on the post-construction condition of the land, the parties will typically consult with the Natural Resources Conservation Service ("NRCS"), a division of the U.S. Department of Agriculture, or other agency and include them in the discussion in an attempt to reach resolution.⁵⁵

⁴⁷ TR 299:5 - 300:6.

⁴⁸ TR 305:3 - 306:20.

⁴⁹ TR 316:7 - 317:13.

⁵⁰ See Exhibit KXL-4, at p. 1.

⁵¹ *Id.* at pp. 2-3.

⁵² TR 344:6 - 347:2.

⁵³ TR 349:9-19.

⁵⁴ TR 353:18 - 354:6.

⁵⁵ TR 354:21 - 355:13.

Ms. Barnett also discussed the landowner database which is kept by the Applicant to memorialize agreements and commitments made with and to landowners for post-construction remedial measures.⁵⁶ Ms. Barnett addressed potential temporary and long term impacts to land, soil, and water.⁵⁷ Ms. Barnett also answered some questions regarding the U.S. Fish and Wildlife Service Biological Opinion included in the U.S. Department of State ("DOS") Final Environmental Impact Statement ("FEIS") and when the assessments were conducted.⁵⁸ Upon questioning by Commissioners, Ms. Barnett stated that any plans for micro and macro nutrient application after construction will be determined after discussions with the affected landowner and the NRCS and will be dependent upon a variety of soil conditions and issues. Ms. Barnett also confirmed that the wetland delineation in Nebraska had been completed and is available.⁵⁹

Mr. John Beaver, a Project Manager, Ecologist and Reclamation Specialist with Westech Environmental Services, Inc., offered testimony on behalf of Keystone. Mr. Beaver filed direct and rebuttal testimony in this matter, with his testimony being accepted into the record as Exhibits KXL-6 and KXL-11, respectively. Mr. Beaver testified that he has been the Senior Reclamation Specialist and Special-Status Species Biologist for the Keystone XL project since 2009. Mr. Beaver stated he oversaw the design of the reclamation and revegetation plan for the project in Nebraska. He testified in his direct testimony that he oversaw the formation of the noxious weed management plan and prepared assessments of the impacts of the project on the northern long-eared bat, rufa red knot, the western prairie fringed orchid, and migratory birds. He also stated that he conducted additional surveys of animals and plants that may be impacted by the pipeline.⁶⁰

Mr. Beaver testified in response to questioning that when the term, "The Sandhills" is used in the application it refers to a defined ecological region identified by the Nebraska Department of Environmental Quality ("NDEQ"), as opposed to sandy soil, which can occur in many places.⁶¹ Mr. Beaver confirmed that during construction, topsoil will be segregated from subsoil along the entirety of the project where trenching will be utilized. Mr. Beaver also confirmed that Keystone will be responsible for policing its contractors to ensure the Construction Mitigation and

⁵⁶ TR 357:24 - 359:17.

⁵⁷ TR 368:3 - 377:21.

⁵⁸ TR 382:1 - 384:11.

⁵⁹ TR 387:2 - 388:11.

⁶⁰ See Exhibit KXL-6, at pp. 1-2.

⁶¹ TR 393:3-9.

Reclamation Plan (CMRP) provision are adhered to and followed.⁶² Mr. Beaver further testified that Keystone will monitor the condition of the right-of-way for reclamation purposes during the entire operational life of the right-of-way.⁶³ Mr. Beaver also stated in response to questioning that although the application states the Applicant will monitor the crop yield of cultivated land post-construction, no studies of pre-construction crop yield were included with the application.⁶⁴ Upon questions from Commissioners, Mr. Beaver testified regarding the application of fertilizers that in agricultural production, typically fertilizer will not be applied as the farmer will apply any fertilizers along with other areas being farmed when the field is put back into production. In other areas it is not usually applied as previous projects have shown it encourages the growth of nuisance species. Mr. Beaver admitted soil fertility can be affected by construction, but that those effects are minimized because the topsoil is replaced in a relatively brief time. Mr. Beaver testified that ripping will be utilized to compacted soil prior to replacing topsoil after construction. He stated regrading may be necessary if settling occurs. Mr. Beaver testified that the heat generated from the operational pipe would have no impact on native grasses and plants.⁶⁵

Mr. Michael Portnoy, the President and CEO of PEI, a full service environmental consulting and engineering firm, testified at the hearing on behalf of Keystone. PEI is a subcontractor of Keystone.⁶⁶ Mr. Portnoy's direct and rebuttal testimony were accepted into the record as Exhibits KXL-7 and KXL-12 respectively. Mr. Portnoy testified he has academic degrees in geology, geochemistry, hydrology, and business administration. He further testified he is a licensed, professional geologist in Nebraska.⁶⁷ Mr. Portnoy testified his specific area of expertise is soil permeability and distance-to-ground water analysis. Mr. Portnoy stated he is the lead hydrologist and project manager for the surveys conducted in connection with the Keystone XL project in these disciplines.⁶⁸

Upon cross-examination Mr. Portnoy discussed the soil permeability surveys conducted in connection with the project that

⁶² TR 415:7 - 416:6.

⁶³ TR 432:24 - 433:7.

⁶⁴ TR 436:14 - 437:1.

⁶⁵ TR 449:21 - 460:19.

⁶⁶ TR 468:24 - 469:6.

⁶⁷ See Exhibit KXL-7, at p. 1.

⁶⁸ *Id.* at p.2.

were included in the application as Exhibit G.⁶⁹ Mr. Portnoy testified that his role in preparing Exhibit G at the request of Keystone included gathering soil data, compiling the data collected, and providing a list of soil permeabilities along the proposed route.⁷⁰ Mr. Portnoy testified that in general he found a wide diversification of soil permeabilities along the route and from soil layer to soil layer in specific locations along the route.⁷¹ Mr. Portnoy further clarified that his report was based entirely upon data obtained from the U.S. Department of Agriculture ("USDA"), NRCS, and the University of Nebraska's Institute of Agriculture and Natural Resources. Mr. Portnoy did not personally conduct any soil surveys in the field.⁷²

Mr. Portnoy also discussed the portion of the report in Exhibit G to the application that dealt with the surface-to-groundwater survey.⁷³ The survey contains the registration of wells and data included in well registration, including ownership, location, the perpendicular distance from the pipeline center line to the wellhead, the type of well, depth of the well to terminus, and the static water level of the well.⁷⁴ Mr. Portnoy clarified that the information included with the well registration is added at the time the well is drilled and submitted by the well drillers. In response to questions from Commissioners, he stated that a well's static water level is subject to seasonal fluctuations and will vary depending on the time of year that it is measured. He stated the values in the survey represent the water table at the time of drilling, rather than being an average of the water table over a period of time.⁷⁵

Dr. Jon Schmidt, Vice President of exp Energy Services, Inc., the management contractor for the Keystone XL Pipeline Project, testified on behalf of Keystone. Dr. Schmidt filed direct and rebuttal testimony in this matter, with his testimony being accepted into the record as Exhibits KXL-8 and KXL-13, respectively. Dr. Schmidt testified he is responsible for the environmental and regulatory management of the Keystone XL Project and assisted in the preparation of the application in front of the Commission.⁷⁶

⁶⁹ See Exhibit KXL-1, Appendix G, Soil Permeability Study and Distance-To-Groundwater Survey, Table SA-1, Figures SA-01 - SA-11.

⁷⁰ TR 477:13-17.

⁷¹ TR 478:16-25.

⁷² TR 484:14 - 485:17.

⁷³ See Exhibit KXL-1, Appendix G, Soil Permeability Study and Distance-To-Groundwater Survey, Figures GW-01 - GW-05 and Tables GW-1 and GW-2.

⁷⁴ TR 500:21 - 505:10.

⁷⁵ TR 524:25 - 525:18

⁷⁶ See Exhibit KXL-8, at pp. 1-2.

Dr. Schmidt testified he participated in the analysis of the preferred and alternative routes. Dr. Schmidt stated that the analyses done in the 2011 FEIS and the 2014 Final Supplemental Environmental Impact Statement ("FSEIS") of the Preferred Route and alternative routes were used in reaching the conclusions contained within the application regarding the routes.⁷⁷ Dr. Schmidt detailed, in response to cross-examination questions, the different areas considered when comparing routes, including, number of acres disturbed, federally listed threatened and endangered species, amount of highly erodible soils, ecologically sensitive areas, and the number of crossing of perennial streams, railroads and roads.⁷⁸ Dr. Schmidt confirmed he was not retained by Keystone to conduct an environmental analysis of a route that would co-locate the entire length the KXL Pipeline with the existing Keystone I oil pipeline. The Keystone I pipeline is another pipeline owned and operated by TransCanada that runs north to south in eastern Nebraska.⁷⁹

Dr. Schmidt was also questioned regarding whooping cranes in Nebraska. Dr. Schmidt testified that approximately 250 miles of the Preferred Route was in the whooping crane range, which is a historical area a species covered, but is not necessarily synonymous with the migration corridor for the whooping crane today. Dr. Schmidt stated the analysis was conducted by the U.S. Fish and Wildlife Service and the results were included in the Biological Opinion contained in the FEIS.⁸⁰

In response to questions from Commissioners, Dr. Schmidt stated that additional field work, engineering and survey work would need to be done if the Mainline Alternative Route was utilized over the Preferred Route. He elaborated that an additional 40 new landowners would need to be accommodated on the Mainline Alternative Route as well.⁸¹ Dr. Schmidt further stated it appeared both the Preferred and Mainline Alternative Routes would cross the Ponca Removal Trail, the historical path used by the Ponca Tribe of Nebraska when they were forcibly removed from Nebraska in 1877, two (2) times.⁸² However, he also testified that route changes have already been made to accommodate cultural sites.⁸³

⁷⁷ TR 530:19 - 531:13.

⁷⁸ TR 556:16 - 557:11.

⁷⁹ TR 553:17 - 554:1.

⁸⁰ TR 577:5 - 578:5.

⁸¹ TR 625:25 - 626:24.

⁸² TR 620:7-11.

⁸³ TR 621:19 - 622:1.

Ms. Meera Kothari, a Professional Engineer for TransCanada testified on behalf of the Applicant. Ms. Kothari's direct testimony was accepted into the record as Exhibit KXL-9. Ms. Kothari stated she is the Manager of US Liquids Projects for TransCanada Corporation and has degrees in mechanical and manufacturing engineering.⁸⁴ Ms. Kothari, in response to questioning on cross-examination, stated that the Mainline Alternative Route could be feasibly and beneficially used in Nebraska, but Keystone preferred the route they designated as the Preferred Route over the Mainline Alternative Route.⁸⁵ Ms. Kothari also testified that after the pipeline is constructed, Keystone will seek the appropriate permits and approvals for maintenance or reclamation work prior to beginning any such activities. She further stated Keystone would consult their records to determine if any cultural issues would be impacted by proposed maintenance activity. If so, she stated Keystone would make appropriate notifications and consultations prior to conducting maintenance activities anywhere along the pipeline route.⁸⁶

In response to questioning by Commissioners, Ms. Kothari testified that although the major river crossing designs call for horizontal directional drilling at a minimum depth of 25 feet below riverbed, the depth of the pipeline for the rivers in Nebraska will be 35 to 60 feet. The entry and exit points would be set back from the bank of the river and with the location to begin and exit boring determined through a scour analysis based on the floodplain and other modeling. Ms. Kothari further clarified that the river crossing design requires, in compliance with federal requirements, check valves and backflow valves be located in proximity of either side of a riverbank.⁸⁷ Ms. Kothari added that for purposes of calculating and developing mitigation, reclamation and construction plans, 100-year flood plans were utilized.⁸⁸

Landowner Intervenor Witnesses

Landowner Intervenors offered the pre-filed direct testimony of 61 Nebraska Landowners, all of which were accepted into the record subject to specific objections and evidentiary rulings of the Hearing Officer. As stated before, only those landowner witnesses that other parties desired to cross-examine were called to testify orally at the hearing. Ten (10) Landowner Intervenors were called to testify and were subject to cross-examination. Landowner Intervenors also offered the testimony of two (2) other

⁸⁴ See Exhibit KXL-9 at p. 1.

⁸⁵ TR 638:9-25.

⁸⁶ TR 663:21 - 665:6.

⁸⁷ TR 673:1 - 675:21.

⁸⁸ TR 677:13 - 678:22.

non-landowner witnesses, only one of which was subject to cross-examination at the hearing.

Mr. Arthur Tanderup, an owner of farmland in Antelope County, testified at the hearing. Mr. Tanderup's direct testimony in this matter, subject to certain objections, was accepted into the record as Exhibit LO-148. Mr. Tanderup testified that he and his wife conduct no-till, irrigated farming raising corn, soybeans, rye, certain other cover crops, and native corn.⁸⁹ Mr. Tanderup testified about his concerns related to the proposed pipeline construction on his land as it relates to compaction of his soil, topsoil loss, wind and water erosion, and the source of any additional soil that will be brought in to fill the trench, during and after construction of the pipe.⁹⁰ Mr. Tanderup also testified he was concerned about the increased post-construction temperature of soil near the pipeline adversely affecting his crops by potentially damaging roots and causing increased insect activity.⁹¹ Additionally, Mr. Tanderup discussed his irrigation and domestic wells and his concerns regarding ground water.⁹² Mr. Tanderup also testified regarding his concerns about additional liability insurance, decreased value of the land, property tax issues, and the inconvenience of maintenance activities conducted on his land during the life of the pipeline.⁹³ Mr. Tanderup confirmed a portion of the Ponca Removal Trail crosses his land.⁹⁴

Ms. Jeanne Crumly, a Holt County landowner, testified at the hearing. Ms. Crumly's direct testimony in this matter, subject to certain objections, was accepted into the record as Exhibit LO-44. Ms. Crumly testified that she and her husband conduct no-till, irrigated farming raising corn, soybeans, hay, and potatoes.⁹⁵ Ms. Crumly discussed her concerns about the pipeline proposed to be built across her land and its impact on the erodible and permeable soils of their farm and their irrigation systems.⁹⁶ Ms. Crumly also expressed concern about topsoil loss, wind and water erosion, and protecting the farm's domestic and irrigation wells.⁹⁷

Landowner Intervenors also called Susan Dunavan, a York County landowner to testify. Ms. Dunavan's direct testimony in

⁸⁹ TR 718:7-16 and 723:7-18.

⁹⁰ TR 723:4-10; 725:3-25; 728:2-6; 730:8-17.

⁹¹ TR 734:14 - 740:7.

⁹² TR 744:6-25.

⁹³ TR 747:12 - 748:12

⁹⁴ TR 752:1-3 and 755:6-7.

⁹⁵ TR 765:12-20.

⁹⁶ TR 766:17-25 and 768:21 - 769:25.

⁹⁷ TR 774:9 - 776:8.

this matter, subject to certain objections, was accepted into the record as Exhibit LO-52. Ms. Dunavan testified that she and her husband own 80 acres of dryland pasture over which the Preferred Route of the pipeline would cross. Ms. Dunavan stated they are attempting to restore the land back to native prairie.⁹⁸ Ms. Dunavan testified that she is concerned about the increased temperature around the pipeline negatively affecting prairie plants and making the soil drier. She further expressed concern about the use of subcontractors by Keystone to construct the pipeline, the decommissioning of the pipeline, and the potential impacts on their domestic well also used to water cattle.⁹⁹

Ms. Bonny Kilmurry, a Holt County landowner, offered testimony at the proceeding. Ms. Kilmurry's pre-filed direct testimony in this matter, subject to certain objections, was accepted into the record as Exhibit LO-71. Ms. Kilmurry testified she and her husband use the land, through which the pipeline is proposed to pass, to support a cow-calf operation and as pastureland and for haying. Ms. Kilmurry expressed concern about the pipeline running through the sub-irrigated meadows located on her property that have water very close to the surface of the ground and the highly erodible hills that are susceptible to blowouts and erosion.¹⁰⁰ Ms. Kilmurry also discussed her concerns with wells on the property that are near the proposed route and have a high water table.¹⁰¹

Ms. Diana Steskal, a Holt County landowner, offered testimony at the proceeding. Ms. Steskal's pre-filed direct testimony in this matter, subject to certain objections, was accepted into the record as Exhibit LO-145. Ms. Steskal testified that her land is worked by a tenant who conducts no-till, irrigated, farming on the land raising wheat, corn, soybeans, edible beans, and popcorn.¹⁰² Ms. Steskal testified that the route of the pipeline crosses her property and expressed general concern about the natural resources of her farm, the sandy porous soil, her pivot irrigation, the pipeline remaining underground after its useful life, and the ground not freezing around the pipeline.¹⁰³

Landowner Intervenors also called Mr. Robert Allpress, a Keya Paha County landowner, to testify on their behalf. Mr. Allpress's pre-filed direct testimony, subject to certain objections, was

⁹⁸ TR 784:9-23.

⁹⁹ TR 791:19 - 792:9; 794:2 - 795:21.

¹⁰⁰ TR 803:25 - 804:17 and 810:11-19.

¹⁰¹ TR 813:22 - 816:17.

¹⁰² TR 867:8-18.

¹⁰³ TR 870:25 - 874:22.

accepted into the record as Exhibit LO-1. Mr. Allpress testified he owns approximately 900 acres of ranch land on the eastern border of Keya Paha County through which the routes of the pipeline is proposed to run.¹⁰⁴ Mr. Allpress testified he had observed a bald eagle nest in the area of the proposed route of the pipeline near his property and has observed whooping cranes in the area. Mr. Allpress testified he is concerned many plants and animals will be endangered if the pipeline is built in that area of Keya Paha County.¹⁰⁵ Mr. Allpress expressed concern about the fragile sandy soil that is susceptible to blow-outs and slides.¹⁰⁶ In response to Commissioner questioning, Mr. Allpress described hill slides that can occur from heavy rains exposing bare dirt and roots that take years to recover.¹⁰⁷ Mr. Allpress also testified that members of both the Yankton Sioux and the Ponca Tribe have been on his property and identified culturally significant sites, including remains of encampments and a burial site.¹⁰⁸

Mr. Andy Grier, a Holt County landowner, also offered testimony on behalf of the Landowner Intervenors. The pre-filed direct testimony of Mr. Grier, subject to certain objections, was accepted into the record as Exhibit LO-155. Mr. Grier is a member of TMAG Ranch, LLC with management decision authority. The proposed route of the KXL pipeline will cross the Holt County ranch.¹⁰⁹ Mr. Grier testified the ranch is directly bordered by the Niobrara River and expressed concerns regarding the proposed river crossing, the high bluffs that run along the river in the area where the pipeline is proposed to cross and soil erosion from land clearing that will also occur with construction. Mr. Grier further expressed concerns regarding the proximity of the pipeline to his wells that supply his house and other water needs on the ranch.¹¹⁰

Landowner Intervenors called Mr. Frank Morrison, an Antelope County landowner, to testify at the hearing. Mr. Morrison filed direct testimony in this matter that was accepted, subject to certain objections, into the record as Exhibit LO-100. Mr. Morrison and his wife farm, producing popcorn, edible beans and peanuts on the land that the proposed Preferred Route of the pipeline would cross.¹¹¹ Mr. Morrison expressed concern about the 65 irrigation wells located on his property, stating the static water level in

¹⁰⁴ TR 879:17-23.

¹⁰⁵ TR 880:3 - 881:21.

¹⁰⁶ TR 884:14 - 885:1.

¹⁰⁷ TR 900:18 - 902:22.

¹⁰⁸ TR 888:2 - 889:14.

¹⁰⁹ See Exhibit LO-155 at pp. 1-2.

¹¹⁰ TR 906:13 - 908:17.

¹¹¹ TR 916:17-21.

the wells is 15 feet below the surface of the ground.¹¹² Mr. Morrison stated water from the wells was used in processing popcorn and dry, edible beans. He stated the proposed pipeline route runs approximately a mile and a half from his processing facility, bisecting Mr. Morrison's property almost in half.¹¹³

Mr. Robert Krutz, a landowner in Antelope County, also offered testimony on behalf of Landowner Intervenors. Mr. Krutz's pre-filed direct testimony, subject to certain objections, was accepted into the record as Exhibit LO-73. The proposed route of the pipeline lies across Mr. Krutz's property where he and his wife operate a natural beef operation and raise corn and soy beans. Mr. Krutz testified that he was concerned the pipeline construction on his property could put his natural beef classification at risk.¹¹⁴ Mr. Krutz expressed additional concerns about his water supply, potential soil erosion, and revegetating the construction site to support his cattle.¹¹⁵

Landowner Intervenors called Mr. Rick Hammond, a tenant farmer of land located in York County, to testify. Mr. Hammond pre-filed direct testimony in this matter that was accepted into the record, subject to certain objections, as LO-60. The proposed pipeline would cross the land that Mr. Hammond farms. Mr. Hammond testified that he raises seed corn on the land and is concerned about the impact of the pipeline construction on the productivity of his crop and was concerned that the land could not be returned to pre-construction condition.¹¹⁶

Dr. Michael O'Hara, a College of Business Administration professor at the University of Nebraska at Omaha, also offered testimony on behalf of Landowner Intervenors. Dr. O'Hara pre-filed direct testimony in this matter that was accepted into the record as Exhibit LO-189. Dr. O'Hara teaches in the areas of law and economics and has particular expertise in estimating damages in a litigation context, called forensic economics.¹¹⁷ Dr. O'Hara was retained by the Landowner Intervenors to do an analysis of the economic impact of the proposed pipeline in Nebraska and to review Dr. Goss's socioeconomic report. Dr. O'Hara disagreed with the conclusions of Dr. Goss regarding sales taxes, noting that the pipeline would depreciate out after fifteen (15) years, meaning property taxes realized by counties after that time would be zero.

¹¹² TR 913:22 - 914:4.

¹¹³ TR 921:4 - 922:13.

¹¹⁴ TR 925:4 - 926:17.

¹¹⁵ TR 927:11 - 928:24.

¹¹⁶ TR 948:17 - 950:23.

¹¹⁷ TR 825:23 - 826:4.

Dr. O'Hara also discussed income and sales/use taxes and other economic consequences to Nebraska, concluding mostly negative economic impacts to Nebraska from the construction and presence of the pipeline in the State.¹¹⁸ Dr. O'Hara testified that in his opinion the mere presence of a pipeline would decrease the value of property by approximately 15 percent.¹¹⁹

Dr. O'Hara stated that his analysis included a review of the "hedonic value" of the affected real estate, concluding that the pipeline would "reduce the emotional attitude of property owners towards their property."¹²⁰ In response to cross-examination questions, Dr. O'Hara confirmed that he did not evaluate or analyze the reports of other government agencies, including the DOS or the NDEQ regarding the economic benefits to Nebraska and the U.S. from the pipeline.¹²¹ Upon questioning by Commissioners, Dr. O'Hara confirmed he did an analysis of the property taxes received from the project on a county by county basis, and estimated it was around \$100,000 per county per year.¹²² Dr. O'Hara stated pipelines can act as both economic barriers, by steering potential development away from the pipeline since landowners can't build on top of the pipeline, and a magnet in some areas increasing employment around things like a pumping station.¹²³

Cultural Intervenors Witnesses

The Cultural Intervenors offered the pre-filed direct testimony of two (2) witnesses, both of which were accepted into the record with specific objections and evidentiary rulings of the Hearing Officer. Both Cultural Intervenor witnesses were called for purposes of cross-examination at the hearing.

Mr. Jason Cooke, a member of the Yankton Sioux Tribe Business and Claims Committee, the executive body of the Yankton Sioux Tribe ("YST") testified on behalf of the Cultural Intervenors. Mr. Cooke's pre-filed direct testimony was accepted onto the record as Exhibit CUL-25. Mr. Cooke testified that the proposed route of the pipeline in Nebraska runs through territory recognized by the YST as traditional territory of the YST.¹²⁴ Mr. Cooke testified that his tribe's sacred cultural resources would be irreparably harmed

¹¹⁸ Exhibit LO-189, Attachment 2.

¹¹⁹ *Id.* and TR 829:16-18.

¹²⁰ TR 849:24 - 851:8.

¹²¹ TR 835:2 - 836:10.

¹²² TR 844:14 - 845:2.

¹²³ TR 857:23 - 858:11.

¹²⁴ See Exhibit CUL-25 at pp. 1-2.

by construction of the pipeline.¹²⁵ He asserted that cultural resources are disturbed by digging under a site, whether or not a cultural resource sustains physical damage.¹²⁶ Mr. Cooke also argued that injury to, or loss of, such resources would mean psychological and cultural harm to tribal members.¹²⁷

Mr. Shannon Wright, the Tribal Historic Preservation Officer for the Ponca Tribe of Nebraska, offered testimony on behalf of the Cultural Intervenors. Mr. Wright's pre-filed direct testimony was accepted into the record as Exhibit CUL-19. Mr. Wright testified about the historical and cultural significance of the Ponca Removal Trail, observing that the Ponca Removal Trail is also important non-Tribal Nebraskans, as evidenced by official efforts to formally recognize the Trail.¹²⁸ Mr. Wright noted that both the Preferred Route and the Mainline Alternative Route would cross the Ponca Removal Trail and opined that construction of the proposed pipeline would damage or destroy parts of the Trail and cultural resources located along the trail.¹²⁹

Mr. Wright also testified regarding the cultural sites on the Allpress land, that he had personally observed. Mr. Wright conducts cultural surveys on behalf of the Ponca Tribe and surveyed the Allpress land. Mr. Wright testified that the artifacts found on the Allpress land show that the tribes once inhabited the area and the earth lodge depressions observed indicate longer-term habitation areas. Artifacts found were stone presses, spearheads, arrowheads, and other stone tools. Mr. Wright testified that the depressions were located in an area overlooking a bluff toward a river, consistent with the standard practice of the tribes in that area.¹³⁰ He also expressed concern about the fact that Keystone had not completed required cultural surveys along many miles of the Preferred Route and the Mainline Alternative Route.¹³¹ He stated his belief that additional cultural resources would be found if the Ponca Tribe was able to complete surveys of entire Preferred Route and Mainline Alternative Route.¹³²

On cross-examination, Mr. Wright agreed that his concerns regarding the Ponca Removal Trail would be alleviated if the Applicant conducted the cultural surveys identified in the

¹²⁵ *Id.* at p. 6.

¹²⁶ *Id.* at p. 2.

¹²⁷ *Id.* at pp. 6-8 and TR 982:4-19.

¹²⁸ Exhibit CUL-19 pp. 9-11.

¹²⁹ *Id.* at pp. 12-16.

¹³⁰ TR 1050:17 - 1053:10.

¹³¹ Exhibit CUL-19 p. 9.

¹³² *Id.*

Programmatic Agreement ("PA") correctly.¹³³ He also agreed that Keystone has time to complete cultural surveys prior to construction of the proposed pipeline.¹³⁴ Mr. Wright confirmed that the Ponca had been invited by DOS to consult on the Keystone XL Project, but no consultation had occurred since the FSEIS was released.¹³⁵ Mr. Wright further testified that the, is not contained on a state or federal list of historical sites, however, the Ponca Tribe has made DOS and Keystone aware of the Trail and provided information on its location.¹³⁶ Mr. Wright further stated that sites not included on state and federal lists of historical sites can still be important sites with spiritual meaning and in the public interest to protect.¹³⁷ Mr. Wright testified that nine (9) members of the Ponca Tribe died along the Trail of Tears in 1877 during the journey from Nebraska to Oklahoma. He stated that five (5) of those remains have not been discovered and it is possible that those remains might be unearthed during construction of the pipeline.¹³⁸

Natural Resources Intervenors Witnesses

The Natural Resources Intervenors offered the pre-filed direct testimony of three (3) witnesses, all of which were accepted into the record with specific objections and evidentiary rulings of the Hearing Officer. Only one (1) Natural Resources Intervenor witness was called for purposes of cross-examination at the hearing. The deposition testimony of the remaining witnesses was offered into the record for purposes of cross-examination and re-direct examination pursuant to a stipulated agreement between the Natural Resources Intervenors and the Applicant.¹³⁹

Dr. Paul Johnsgard, a University of Nebraska-Lincoln professor of biological sciences emeritus, offered testimony on behalf of the Natural Resources Intervenors. Dr. Johnsgard's testimony was accepted into the record as Exhibit NR-1, with specific objections and evidentiary rulings of the Hearing Officer.¹⁴⁰ Dr. Johnsgard testified he concentrated his research on the comparative biology of several major bird groups, with special emphasis in his research on the migratory birds of the Great

¹³³ TR 1054:19 - 1055:3.

¹³⁴ TR 1055:4-7

¹³⁵ TR 1055:24 - 1057:6; 1084:19 - 1085:20.

¹³⁶ TR 1056:13-20; 1058:1-20.

¹³⁷ TR 1076:7-22.

¹³⁸ TR 1079:11 - 1081:10.

¹³⁹ See Exhibits KXL-61 and KXL-62.

¹⁴⁰ Natural Resources Intervenors also filed a correction to Dr. Johnsgard's direct testimony that was accepted into the record as Exhibit NR-2.

Plains, including whooping cranes.¹⁴¹ Dr. Johnsgard stated whooping cranes are one of the rarest groups of birds with only approximately 400 remaining in the wild.¹⁴² Dr. Johnsgard testified that his main area of concern related to the KXL pipeline project is the additional overhead electric transmission lines that will need to be constructed for operation of the pipeline. He explained that transmission lines are especially dangerous to whooping cranes as they fly about 30 to 40 feet off the ground and due to poor forward-looking vision, collide with powerlines, killing the crane.¹⁴³ Dr. Johnsgard further testified that the proposed route of the pipeline would be within the primary migration corridor of the whooping crane and any additional transmission lines would pose a potential threat. He stated the risk to the cranes from the transmission lines for the pipeline project is small.¹⁴⁴ Dr. Johnsgard recommended that devices be placed on the transmission lines to get the attention of the cranes to assist in avoiding collisions.¹⁴⁵

Economic Intervenor Witnesses

The Economic Intervenors offered the pre-filed direct testimony of two (2) witnesses, both of which were accepted into the record. Only one (1) of the witnesses was called for purposes of cross-examination at the hearing.

Mr. David L. Barnett, an International Representative assigned to the Pipeline and Gas Distribution Department for the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, AFL-CIO ("UA"), offered testimony on behalf of the Economic Intervenors. Mr. Barnett's testimony was accepted into the record as Exhibit ECO-1. Mr. Barnett testified about the positive economic impacts of using union labor on the Keystone XL Project.¹⁴⁶ He stated UA has worked with TransCanada on several recent projects and he estimated UA could expect 564 jobs for its members on the construction of the Keystone XL Pipeline Project.¹⁴⁷ On cross-examination, Mr. Barnett testified that there was no contract between UA and Keystone for the Keystone XL Project.¹⁴⁸

¹⁴¹ See Exhibit NR-1 at pp. 1-2.

¹⁴² TR 998:4-10 and TR 1012:2-14.

¹⁴³ TR 1000:10 - 1001:8.

¹⁴⁴ TR 1001:14 - 1002:3 and TR 1028:3-8.

¹⁴⁵ TR 1014:20 - 1016:7.

¹⁴⁶ See Exhibit ECO-25 at p. 1.

¹⁴⁷ *Id.* at pp. 10-11.

¹⁴⁸ TR 1092:11-13.

Keystone Rebuttal Witnesses

Keystone pre-filed the rebuttal testimony of six (6) witnesses. Four of the six (6) also filed direct testimony, the remaining two (2) only filed rebuttal testimony in this matter. Of the six (6) rebuttal witnesses only two (2) were cross-examined at the hearing.

Ms. Erin Salisbury, one of the Environmental Project Managers for the Keystone XL Pipeline Project, offered rebuttal testimony on behalf of the Applicant. Ms. Salisbury's rebuttal testimony was accepted into the record as KXL-14. Ms. Salisbury testified she has responsibility to manage the Applicant's cultural resource efforts in Montana, South Dakota, and Nebraska. Ms. Salisbury generally testified regarding the PA for the Keystone XL Project found in the FSEIS, including the Record of Consultation and the Unanticipated Discoveries Plan.¹⁴⁹ Ms. Salisbury attached a copy of the PA to her rebuttal testimony.¹⁵⁰ Ms. Salisbury testified that every eligible cultural site encountered thus far in Nebraska had been addressed by avoidance.¹⁵¹ Ms. Salisbury confirmed that Keystone had not completed cultural surveys along the Mainline Alternative route submitted with the application.¹⁵² Ms. Salisbury also testified that Keystone proposed to conduct traditional cultural surveys of 100 percent of the route, even though such surveys are not required by federal regulations.¹⁵³ She further testified that the only areas that have not already been surveyed are those where the survey team had not been permitted access.¹⁵⁴ She stated field survey crews that surveyed the pipeline routes were typically composed of the three to six qualified archeologists and a tribal monitor.¹⁵⁵ Ms. Salisbury testified that although the Ponca Removal Trail was not officially recorded as an archeological resource in Nebraska, however, Keystone was able to complete a field survey, accompanied by a tribal monitor, at one location where the Preferred Route crosses the Trail.¹⁵⁶ Ms. Salisbury stated that no historic properties were identified during that survey.¹⁵⁷

Upon cross-examination, Ms. Salisbury testified that Keystone was not a part of the consultation between the DOS and the identified tribes with historic interest along the Preferred

¹⁴⁹ See Exhibit KXL-14 at pp. 2-5.

¹⁵⁰ *Id.*, See Exhibit 1 attached to Exhibit KXL-14.

¹⁵¹ TR 1124:12-14.

¹⁵² TR 1108:7-18.

¹⁵³ KXL-14, p. 3: 6-50.

¹⁵⁴ *Id.* at 4:74-75.

¹⁵⁵ *Id.* at p. 4:72-74.

¹⁵⁶ *Id.* at pp. 2:31-34; 5:85-91.

¹⁵⁷ *Id.* at p. 5:91-92.

Route. She stated she was not familiar with the details of which tribes were consulted, when and how they were consulted, and which tribes had participated in any cultural surveys.¹⁵⁸ Ms. Salisbury stated that the DOS would have talked with any members of the Ponca Tribe and hired any tribal monitors, Keystone was not responsible for that and did not directly contact the Ponca Tribe.¹⁵⁹

Mr. Rick Perkins, a Keystone XL Pipeline Project Manager in charge of logistics and services for the project, testified on behalf of Keystone. Mr. Perkin's rebuttal testimony was accepted into the record as KXL-15. Mr. Perkins's testimony dealt exclusively with workforce camps, with Mr. Perkins stating that to the extent Keystone determines workforce camps are necessary for the construction of the project, he would be responsible for the construction and oversight of those camps. Mr. Perkins testified that a contractor, Target Logistics Management, LLC, has been hired by Keystone to operate any workforce camps.¹⁶⁰ Upon cross-examination, Mr. Perkins stated that the contractor, not Keystone, would employ the pipeline workers and be responsible for conducting drug screening and testing of workers.¹⁶¹ Mr. Perkins further stated that the Applicant intended to meet with local law enforcement, but had not yet done so in Nebraska.¹⁶² Mr. Perkins testified that the Department of Transportation requires pre-employment drug testing of all pipeline workers.¹⁶³

O P I N I O N A N D F I N D I N G S

In 2011, the Nebraska Legislature enacted the Major Oil Pipeline Siting Act¹⁶⁴, giving the Commission authority to review the route of a proposed major oil pipeline and determine if the route is in the public interest. First and foremost, we must emphasize the limited scope and the narrowness of the authority given to the Commission by the Legislature in the Siting Act. The Commission is limited to a review of the proposed route only. The Commission is *not* to determine whether or not the pipeline project, or the pipeline itself, should be built. Neither is the Commission free to consider the energy security of the U.S., the character of the owner/operator of the pipeline, the Applicant's ownership structure, the origin and destination of the product to be shipped through the pipeline, or the legislative wisdom of eminent domain.

¹⁵⁸ TR 1114:16 - 1115:24.

¹⁵⁹ TR 1178:4-17.

¹⁶⁰ Exhibit KXL-15 at pp. 1-2.

¹⁶¹ TR 1186:12-23.

¹⁶² TR 1187:24 - 1188:5.

¹⁶³ TR 1191:17-25.

¹⁶⁴ Neb. Rev. Stat. §§ 57-1401 - 57-1413 (2016 Cum. Supp.).

The Legislature already determined and stated in the Siting Act that, "The construction of major oil pipelines in Nebraska is in the public interest of Nebraska and the nation to meet the increasing need for energy."¹⁶⁵

Additionally, the Legislature further narrowed the Commission's review of the proposed routes by expressly prohibiting the Commission from evaluating safety considerations, including the risk or impact of spills or leaks from the major oil pipeline, when making its determination on the routes.¹⁶⁶ Many inside and outside of this proceeding have urged the Commission to broaden our review to include spills and advised us that our authority under the Siting Act should not be so limited regarding safety. However, while we understand the passion and concerns surrounding this project, in an analysis of the Siting Act provisions, we can draw no other conclusion than that the Commission is not permitted to weigh such potential spills, leaks, or similar risks for any purpose in its analysis. The Legislature made the decision that safety considerations in connection with interstate pipeline projects are federally preempted and, therefore, prohibited the Commission from considering such issues in making its decision.¹⁶⁷ In the Siting Act, the Legislature has given the Commission the limited responsibility of determining whether the route of the pipeline is in the public interest.

Public Interest

The Commission must first consider what is meant by the "public interest". The Siting Act gives little to no direction or interpretation on what standard is to be used by the Commission to determine if the public interest requirement included in the Siting Act is satisfied by an applicant. Therefore, without clear direction, it is up to the Commission to determine what the public interest analysis should be under the Siting Act.

The responsibility for determining the public interest is not foreign to the Commission. Many Nebraska Supreme Court cases discuss the public interest standard in the context of the Commission. In *In re Application No. 30466* the Supreme Court stated, "All the powers and jurisdiction of the Public Service Commission must be found within the constitutional provision creating it. This provision should not be construed so narrowly as to defeat its purpose. Rather, it should be liberally construed to

¹⁶⁵ Neb. Rev. Stat. § 57-1403(3).

¹⁶⁶ Neb. Rev. Stat. § 57-1407(4).

¹⁶⁷ Neb. Rev. Stat. § 57-1402(2).

effectuate the purpose for which the commission was created, which is primarily to serve the public interest."¹⁶⁸ More specific to construction of "public interest", the Nebraska Supreme Court has also stated, "determination of what is consistent with public interest or public convenience and necessity, is one peculiarly for determination of the [Public Service Commission]."¹⁶⁹

The idea of the public interest determination being unique to the Commission is repeated consistently throughout case law regarding interpretation of public interest. In *Robinson v. National Trailer Convoy, Inc.*, the Court stated, "This determination [of public interest] by the Commission is a matter peculiarly within its expertise."¹⁷⁰ In *Application of Greyhound Lines, Inc.*, "The public interest is one that is peculiarly for the determination of the commission,"¹⁷¹ And again, "The determination of what is consistent with the public interest, or public convenience and necessity, is one that is peculiarly for the determination of the Public Service Commission."¹⁷²

The Legislature has frequently tasked the Commission with conducting public interest determinations within specific statutory framework. When determining whether to issue certificates of authority to intrastate motor carriers, the Commission is directed to determine the public interest by considering if the proposed services are, "designed to meet the distinct need of each individual customer or a specifically designated class of customers."¹⁷³

When determining whether two or more regulated motor carriers may consolidate, we are directed, "If . . . the commission finds that the transaction proposed will be consistent with the public interest and does not unduly restrict competition and that the applicant is fit, willing, and able to properly perform the proposed service, it may enter an order approving and authorizing such consolidation."¹⁷⁴

Pursuant to the Telecommunications Regulation Act¹⁷⁵, the Commission must weigh the public interest in making a decision on

¹⁶⁸ *In re Application No. 30466*, 194 Neb. 55, 230 N.W.2d 190 (1975).

¹⁶⁹ *Application of E & B Rigging & Transfer Inc.*, 191 Neb. 714, 217 N.W.2d 813 (1974).

¹⁷⁰ *Robinson v. National Trailer Convoy, Inc.*, 188 Neb. 474, 197 N.W.2d 633 (1972), *In re Application of Northwestern Bell Tel. Co.*, 223 Neb. 415, 390 N.W.2d 495 (1986).

¹⁷¹ *Application of Greyhound Lines, Inc.*, 209 Neb. 430, 308 N.W.2d 336 (1981).

¹⁷² *ATS Mobile Tel., Inc. v. Nw. Bell Tel. Co.*, 213 Neb. 403, 330 N.W.2d 123 (1983).

¹⁷³ *Neb. Rev. Stat. § 75-311(2)*.

¹⁷⁴ *Neb. Rev. Stat. § 75-318*.

¹⁷⁵ *Neb. Rev. Stat. §§ 86-101 - 86-165*.

disputed terms of railroad/telecommunications carrier crossing agreements. We are directed to consider safety, engineering, and access requirements of the railroad carrier as such requirements are prescribed by the Federal Railroad Administration and established rail industry standards.¹⁷⁶ In Section 86-165, in determining whether to approve or reject an application to sell a telephone exchange, the Commission, "shall consider the protection of the public interest," and other factors including the adequacy of the telephone service, the reasonableness of telephone rates, the provision of public safety services, taxes paid by the company, and the company's ability to provide modern services. The Commission is even given authority to impose conditions on the approval of an application that the Commission, "deems necessary to ensure protection of the public interest pursuant to the criteria set forth in this subsection."¹⁷⁷

In the State Natural Gas Regulation Act, the Commission is given authority to determine if proposals submitted by jurisdictional utilities or metropolitan utilities districts to enlarge or extend its service territory is in the public interest. The Commission must determine public interest by considering the economic feasibility of the extension or enlargement, the impact the enlargement will have on the existing and future natural gas ratepayers, whether the extension or enlargement contributes to the orderly development of natural gas utility infrastructure, whether the extension or enlargement will result in duplicative or redundant natural gas utility infrastructure, and whether the extension or enlargement is applied in a nondiscriminatory manner.¹⁷⁸

It would seem reasonable based on these statutes, that any public interest analysis depends much on the context of the statutory scheme in which it resides. This is borne out by the Supreme Court. In discussing the Commission's interpretation of the public interest in *Wells Fargo Armored Serv. Corp. of Neb. v. Bankers Dispatch Corp.*, the Court held, "'Consistent with the public interest' within a statute governing contract carrier permit applications means that the proposed contract carrier service does not conflict with the legislative policy of the state in dealing with transportation by motor vehicles."¹⁷⁹ The Nebraska Supreme Court finding was consistent with a similar finding by the U.S. Supreme Court, that the words "public interest" in a

¹⁷⁶ Neb. Rev. Stat. § 86-164(2)(a).

¹⁷⁷ Neb. Rev. Stat. § 86-165(2).

¹⁷⁸ Neb. Rev. Stat. § 66-1863 and Neb. Rev. Stat. § 66-1860.

¹⁷⁹ *Wells Fargo Armored Serv. Corp. of Neb. v. Bankers Dispatch Corp.*, 186 Neb. 261, 182 N.W.2d 648 (1971).

federal regulatory statute take meaning from the purpose of the regulatory legislation.¹⁸⁰

Therefore, it seems reasonable to conclude that a public interest determination is uniquely within the Commission's expertise making the Commission especially suited to establish the standard for the public interest review under the Siting Act. However, we must do so within the context of the statutory framework established by the Legislature and in such a way that does not conflict with the legislative policy and intent behind the Act. The Legislature specifically lays out the purposes of the Siting Act,

(1) The purposes of the Major Oil Pipeline Siting Act are to:

(a) Ensure the welfare of Nebraskans, including protection of property rights, aesthetic values, and economic interests;

(b) Consider the lawful protection of Nebraska's natural resources in determining the location of routes of major oil pipelines within Nebraska;

(c) Ensure that a major oil pipeline is not constructed within Nebraska without receiving the approval of the commission under section 57-1408;

(d) Ensure that the location of routes for major oil pipelines is in compliance with Nebraska law; and

(e) Ensure that a coordinated and efficient method for the authorization of such construction is provided.¹⁸¹

Therefore, keeping these stated purposes firmly in mind, the Commission turns to its evaluation of the public interest of the proposed routes. While the Siting Act places the burden on an applicant to establish a proposed route will serve the public interest, it also mandates the Commission in making such a determination, to evaluate eight specific issues, again not to include safety considerations. The eight (8) areas the Commission is directed to evaluate are:

(a) Whether the pipeline carrier has demonstrated compliance with all applicable state statutes, rules, and regulations and local ordinances;

¹⁸⁰ *Nat'l Ass'n for Advancement of Colored People v. Fed. Power Comm'n*, 425 U.S. 662, 96 S. Ct. 1806, 48 L. Ed. 2d 284 (1976).

¹⁸¹ *Neb. Rev. Stat.* § 57-1402.

- (b) Evidence of the impact due to intrusion upon natural resources and not due to safety of the proposed route of the major oil pipeline to the natural resources of Nebraska, including evidence regarding the irreversible and irretrievable commitments of land areas and connected natural resources and the depletion of beneficial uses of the natural resources;
- (c) Evidence of methods to minimize or mitigate the potential impacts of the major oil pipeline to natural resources;
- (d) Evidence regarding the economic and social impacts of the major oil pipeline;
- (e) Whether any other utility corridor exists that could feasibly and beneficially be used for the route of the major oil pipeline; and
- (f) The impact of the major oil pipeline on the orderly development of the area around the proposed route of the major oil pipeline.
- (g) The reports of the agencies filed pursuant to subsection (3) of this section; and
- (h) The views of the governing bodies of the counties and municipalities in the area around the proposed route of the major oil pipeline.¹⁸²

Views of the Counties and Municipalities

The Commission shall evaluate, "the views of the governing bodies of the counties and municipalities in the area around the proposed route of the major oil pipeline."¹⁸³ The Commission sent letters soliciting input on the proposed routes to 18 counties¹⁸⁴ and 32 cities¹⁸⁵ along both the Preferred Route and the Mainline Alternative Route. Six counties responded, with Boone, Nance,

¹⁸² *Id.*

¹⁸³ *Neb. Rev. Stat. § 57-1407(4)(h).*

¹⁸⁴ Letters were sent to the counties of Antelope, Boone, Boyd, Butler, Colfax, Fillmore, Holt, Jefferson, Keya Paha, Madison, Merrick, Nance, Platte, Polk, Saline, Seward, Stanton, and York.

¹⁸⁵ Letters were sent to the cities of Albion, Atkinson, Butte, Central City, Clearwater-Ewing, Columbus, Crete, David City, Elgin, Fairbury, Friend, Fullerton, Geneva, Genoa, Henderson, Madison, Neligh, Newman Grove, Norfolk, O'Neill, Orchard, Schuyler, Seward, Spencer, Springview, St. Edward, Stanton, Stromsburg, Sutton, Wisner, and York.

Saline, and Seward counties expressing support for the project and Boyd and Holt counties expressing opposition to the project. Two cities responded, Seward and Steele City, both were favorable toward the project.¹⁸⁶

State Agency Reports

The Commission shall evaluate, "the reports of the agencies filed pursuant to subsection (3) of this section."¹⁸⁷ The Siting Act gives the Commission the ability to request reports from the Department of Environmental Quality, the Department of Natural Resources, the Department of Revenue, the Department of Transportation, the Game and Parks Commission, the Nebraska Oil and Gas Conservation Commission, the Nebraska State Historical Society, the State Fire Marshal, and the Board of Educational Lands and Funds, for information within the respective agency's area of expertise relating the impact of the proposed pipeline. The information could include the opinions of the agency on the advisability of approving, denying, or modifying the location of the route of the pipeline. The Commission specifically requested opinions and information regarding both the Preferred Route and the Mainline Alternative Route from all nine (9) agencies listed in the statute.

All nine (9) agencies responded to the Commission and no agency expressed any concerns or opinion regarding approval, denial, or relocating of either the Preferred or Mainline Alternative Routes.¹⁸⁸

Compliance with Applicable State Statutes, Rules and Regulations and Local Ordinances

The Commission shall evaluate, "whether the pipeline carrier has demonstrated compliance with all applicable state statutes, rules, and regulations and local ordinances."¹⁸⁹ In its application, Keystone stated it has complied with all currently applicable state statutes, rules and regulations, and local ordinances. The Applicant noted that at this stage of the process, some requirements are not yet applicable and it is premature to comply with certain requirements. Keystone committed to obtain all required permits and comply with all state laws, regulations, and local ordinances, and zoning requirements, when appropriate within

¹⁸⁶ See Exhibit PSC-5.

¹⁸⁷ Neb. Rev. Stat. § 57-1407(4)(g).

¹⁸⁸ See Exhibit PSC-4.

¹⁸⁹ Neb. Rev. Stat. § 57-1407(4)(a).

the project.¹⁹⁰ It further provided a plan for compliance with the Nebraska Oil and Pipeline Reclamation Act¹⁹¹, as required by Commission Rules.¹⁹² All the commitments of Keystone in its application were affirmed by Mr. Tony Palmer at the hearing.¹⁹³

Intervenors argue Keystone failed to provide evidence of compliance with all statutes, rules, regulations, and local ordinances. Landowner Intervenors point out that Keystone has no fully executed road haul agreements with the counties.¹⁹⁴ Dr. O'Hara expressed concerns about no commitment from the Applicant to comply with private setbacks and/or covenants, as these are not necessarily a statute, rule, regulation, or local ordinance.¹⁹⁵

To expect an applicant to list each and every law, rule, regulation, or ordinance they have, or may have to comply with during a construction project of this magnitude seems impractical. We note the inclusion in this provision of the Siting Act of the word "applicable", which is defined as, "fit, suitable, pertinent, related to, or appropriate; capable of being applied."¹⁹⁶ Arguably, some provisions of state, county and local law are unable to be complied with by the Applicant prior to construction. This seems even more the case in relation to required permits at all different levels. Indeed, it would be impossible in many cases for an applicant to determine which permits to obtain prior to knowing what route, if any, may be approved by the Commission. The Applicant has promised it will comply, absent any reason to doubt the commitments of the Applicant, the Commission is satisfied they have demonstrated compliance with applicable state and local provisions.

Evidence of Impact upon Natural Resources

The Commission shall evaluate, "evidence of the impact due to intrusion upon natural resources and not due to safety of the proposed route of the major oil pipeline to the natural resources of Nebraska, including evidence regarding the irreversible and irretrievable commitments of land areas and connected natural resources and the depletion of beneficial uses of the natural

¹⁹⁰ Exhibit KXL-1, §9.8, p. 35 & §12.0, p.38.

¹⁹¹ *Neb. Rev. Stat.* §§ 76-3301 - 76-3308.

¹⁹² 291 NAC 9, § 23.02A8.

¹⁹³ Exhibit KXL-2, at pp. 4-5; TR 162:20 - 163:3; 186:15 - 187:21.

¹⁹⁴ Exhibit LO-148 at pp. 6-9.

¹⁹⁵ TR 841:2-23.

¹⁹⁶ *Black's Law Dictionary* 65 (The Publisher's Editorial Staff ed., Abr. 6th ed., West Group 1991).

resources."¹⁹⁷ The Applicant states that it has taken significant steps to minimize intrusions on natural resources. The Preferred and Mainline Alternative Routes were both routed to avoid the Nebraska Department of Environmental Quality ("NDEQ") defined area of the Nebraska Sandhills.¹⁹⁸ During this proceeding there was significant dispute and discussion about what constitutes the "Sandhills", how they are both defined and delineated. Landowner Intervenor maintain both routes still cross fragile, sandy soils that are part of the Sandhills.¹⁹⁹ However, the geographic area defined as Sandhills by NDEQ has been avoided by both routes.

The Applicant states the Preferred Route was specifically designed after surveys and refinement from input from different agencies including NDEQ and DOS to avoid major water bodies, fragile soil areas, recreation areas, and special interest areas such as Wetland Reserve Program land and Nebraska Land Trust tracts.²⁰⁰ The Preferred Route avoids most areas of native prairie and avoids Nebraska state-managed wildlife management areas which provide protected habitat.²⁰¹ The Applicant testimony emphasized most of the impacts are temporary in nature and not major. Keystone points out that a large percentage of the land crossed is agricultural in nature making impacts on vegetation short term.²⁰² TransCanada witness, Mr. Beaver, opined that the construction of the pipeline would not significantly increase the impermeability of the soil.²⁰³

The Applicant further testified that through the federal review process conducted by DOS and the U.S. Fish and Wildlife Service ("USFWS"), in consultation with the Nebraska Game and Parks Commission, the Preferred Route was designed to minimize impacts to wildlife.²⁰⁴ Only one federally-listed species, the American burying beetle was listed by DOS and USFWS as likely to be adversely affected by the proposed project, and the effects were stated to not likely jeopardize the continued existence of the burying beetle.²⁰⁵ The DOS Biological Assessment found other federally-listed species would not be adversely affected by the project. This includes the whooping crane.²⁰⁶

¹⁹⁷ Neb. Rev. Stat. § 57-1407(4)(b).

¹⁹⁸ See Exhibit KXL-1, §3, p.19.

¹⁹⁹ TR 766:16-25; 870:21-25; 909:5-15.

²⁰⁰ See Exhibit KXL-1, § 9.13, pp. 36-37; Exhibit KXL-20, pp.8-9, 71-72.

²⁰¹ See Exhibit KXL-11, p.5; Exhibit KXL-19, p. 723.

²⁰² See Exhibit KXL-1, §§ 13-18, pp. 38-63; Exhibit KXL-5, pp. 1-3; Exhibit KXL-6, pp. 1-4; Exhibit KXL-7, pp. 2-3; Exhibit KXL-8, pp. 1-4; Exhibit KXL-11 through KXL-13.

²⁰³ Exhibit KXL-11, pp. 1-2.

²⁰⁴ See Exhibit KXL-21 and KXL-22.

²⁰⁵ See Exhibit KXL-22, p. 70; Exhibit KXL-21, pp. 170-171.

²⁰⁶ See Exhibit KXL-21; Exhibit KXL-22.

The Landowner Intervenors focused on the negative impacts of the proposed construction to the soil, water, habitat, and the aquifer, and the difficulties in returning the land to pre-construction state. Regarding soil they point out the potential negative impacts of soil erosion, loss of topsoil, soil compaction, an increase in large rocks in the topsoil, and soil contamination from construction of the project.²⁰⁷ Regarding water they discuss increased sedimentation in surface water, degraded aquatic habitat, changes in channel morphology and stability, decreases in river bank stability, and erosion of river banks.²⁰⁸ Landowner Intervenors also point out there are 2,398 wells within one mile of the Preferred Route, in comparison to 105 wells within one mile along the pipeline route through South Dakota.²⁰⁹ Landowner Intervenors also cite to Keystone's application regarding the project's impact on wetland habitats and causing changes in wetland hydrology.²¹⁰ In regards to the aquifer under the State of Nebraska, they state there may be a temporary draw down on the aquifer during construction.²¹¹

The Landowner Intervenors also point out that Keystone doesn't quantify what it means by "significant" when it states that it does not anticipate any significant overall effects to crops and vegetation from the heat generated by the pipeline underground during normal operations.²¹² Additionally, Landowner Intervenors express concern over Keystone's statement that it takes upwards of fifty (50) years for new trees to mature and no trees will be able to be replanted over where the pipeline is buried.²¹³

Natural Resources Intervenors also expressed concerns on the impacts to natural resources of the pipeline project, specifically citing to landowner testimony regarding the impact of the heat generated underground by the operation of the pipeline and the fear there will be irreparable damage to the land and soil from the heat.²¹⁴ Other landowner expressed concern noted by Natural Resources Intervenors about irreparable harm from the Applicant's failure to restore their land to pre-construction condition.²¹⁵

²⁰⁷ TR 368:10 - 369:9,11.

²⁰⁸ TR 373:6 - 374:12.

²⁰⁹ TR 566:1-10.

²¹⁰ Exhibit KXL-1, p. 41.

²¹¹ TR 372:13-20.

²¹² TR 562:15 - 563:9.

²¹³ Exhibit KXL-1, p. 42.

²¹⁴ TR 756:21 - 757:5; 874:7-19.

²¹⁵ TR 788:5-22; 928:10 - 929:13.

Natural Resources Intervenors point to the testimony of Mr. Allpress, a landowner in Keya Paha County, regarding the fragile nature of his soil and the significant risks of hills slides causing damage to plants and risk to wildlife in the area, and his belief that Keystone has chosen a route with significant issues that could cause irreparable harm by building through Keya Paha County.²¹⁶

Experts for the Natural Resources Intervenors testified that due to the soil characteristics along the route, in their opinion, the proposed pipeline construction will decrease soil permeability and increase soil compaction post construction, and present very real challenges in restoring the soil, causing a decrease in agricultural productivity both during construction and after.²¹⁷ They further testified that placing a pipe in the ground with a shallow aquifer could alter flow paths of groundwater and irreversibly and irreparable impact local springs and subsurface flows.²¹⁸ Finally, Natural Resources Intervenors spent significant time discussing the impact of the additional powerlines necessary to supply the operation of the pipeline to the endangered whooping cranes. The migratory path of the whooping cranes passes through Nebraska and besides researchers and conservationists, thousands of people visit Nebraska each year to view the migrating Sandhill cranes and catch a glimpse of the rare whooping cranes.²¹⁹ While they admit the impact will be small on the whooping cranes, they maintain one bird killed on such a small population is a high price to pay.²²⁰

The Commission is very cognizant of the fact that opening a trench that entirely bisects the State of Nebraska from North to South to insert a 36-inch pipe will have impacts to the natural resources of the state, including soil, water, and wildlife. It is impossible to complete such a project without impacts. There is no utopian option where we reap the benefits of an infrastructure project without some effects. We are tasked with weighing those impacts against the potential benefits. We do not take lightly the concerns of the landowners, other Nebraskans, and our fellow Commissioners. We share many of the concerns expressed regarding the soils in Keya Paha, Holt, Boyd, and Antelope Counties. However, we also are very cognizant of the benefits to Nebraska, especially to the counties along the route. With economic concerns abounding, tax revenues from a project such as this can help ease burdened landowners, counties, school districts, and subdivisions by

²¹⁶ TR 883:19 - 885:1.

²¹⁷ Exhibit NR-3, pp. 5-6, 8, 13.

²¹⁸ Exhibit NR-4, p. 9.

²¹⁹ Exhibit No. NR-1, p.10.

²²⁰ TR 1001:14 - 1002:3 and TR 1028:3-8.

raising the potential of future property tax relief via expansion of the local tax base. Regardless of the infrastructure project proposed, weighing the concerns with the benefits is a difficult analysis.

Evidence of Methods to Minimize or Mitigate Potential Impacts

The Commission shall evaluate, "evidence of methods to minimize or mitigate the potential impacts of the major oil pipeline to natural resources."²²¹ The Commission heard significant amounts of testimony regarding Keystone's Construction Mitigation and Reclamation Plan²²² ("CMRP"). Keystone testified the CMRP measures are based upon best practices within the pipeline construction industry.²²³ The CMRP contains plans that outline multiple procedures developed by the Applicant in consultation with NRCS and University of Nebraska experts.²²⁴ The plans include procedures for soil protection, water-crossing methods, vegetation reclamation, and aquatic resources protection to lessen the impacts on natural resources and return the land disturbed to pre-construction conditions as close as reasonably possible.²²⁵ The Applicant also provided Construction Reclamation ("Con/Rec") Units for the Keystone XL Project and a Noxious Weed Management Plan that are intended to work in conjunction with the CMRP. Keystone also committed to developing and implementing a Construction Spill Prevention, Control, and Countermeasure Plan, which will be finalized when construction contractors are engaged for the project.²²⁶ The CMRP also contains provisions for daily monitoring by an Environmental Inspector to review the construction for compliance with federal, state, and local requirements. Pursuant to the plan, inspectors will have the authority to stop the work on the pipeline if appropriate.²²⁷

The Applicant testimony also addressed additional measures to mitigate and reclaim the areas along the construction including deep ripping to relieve compaction from construction traffic, and placing the pipeline so it crosses surface water in the direction of the flow of groundwater to minimize impacts on groundwater flows.²²⁸

²²¹ Neb. Rev. Stat. § 57-1407(4)(c).

²²² Exhibit KXL-1, Appendix D.

²²³ Exhibit KXL-11, p. 3.

²²⁴ TR 465:22 - 467:6.

²²⁵ See Exhibit KXL-1, § 8, pp. 22-30 and Appendix D.

²²⁶ See Exhibit KXL-24 through KXL-26, KXL-5, pp. 2-3 and KXL-1, § 9.11, p.36.

²²⁷ Exhibit KXL-1, Appendix D, § 2.2, p.96.

²²⁸ Exhibit KXL-11, pp. 1-3; Exhibit KXL-12, pp. 2-3.

Landowner Intervenor noted that the CMRP offered by Keystone has not been updated since 2012.²²⁹ Further, they emphasized that while Keystone offered its plan for mitigation and reclamation, it can deviate from the plan at its own discretion.²³⁰ Further, Landowner Intervenor argue that many of the statements offered by Keystone in the application are not defined or measured. For example, there is no definition of "to the extent possible" when describing mitigation and reclamation processes, and no specificity on how and who would determine if reclamation had occurred to the extent possible after construction.²³¹

Keystone admitted under cross-examination that they did not study the soil on the property owned by the Landowner Intervenor and it is more challenging to control erosion in fine, sandy soils.²³² Landowner Intervenor testified that the soil in Keya Paha, Holt & Antelope counties is often sandy and fine soil.²³³

The success or failure of mitigation and reclamation efforts can often be in the eye of the beholder and enter into a realm where reasonable mind may differ on the best course, the successfulness of the process, and whether further steps may or may not be in order. It appears the procedures put forth by the Applicant conform to industry standards and are reasonable. However, we also are very aware that there are unique challenges in many areas of Nebraska. Therefore, we find that the Natural Resources Conservation Service (NRCS), is an excellent resource for the Applicant and landowners, and in the event a dispute arises regarding reclamation and mitigation efforts in connection with the Keystone XL Pipeline Project, that NRCS be consulted and their advice followed. Therefore, while we stop short of ordering consultation and compliance with NRCS opinion and advice, we strongly urge that NRCS be consulted regarding reclamation and mitigation disputes and their advised course of action be undertaken by the Applicant and affected landowner, as circumstances may dictate.

Evidence Regarding Economic and Social Impacts

The Commission shall evaluate, "evidence regarding the economic and social impacts of the major oil pipeline."²³⁴ Both economic and social impacts were discussed extensively by all parties to the proceeding. We will discuss each area distinctly

²²⁹ TR 403:15 - 404:25.

²³⁰ TR 401:5-24.

²³¹ TR 418:18 - 420:23.

²³² TR 350:20-25.

²³³ TR 766:16-25; 870:21-25; and 909:5-15.

²³⁴ Neb. Rev. Stat. § 57-1407(4)(d).

below, however, we are aware there is overlap between the two areas.

Economic Impact

Keystone offered evidence of the socio-economic impacts of the project. Keystone cited positive tax effects, estimating the tax benefits would exceed \$200 million during construction and the first 15 years of operation of the pipeline.²³⁵ Keystone also cited to the findings of both NDEQ and DOS that there would be significant, positive tax effects for Nebraska and the U.S.²³⁶ Additionally, Keystone confirmed through Tony Palmer, that it would not make any claims for deductions, exemptions, credits, refunds, or rebates under the Nebraska Advantage Act in connection with the Keystone XL project.²³⁷

Keystone also provided testimony that concluded the project would increase employment in Nebraska, estimating 727.6 jobs supported per year from 2018 to 2034, resulting in \$.7 billion in labor income during the same period.²³⁸ The DOS also found that the entire project, not just in Nebraska, would support around 42,100 jobs and contribute approximately \$34 billion to the U.S. Gross Domestic Product.²³⁹

Keystone highlighted the finding in the FSEIS that the operation of the project was not expected to have an impact on residential or agricultural property values and the findings of NDEQ, of hundreds of millions of dollars of new economic activity, millions of dollars in annual property tax revenue, and hundreds of jobs for Nebraskans.²⁴⁰

The Landowner Intervenor expert disputed the findings and numbers provided by Keystone. Dr. O'Hara estimated that fewer than ten (10) jobs would be created by the project and Landowner Intervenor included evidence that as of May 19, 2017, Keystone had created 34 permanent jobs and one temporary job.²⁴¹ Dr. O'Hara pointed out Keystone would only pay property taxes for fifteen (15) year and zero property taxes after 2034. Dr. O'Hara testified that in his opinion net decreases in property taxes over the lifetime of the pipeline and losses of state income tax revenues

²³⁵ Exhibit KXL-1, Appendix H, Table 3.8, p. 358.

²³⁶ Exhibit KXL-19, pp. 25-26 and KXL-20, pp.8-9, 26-27.

²³⁷ TR 157:22 - 158:5.

²³⁸ Exhibit KXL-1, Appendix H.

²³⁹ Exhibit KXL-19, p. 25.

²⁴⁰ Id. at p. 26 and Exhibit KXL-20, pp. 8-9, 26-27.

²⁴¹ Exhibit LO-244, pp. 9-10.

would offset any temporary sales tax increases. He estimated counties would have other increased operating expenses due to the project and the pipeline would potentially limit future economic development. He additionally estimated a 15% decrease in land value with the pipeline on the property.²⁴² Landowner Intervenor noted that Keystone did not rebut their assertions that their land would suffer from decreased productivity and pointed out that Keystone had not conducted any studies on topsoil and the effects of replacement on productivity and crop yields along the route.²⁴³

The Economic Intervenor testified that UA has approximately 1,500 Nebraska members, LiUNA has around 600 Nebraska members, and IBEW represents around 371 members in Nebraska.²⁴⁴ The Economic Intervenor testified that the socio-economic well-being of their members depends on projects like the Keystone XL project. They went on to testify that the Keystone XL Project will create benefits for union members as well as Nebraska localities and residents. Economic Intervenor witness David Barnett estimated the Project would create about \$30 million in wages and \$20 million in fringe benefit contributions in Nebraska, employing approximately 564 UA members.²⁴⁵ Witness Gerhard testified that the project would create approximately 100 jobs for LiUNA members and approximately 80 jobs for IBEW members for the pumping stations alone. All employed members would receive wages and contributions to retirement and health care benefits for themselves and their families.²⁴⁶ Economic Intervenor testified that construction jobs like those created by the Keystone XL Project are vital to Nebraska families who depend on construction jobs for their livelihood.²⁴⁷

Mr. Gerhard further estimated that while some of the created jobs are for the period of construction, other permanent jobs would also be created for IBEW members as a result of transmission/distribution demands for the operation of the pipeline.²⁴⁸ Mr. Gerhard testified the jobs will be permanent in nature due to the increase in electrical capacity and demand requiring more service to transmission lines and additional generation stations.²⁴⁹ Finally, Mr. Gerhard discussed the increased economic activity brought into the State of Nebraska due to increased demand for food, lodging, recreation, and other daily

²⁴² Exhibit LO-189, pp. 22-35.

²⁴³ TR 344:6-21; 949:22 - 950:25; 766:16 - 768:2; 810:9-22; 402:25 - 403:14.

²⁴⁴ Exhibit ECO-1, pp. 1-2; Exhibit ECO-2, p. 1.

²⁴⁵ Exhibit ECO-1, pp. 11-12.

²⁴⁶ Exhibit ECO-2, p. 5.

²⁴⁷ *Id.* at p. 6.

²⁴⁸ *Id.*

²⁴⁹ *Id.*

needs of workers on the pipeline, spurring local business and creating positive economic activity and tax revenue.²⁵⁰

While much of the economic testimony was conflicting, what wasn't disputed was that Nebraska will accrue economic benefit from the Keystone XL Project. The exact nature of those benefits and how to quantify those benefits was strongly disputed. It is clear Nebraska will reap some level of benefit from the investment and activity that is associated with the pipeline construction and operation. The counties where the pipeline is situated will benefit from increased property tax revenues. This is especially true as the Applicant has committed to not utilize the tax benefits it may be entitled to under the Nebraska Advantage Act. We find the Applicant shall comply with its commitment to not use the Nebraska Advantage Act in any form in connection with the Keystone XL Project. Finally, the fact that the property tax revenues may only be for a certain number of years, and there may be other costs offsetting the revenues somewhat, does not eliminate the economic benefits that will be realized by Nebraska families, communities, counties, and the state as a whole from the pipeline project.

Social Impact

The discussion in the proceeding regarding social impacts of the proposed pipeline project focused primarily on two (2) areas, the preservation of cultural resources and impacts from the temporary construction camp that may be established in Holt County.

The public interest with respect to the preservation of cultural resources²⁵¹ along the pipeline route is a matter of federal law, and governed by the National Historic Preservation Act ("NHPA").²⁵² The DOS is the lead federal agency for review of the proposed pipeline and tribal consultation under NHPA.²⁵³ Pursuant to Section 106 of NHPA, the DOS, the Nebraska State Historical Preservation Officer, Keystone, and various other state and federal agencies entered into an amended PA in December, 2013.²⁵⁴

²⁵⁰ *Id.* at pp. 6-7.

²⁵¹ NDEQ defined cultural resources as, "physical evidence of culturally and historically valued aspects of the human and natural environment on the landscape." KXL-020, p. 28.

²⁵² 56 U.S.C. 300101 *et seq.*

²⁵³ KXL-019, p. 271.

²⁵⁴ KXL-014, pp. 7-160 and See Exhibit PSC-6, Nebraska State Historical Society Letter, March 5, 2017.

Among other things, the PA requires Keystone to avoid, whenever feasible, adverse effects on known cultural resources.²⁵⁵ Adverse effects that cannot be avoided must be minimized and mitigated.²⁵⁶ In the event of an unanticipated discovery of cultural resources, all construction activities in the vicinity of the discovery must cease.²⁵⁷ Construction may only resume after such resources are evaluated and are protected to the extent required by the PA and NHPA.²⁵⁸ The PA also includes a Tribal Monitoring Plan, the objective of which is to minimize the potential for adverse effects from the Project activities on previously unidentified historic properties.²⁵⁹ The Tribal Monitoring Plan calls for tribal monitors with experience in the identification of cultural resources to monitor construction along the pipeline route.²⁶⁰ Under the PA, tribal monitors are to be selected by the individual tribes, with construction activities in a given location observed by tribal monitors who are representatives of tribes claiming historical use of that land.²⁶¹

The Cultural Intervenors provided testimony highlighting both YST and Ponca concerns regarding sacred cultural resources that would be irreparably harmed by construction of the pipeline and the resulting psychological and cultural harm to tribal members.²⁶² Mr. Wright testified specifically about the Ponca concerns about the project impacts to the Ponca Removal Trail.²⁶³ Mr. Wright also testified that his concerns about cultural surveys would be alleviated if such surveys were conducted properly under the PA.²⁶⁴ He also agreed that Keystone has time to complete cultural surveys prior to construction of the proposed pipeline.²⁶⁵

The DOS invited a total of 84 Indian tribes to consult on the proposed pipeline project on a government-to-government basis, pursuant to Section 106 of NHPA.²⁶⁶ Both the Ponca Tribe of Nebraska and the Yankton Sioux Tribe of South Dakota are listed in the PA as consulting parties.²⁶⁷ The record shows numerous contacts between the Ponca and the DOS, including numerous telephone calls, letters, emails and six consultation meetings, prior to execution

²⁵⁵ KXL-023, p 13, 16-19

²⁵⁶ KXL-023, p. 12, 52.

²⁵⁷ KXL-023, p 13, 16-19.

²⁵⁸ KXL-023, p. 18.

²⁵⁹ KXL-023, p. 92.

²⁶⁰ KXL-023, p. 16-17, 92, 97-104.

²⁶¹ *Id.*

²⁶² Exhibit CUL-25 pp. 6-8.

²⁶³ Exhibit CUL-19 pp. 9-10.

²⁶⁴ TR 1054:23-1055:3.

²⁶⁵ TR 1055:4-7

²⁶⁶ KXL-014, p. 118.

²⁶⁷ KXL-014, p. 120-21.

of the PA.²⁶⁸ Likewise, the record shows the YST also participated in six consultation meetings, with a greater number of letters, telephone calls and emails.²⁶⁹ However, the record is unclear on the Cultural Intervenors' participation in the consultative process after the execution of the amended PA by various parties in December 2013.²⁷⁰

The Applicant's CMRP contains an express commitment by Keystone to comply with any PA in order to minimize the impact on cultural sites along the route and address any unanticipated cultural discoveries during construction.²⁷¹ The application states that Keystone intends to avoid historical properties or culturally significant sites by rerouting the pipeline "to the extent practicable."²⁷² Moreover, the CMRP states that if an unanticipated discovery of cultural resources occurs, all construction activities will be halted within a 100-foot radius of the discovery.²⁷³ The site will be protected and work will not resume until all mitigation measures are complete under the PA and approval is received from the relevant agencies.²⁷⁴ Moreover, the record reflects that Keystone has already made changes to the Preferred Route in order to accommodate cultural sites and that every eligible cultural site encountered thus far in Nebraska has been addressed by avoidance.²⁷⁵

Taken as a whole, the record demonstrates Keystone has complied with federal law and made alterations of the route to accommodate culturally important sites and it is reasonable to expect that Keystone will continue to do so. Further, DOS will continue to require compliance with the PA and NHPA. Therefore, we think it fair to conclude that the Applicant's compliance with the PA and NHPA will help to assure that the route of the pipeline will be in the public interest.

The Cultural Intervenors also expressed concern regarding the potential negative social impacts from the temporary construction camp that may be established in Holt County. Mr. Cooke testified that a pipeline construction camp in proximity to the YST reservation and casino in South Dakota would raise the threat of harm to tribal members due to violence or other criminal

²⁶⁸ KXL-023, p. 145.

²⁶⁹ *Id.* at p. 149.

²⁷⁰ TR 1056:13 - 1057:25; 1084:19 - 1085:20.

²⁷¹ KXL-1, Appendix D, p. 105.

²⁷² *Id.*

²⁷³ *Id.*

²⁷⁴ *Id.*

²⁷⁵ TR 1124:12-14; TR 621:19 - 622:1.

activity.²⁷⁶ However, the information in the record regarding construction camps states that Keystone would require camp residents to comply with a written code of conduct, the violation of which would potentially result in expulsion.²⁷⁷ The construction camps will be fenced, with a guardhouse manned 24 hours a day, seven (7) days a week, an additional roving security guard, supplemented by off-duty law enforcement personnel, and video surveillance.²⁷⁸ Only authorized personnel will be granted access to the work camp and no visitors will be allowed.²⁷⁹ All construction camps would be permitted, constructed, and operated consistent with applicable county, state, and federal regulations.²⁸⁰

In addition, information included in the record states that the social ills that impact communities due to an influx of large numbers of workers are generally associated with "boom towns, longer-term operations such as oil drilling operations where a largely male workforce may be residing for months or years."²⁸¹ Construction camps on the Keystone project would be temporary, expected to exist for approximately six to eight months, and located away from communities.²⁸²

Based on the foregoing, we do not believe that a temporary construction camp in a location with insufficient lodging to accommodate the number of workers necessary to build the pipeline would be contrary to the public interest.

Impact of the Pipeline on Orderly Development of the Area

The Commission is directed to evaluate, "the impact of the major oil pipeline on the orderly development of the area around the proposed route of the major oil pipeline."²⁸³ The Applicant states the land along the routes is primarily agricultural and located in rural areas, and the land will remain agricultural after construction is complete. The presence of the pipeline after construction is completed, will not interfere with normal agricultural operations.²⁸⁴ Landowner Intervenors raised concerns regarding the impact of the pipeline on irrigation and drain tiles after construction. The Applicant responded that Keystone's CMRP

²⁷⁶ Exhibit CUL-25 pp. 8-10.

²⁷⁷ KXL-19 p. 1321.

²⁷⁸ *Id.*

²⁷⁹ *Id.* at pp. 2205-2206.

²⁸⁰ *Id.* at p. 343.

²⁸¹ *Id.* at p. 2205.

²⁸² *Id.*

²⁸³ *Neb. Rev. Stat. § 57-1407(4)(f).*

²⁸⁴ Exhibit KXL-1, §21, pp. 69-70; Exhibit KXL-3, pp. 2-3.

addresses the mitigation measures that will be utilized to address impacts on irrigations systems. The CMRP, Keystone points out, also includes specific plans for repair of underground drainage tiles and methods to resolve with the landowner any repair costs.²⁸⁵

Landowner Intervenor argue that Keystone did not conduct a study on the impact of the pipeline on development. They argue electricity demands for the pipeline pumping stations could affect irrigators in the area, but offered no evidence in this regard.²⁸⁶ Dr. O'Hara testified that the presence of the pipeline could act as a physical barrier and steer potential development away from the location of the pipeline, as no building can occur over the buried pipeline.²⁸⁷

The land along the proposed route is primarily agricultural in use, and will most likely remain primarily agricultural after any construction is completed. Any future development, such as erecting buildings or other structures, would need to avoid the direct pipeline path. However, similar restrictions on development occur in areas near other infrastructure, i.e., roads, bridges, dams, power lines, etc. The impact on development of the area along the location of the pipeline seems minimal.

Existence of Other Utility Corridors

The Commission is also directed to evaluate, "whether any other utility corridor exists that could feasibly and beneficially be used for the route of the major oil pipeline."²⁸⁸ The term "utility corridor" is not defined in the Siting Act, nor could we find the term used elsewhere in Nebraska statutes. For purposes of a plain meaning analysis, corridor is defined as, "a passageway",²⁸⁹ and utility is defined as, "equipment or piece of equipment to provide service to the public".²⁹⁰ So it seems reasonable that the plain meaning of a utility corridor is a passageway for facilities providing public services. It does not appear the Siting Act limits other utility corridors to those containing crude oil pipelines. The Applicant discussed consideration of other utility corridors that included a Nebraska Public Power District high voltage electric transmission line in Knox and Antelope counties and the

²⁸⁵ Exhibit KXL-24, §§ 4.1, 5, 5.3.

²⁸⁶ See Landowner Intervenor's Closing Argument, p.7.

²⁸⁷ TR 857:16 - 858:5.

²⁸⁸ Neb. Rev. Stat. § 57-1407(4) (e).

²⁸⁹ Webster's Seventh New Collegiate Dictionary at 187.

²⁹⁰ *Id* at 978.

Cowboy Trail,²⁹¹ a former railroad line, in Rock, Holt, and Antelope counties. The Applicant discarded these routes for various reasons laid out in the application, with which we agree.²⁹²

The Applicant's proposed Mainline Alternative Route would run near the existing Keystone I pipeline for approximately 95 miles and by the Applicant's own statement, "was developed to maximize the length of co-location with the existing Keystone Mainline pipeline", otherwise referred to as Keystone I, in eastern Nebraska.²⁹³ While it does not 100% co-locate the Keystone I line, the Alternative Mainline Route does utilize an existing utility corridor, the Keystone I Pipeline, for approximately two-thirds of the route through Nebraska. Therefore, the opportunity to utilize at least a portion of an alternative utility corridor does exist.

However, the most frequently discussed alternative utility corridor in this proceeding was one utilizing a route co-locating the entire existing Keystone I Mainline oil pipeline in eastern Nebraska.²⁹⁴ Such a route would require the entry point from South Dakota be in Cedar County, or over 100 miles east from the current entry point in Keya Paha County. Some in the proceeding dubbed this complete parallel route the "I-90 Route", as it would in theory route the Keystone XL Pipeline further east in South Dakota along Interstate 90 and then parallel Keystone I south through Nebraska. During the DOS Environmental Impact review, the I-90 Route was reviewed for comparison purposes to the route preferred by Keystone.²⁹⁵

In 2010, a year before the passage of the Siting Act in Nebraska, South Dakota issued a construction permit to Keystone which allows for the crossing between Nebraska and South Dakota to occur in Keya Paha County.²⁹⁶ This is the point of entry into Nebraska used by Keystone for all three (3) routes proposed in this proceeding. Many, including our dissenting colleagues, advocate for us to not approve any of the proposed routes before us in this application and instead urge the Applicant to move the entry point out of Keya Paha County. They suggest the idea of co-locating the entire Keystone XL Pipeline with the Keystone I line

²⁹¹ The Cowboy Trail is a former railroad line that was gifted to the State of Nebraska pursuant to the National Trails System Act, 16 USC §§ 1241-1251.

²⁹² Exhibit KXL-1, §20.2, pp. 65-66.

²⁹³ Exhibit KXL-1, §20.3, pp. 66-67.

²⁹⁴ See Exhibit KXL-1, §20, pp. 64-70, TR 182:5 - 183:6; TR 545:8-12; TR 546:7-10; Exhibit NR-4, pp. 8-9.

²⁹⁵ Exhibit KXL-19, pp. 1965-2008.

²⁹⁶ See Docket No. HP09-001, *In the Matter of the Application By TransCanada Keystone Pipeline, LP for a permit under the South Dakota Energy Conversion and Transmission Facilities Act to construct the Keystone XL Project*, Amended Final Decision and Order; Notice of Entry, (June 29, 2010).

in Nebraska. We have serious concerns about dismissing the decision of our South Dakota neighbors. We are well aware that South Dakota's process is different from the routing approval process utilized by the Nebraska Legislature in the Siting Act. However, to disregard the decision of South Dakota that was made before Nebraska had even enacted the Siting Act, is at best awkward and at least highly questionable. While we understand that our primary focus is clearly the interests of Nebraska, we do not believe it to be in Nebraska's best interest to demand an approach that would result in direct conflict with our northern neighbor. Nebraska shares common goals and interests with other states in the union and we cannot frivolously dismiss the national aspect of this project before us and the decisions of our counterparts in neighboring states.

Ultimately, regardless of the amount of time the I-90 Route was discussed, the discussion is speculative. A route completely paralleling the Keystone I pipeline is not before us in this proceeding. Further, even if we rejected the three (3) routes in front of us, we have no evidence to even make a recommendation that the Applicant pursue the I-90 Route, as we are unable with this evidentiary record to determine whether the I-90 Route is either a feasible or beneficial alternative to what is proposed by the Applicant. Finally, we are unconvinced that this Commission is endowed with the authority under the Siting Act to approve a route that requires the entry point, previously reviewed by other state and federal regulatory bodies, to be moved. The idea of the I-90 Route may sound good in theory, but we do not have the authority to approve it.

Proposed Routes

What we do have in front of us is information on three (3) routes from the Applicant, the Preferred Route, the Sandhills Alternative Route and the Mainline Alternative Route. The Applicant selected the route that it preferred, but also included two other alternative routes. All three (3) routes enter Nebraska in Keya Paha County and end at Steele City in Jefferson County.²⁹⁷

The Sandhills Alternative Route is the most westerly of the three (3) routes. The Sandhills Alternative Route was the original proposed route of the Keystone XL Pipeline through Nebraska. The route was subsequently modified in consultation with NDEQ after concerns regarding the Sandhills region were raised by Nebraskans.²⁹⁸ The Sandhills Alternative Route would require 254.9

²⁹⁷ Exhibit KXL-1, S2, pp. 8-14.

²⁹⁸ Exhibit KXL-20.

miles of pipe to be built in Nebraska. This route was previously rejected by the State of Nebraska and therefore we also reject this alternative.

The Preferred Route is the route previously reviewed by NDEQ and approved by the Governor. The Preferred Route is located to the east of the Sandhills Alternative Route, having been moved to the east to avoid the NDEQ-identified region of the Sandhills.²⁹⁹ Based on the NDEQ Final Evaluation Report and the subsequent Governor approval of the Preferred Route, Keystone incorporated the Preferred Route into its 2012 Presidential Permit application.³⁰⁰ The Preferred Route would extend 275.2 miles from its entry in Keya Paha County to its exit from Nebraska in Steele City. However, Keystone admitted the route was determined by simply drawing a direct line from Hardesty, Alberta, to Steele City, Nebraska, constituting the shortest route between the origin and the destination of the pipeline.³⁰¹ However, when concerns were expressed by Nebraskans about a particularly fragile ecological area, the NDEQ-defined Sandhills, the route was moved from the original shortest route, adding approximately 20 miles to the pipeline's length and diverting it away from the Sandhills. But, ultimately, the Preferred Route fails to take advantage of any opportunity to co-locate with the existing utility corridor represented by Keystone I, and therefore we are unable to conclude that the Preferred Route is in the public interest.

The Mainline Alternative Route follows the same route as the Preferred Route for the portion in Northern Nebraska before it diverts further east through Madison County to meet up with the Keystone I Pipeline in Stanton County. It then turns south, co-locating with Keystone I for the remainder of the route to Steele City. With the Alternative Mainline Route, the Keystone XL pipeline would co-locate near the Keystone I Mainline Route for approximately 100 miles for a total route length of 280.5 miles long, which is only 5 miles longer than the Preferred Route. TransCanada's engineer, Ms. Kothari, was clear that the Alternative Mainline Route was a viable and beneficial route, it just wasn't the route Keystone preferred.³⁰² Further, as noted above, the Mainline Alternative Route was developed by the Applicant to maximize the length of co-location with the existing Keystone I Pipeline.³⁰³ Additionally, in response to the Commission's request, NDEQ completed an analysis of the Mainline

²⁹⁹ Exhibit KXL-1, Appendix B.

³⁰⁰ *Id.* at §3, pp. 19-20.

³⁰¹ TR 182:24 - 183:6; TR 679:11 - 680:6.

³⁰² TR 638:8-22.

³⁰³ Exhibit KXL-1, §20.3, pp. 66-67.

Alternative Route, finding the route would have minimal environmental impacts in Nebraska. NDEQ's findings were supported by the mitigation commitments and reclamation procedures included in Keystone's application.³⁰⁴

We see many benefits to maximizing the co-location of the Keystone XL Pipeline with Keystone I. It is in the public interest for the pipelines to be in closer proximity to each other, so as to maximize monitoring resources and increase the efficiency of response times. This would also assist emergency responders and others that may be called upon to assist with any issues that may arise with either pipeline.

Additionally, the Alternative Mainline Route impacts fewer miles of the ranges of threatened and endangered species, including the interior least tern, whooping crane, piping plover, Massasauga rattlesnake, river otter, and small white lady's slipper. We particularly note the Alternative Mainline Route would impact 84.6 fewer miles of whooping crane migratory path as compared to the Preferred Route.³⁰⁵ Other benefits of the Alternative Mainline Route include, but are not limited to, one fewer river crossing, fewer wells within 500 feet of the pipeline, fewer acres of pivot irrigated crop land crossed, fewer crossing of intermittent and perennial streams and rivers, fewer miles of pipeline placed in areas with shallow groundwater, and fewer state highways and natural gas facilities to be crossed.³⁰⁶

Keystone cites the additional five (5) miles in length and one (1) additional pumping station as negatives against the Mainline Alternative Route. However, we feel the benefits of maximizing co-location opportunities and utilizing the existing utility corridor that is the Keystone I Mainline Route, outweighs these concerns. The additional twenty (20) miles added to the Preferred Route weighed against avoiding the Sandhills region made the additional miles a beneficial tradeoff. We see a similar situation here, the benefits of the Alternative Mainline Alternative Route outweigh the additional five (5) miles added to the length of the pipeline and a pumping station.

Conclusion

After careful evaluation and consideration of all the evidence adduced, and the careful weighing of all the issues, factors, and aspects of the proposed routes of the Keystone XL

³⁰⁴ See Exhibit PSC-4, Keystone XL Analysis, Report to the Nebraska Public Service Commission, July 2017.

³⁰⁵ Exhibit KXL-1, Table 2-1, p. 15.

³⁰⁶ *Id.* at pp. 16-18.

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Pipeline, we find that the Alternative Mainline Route is in the public interest and shall be approved.

O R D E R

IT IS THEREFORE ORDERED by the Nebraska Public Service Commission that findings and conclusions contained above, be, and are hereby, adopted.

ENTERED AND MADE EFFECTIVE at Lincoln, Nebraska, this 20th day of November, 2017.

NEBRASKA PUBLIC SERVICE COMMISSION

COMMISSIONERS CONCURRING:



//s//Frank E. Landis
//s//Tim Schram



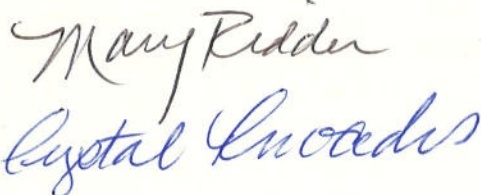
Chairman

ATTEST:



Executive Director

COMMISSIONERS DISSENTING:



SECRETARY'S RECORD, NEBRASKA PUBLIC SERVICE COMMISSION

Commissioner Johnson, concurring:

Although I join the Majority in concluding that the Mainline Alternative Route of the proposed Keystone XL pipeline is in the public interest, I also write separately to emphasize additional matters of critical importance. Keystone has made quite a few promises to Nebraskans, both in their application and during the course of this proceeding. There should be no doubt that this Commission and the citizens of this State expect TransCanada to keep those promises, and we will be watching to make sure that they do so.

Of greatest importance is Keystone's promise to fully restore the land that will be impacted by construction of the pipeline. Landowner testimony made clear that a successful reclamation process, particularly in Keya Paha, Boyd, and Holt counties, will not be a matter of simply scattering some seed and walking away. Several landowners provided compelling testimony about their own efforts to reestablish vegetation in fragile sandy soils after blowouts, hill slides, or other injuries to the land. The upshot of this testimony is that successful restoration can be a very difficult process, requiring a great deal of time, care, and attention. TransCanada's project manager testified the company has made a "commitment" to properly restore the land so that, "there is no impact."¹ The company must honor that commitment.

The project manager also testified that during construction the pipe will, "be bent to follow the contour of the ground."² In future years, however, the shifting Sandhills terrain will be significantly altered by wind, rain and the passage of time. Therefore, even with a minimum initial cover of four feet, parts of the pipeline may become exposed, either slowly due to erosion or suddenly due to blowouts and hill slides. In the event that the pipeline becomes exposed to the elements, Keystone must immediately respond to re-bury the pipe to the required depth and restore the affected land. Keystone's project manager promised that the company will, "continuously monitor this pipeline for its entire length. So any point where you see any erosion or we see any erosion, . . . we can mitigate that and then reseed it, **whatever it requires.**"³ The company must keep that promise.

¹ TR 205:16-25.

² TR 267:10-11.

³ TR 271:2 (Emphasis added.)

Keystone's project manager further promised that the company would be accountable for production losses and other costs resulting from pipeline maintenance and damage to the land throughout the useful life of the pipeline. He stated, "even if it's years after construction, then that's our responsibility."⁴ The company must abide by that responsibility.

Finally, I fully understand that MOPSA forbids this Commission from considering issues related to pipeline safety. Nonetheless, it is obvious that safety issues are of prime concern to the public regarding to this pipeline. Safety was the number one issue raised at the Commission's four public meetings and in the many thousands of written comments we have received during this process. TransCanada and project advocates have often said that the Keystone XL pipeline will be the safest in history. Nebraskans are counting on that promise, too.



Rod Johnson

Commissioner, District 4

⁴ TR 271:19-22.

Commissioner Rhoades, dissenting:

I respectfully dissent. Under the Major Oil Pipeline Siting Act ("MOPSA"), the burden of proof of public good resides with the Applicant.¹ In this case, the Applicant did not meet its burden in many areas, and the Majority should not have approved the Mainline Alternative Route.

Moreover, the Commission failed to protect the due process rights of groups affected by this proceeding. In particular, I am concerned that approval of the Mainline Alternative Route violates the due process rights of the landowners along that route where it deviates from the Preferred Route. These landowners will now have their land taken by the Applicant and they may not even be aware that they were in the path of the approved route, as landowners along the Alternate Mainline Route were never notified by Keystone or the Commission.

The Applicant was required under MOPSA and Rules and Regulations of the Commission to publish notice of the application in a local paper of general circulation for each county along the routes and provide proof of publication to the Commission.² No such documentation was received by the Commission and no evidence was presented that would indicate that the additional forty landowners the Applicant said would be impacted along the Mainline Alternative Route are aware they are in the path of the route approved by the Majority.³ This would violate their due process rights in this proceeding and again demonstrates a failure of the Applicant to meet the requirements of MOPSA and meet the burden of proof.

In addition, I want it noted that I disagreed vigorously with some of the decisions made by the Hearing Officer in this proceeding. Particularly the decisions regarding the limitations placed on the participation of some of the Formal Intervenors. Commission Rule 015.01C states, "A formal intervenor shall be entitled to participate in the proceeding to the extent of his/her express interest in the matter. Such participation shall include, without limitation, presentation of evidence and argument, cross-examination of witnesses and submission of rebuttal evidence."⁴

¹ Neb. Rev. Stat. § 57-1407(4).

² Neb. Rev. Stat. § 57-1405(3) and 291 NAC 9 § 023.02B2.

³ TR 625:25 - 626:24.

⁴ 291 NAC 1 § 015.01C.

While Commission rules do permit consolidation of intervenors, the rules and regulations are clear that this is only to be done if it does not harm the intervenors ability to put forward their case.⁵ Forcing the consolidation of the Yankton Sioux Tribe and the Ponca Tribe of Nebraska—who have different language, history, culture, religion and tradition—was inappropriate and in my view a violation of their due process rights. One would not conclude that Germans and Italians are both European and therefore have the same concerns, and such a conclusion should not have been drawn for the Yankton Sioux and Ponca Tribes. Further, the decision to limit the Tribes and environmental groups to one witness each was also inappropriate and a violation of their due process rights. Commission rules clearly state these Intervenor should have had the ability to fully present their case.⁶ The Natural Resources and Cultural Intervenor should have had the same standing to fully present their position as the Applicant and Landowners. These decisions were solely those of Hearing Officer Schram and I urged my fellow Commissioners to reconsider the decisions made by the Hearing Officer, to no avail. The Commission failed to consider the rights of the Intervenor in refusing to correct the Hearing Officer.

With regard to the merits of the Commission's decision to select the Mainline Alternative Route, the Applicant provided no evidence to support a finding that this route is in the public interest. The application provides only one page of substantive information about the Mainline Alternative Route and the Applicant concludes the Route will:

1. Result in greater total number of acres disturbed due to increase in route length;
2. Increase the crossing of the ranges of federally listed and endangered species;
3. Increase the crossing of highly erodible soils;
4. Increase the crossing of ecological unusually sensitive areas; and
5. Increase the number of crossing of perennial streams, railroads and total road crossings.
6. Will result in the need for an additional pumping station.⁷

It is clear that the Applicant discarded the Mainline Alternative Route and never intended it to be considered. The focus

⁵ Neb. Rev. Stat. § 84-912.02.

⁶ 291 NAC 1 § 015.01C.

⁷ Exhibit KXL-1, p.14.

of the federal and state reports was on the Preferred Route. The studies on the impacts of the pipeline conducted by federal and state agencies were done on the Preferred Route and drew no conclusions on the Mainline Alternative Route, even though state agencies were asked to review both the Preferred and Mainline Alternative Routes.

MOPSA requires the location of routes for the major oil pipelines be in compliance with Nebraska law. However, the application lacks sufficient substance to prove that the Applicant has complied with all applicable state statutes, rules, and regulations and local ordinances.⁸ No outline, affidavit, or certification was submitted providing proof the Applicant made an effort to ensure it was in compliance.

The Applicant and the Intervenors presented evidence that the pipeline project will cause intrusion upon natural resources during construction, including irreversible and irretrievable commitments of land areas and connected natural resources.⁹ Also, Nebraska Department of Environmental Quality ("NDEQ") found in its 2013 Final Report that there would be impacts, including disturbance of topography, loss of access to underlying mineral resources, disturbance of paleontological resources, and potential damage to the pipeline attributable to geological hazards like flooding and landslides.¹⁰ The NDEQ Final Report found a high risk of landslides in the fragile sandy soils of the northern counties. As the Preferred and Mainline Alternative Routes both would enter in Keya Paha County and run through the same northern counties before diverging, the concerns expressed regarding the impacts on these soils is not mitigated by approving the Mainline Alternative Route.¹¹

I would also note here that NDEQ in preparing its Final Report stated that the Final Environmental Impact Statement ("FEIS") analyzed a different route than the reroute, which is now called the Preferred Route. Therefore, the FEIS resource impact analysis is not applicable to the Preferred Route or the Mainline Alternative Route. NDEQ also requested additional information from Keystone in several areas, but the requests were dismissed with Keystone stating there was no material difference from the FEIS

⁸ See *Neb. Rev. Stat.* § 57-1402(1)(a).

⁹ See *Neb. Rev. Stat.* § 57-1407(4)(b).

¹⁰ Exhibit KXL-20, p.19.

¹¹ *Id.* at pp. 19-20.

analyzed route and the Preferred Route.¹² Since the Applicant refused to provide this evidence, it failed to fulfill its burden of proof. We know the Mainline Alternative Route contains areas of more highly erodible soils which were not previously reviewed, located in Madison County and north and south of the Platte River Crossing.¹³ The NDEQ report also concludes the Mainline Alternative Route directly intersects with the Ogallala Group and crosses the aquifer in Madison, Saline, and Jefferson Counties.¹⁴ The Mainline Alternative Route also increases the number of stream crossings from 25 (along the Preferred Route) to 34.¹⁵ NDEQ also states, given the Mainline Alternative Route is longer and requires an additional pumping station, it will require additional energy inputs and that additional production and consumption will cause additional emissions. While Nebraska is currently in statewide attainment status for the National Ambient Air Quality Standards ("NAAQS"), additional modeling may be required depending on the size of engines required for Keystone's power needs.¹⁶ Finally, NDEQ's determination that the Mainline Alternative Route would have minimal permanent environmental impacts in Nebraska was based on a review of the mitigation commitments and reclamation procedures identified in the application. This determination is consistent with the 2013 NDEQ Report analysis and the U.S. Department of State's ("DOS") 2014 Final Supplemental Environmental Impact Statement ("FSEIS").¹⁷ Accepting NDEQ's 2017 conclusions is problematic because the conclusions relied on two previous reports, neither of which evaluated the Mainline Alternative Route.

Further, because the easements Keystone is seeking with landowners are granted in perpetuity, there is no way for the Commission to conclude that there will not be irreversible and irretrievable commitments of land area and connected natural resources and depletion of beneficial uses. All human-made infrastructure degrades and fails over time. No infrastructure ever designed has lasted for eternity and there is no reason to believe this pipeline will be an exception. Additionally, the Applicant will not provide any specific Material Safety Data Sheet ("MSDS") data until there is an actual spill. Therefore, it is impossible to prepare beforehand for environmental impacts and it

¹² *Id.* at p. 1511.

¹³ Exhibit PSC-4, See Nebraska Dept. of Environmental Quality Keystone XL Analysis, Report to the Nebraska Public Service Commission (July 2017) at p. 6.

¹⁴ *Id.* at pp. 7-9.

¹⁵ *Id.* at p. 10.

¹⁶ *Id.* at p. 11.

¹⁷ See Exhibit PSC-4, Letter from NDEQ, April 20, 2017.

will expose first responders, with limited resources, to unknown chemical compounds they may not have the necessary equipment to contain.¹⁸ The Applicant is required under MOPSA to disclose the contents of the chemicals and product to be transported in the pipeline.¹⁹ They have not fulfilled this obligation according to responses received by NDEQ and therefore again have not met their burden of proof. I am aware the risks and impacts of spills are not to be weighed in the Commission's decision, the information was reviewed by NDEQ, as mandated in MOPSA, and is a part of the record, and therefore worth noting as a potential impact from this pipeline.

No evidence was presented to substantiate that the Applicant will minimize or mitigate potential impacts on natural resources.²⁰ The Preferred and Mainline Alternative Routes still run through several miles of fragile sandy soil that is difficult to restore and will substantially interfere with regular farming activities of the impacted landowners.²¹

The Applicant also provided insufficient evidence to substantiate any positive economic or social impacts for Nebraska from the project.²² No project labor agreements or contracts have been entered into by Keystone or TransCanada with any Nebraska labor union or contractor. There was no evidence provided that any jobs created by the construction of this project would be given to Nebraska residents.²³ Additionally, the Applicant didn't provide any evidence that construction of this pipeline would not adversely impact common carriers currently transporting similar products.²⁴ No information was provided to prove that there will not be a loss of railroad revenue or jobs resulting from the construction of this pipeline. In other areas of Commission jurisdiction, we consider the impact on other carriers offering similar service when making a determination if a specific application is in the public interest. I feel it should be a part of our public interest analysis in this proceeding as well.²⁵ The short-term increases in property taxes collected will not offset the losses to the overall

¹⁸ Exhibit KXL-20 at p. 1765.

¹⁹ *Neb. Rev. Stat.* § 57-1405(2)(e) and 291 NAC 9 § 023.02A5.

²⁰ See *Neb. Rev. Stat.* § 57-1407(4)(c).

²¹ TR 766:16-25; 870:21-25; 909:5-15 and Exhibit NR-3, pp. 5-6, 8, 13.

²² See *Neb. Rev. Stat.* § 57-1407(4)(d).

²³ TR 1092:11-13.

²⁴ TR 333:2-13.

²⁵ See *Robinson v. National Trailer Convoy, Inc.*, 188 Neb. 474, 197 N.W.2d 633 (1972), *In re Application of Northwestern Bell Tel. Co.*, 223 Neb. 415, 390 N.W.2d 495 (1986), *Application of Greyhound Lines, Inc.*, 209 Neb. 430, 308 N.W.2d 336 (1981).

value of the land through which the major oil pipeline runs.²⁶ Further, the limitations in the orderly development and operations on the affected land will result in a loss of land value from the limitations.²⁷

The Nebraska Department of Revenue ("NDR") also weighed in on the project, stating in its letter to the Commission that it is difficult to gauge the impact of the project on property taxes collected by counties because the distributed value will be taxed based on the local levy rate for each subdivision and depreciation for personal property will depend on the year the assets are placed into service.²⁸ NDR goes on to say sales and use taxes would be collected during construction, but what those liabilities will be is unknown and cannot be determined accurately by NDR. With regard to income taxes, there may be some increased tax revenue from workers coming from outside of Nebraska to work on the pipeline construction, because they would be new taxpayers.²⁹ Presumably, if the jobs were given to Nebraskans, income taxes would remain flat because those Nebraskans are already paying income taxes. NDR was silent on the potential lost income taxes of those currently working in Nebraska's rail industry who may be harmed if construction proceeds. NDR admits the tax liability related to the income of migrant workers is unknown and cannot be determined. Finally, NDR notes that the Applicant is a qualified business under the Nebraska Advantage Act and would be eligible for tax incentives available under the Advantage Act. The tax incentives could include a refund of sales taxes paid and investment and employment credits against income tax. However, it is unknown and unknowable at this time whether TransCanada will apply for benefits for which it is qualified.³⁰ While the Applicant denies any intention to apply for Nebraska Advantage Act credits, once again the people of Nebraska are being asked to take this on faith without any legal basis for enforcement should the Applicant change its mind. In the event Keystone does apply for said credits, the construction is likely to have a negative economic impact on the state because the gains in tax revenue would be negated by the refunds and credits given to the Applicant.

The Applicant admitted it had not spoken with the Nebraska Native American Tribes.³¹ The Applicant only reported DOS had

²⁶ Exhibit LO-189, pp. 22-35.

²⁷ TR 849:24 - 852:15.

²⁸ See Exhibit PSC-4, Letter from Nebraska Department of Revenue, March 2, 2017.

²⁹ *Id.*

³⁰ *Id.*

³¹ TR 1178:4-24.

worked with the Southern Ponca Tribe, who reside in Oklahoma.³² This is the equivalent of asking a distant relative for permission to do major construction in your backyard. This is as inadequate as it is unreasonable. Additionally, no evidence was presented by the Applicant to negate allegations that work camps established by Keystone to house construction workers will not create a strain on local resources as it relates to fire, police, sanitation, demands for power, and public safety. Furthermore, there was no evidence presented by the Applicant indicating where the work camps would be located and therefore no conclusions can be drawn about the impact they will have on the local economy or resources.

The FEIS notes that the Nebraska portion of the pipeline route could impact the Oregon, California, and Mormon Pioneer National Historic Trails, as well as the Pony Express National Historic Trail.³³ Once again, the Majority has no information from the Applicant about any potential impacts to these historic trails in Nebraska in relation to the Mainline Alternative Route, but it proceeded to approve the route for the Keystone XL Pipeline.

Another utility corridor exists that could feasibly and beneficially be used for the route.³⁴ The Applicant did not prove that twinning or co-locating the Keystone XL Pipeline with the Keystone I Pipeline in eastern Nebraska was not feasible and beneficial. Rather, Keystone stated it was not their preference to use that corridor.³⁵ The Applicant did not refute the landowners' argument that using the existing Keystone I corridor would avoid fragile soils, reduce impacts to endangered species, and avoid widespread controversy and opposition to the project.³⁶

The application clearly states that the pipeline will impact orderly development of the area around the proposed route of the major oil pipeline.³⁷ The soils will be difficult to restore and the easements will be maintained in perpetuity. That will place a substantial burden on the landowners who will not be able to build a fence, shed, irrigation pivot, plant a tree, modify grading, and any other number of activities usually granted to property owners along the pipeline route. All development will be prohibited in the easement for infinity, therefore, it will certainly impact orderly development of the land adjacent to the easement.

³² TR 1114:16 - 1115:24.

³³ Exhibit KXL-20, p. 1762.

³⁴ See *Neb. Rev. Stat.* § 57-1402(e).

³⁵ TR 638:9-25.

³⁶ TR 541:8 - 553:15.

³⁷ See *Neb. Rev. Stat.* § 57-1402(f).

Many of the same concerns and issues that I have just raised are also true of the Mainline Alternative Route approved by the Majority. Approving the Mainline Alternative Route did not alleviate or reduce the concerns in any of the areas I discussed above. There was insufficient information provided in this proceeding to substantiate that the Mainline Alternative Route is preferable or in the public interest. The 2013 NDEQ Report reviewed the Preferred Route and did not contain an analysis of the Mainline Alternative Route.³⁸ While several state agencies were asked by the Commission to provide evaluations of both routes, The Board of Educational Lands and Funds, Department of Natural Resources, Department of Revenue, Department of Roads, Department of Transportation, State Fire Marshall, and The Oil and Gas Commission explicitly or implicitly state that they have reviewed the proposed or Preferred Route with no mention of a review of the Mainline Alternative Route. Nebraska Game and Parks and The State Historical Society sent letters outlining the process for approval, but never directly offered an opinion about approving or disapproving any route. Indeed, all the agencies cited previous reviews of the original Sandhills route and the Preferred Route (as negotiated by the Legislature) but none of them addressed the Mainline Alternative Route.³⁹ This is likely because the Applicant emphasized it had discarded the Mainline Alternative Route and it was not to be considered.

For all the forgoing reasons, I would not have approved any of the proposed routes contained within Keystone's application and therefore, I dissent.



Crystal Rhoades
Commissioner, District 2

³⁸ See Exhibit KXL-20.

³⁹ See Exhibit PSC-4.

Commissioner Ridder, dissenting:

I respectfully dissent. The Major Oil Pipeline Siting Act ("MOPSA") directs the Commission to determine if an application for a route through our state is in the public interest. MOPSA also states that the Applicant has the burden of establishing that the proposed route is in the public interest. The Applicant failed to meet this burden in at least three of the eight areas which the Commission was charged with evaluating under Section 57-1407.

Impact on Natural Resources and Mitigation Efforts

The Nebraska Department of Environmental Quality ("NDEQ") press release dated December 29, 2011 states that the NDEQ "announced the areas that it considers to be "Nebraska Sandhills" and did so as "relating to the development of an alternative route that avoids the Nebraska Sandhills".¹

The Final Supplemental Environmental Impact Statement (FSEIS) also states in its Executive Summary, "The proposed route differs from the route analyzed in the 2011 Final Environmental Impact Statement in that it would avoid the environmentally sensitive Nebraska Department of Environmental Quality (NDEQ)-identified Sand Hills Region".²

The Applicant addressed what would be done during and following construction to try to mitigate issues caused by their route passing through various soils, yet the unrebutted testimony by landowners is that the route actually does pass through porous, fragile, erodible, sandy soil types which were to be avoided due to several factors, including erosion, long-term difficulty in reestablishing pasture grasses, and when saturated, slide-prone hills.

Several Intervenor Landowners stated during the public hearing that the proposed route is in sandy, fragile soil. Bob Allpress testified, "When we have periods of high rain, the water permeates down to the clay base and provides a liquefying source for the hills to rest on. Just take a piece of the hill here, and it will just break off. And it will slide 50, 60, 100 feet down the hill, depending on how high the hill is."³ And again, "It takes

¹ Exhibit KXL-1, Appendix B.

² Exhibit KXL-19, ¶ 2.

³ TR 901:4-11.

years to recover. Some of those are still bare dirt after 5 to 10 years."⁴

Mr. Robert Krutz discussed a heavy rain event in 2012 which produced a flood of water washing through a cut, or draw, on his property, producing a washout. This occurred in the area through which the pipeline is proposed to cross. In response to a question about revegetating the washed out area, Mr. Krutz stated, "No. I mean, with the sandy soil, there's no ... there's no vegetation. Maybe a sparse of a ... well, there's been some leafy spurge come up, which is a noxious weed. But there is very little. And I'd say very little weeds. There's no grass or nothing there, no."⁵

The concerns expressed by these landowners speak to a natural resource intrusion which Nebraska landowners have learned time and again must not occur. The act of reclaiming or repairing damage to these soil types and their accompanying pasture grasses is not nearly as simple a matter as reseeding, nor does reclamation succeed in a matter of a few years. Such an intrusion, over the course of many miles, will deplete the beneficial use of these natural resources.

A table included in the application, which was later amended in the Applicant's rebuttal testimony, states that the Preferred Route would pass through 47.1 miles of highly wind erodible soils, approximately 17% of the route, and 57.4 miles of highly water erodible soils which is around 20.9% of the 275.2 mile Preferred Route.⁶ Commission Exhibit PSC-6 included USDA NRCS Soil maps which indicate that 33.9% of the Preferred Route passes through highly erodible soils.⁷

The FSEIS lists highly wind erodible miles as 48.1 and highly water erodible miles as 178 along the Preferred Route.⁸ Continuing, the FSEIS states, "In northern Nebraska, the proposed Project route from approximately [mile post] 619 to [mile post] 707 in Boyd, Holt, and Antelope counties would enter an area where the soils tend to be highly susceptible to erosion by wind and often exhibit characteristics of the NDEQ-identified Sand Hills Region."⁹ Mile post 619 to mile post 707 is 88 miles.

⁴ TR 902:16-18.

⁵ TR 928:12-19.

⁶ Exhibit KXL-1, Table 2.1, p. 9.

⁷ Exhibit PSC-6, See Soils Characterization Along Keystone XL Routes.

⁸ Exhibit KXL-19, p. 592.

⁹ *Id.* at p. 593.

All of the testimony and the exhibits referred to above, un rebutted, indicate that neither the Preferred Route nor the Mainline Alternate Route is in the public interest because neither route achieves the avoidance of a sensitive Nebraska region containing porous, fragile, highly erodible, sandy soils. Thus both routes impact the beneficial uses of Nebraska's natural resources, and the Applicant failed to meet its burden to prove it is in the public interest.

Alternative Utility Corridor

The Applicant admits it considered the I-90 Route that was reviewed in the FEIS and FSEIS, however the I-90 Route was not offered to the Commission as an alternative. The I-90 Route was considered, according to the FSEIS, for comparison purposes to the Preferred Route, however, contrary to the claims of the Applicant, it was never discarded by the Department of State (DOS) in the FSEIS.¹⁰ Instead, the DOS never took a position or expressed any opinion on the I-90 Route. In fact, when the final recommendations were made in the FSEIS, DOS made no mention of the I-90 Route, but stated there were only two options before the decision-maker, approving or denying the proposed pipeline project. The actual routes, Preferred or I-90, were not approved or rejected by the DOS.¹¹

In every single major area of comparison reviewed in the FSEIS, the I-90 Route had either very similar or fewer potential environmental impacts than the Preferred Route. The critical areas examined in the FSEIS included: Geology, Soils, Groundwater, Surface Water, Wetlands, Terrestrial Vegetation, Wildlife, Fisheries, Threatened and Endangered Species, Land Use, Recreation, and Visual Resources, Socioeconomics, Cultural Resources, Air Quality and Noise, and Climate Change.¹²

Ultimately, in this proceeding, the Applicant simply dismissed the I-90 Route stating, "it is not possible because the Mainline's point of entry into Nebraska is situated over 100 miles to the east of, and for practical purposes too far removed from, the existing fixed starting point of the Project".¹³

¹⁰ See Applicant's Post-Hearing Brief, filed September 15, 2017, at p. 9.

¹¹ Exhibit KXL-19, p. 2008.

¹² Exhibit KXL-19.

¹³ Exhibit KXL-1, § 20.1.

While the Applicant considers the exit point from South Dakota a "fixed starting point" in Nebraska, that is a phrase coined by the Applicant. The entry point is actually not fixed in Nebraska but is located there as a result of a construction permit issued to the Applicant by South Dakota. The proceedings in Nebraska and South Dakota are very different regardless of what each may trigger. The Commission's duty is to find whether a proposed route through Nebraska is in the public interest.

There is an existing Keystone Pipeline running through Nebraska which is an existing utility corridor and which was approved by all necessary federal and state agencies prior to its construction. That utility corridor continues north out of Nebraska and, according to the FSEIS, would follow other existing utility corridors as it joins I-90.¹⁴

Yes, the I-90 Route would be longer than the proposed route, adding an additional 52 miles to an already 927 mile project, and yes, the I-90 Route was not offered to the Commission as an alternative. The I-90 Route, however, is a viable utility corridor that would avoid the Nebraska Sandhills soils, which all three (3) alternatives routes offered by the Applicant, the Proposed, Sandhills, and Mainline Alternative Routes, would not.

An existing utility corridor that is both feasible and beneficial does exist but was discarded as a route because the Applicant chose a 52-mile shortcut through Nebraska's Sandhills. I believe that none of the three (3) routes offered to us by the Applicant are in the public interest of Nebraska, and therefore, for the reasons outlined above, I must dissent.



Mary Ridder
District 5

¹⁴ Exhibit KXL-19, pp. 1965-1966.

Exhibit D

Keystone Pipeline Routes



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

0 12.5 25 50 Miles



Exhibit E

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION) APPLICATION NO. OP-0003
OF TRANSCANADA KEYSTONE)
PIPELINE, LP FOR ROUTE APPROVAL)
OF THE KEYSTONE XL PIPELINE)
PROJECT PURSUANT TO THE MAJOR)
OIL PIPELINE SITING ACT,)

REBUTTAL TESTIMONY OF
JON A. SCHMIDT, PH.D.

STATE OF FLORIDA)
)ss.
COUNTY OF WALTON)

1 **Q: Are you the same Dr. Schmidt who testified as part of Keystone’s Application in**
2 **written testimony dated February 13, 2017?**

3 A: Yes.

4 **Q: Since your testimony was submitted, have you identified clarifications to your**
5 **testimony which need to be made?**

6 A: Yes.

7 **Q: What clarifications are necessary?**

8 A: First, in the Application on pages 8 and 61, there is a statement that the Keystone
9 Mainline Alternative Route would “[i]ncrease the crossing of the ranges of federally-
10 listed threatened and endangered species.” That statement was intended to mean that
11 the number of federally and state listed threatened and endangered species ranges
12 crossed by the Mainline Alternative Route is greater than the number of federally and
13 state listed threatened and endangered species ranges crossed by the Preferred Route.
14 Specifically, on the Mainline Alternative Route, the habitat ranges of four more

15 threatened and endangered species would be crossed, and those species are the Pallid
16 Sturgeon, the Topeka Shiner, the Sturgeon Chub, and the Lake Sturgeon. Those
17 species' ranges are avoided along the Preferred Route.

18 **Q: Are other clarifications necessary?**

19 A: Yes, second, the chart in Table 2-1 is incomplete.

20 **Q: How so?**

21 A: The number of acres of erodible soils listed in the chart is not correct, because some of
22 the NRCS data was not downloaded completely before the analysis was performed.

23 **Q: Why is the chart incorrect?**

24 A: When we downloaded the GIS data from the NRCS for the chart, for unknown reasons,
25 the information was only partially downloaded.

26 **Q: Have you updated Table 2-1?**

27 A: Yes.

28 **Q: Is Exhibit A attached to this testimony a true and accurate version of the updated
29 Table 2-1 for the Application?**

30 A: Yes.

31 **Q: What is the significance of the updated table?**

32 A: Table 2-1 now accurately reflects that the Mainline Alternative Route will increase the
33 crossing of highly erodible soils as compared to the Preferred Route, which is one of
34 the reasons why the Preferred Route is more preferable to the Mainline Alternative
35 Route as reflected on pages 8 and 61 of the Application.

36 **Q: Have you read the pre-filed direct testimony of Dr. Paul A. Johnsgard, Ph.D.?**

37 A: Yes.

38 **Q: Did you read Dr. Johnsgard's testimony regarding the possible impact on**
39 **whooping cranes?**

40 A: Yes.

41 **Q: Do you agree with Dr. Johnsgard?**

42 A: No.

43 **Q: Why not?**

44 A: The addition of power lines associated with the Keystone XL Pipeline is very minor in
45 the context of the number of miles of power lines in the migration corridor in Nebraska.
46 Currently, it is estimated that approximately 20 miles of new power lines associated
47 with the project will be added within the migratory corridor. Pump station 22 will add
48 approximately 2.49 miles; pump station 24 will add approximately 16.25 miles; and
49 pump station 25 will add approximately .78 miles. In the migratory corridor in
50 Nebraska, there are already approximately 5,471 miles of power lines according to the
51 2017 PennWell MAP Search. Accordingly, the Preferred Route adds a mere 0.4% to
52 the existing mileage of powerlines in Nebraska in the migratory corridor. In addition to
53 that minor addition to the power line infrastructure, the power providers have agreed to
54 adopt mitigation measures (See Appendix A of the Biological Assessment) which
55 further reduce the possible impact by 50-60% according to Dr. Johnsgard.

56 **Q: Are there other reasons you disagree?**

57 A: Yes, the whooping crane merely flies through Nebraska during its migratory journey. It
58 does not nest or raise its young in the State of Nebraska.

59 **Q: Have any government agencies provided input on the possible impact to the**
60 **whooping crane as a result of the Keystone XL Project?**

61 A: Yes.

62 **Q: Which government agencies?**

63 A: The United States Fish and Wildlife Service issued a Biological Opinion which
64 concurred with the Department of State that the Project is not likely to adversely affect
65 the whooping crane.

66 **Q: What is Exhibit B attached to this testimony?**

67 A: It is a true and accurate copy of the United States Fish and Wildlife Service Biological
68 Opinion, which is a consultation document issued and prepared by the United States
69 Fish and Wildlife Service in coordination with the U.S. Department of State and
70 Nebraska Game and Parks on May 15, 2013 pursuant to section 7 of the Endangered
71 Species Act (16 U.S.C. § 1531 et seq.).

72 **Q: Have any other government agencies provided input?**

73 A: Yes, the Nebraska Game & Parks wrote a letter to the Public Service Commission
74 pursuant to MOPSA, which states that Nebraska Game & Parks' input was evaluated
75 and incorporated as part of the Biological Opinion.

76 **Q: Is Exhibit C, attached to this testimony, a true and accurate copy of the Nebraska
77 Game and Parks letter?**

78 A: Yes.

79 **Q: Is there any other analysis of the possible impact of the Keystone XL Project or
80 whooping cranes in Nebraska?**

81 A: Yes, on December 21, 2012, the United States Department of State issued its Final
82 Biological Assessment pursuant to section 7(c) of the Endangered Species Act.

83 **Q: Is that analysis reflected in Exhibit D attached to this testimony?**

84 A: Yes.

85 **Q: Is Exhibit D a true and accurate copy of the United States Department of State’s**
86 **Biological Assessment?**

87 A: Yes.

88 **Q: What did the Biological Assessment conclude?**

89 A: In section 3.1.3.5 (page 3.0-24), the State Department concluded “The proposed Project
90 ‘may affect, but is not likely to adversely affect’ whooping cranes. This determination
91 is based on the rarity of the species, its status as a migrant through the proposed Project
92 area, Keystone’s commitment to follow recommended conservation measures identified
93 by the USFWS, and power providers will consult with the USFWS regarding ways to
94 minimize or mitigate impacts to the whooping crane and other threatened and
95 endangered species for new distribution lines to the pump stations (See Appendix A,
96 Letters of Section 7 Consultation Commitments from Power Providers) and follow
97 recommended avoidance and conservation measures of the USFWS. As a result, no
98 direct impacts are expected to result from construction. Indirect impacts from
99 disturbance of migrating whooping cranes during Project construction and hydrostatic
100 testing are expected to be avoided and minimized through Keystone’s commitment to
101 follow recommended conservation measures identified by the USFWS.” (emphasis
102 added).

103 **Q: Are the State Department’s conclusions in the Biological Assessment and the**
104 **USFWS’s conclusion in the Biological Opinion made pursuant to their roles under**
105 **the Endangered Species Act and in conjunction with Keystone’s application for a**
106 **Presidential Permit?**

107 A: Yes.

108 **Q: Have you read the pre-filed written testimony of Thomas David Hayes, Ph.D.?**

109 A: Yes.

110 **Q: Did you read Dr. Hayes' testimony regarding his view of the inaccuracies within**
111 **the Application?**

112 A: Yes.

113 **Q: Do you agree with his statement that the bullet points on pages 8 and 61 of the**
114 **Application regarding federally-listed and threatened species are inaccurate?**

115 A: No. But, as explained above, the statement in the Application is not clear, so earlier in
116 this testimony, I have clarified that Keystone meant that the number of ranges of
117 federally-listed and state listed species is reduced if the Preferred Route is used rather
118 than the Mainline Alternative.

119 **Q: Do you agree with Dr. Hayes' statement that the Preferred Route actually crosses**
120 **more highly erodible soils than the Mainline Alternative?**

121 A: Dr. Hayes' view based upon Table 2-1 is understandable but not accurate. As I
122 explained earlier, Table 2-1 was, unfortunately, incomplete because soil data was only
123 partially downloaded when we were preparing the tables for the Application. But based
124 upon the correct data, Keystone's statement is accurate, and it serves as one of the
125 reasons why the Preferred Route is superior.

126 **Q: Does the Preferred Route cross less highly erodible soils than the Mainline**
127 **Alternative?**

128 A: Yes.

129 **Q: Did you read Dr. Hayes' view of the benefits of co-locating the Keystone XL**
130 **Pipeline with the Keystone Mainline?**

131 A: Yes.

132 **Q: Do you agree that the Application improperly downplays those benefits?**

133 A: No.

134 **Q: Why not?**

135 A: The benefits of co-location through the use of the Mainline Alternative in this instance
136 are minor, if any exist at all.

137 **Q: Why are there minor, if any, benefits with co-location through the use of the**
138 **Mainline Alternative?**

139 A: Because, in addition to the other superiorities of the Preferred Route, there is, in fact,
140 very limited opportunity to truly co-locate with the Keystone Mainline. As reflected in
141 Section 2.1.3 of the Application, there is a significant deviation from the Mainline to
142 avoid a wellhead protection area near Seward, Nebraska. In the Application, it is
143 identified as 29.8 miles. Additionally, I have conducted a more detailed analysis of the
144 co-location possibilities, and the co-location is not available for the majority of the
145 Mainline Alternative Route.

146 **Q: Did you conduct the more detailed analysis of the co-location opportunities of the**
147 **Mainline Alternative since the filing of the Application?**

148 A: Yes.

149 **Q: What did you learn?**

150 A: Based upon a more in-depth evaluation of the routing, there are numerous locations
151 where deviations from the Mainline are required to avoid the same constraints that are

152 avoided by the Preferred Route. This reduces the availability of co-location to 38.3
153 miles where the Keystone XL Pipeline would be truly co-located with the Keystone
154 Mainline.

155 **Q: What causes the need for a deviation from the Mainline?**

156 A: There are a variety of reasons which are identified when looking at a route in specific
157 detail. In many instances, the simple fact is that the original route already uses the only
158 acceptable right-of-way for that area. For this co-location analysis, the reasons for
159 deviations that prohibit true co-location with the Keystone Mainline include:

160 • To maintain least a 500-foot buffer from residences where practicable.

161 • Because the existing Keystone Mainline utilized the optimal stream
162 crossing locations, in many cases there is inadequate area to accommodate a second
163 pipeline crossing. This occurs along the Mainline Alternative in 18 locations. At an
164 additional 8 locations, ponds adjacent to the existing Keystone Mainline do not allow
165 co-location.

166 • To avoid impact on three Wellhead Protection Areas in Seward County,
167 the proposed Mainline Alternative route is required to deviate from the existing
168 Keystone Mainline from Mainline Alternative milepost 805.3 to 835.1 (milepost 567.4
169 to 591.3 on the existing Keystone Mainline). A fourth Wellhead Protection Area in
170 Jefferson County totaling 1 mile in length is avoided by a route deviation at the
171 Mainline Alternative milepost 864 (milepost 621 on the existing Keystone Mainline).

172 • To avoid constructability issues at roads and railroads, the Mainline
173 Alternative would require deviation from the existing Keystone Mainline in 6 locations.

174 The primary causes were inadequate workspace due to the presence of an existing

175 structure, the presence of a point of inflection immediately before or after the crossing,
176 or instances where the existing Keystone Mainline route would abut the right-of-way
177 being paralleled for only a short distance necessitating extraneous undercrossing of the
178 existing Keystone Mainline.

179 • The Mainline Alternative route is required to deviate from the existing
180 Keystone Mainline route in 2 locations to avoid the existing pump stations.

181 • The existing Keystone Mainline was sited immediately adjacent to
182 property lines or long ditches at half section lines in several locations per landowners'
183 requests. The Mainline Alternative route deviates from the existing Keystone Mainline
184 route in two such locations due to existing features such as structures and waterbodies.

185 • A deviation is required to avoid a long crossing of native prairie
186 (approximately 2,900 feet) in Colfax County near the Mainline Alternative milepost
187 770 (Keystone Mainline milepost 533) and to better accommodate a stream crossing.

188 • Deviations from the existing Keystone Mainline route are required in 2
189 locations due to center pivot irrigation features.

190 **Q: What is the impact of all of these deviations?**

191 A: In addition to impacting landowners with the Keystone pipeline already on their
192 property, the Keystone XL pipeline – if sited as described above to avoid existing
193 features - would impact approximately 39 new tracts with approximately 30 new
194 landowners. Approximately 43 tracts/landowners from the Keystone Mainline would
195 be avoided.

196 **Q: Based upon this analysis, do you agree with Dr. Hayes that the co-location**
197 **opportunities are improperly downplayed?**

198 A: No, to the contrary, I believe the co-location issues involved with the Keystone
199 Mainline Alternative were not sufficiently downplayed.

200 **Q: Why do you say that?**

201 A: As a general rule, the Keystone Mainline used the best route available to avoid or
202 minimize impacts to features such as stream crossings, roads, railroads, ponds and with
203 regard to residences. It, therefore, means that a truly co-located route will not be able
204 to use the best route available in some instances.

205 **Q: Do you have any similar concerns with the Preferred Route?**

206 A: No.

207 **Q: Why not?**

208 A: The Preferred Route is the result of literally years of scrutiny by landowners and
209 governments, micro-alignments for engineering and landowner-specific concerns,
210 negotiations with the vast majority of landowners, and regulatory review by numerous
211 local, state and federal governmental agencies, which have optimized the route to the
212 greatest extent possible.

213 **Q: How was the Preferred Route developed?**

214 A: As with most pipeline projects, the beginning and ending points were finalized, and
215 major constraints were identified that define a study corridor. After potential corridors
216 were identified, the routing criteria identified in section 2.1 were applied and route
217 alternatives were identified. After field reconnaissance and analysis of additional
218 agency-supplied data, the alternatives were refined and incorporated into the NDEQ
219 route review process. During the NDEQ route review process, field surveys were
220 undertaken of the preferred route and additional refinements were incorporated to refine

221 the preferred route. Since the NDEQ process was completed, additional work has been
222 completed with landowners and engineering and construction analysis to refine the
223 route that was presented to the Commission in the Application. In short, developing
224 and refining this route is the product of years of effort by many interested individuals
225 and agencies.

226 **Q: In your experience, has the route of a pipeline ever received as much development**
227 **and refinement to optimize the route as the Preferred Route for the Keystone XL**
228 **Pipeline?**

229 A: No, and I have been involved in the permitting and regulatory filings of more than
230 10,000 miles of oil and gas pipelines in the United States.

231 **Q: Are you familiar with the landowners' concept of trying to "twin" or closely**
232 **parallel the entire Mainline Route from North to South in Nebraska?**

233 A: I understand some witnesses have asked for that to be the route, but it is not a feasible
234 alternative.

235 **Q: Why is it not feasible?**

236 A: First, South Dakota's permit and the Presidential Permit are based, in part, upon an exit
237 point from South Dakota to Nebraska, which is approximately 100 miles to the West of
238 the Mainline entry point in Nebraska from South Dakota. Both the EIS process and the
239 SD PUC process analyzed and approved the route as it is currently configured. The
240 analysis performed for both of those processes determined that following the existing
241 mainline was not the preferred alternative. In other words, a total twinning of the route
242 cannot happen without changing permit authorizations for South Dakota and the Final
243 Supplemental Environmental Impact Statement upon which the Presidential Permit is

244 based. Second, simply finding another path for the pipeline at the Missouri River
245 crossing near Yankton, South Dakota, is not possible because on the North side of the
246 river, Southeast of Yankton, there is a sewage treatment plant which inhibits and limits
247 the possible locations for another horizontal directional drill of the Missouri River.
248 And, on the South side of the river, there is a considerable amount of wetlands habitat,
249 which means the Keystone XL path would have to enter the State in a manner which is
250 not truly co-located or twinned.

251 **Q: Did you see Dr. Hayes's testimony of an unexplained discrepancy between the**
252 **Application and the 2014 FSEIS?**

253 A: Yes.

254 **Q: Do you agree with Dr. Hayes?**

255 A: I agree that from the face of the documents there appears to be a discrepancy. But after
256 reviewing the erodible soil data referenced earlier in my testimony, I am confident the
257 numbers in the attached Table 2-1 are accurate. I did not prepare the data in the FSEIS,
258 and I am unsure why those numbers do not match the attached version of Table 2-1.

259 **Q: Is there any other aspect of Dr. Hayes' analysis you believe is inaccurate?**

260 A: Yes, on pages 5 and 6, Dr. Hayes speculates that the construction will lead to the
261 mixture of surface and subsurface soil. In fact, construction will be conducted during
262 typical dry seasons (i.e. summer and fall) and the CMRP (§ 4.3) requires the removal,
263 segregation, and storage of topsoil to avoid the mixture of soils that Dr. Hayes testifies
264 could occur. Additionally, § 2.2 of the CMRP specifies that Environmental Inspectors
265 will monitor the activities of the Project on a daily basis for compliance with federal,

266 state, and local regulatory requirements. The Environmental Inspector and Chief
267 Inspector have the authority to stop work when appropriate.

268 **Q: Any other issues with Dr. Hayes' testimony?**

269 A: Yes, on page 11, Dr. Hayes suggests that the pipeline is particularly destructive to
270 wetlands. This testimony is not applicable for the Preferred Route because it only
271 crosses 0.6 miles of wetlands, and the CMRP (§ 6.0) contains six pages of detailed
272 mitigation requirements to avoid damages to that 0.6 miles of wetlands. In addition, the
273 best practices incorporated into the CMRP are based upon the nationwide permitting
274 requirements of the US Army Corps of Engineers and the Federal Energy Regulatory
275 Commission. Both of these agencies have developed these best practices from
276 monitoring reclamation of utility line crossings of wetlands over many years. These
277 best practices have been shown to result in no long term, irrevocable, impacts to
278 wetlands and are the findings underpinning the nationwide permit program for utility
279 lines (see list of references of studies documenting these facts attached as Exhibit E).

280 **Q: Have you reviewed Mr. Trungale's pre-filed testimony?**

281 A: Yes.

282 **Q: Did you review his testimony regarding lack of site-specific details for 276 water
283 body crossings?**

284 A: Yes.

285 **Q: Has Keystone determined which method of crossing it will use at each of the 276
286 crossings?**

287 A: Not specifically, because Keystone cannot know the exact condition of the waterbody
288 until the time of construction. But, Keystone has identified the acceptable crossing
289 methods depending upon the range of conditions possible during construction.

290 **Q: Where are those options described?**

291 A: In § 7.4 of the CMRP.

292 **Q: How were those options chosen?**

293 A: They are based upon the Federal Energy Regulatory Commission's Waterbody and
294 Wetland Crossing and Mitigation Procedures. These options are tried and true, long-
295 standing, methods based upon industry best management practices to minimize and
296 reclaim crossings of all types of waterbodies. These methods are also recognized by
297 the US Army Corps of Engineers as acceptable methods to minimize impacts to waters
298 of the US, compliant with the requirements of the Nationwide General permit (No. 12)
299 for utility crossings.

300 **Q: In your experience is it common to establish a suite of possible options before**
301 **construction, then make decisions on which option to use based upon the**
302 **conditions in the field at the time of construction?**

303 A: Yes, in fact, decisions based upon conditions at the time of construction are, by far, the
304 best method to use because, despite seasonal trends, from year to year it is possible that
305 conditions including the amount and velocity of water at the time of construction can
306 change.

307 **Q: What about Mr. Trungale's criticism that the determination of whether an**
308 **"important fisheries resource" "could be impacted" should not be made solely**
309 **during the construction phase of the project?**

310 A: The criticism is untrue. After consultation with numerous government agencies,
311 including USFWS and Nebraska Game and Parks, no significant commercial or
312 recreational fisheries have been identified that require a crossing method not already
313 identified. But, Keystone will continue to work with the federal and state agencies to
314 address any new concerns that may arise prior to construction.

315 **Q: Do you agree with Mr. Trungale's statement that flowing open-cut crossings**
316 **threaten immediate and irreparable harm to the waters of the United States?**

317 A: No. Flowing open-cut crossings are, by their nature, relatively brief events, lasting 24-
318 48 hours, that do not result in long term impacts to stream fisheries and biota (see
319 references attached). In addition, contrary to his testimony, according to NDEQ water
320 quality information no polycyclic aromatic hydrocarbons (PAHs) are present in the
321 Nebraska streams crossed by the Project. Moreover, I am unaware of studies to
322 confirm Mr. Trungale's testimony, and the Canadian study he cites is a compilation of
323 older Canadian projects (built in the 1970s), most of which may not have used the
324 current best practices and other measures Keystone will use.

325 **Q: Does the CMRP address the potential for a release of hazardous materials during**
326 **construction?**

327 A: Yes, in section 3.0 (pages 11-17) the mitigation plan is outlined. Additionally, due to
328 the nature of this type of construction and the possible types of releases, any
329 hypothetical release would be in small quantities and of a short-term duration.

330 **Q: Do you agree with Mr. Trungdale that the Mainline Alternative would be less**
331 **likely to cause irreversible and irretrievable impacts to Nebraska's natural**
332 **resources?**

333 A: No. I do not think either route is likely to cause irreversible or irretrievable impacts to
334 Nebraska's natural resources. But, I must point out that Mr. Trungale is particularly
335 concerned with waterbody crossings, and the Mainline Alternative has 10 more
336 Perennial Stream/River crossings than the Preferred Route. Based upon Mr. Trungale's
337 stated concerns, the Preferred Route is clearly superior.

338 **Q: Since the Application was filed in February 2017, have any permits been granted**
339 **for the Keystone XL Project?**

340 A: Yes, the Presidential Permit attached hereto as Exhibit F was granted in March 2017.
341 That Presidential Permit incorporated and was based, in part, upon the Final
342 Supplemental Environmental Impact Statement. A true and accurate copy of the Final
343 Supplemental Environmental Impact Statement is maintained by the United States
344 Department of State and may be readily accessed at [http://keystonepipeline-
346 xl.state.gov/2012/finalseis/index.htm](http://keystonepipeline-
345 xl.state.gov/2012/finalseis/index.htm). The FSEIS (in Appendix H) contains the
347 Biological Opinion, which USFWS issued as part of its duty to consult with the
348 Department of State regarding the Presidential Permit and Section 7 of the Endangered
349 Species Act. The FSEIS (Appendix H) contains the Department of State's Biological
350 Assessment, which was prepared and issued pursuant to section 7(c) of the Endangered
351 Species Act. The FSEIS (Appendix E) also contains the Amended Programmatic
352 Agreement among other documents which require continued efforts by Keystone to
353 complete the NHRP Section 106 consultation requirements before, during, and after
354 construction.

354 **Q: Why are these documents important to the Presidential Permit?**

355 A: Because according to the Presidential Permit the construction, operation, and
356 maintenance of the United States Facilities shall be in all material respects as described
357 in the permittee's Application for a Presidential Permit under Executive Order 13337,
358 filed on May 4, 2012, and resubmitted on January 26, 2017, the Final Supplemental
359 Environmental Impact Statement dated January 31, 2014, including all Appendices as
360 supplemented, and the CMRP (among others).

[Handwritten signature]

Jon A. Schmidt, Ph.D.

Subscribed and sworn to before me this 10th day of July, 2017.

[Handwritten signature]
Notary Public

Notary Public - State of Florida
NYCOLE MCKISSACK
MY COMMISSION # FF242740
EXPIRES: June 22, 2019
Bonded through Western Surety Company

Table 2-1. Comparison of The Preferred Route to the Two Proposed Alternatives

FEATURE	SUB-CATEGORIES	ATTRIBUTE	SANDHILLS ALTERNATIVE ROUTE	PREFERRED ROUTE	KEYSTONE MAINLINE ALTERNATIVE ROUTE
			254.8 Miles	275.2 Miles	280.5 Miles
Environmental Features					
<i>Federally Listed Species Range (Endangered)¹</i>	American burying beetle	CROSSING LENGTH (MILES)	112.1	100.9	100.9
	Interior least tern		25.6	27.5	18.4
	Pallid sturgeon		0.0	0.0	3.2
	Topeka shiner		0.0	0.0	7.7
	Whooping crane		229.9	250.9	166.3
<i>Federally Listed Species Range (Threatened)¹</i>	Northern long-eared bat	CROSSING LENGTH (MILES)	254.8	275.2	280.5
	Piping plover		25.6	27.5	18.4
	Western prairie fringed orchid		96.4	118.2	145.4
<i>State Listed Species Range (Endangered)¹</i>	American burying beetle	CROSSING LENGTH (MILES)	112.1	100.9	100.9
	Interior least tern		25.6	27.5	18.4
	Pallid sturgeon		0.0	0.0	3.2
	Sturgeon chub		0.0	0.0	3.2
	Topeka shiner		0.0	0.0	7.7
	Whooping crane		229.9	250.9	166.3
	Lake sturgeon		0.0	0.0	3.2
	Massasauga rattlesnake		14.4	14.4	13.4
<i>State Listed Species Range (Threatened)¹</i>	Northern long-eared bat	CROSSING LENGTH (MILES)	254.8	275.2	280.5
	Northern redbelly dace		23.8	16.8	16.8
	Piping plover		25.6	27.5	18.4
	River otter		33.0	26.2	26.1
	Small white lady's slipper		52.8	43.4	39.6
	Western prairie fringed orchid	CROSSING LENGTH (MILES)	96.4	118.2	145.4
	Highly Water Erodible Soils ²		79.9	57.4	61.2
	Highly Wind Erodible Soils ²	CROSSING LENGTH (MILES)	90.5	47.1	48.9



Table 2-1-1. Comparison of The Preferred Route to the Two Proposed Alternatives

FEATURE	SUB-CATEGORIES	ATTRIBUTE	SANDHILLS ALTERNATIVE ROUTE	PREFERRED ROUTE	KEYSTONE MAINLINE ALTERNATIVE ROUTE
<i>High Consequence Area (HCA)³ - Ecological Unusually Sensitive Areas</i>		CROSSING LENGTH (MILES)	254.8 Miles	275.2 Miles	280.5 Miles
			3.8	2.2	4.4
<i>Sandhills Terrain Crossed</i>	Major Land Resource Area (MLRA) Sandhills ⁴	CROSSING LENGTH (MILES)	81.0	0.0	0.0
	Topographic Region Sandhills ⁵		68.8	3.9	3.9
	Eco-Region IV Sandhills ⁶		91.5	0.0	0.0
	Barren Land (Rock/Sand/Clay)		0.0	0.0	0.0
	Open Water		0.9	0.7	0.7
	Developed, Open Space		5.5	8.4	10.0
	Developed, Low Intensity		0.5	0.3	0.5
	Developed, Medium Intensity		0.0	0.0	0.1
	Deciduous Forest		1.6	1.9	2.9
	Evergreen Forest		0.0	0.0	0.0
<i>Land Use Class⁷</i>	Mixed Forest	CROSSING LENGTH (MILES)	0.1	0.1	0.1
	Shrub/Scrub		0.0	0.0	0.0
	Grassland/Herbaceous		136.6	78.3	77.9
	Pasture/Hay		5.3	2.1	2.0
	Cultivated Crops		99.8	180.9	184.6
	Woody Wetlands		1.6	1.7	1.3
	Emergent Herbaceous Wetlands		2.8	0.7	0.6
	Artificial Path ⁸		11	15	11
	Canal/Ditch		1	0	1
	Intermittent Stream/River		195	229	205
<i>Hydrology⁹</i>	Perennial Stream/River		7	21	31
	SUBTOTAL		215	265	248

Table 2-1. Comparison of The Preferred Route to the Two Proposed Alternatives

FEATURE	SUB-CATEGORIES	ATTRIBUTE	SANDHILLS ALTERNATIVE ROUTE	PREFERRED ROUTE	KEYSTONE MAINLINE ALTERNATIVE ROUTE
Non-Environmental Features					
<i>Number of Pump Stations</i>					
<i>HCA - Wellhead Protection Areas⁹</i>			5	5	6
<i>Depth to Shallow Groundwater From CSD Well Data¹⁰</i>					
<i>0 - 10 Feet</i>			27.7	6.0	5.1
<i>Ownership¹¹</i>					
<i>Federal</i>			0.0	0.1	0.3
<i>State</i>			6.6	5.4	4.8
<i>Local Government</i>			0.0	0.1	0.2
<i>Private</i>			248.2	269.7	275.3
<i>Railroad Crossings¹²</i>					
<i>Local Road/Vehicular Trail¹³</i>			47	63	56
<i>County Road</i>			24	30	53
<i>Interstate</i>			2	2	2
<i>Local Neighborhood Road¹³</i>			169	221	243
<i>State Highway</i>			16	17	15
<i>US Highway</i>			8	9	10
<i>Pipeline Crossings¹⁴</i>					
<i>Crude Oil</i>			0	0	0
<i>Miscellaneous</i>			1	1	1
<i>Natural Gas</i>			30	35	20
<i>Refined Products</i>			4	4	4

Table 2-1-1. Comparison of The Preferred Route to the Two Proposed Alternatives

FEATURE	SUB-CATEGORIES	ATTRIBUTE	SANDHILLS ALTERNATIVE ROUTE	PREFERRED ROUTE	KEYSTONE MAINLINE ALTERNATIVE ROUTE
Water Wells (Active and Inactive) ¹⁵		NUMBER WITHIN 150 FEET OF CENTERLINE	254.8 Miles	275.2 Miles	280.5 Miles
		NUMBER WITHIN 300 FEET OF CENTERLINE	26	11	15
		NUMBER WITHIN 500 FEET OF CENTERLINE	66	69	57
Pivot Irrigation Crop Crossings ¹⁶		NUMBER OF CROSSINGS	134	189	148
		NUMBER OF CROSSINGS	143	326	256
		CO-LOCATION LENGTH (MILES)	7.8	7.3	38.3
Co-Location ¹⁷	Right-of-Way (Pipeline)		0.3	0.0	3.3
	Utility Corridors		1.5	2.4	13.0
	Roads				

¹Source: Nebraska Natural Heritage Program, Nebraska Game and Parks Commission (NGPC); September 2011.

²Source: Natural Resources Conservation Service (NRCS), 2007. Includes soils in wind erodibility group (WEG) of 1 or 2

³Source: US Department of Transportation – Pipeline and Hazardous Materials Safety Administration (PHMSA)

⁴Source: US Department of Agriculture (USDA), NRCS, 2006

⁵Source: University of Nebraska-Lincoln, Conservation and Survey Division (CSD)/Institute of Agriculture and Natural Resources

⁶Source: US Environmental Protection Agency (EPA)

⁷Source: National Landcover Data (NLCD), 2011

⁸Source: National Hydrology Dataset

⁹Source: Nebraska Department of Environmental Quality (NDEQ), 2014

¹⁰Source: University of Nebraska-Lincoln, CSD Average Groundwater Depth

¹¹Source: Contract Land Staff; previously UFS; Parcel Data along Mainline Option was digitized based on Plat Books

¹²Source: U.S. Census Bureau (TIGER), 2012

¹³Unnamed roads, including private roads and vehicular trails (as classified by MAF/TIGER Feature Class Code)

¹⁴Source: PennWell MAPSearch, 2014

¹⁵Source: Nebraska Department of Natural Resources, 2015

¹⁶Source: Pivot Irrigation Crops were digitized based on 2012 NAIP Imagery

¹⁷Source: Co-location mileage is based on features that are within 250 feet of the centerline, any segments less than 0.25 miles long that cross the centerline were removed since they are considered crossings and not co-location

Exhibit F

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION) APPLICATION NO. _____
OF TRANSCANADA KEYSTONE)
PIPELINE, LP FOR ROUTE APPROVAL)
OF THE KEYSTONE XL PIPELINE)
PROJECT PURSUANT TO THE MAJOR)
OIL PIPELINE SITING ACT,)

DIRECT TESTIMONY OF JON A. SCHMIDT PH.D.

STATE OF FLORIDA)
)ss.
COUNTY OF WALTON)

1 **Q: Please state your name.**

2 A: My name is Jon A. Schmidt Ph.D.

3 **Q: Mr. Schmidt, are you employed?**

4 A: Yes. I am Vice President with exp Energy Services, Inc. (“exp”) which is the
5 management contractor for the Keystone XL Pipeline Project (“Project”) owned by the
6 applicant TransCanada Keystone Pipeline, LP (“Keystone”).

7 **Q: Do you have any responsibilities with respect to the Project?**

8 A: Yes, I am responsible for environmental and regulatory management for the Project.

9 **Q: What is the highest level of education you have obtained?**

10 A: I obtained a doctorate from Florida State University in 1987.

11 **Q: What is the purpose of your testimony today?**

12 A: I am offering this testimony in support of Keystone’s application pursuant to the Major
13 Oil Pipeline Siting Act (“MOPSA”) for approval of the Project’s Preferred Route.

14 **Q: Do you have any prior experience with the preparation of permit applications or**
15 **regulatory filings?**



16 A: Yes. For the last 30 years, I have worked to prepare permit applications and regulatory
17 filings for pipelines, power lines, LNG facilities, and natural gas storage facilities for
18 various companies throughout the United States. This includes over 10,000 miles of oil
19 and gas pipeline projects in more than 30 states.

20 **Q: Are you familiar with Keystone's application for route approval pursuant to Neb.**
21 **Rev. Stat. § 57-1401 et seq?**

22 A: Yes.

23 **Q: How are you familiar with that application?**

24 A: I participated in the preparation of the Project's application. With regard to the topics
25 contained in the application, I am individually or jointly responsible for sections 2.1
26 (Development of the Preferred and Alternative Routes), 3 (reasons for Preferred Route),
27 13 (the preparation and content of the environmental impact study), 16 (evidence of the
28 Project's impact on wildlife), 17 (the Project's impact on plants, except for noxious
29 weeds), and 18 (mitigation and minimization efforts for reducing impact on natural
30 resources).

31 **Q: Are the facts stated within those sections of the application true and accurate to**
32 **the best of your knowledge?**

33 A: Yes, and I incorporate those sections into my testimony as though set forth fully herein.

34 **Q: Were you involved with regard to the selection of the Preferred Route?**

35 A: Yes.

36 **Q: What was your involvement?**

37 A: With regard to the selection of the Preferred Route, I was involved with consideration
38 of alternative routes, including those identified in the application during the Nebraska

39 Department of Environmental Quality's (NDEQ) preparation of its Final Evaluation
40 Report, which was submitted to Governor Heineman. The Preferred Route reflects the
41 NDEQ's positive findings and the Governor's approval with respect to that route.
42 Alternative routes were also considered during preparation of the environmental impact
43 statements during the federal National Environmental Policy Act review, and the DOS'
44 Final Supplemental Environmental Impact Statement (FSEIS) concluded that
45 significant impacts to most resources are not expected along the Preferred Route.

46 **Q: Do the alternative routes confer an environmental advantage over the Preferred**
47 **Route?**

48 A: Neither the Sandhills Alternative Route nor the Keystone Mainline Alternative Route
49 confers a distinct environmental advantage over the Preferred Route. In fact, the
50 Preferred Route as described in the application disturbs the least amount of land and
51 sensitive areas without crossing the "Sandhills" as defined by the Nebraska Department
52 of Environmental Quality.

53 **Q: How does the Preferred Route impact natural resources, including wildlife and**
54 **plants, as compared to alternative routes?**

55 A: The Preferred Route reduces impacts to American Burying Beetle habitat and other
56 federally listed threatened and endangered species, habitats that may support state-listed
57 threatened and endangered species, grasslands, and reduces impacts to wellhead
58 protection areas. The Preferred Route also requires one less pump station and
59 associated electrical transmission lines than the Keystone Mainline Alternative Route.

60 **Q: What were the principle reasons Keystone selected the Preferred Route?**

61 A: Minimizing the amount of disruption to land and sensitive environmental resources,
62 avoiding additional infrastructure (i.e., another pump station and associated electrical
63 transmission lines) and avoiding the Sandhills were the principal reasons Keystone
64 selected the Preferred Route.

65 **Q: Have considerations with regard to the impact on natural resources and wildlife
66 and plants within the preferred route been studied by Keystone?**

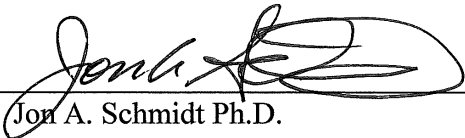
67 A: Yes. Keystone studied those potential impacts. The considerations were also
68 extensively studied in the NDEQ review and the preparation of the FSEIS by the
69 Department of State and other agencies.

70 **Q: Are impacts on natural resources and wildlife and plants within the Preferred
71 Route discussed in the application?**

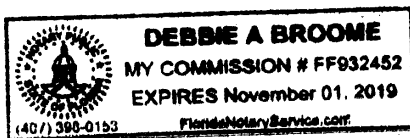
72 A: Yes.

73 **Q: Does Keystone have plans to address those impacts?**

74 A: Yes. Keystone's plans to address those impacts are explained in sections 16, 17, 18, and
75 the Construction Mitigation and Reclamation Plan.


Jon A. Schmidt Ph.D.

Subscribed and sworn to before me this 13th day of February, 2017.



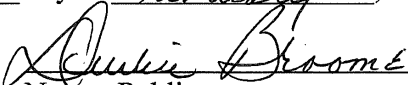

Notary Public

Exhibit G

The New York Times | <https://nyti.ms/2hF7go6>

U.S.

Keystone Pipeline Leaks 210,000 Gallons of Oil in South Dakota

By MITCH SMITH and JULIE BOSMAN NOV. 16, 2017

About 5,000 barrels of oil, or about 210,000 gallons, gushed out of the Keystone Pipeline on Thursday in South Dakota, blackening a grassy field in the remote northeast part of the state and sending cleanup crews and emergency workers scrambling to the site.

“This is not a little spill from any perspective,” said Kim McIntosh, an environmental scientist with the South Dakota Department of Environment and Natural Resources. No livestock or drinking water sources appeared to be threatened, Ms. McIntosh said, and no farm buildings or houses are within a mile.

The spill, near Amherst, S.D., comes just days before regulators in neighboring Nebraska decide whether to grant the final permit needed to begin construction on a different pipeline proposal, the Keystone XL, which would be operated by the same company. An announcement in Nebraska is expected on Monday.

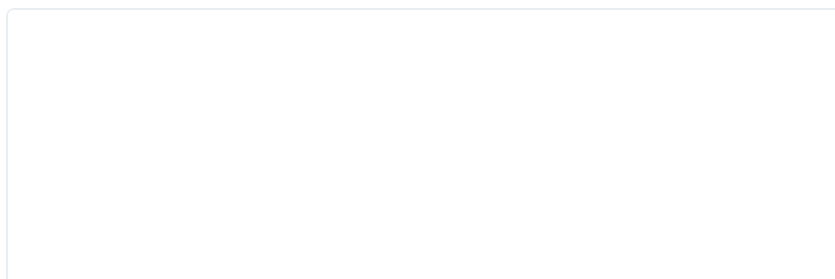
The pipeline company, TransCanada, said in a statement that the South Dakota leak was detected around 6 a.m. local time on Thursday. The pipeline was shut down, and the cause of the leak was under investigation.

“TransCanada appreciates the collaborative support of local officials, emergency response personnel and commissioners in Marshall County, as well as the landowner who has given permission to access land for assessment, identification and cleanup activities,” the company said in its statement.

A photo of the spill, which was posted to the company’s Twitter account, showed a large, darkened area in a field. The Keystone Pipeline is part of a 2,687-mile system that carries crude oil from Alberta to several points in the United States, including Illinois and Oklahoma.



A reporter for The Aberdeen American News at the scene of the spill said on Twitter that the area was blocked off by emergency vehicles.





Shannon Marvel
@smarvel_AAN

Not seeing any cleanup or hazmat teams yet, but there's a emergency presence here.

2:43 PM - Nov 16, 2017

5 14 6

Opponents of Keystone XL, which is proposed to run about 1,100 miles and would become part of the Keystone system, quickly cited Thursday's spill as evidence of the risks posed by such pipelines, and urged Nebraska regulators to take note.

"We've always said it's not a question of whether a pipeline will spill, but when, and today TransCanada is making our case for us," Kelly Martin of the Sierra Club said in a statement. "This is not the first time TransCanada's pipeline has spilled toxic tar sands, and it won't be the last."

Keystone XL has the strong support of President Trump and most Republican politicians, but it has faced years of vocal opposition in Nebraska from some farmers and ranchers who worry that a spill could spoil their groundwater and decimate agricultural land.

"That's our fear — that pipelines do leak," said Jeanne Crumly, whose farm near Page, Neb., is along the proposed Keystone XL route, after being told about the South Dakota spill.

Ms. Crumly and about 90 other Nebraska landowners have not signed easements with TransCanada and have urged against issuing a permit for the project. Nebraska's Public Service Commission plans to announce on Monday

morning whether it will approve the permit, the last major regulatory hurdle before construction on Keystone XL could begin.

Thursday's episode is one of several major pipeline spills in recent years. More than a million gallons leaked from a pipeline into the Kalamazoo River in Michigan in 2010, and 50,000 gallons of oil gushed into the Yellowstone River in Montana in 2015, contaminating drinking water there.

Oil pipelines have faced greater scrutiny since thousands of protesters gathered near the Standing Rock Sioux Reservation in North Dakota last year to protest the Dakota Access Pipeline. The site of Thursday's spill was near the boundaries of the Lake Traverse Reservation, home of the Sisseton Wahpeton Oyate tribe.

Dave Flute, the tribal chairman of the Sisseton Wahpeton Oyate, said he was contacted early in the afternoon by emergency management services and told that there was a "substantial leak" in the pipeline.

"We are monitoring the situation as this leak is adjacent to our reservation," Mr. Flute said in a statement. "We do not know the impact this has on our environment at this time but we are aware of the leak."

Ms. McIntosh, the South Dakota environmental official, said that TransCanada employees and contractors were at the spill site and that soil cleanup workers were on the way. The state was overseeing the response.

Ms. McIntosh said that the leak was "a large release" of oil, but that "the location of this is not in a sensitive area."

"They've got a response plan that they kicked in right away," Ms. McIntosh said. "The area's very rural, which is very positive. There's no one nearby that is drinking any of the groundwater that may be impacted, so that's less of an issue."

A version of this article appears in print on November 17, 2017, on Page A18 of the New York edition with the headline: As Nebraska Weighs Pipeline, a Spill in South Dakota.

Exhibit H

TransCanada ordered to run Keystone pipeline at reduced pressure

Reuters Staff
2 MIN READ

:

(Reuters) - TransCanada Corp's Keystone crude pipeline must operate at a 20 percent pressure reduction after it restarts, the U.S. pipeline regulator said on Tuesday, nearly two weeks after the line was shut after it leaked 5,000 barrels of oil in South Dakota.

Calgary-based TransCanada shut the 590,000 barrel-per-day pipeline, one of Canada's main crude export routes linking Alberta to U.S. refineries, on Nov. 16 after a leak was detected.

The pipeline restarted on Tuesday, a spokesman said, although he added there was no timeline for when the Pipeline and Hazardous Materials Safety Administration (PHMSA) would allow it to return to full capacity.

In a corrective action order on Tuesday, PHMSA said its investigation is ongoing, although its preliminary findings showed TransCanada and PHMSA identified the source of the release on Nov. 26.

"The rupture has characteristics of mechanical damage from original construction," it said. "Preliminary information indicates the failure may have been caused by mechanical

damage to the pipeline and coating associated with a weight installed on the pipeline in 2008.”

The pipeline was constructed from June 2008 until March 2010. Weights are placed on the pipeline in areas where water could potentially result in buoyancy concerns, it added.

TransCanada has removed the portion of pipeline containing the failure location and will ship it to a lab for testing, the order said.

It is not clear when the pressure restriction would be removed, although the order notes the Director may allow the removal or modification upon written request from TransCanada demonstrating that restoration to normal pressure is justified.

Reporting by Catherine Ngai; Editing by Leslie Adler and Chris Reese

Exhibit I

Keystone's existing pipeline spills far more than predicted to regulators

Valerie Volcovici, Richard Valdmanis

4 MIN READ

:

(Reuters) - TransCanada Corp's ([TRP.TO](#)) existing Keystone pipeline has leaked substantially more oil, and more often, in the United States than indicated in risk assessments the company provided to regulators before the project began operating in 2010, according to documents reviewed by Reuters.

The Canadian company is now seeking to expand the pipeline system linking Alberta's oil fields to U.S. refineries with its proposed Keystone XL project, which has U.S. President Donald Trump's backing.

The existing 2,147-mile (3,455 km) Keystone system from Hardisty, Alberta, to the Texas coast has had three significant leaks in the United States since it began operating in 2010, including a 5,000-barrel spill this month in rural South Dakota, and two others, each about 400 barrels, in South Dakota in 2016 and North Dakota in 2011.

Before constructing the pipeline, TransCanada provided a spill risk assessment to regulators that estimated the chance of a leak of more than 50 barrels to be "not more than once every seven to 11 years over the entire length of the pipeline

in the United States,” according to its South Dakota operating permit.

For South Dakota alone, where the line has leaked twice, the estimate was for a “spill no more than once every 41 years.”

The spill risk analysis was conducted by global risk management company DNV GL. A spokesman for DNV did not respond to a request for comment.

Members of South Dakota’s Public Utilities Commission told Reuters last week they could revoke TransCanada’s operating permit if an initial probe of last week’s spill shows it violated the terms of the license.

Those terms include requirements for standards for construction, regular inspections of pipeline infrastructure, and other environmental safeguards.

“They testified that this is going to be a state-of-the-art pipeline,” said one of the commissioners, Gary Hanson. “We want to know the pipeline is going to operate in a fashion that is safe and reliable. So far it’s not going well.”

TransCanada shut a section of the line while it cleans up the leak, which occurred near the town of Aberdeen on Nov. 16. An official did not respond to a request for comment.

The spill took place days before regulators in neighboring Nebraska approved a route for TransCanada’s proposed Keystone XL pipeline through the state, lifting the last major regulatory hurdle for the expansion that has been delayed for years by environmental opposition.

Trump handed TransCanada a presidential permit for Keystone XL in March, reversing former President Barack Obama's decision to reject the line on economic and environmental grounds, saying that it would create jobs and boost national security.

TransCanada's spill analysis for Keystone XL, which would cross Montana, South Dakota and Nebraska, estimates 2.2 leaks per decade with half of those at volumes of 3 barrels or less. It estimated that spills exceeding 1,000 barrels would occur at a rate of once per century.

Reporting by Valerie Volcovici and Richard Valdmanis