BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE PETITION OF TransCanada KEYSTONE PIPELINE, LP FOR ORDER ACCEPTING CERTIFICATION OF PERMIT ISSUED IN DOCKET HP09-001 TO CONSTRUCT THE KEYSTONE XL PIPELINE	)))))))	Docket 14-001 **DAKOTA RURAL ACTION'S POST-HEARING BRIEF**

To say that these proceedings have been contentious risks making a gross understatement. The permitting process for TransCanada Keystone Pipeline LP's ("TransCanada") proposed Keystone XL Pipeline (the "KXL Pipeline") has been a classic example of long-held privileges afforded the global fossil fuel industry arrayed against the interests of a public that is increasingly concerned about the effects of fossil fuel on our environment. This post-hearing brief is submitted on behalf of Dakota Rural Action ("DRA"), a nonprofit organization that represents the interests of South Dakota's farming and ranching families – individuals whose lands have been negatively affected by TransCanada's base Keystone pipeline, and who will bear the burden and effects of the proposed KXL Pipeline should it ever be constructed.

INTRODUCTION

Nine days of regulatory hearings before the South Dakota Public Utilities Commission (the "Commission") were barely enough to permit a thorough examination of the risks to the public that would be posed by the KXL Pipeline. These challenges were exacerbated by a clear power imbalance – a multinational corporation with tremendous resources arrayed against a small group of individuals, nonprofit organizations, and indigenous tribes, all of whom lacked the resources to do very basic things, such as engage much-needed expert witnesses to counter the paid-for narrative presented by TransCanada. Compounding these challenges was the Commission's own unwillingness to permit a thorough discovery process, illustrated by its order of December 17, 2014, limiting the scope of the

proceedings and discovery. Additionally, TransCanada's obfuscation in responding to discovery requests – and the lack of resources by intervening parties to hire experts to fully analyze and interpret the information ultimately provided by TransCanada – further exacerbated the challenges. These circumstances left many intervenors, including DRA, with the clear impression that when challenging the economic privilege and power of the entrenched fossil fuel industry, the deck is stacked against citizens. With this institutional imbalance embedded in the overall process, intervenors such as DRA and the general public has no choice but to rely upon the Commission to carefully scrutinize claims made by well-funded corporations such as TransCanada in order to proactively protect South Dakota's water and land resources. We would suggest that the Commission's obligation to do so rises to the level of a fiduciary duty owed to the citizens of South Dakota in order to fulfill the public trust with which it is entrusted. The Commission is the only entity that can offset structural imbalances faced in proceedings such as this.

Even in the face of the tremendous power and resource imbalance DRA and the other intervenors faced, a remarkable thing happened during the course of these proceedings. Perhaps overly-confident in its political and economic power, TransCanada made a significant error fatal to its case for recertification of the permit for the KXL Pipeline. TransCanada failed to put on a case that even touched upon the majority of the conditions it had to demonstrate that it could meet. Instead, TransCanada simply believed that it could get by with saying "trust us, we'll comply." Time and time again throughout the nine-day hearing, TransCanada's witnesses came up short and the company failed to present evidence that it would or even could comply with permit conditions. TransCanada is asking the Commission to grant recertification on a hope and a prayer, with no substantive evidence that permit conditions can be met. That is not sufficient for TransCanada to prevail. Its petition for certification should be denied.

Even more remarkably, with the lack of substantial evidence to support its petition for certification, TransCanada – with support from Commission staff – argues that the scope of the Commission's authority is severely limited. DRA suggests this attempt to severely restrict the

Commission's authority to consider issues and evidence in the context of certification proceedings is incorrect.

As a final note, DRA would encourage the Commission to carefully examine the transcripts of the proceedings. Commissioner Fiegen, for example, is already examining the transcripts due to her medical absence during the hearing. Commissioner Hansen, who is also facing medical issues, should also be afforded the full opportunity to examine the hearing transcripts as well, perhaps after he is fully healed. The Commission as a whole has ample time to do so, given the statement by TransCanada executive Corey Goulet that no other permits were currently being applied for, in addition to the fact that the proposed KXL Pipeline's fate in Nebraska is still in question, not to mention the fact that no federal permit has been forthcoming. In short, there is no need for the Commission to feel rushed in its evaluation of these matters because time is not of the essence.

PROCEDURAL BACKGROUND

TransCanada was originally granted a permit for construction of the proposed KXL Pipeline through South Dakota on June 29, 2010 via entry by the Commission of its Amended Final Decision and Order (the "2010 Permit"), subject to fifty separate conditions. The conditions imposed on TransCanada by the 2010 Permit ranged from compliance with all federal and state environmental laws, to compliance with a variety of other matters as set forth in the 2010 Permit. Because TransCanada failed to commence construction of the proposed KXL Pipeline within four years of the date of the 2010 Permit, under SDCL § 49-41B-27 it was required to file a petition with the Commission certifying that it could continue to meet the conditions upon which the 2010 Permit was issued. SDCL § 49-41B-27 states:

> Utilities which have acquired a permit in accordance with the provisions of this chapter may proceed to improve, expand, or construct the facility for the intended purposes at any time, subject to the provisions of this chapter; provided, however, that ***if such construction***, expansion and improvement ***commences more than four years after a permit has been issued, then the utility must certify to the Public Utilities Commission that such facility continues to meet the conditions upon which the permit was issued***. (Emphasis added.)

STANDARD OF REVIEW

In rendering a decision the Commission must do so within an appropriate legal framework. This issue gets to the heart of the matter – what is required in order for TransCanada to "certify to the Public Utilities Commission that such facility continues to meet the conditions upon which the permit was issued" under SDCL § 49-41B-27? DRA suggests there are three key principles: (a) TransCanada's burden of proof, (b) the requirement that TransCanada present substantial evidence in support of its petition, and (c) the application of the public trust doctrine, which places a fiduciary duty on the Commission to protect South Dakota's land, water, and environment.

Burden of Proof

There is no question that TransCanada bears the burden of proof in advancing its petition for certification under SDCL § 49-41B-27. This principle is long-standing under South Dakota law, with the South Dakota Supreme Court "affirming the well-established rule that, "He who asserts an affirmative has the burden of proving the same."" *Tripp State Bank of Tripp v. Jerke*, 189 N.W. 514 (S.D. 1922).

Beyond the basic standard articulated by the South Dakota Supreme Court, the Commission's own administrative rules expressly address the question of which party carries the burden of proof in a contested case. The Commission's rules state that "[i]n any contested case proceeding … petitioner has the burden of proof as to factual allegations which form the basis of the … application, or petition …" S.D. Admin. R. 20:10:01:15.01 (2006). The Commission's rules are dispositive of this issue. TransCanada is the petitioner. TransCanada submitted a petition to the Commission pursuant to SDCL § 49-41B-27. The petition asks the Commission to make a factual determination that it can continue to meet the conditions upon which the 2010 Permit was granted. That petition was opposed by the intervenors, including DRA. Hence, TransCanada has the burden of proving that the proposed KXL Pipeline project continues to meet the conditions upon which the 2010 Permit was granted.

These principles were acknowledged prior to the Final Evidentiary Hearing (hereinafter, referenced as "EH" when citing to the hearing transcript), when the Commission and the parties expressed their respective understanding of what areas of inquiry and issues were before the Commission in these highly-contested proceedings. In fact, Chairman Nelson directly instructed the parties as to who had the burden of proof and what that burden was:

> "It is the Petitioner, TransCanada, that has the burden of proof. And under SDCL 49-41B-27, that burden of proof is to establish that the proposed facility continues to meet the 50 Conditions set forth in the Commission's Amended Final Decision. I would like to stress again to all parties here today that this case is about whether the project continues to meet those 50 Conditions." [7/27/15 EH: 10. *Also see*, 7/27/15 EH: 472].

This reality was acknowledged by TransCanada itself in its opening statement to the Commission, where it stated that the burden of proof was limited to the Amended Conditions established as part of the 2010 Permit: "We are here today to meet Keystone's burden of 18 proof. That is, certifying that the project continues to meet the 50 Conditions on which the Permit was issued and that it can be constructed and operated accordingly." [7/26/15 EH: 67]. TransCanada directly stated that it would call seven witnesses to satisfy its burden of proof, "five of whom are direct witnesses, two of whom are rebuttal. We will present exhibits that meet that burden of proof." [7/26/15 EH: 67].

Finally, TransCanada's burden of proof was articulated by the Commission's counsel, John Smith who, after opening statements had been completed, launched the presentation of evidence by stating: "And the party having the burden of proof, the Petitioner, TransCanada Keystone Pipeline, LP, please proceed with your case in chief." [7/26/15 EH: 148]. Extending this burden further, Commission counsel even determined that since TransCanada's witnesses were describing the nature and purpose of the proposed changes in the Findings of Fact (Exhibit C to TransCanada's petition for certification), cross-examination would be permitted in those areas, despite the fact they were "not part of Conditions that I know of." [7/26/15 EH: 212-213]. Given that TransCanada advanced that proposition in its petition for

certification, even the proposed changes to the Findings of Fact as to the 2010 Permit were to be used as a guideline at the hearing, per Chairman Nelson's suggestion. [7/26/15 EH: 213].

Substantial Evidence

With the burden of proof squarely on TransCanada, it has the obligation to demonstrate that it can meet that burden through the presentation of substantial evidence in support of its petition. While South Dakota's courts are obligated to give broad deference to the decisions of administrative agencies, including the Commission, judicial deference is not absolute, and courts may reverse or modify agency decisions if "…substantial rights of the appellant[s] have been prejudiced because the administrative findings, inferences, conclusions, or decisions are...(5) [c]learly erroneous in light of the entire evidence in the record; or (6) [a]rbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion." SDCL § 1-26-36.

When deciding whether a decision by the Commission is "clearly erroneous" courts will examine whether "substantive evidence" exists in the record upon which the Commission based its decision. *Helms v. Lynn's, Inc.*, 542 N.W.2d 764 (S.D. 1996); *Therkildsen v. Fisher Beverage*, 545 N.W.2d 834 (S.D. 1996) (citing *In re Establishing Certain Territorial Elec. Boundaries*., 318 N.W.2d 118 (S.D. 1982)); *Helms v. Lynn's, Inc.*, 542 N.W.2d 764 (S.D. 1996) (stating '[t]he issue we must determine is whether the record contains substantial evidence to support the agency's determination.'); *Abilb v. Gateway 2000, Inc*., 547 N.W.2d 556 (S.D. 1996) (stating '[t]he question is not whether there is substantial evidence contrary to the findings, but whether there is substantial evidence to support them.'); *see also Westergren v. Baptist Hosp. of Winner*, 549 N.W.2d 390 (S.D. 1996); *Zoss v. United Bldg. Centers, Inc*., 566 N.W.2d 840 (S.D. 1997); *Jackson v. Lee's Travelers Lodge, Inc.,* 563 N.W.2d 858 (S.D. 1997); *Rohleck v. J & L Rainbow, Inc.*, 553 N.W.2d 531 (S.D. 1996) (each case cites to and applies the substantive evidence test described in *Therkildsen*, *Helms*, and *Abilb*). Of note, the substantive evidence standard explicitly

applies to decisions by the Commission. See *In re Establishing Elec. Boundaries*, 318 N.W.2d at 121.

Substantive or substantial evidence is much more than a mere promise, hope, or conclusory statement. SDCL § 1-26-1(9) defines the term as "…such relevant and competent evidence as a reasonable mind might accept as being sufficiently adequate to support a conclusion." South Dakota's Supreme Court delved into the meaning of this requirement in *M.G. Oil Co. v. City of Rapid City*, 793 N.W.2d 816 (S.D. 2011). The *M.G. Oil. Co*. case involved an application for a conditional use permit to operate a video lottery casino. *Id*., at 817. Rapid City's City Council could deny issuing a permit if it concluded that the permit would cause an undue concentration of similar uses, resulting in blight, deterioration or substantially diminished or impaired property value. *Id*. at 822. The "evidence" at a public meeting consisted of vague conclusory statements as to the potential impact of granting the permit – mainly, allegations that an increase in crime would occur. Additionally, a City Alderman expressed his belief that real estate values might fall as a consequence of issuing the permit. *Id*., at 821-22. As a result the City Council voted to deny the permit. The applicant appealed arguing that the City's decision was arbitrary and capricious and an abuse of discretion. *Id*., at 820.

In looking at the substantial evidence requirement, the Court examined whether the testimony and comments submitted during City Council meetings constituted substantial evidence upon which the Council could base its decision. *Id*., at 822-23. Its conclusion was that it was not. The Court held that "[v]ague reservations expressed by [Council] members and nearby landowners are not sufficient to provide factual support for a Board decision." *Id*., at 823 (citing *Olson v. City of Deadwood*, 480 N.W.2d 770, 775 (S.D. 1992)). Of note, the Court also stated that the City's failure to link specific and substantive testimonial evidence to the governing statute resulted in nothing more than simply repeating the language of the ordinance as a basis to deny the permit. *Id*. 823-24. That did not constitute substantial evidence in the Court's eyes.

TransCanada's case presents the same issue. Its witnesses' testimony largely consisted of conclusory, unsupported statements that it would comply with the conditions of the 2010 Permit. That is insufficient and does not constitute the substantial evidence necessary to support granting its petition.

Public Trust Doctrine – Commission has a Fiduciary Duty

In addition to determining whether TransCanada has presented substantial evidence demonstrating that it continues to meet the conditions of the 2010 Permit, in making its decision whether or not to grant TransCanada's petition for certification under SDCL § 49-41B-27, the Commission is held to a higher standard under the principles of the public trust doctrine. The public trust doctrine holds that certain natural resources belong to all and cannot be privately owned or controlled because of their intrinsic value to each individual and society. Public governmental bodies such as the Commission are, in effect, held to be trustees, with a fiduciary duty owed to the public to safeguard those resources. "[T]he Public Trust Doctrine is a critically important reminder of the duty of government to preserve wildlife, to protect the public's right to enjoy and benefit from a diverse ecosystem, and the duty of courts to carefully scrutinize any attempts to abandon the public trust in those resources." *Center for Biological Diversity, Inc. v. FPL Group, Inc.*, 166 Cal. App. 4th 1349 (2008) (quoting Carstens, *The Public Trust Doctrine: Could a Public Trust Declaration for Wildlife Be Next?* (2006) vol. 2006, No. 9, Cal.Envtl. L.Rptr. 1).

South Dakota has explicitly recognized the public trust doctrine. The most recent and most discussed case is *Parks v. Cooper*, 676 N.W.2d 823 (S.D. 2004), which held that "as matter of first impression, all water in South Dakota belongs to the people in accord with the public trust doctrine …" This principle in South Dakota extends back to the earlier part of last century, when in *Filsrand v. Madson,* 35 S.D. 457 (1915), the Court held that a riparian owner of water cannot interfere with "navigating, boating, fishing, fowling and like public uses" by the public. Interestingly, while not directly

addressing the public trust doctrine, the South Dakota Supreme Court, in *State v. Schwartz*, 689 N.W.2d 430 (S.D. 2004), stated:

> "South Dakota retains a distinctly individual character, evident in its diverse communities, its amalgam of cultures, its mixture of heritages, and its contrasting terrain. Matters unique to South Dakota may generate a reason to view a particular constitutional provision differently. … [O]ur decision in *Parks v. Cooper* exhibits the type of deeply rooted regional issue—preservation of precious water resources through the public trust doctrine—that a court might take into account in examining a disputed provision of our constitution." *Id.*

DRA suggests that the public trust doctrine imposes upon the Commission a heightened fiduciary standard when it comes to protecting South Dakota's environment and resources from damage that could be caused by a pipeline leak or spill. While the Courts have explicitly referenced the public trust doctrine extending to protection of the State's water resources – which, by necessity, would include its surface and groundwater – the same principle applies to protection of the State's land, including its soil, native grasses, and crops. DRA suggests that the application of the public trust doctrine means that the Commission should set a higher bar for companies such as TransCanada, whose activities risk damaging the State's land and water resources.

TransCanada FAILS TO MAKE ITS CASE

With the procedural standards firmly in mind, the Commission must decide whether TransCanada met its burden of proof through the presentation of substantial evidence demonstrating that it could continue to meet the conditions of the 2010 Permit. The entire purpose of having a nine-day evidentiary hearing was to provide TransCanada with an opportunity to present substantial evidence. In the end, TransCanada embodied the classic fairy tale of the emperor who wore no clothes. Its case was sorely lacking. TransCanada's witnesses presented conclusory statements that were largely untied to specific conditions. Where conditions were referenced, TransCanada largely failed to present supporting evidence.

Witness after witness presented by TransCanada agreed that their pre-filed substantive written testimony was not related to showing compliance with any specific condition of the 2010 Permit, but

instead, to support TransCanada's proposed amendment of the Findings of Fact.[1] For example, the President of TransCanada's Keystone system, Corey Goulet [7/27/15 (Goulet) EH: 148, 7/29/15 (Goulet) EH: 507] stated: "The changes discussed in FF 24-29 related to demand, do not affect Keystone's ability to meet the conditions upon which the Permit was issued." Direct Testimony of Corey Goulet, HP 14-001, ¶11, p. 5. When asked if this statement referred to Amended Conditions 6, 7, and 37, Goulet could only answer: "I'll just refer to those Conditions, but I believe that that's part of my certificate as well." 7/27/15 (Goulet) EH: 151. Goulet offered no proof showing how TransCanada had been and would be able to continue to do so. See, as further examples of the record: 7/29/15 (Schmidt) EH: 531-532;[2] 7/30/15 (Tillquist) EH: 655-656; Meera Kothari (agrees pre-filed testimony makes no reference to any Amended Condition it purportedly provides evidence for. 7/31/15 (Kothari) EH: 1078). However, while Kothari generally testified that her pre-filed testimony "related" to Amended Conditions 2 and 31 [7/30/15 (Kothari) EH:993, 1064-1065], she made no connection in her oral testimony between any particular testimony as evidence showing TransCanada's history and continued ability to comply with the 2010 Permit.

Demonstrating a remarkable ability to pass the buck, many of TransCanada's witnesses claimed that others could better answer questions being posed. Most of the TransCanada witnesses who said so named Meera Kothari as the person who could answer their questions about:

- Whether representatives of TransCanada's "engineering or construction department" would testify at the hearing: 7/27/15 (Goulet) EH:182.

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[1] Each objection to admission of pre-filed written testimony based only on Findings of Fact and not specific Amended Conditions was overruled by the PUC. 7/28/15 (Goulet) EH: 474; 7/29/15 (Schmidt) EH: 533; 7/30/15 (Tillquist) EH: 658; 7/31/15 (Kothari) EH:1078. DRA respectfully submits such rulings were in error and seeks reversal of the admission of such evidence as being irrelevant to whether TransCanada has been and will continue to comply with the Commission's Amended Conditions, by way of reconsideration.

[2] Although Schmidt responded to TransCanada Attorney White, that such testimony related to Amended Conditions 1-3, 6, 13-16, 20, 22, 26, 41, 43, 44, there was no testimony by Schmidt as to how such evidence showed TransCanada had been and will continue to comply with all or even these specific Amended Conditions. [7/29/15 (Schmidt) EH: 533].

- The length of the proposed KXL Pipeline to be above versus below ground. 7/28/15 (Goulet) EH:335-336.
- Whether there had been consultation with and input from nearby and affected tribes as to routing issues. 7/27/15 (Goulet) EH:182.
- Specifically whether the Yankton Sioux Tribe was notified of proposed local route changes. 7/27/15 (Goulet) EH:170.
- Whether TransCanada provided contact information for its land representative Sarah MeTransCanadaalf to landowners, the designated TransCanada public liaison. 7/27/15 (Goulet) EH:171
- About KXL routing, particularly through John Harter's land. 7/29/15 (Schmidt) EH:628.
- Details about the "89 crossings of pipeline" in the South Dakota portion of the proposed KXL Pipeline and particular waterbody crossing plans. 7/28/15 (Goulet) EH:260-261.
- How large a creek needs to be before TransCanada proposes Horizontal Directional Drilling (HDD) be used for the crossing. 7/28/15 (Goulet) EH:336.
- Details about the HDD process [7/29/15 (Schmidt) EH:545], including open cut and HDD "construction methodologies." 7/29/15 (Schmidt) EH:627.
- Details regarding the proposed HDD Bridger Creek crossing. 7/28/15 (Goulet) EH:279.
- Explanations as to why the Bridger Creek crossing has now be selected by TransCanada for utilization of HDD rather than open cut methods for pipeline installation. 7/29/15 (Schmidt) EH:589.
- What kind of pipe is used by the Mni Wiconi Water system at the location where it is proposed to be crossed over by the proposed KXL Pipeline. 7/29/15 (Schmidt) EH:633.
- Whether planning by TransCanada for the proposed KXL Pipeline includes the occurrence of earthquakes. 7/28/15 (Goulet) EH:336.
- Whether sliding slope soil concerns caused re-routing of KXL. 7/29/15 (Schmidt) EH:577.

- Information about the TransCanada website which had contained a section regarding a South Dakota voluntary evacuation zone. 7/28/15 (Goulet) EH:281-282.

Curiously and significantly, as the Commission weighs any purported claims of compliance with the Amended Conditions of the 2010 Permit, although Kothari was called by TransCanada as a witness "to speak to the engineering design construction for that project" [7/30/15 (Kothari) EH:1010], she was not and has never been licensed to provide engineering services in the United States. 7/31/15 (Kothari) EH:1124. ***Kothari, despite her supervisory work on projects in the United States, never made any effort to become licensed to professionally work in the United States as an engineer.*** 7/31/15 (Kothari) EH:1202. Remarkably, Kothari admitted, "I don't perform any specific services. My role ... as the project engineer is to know the requirements and ensure that we have subject-matter experts and specialty engineers who can fulfill that function." *Id.* This is significant because the record shows that TransCanada failed to call any of the subject-matter experts and specialty engineers on the KXL Pipeline project who could arguably have presented the substantive evidence that was lacking. In short, when it comes to substantial evidence, TransCanada's witnesses largely passed the buck to Kothari, who was ultimately found to be holding an empty bag.

However, although having served as the former lead project engineer for the KXL Pipeline[3] [7/30/15 (Kothari) EH:993], Kothari had overall engineering oversight for the Keystone Pipelines, including the proposed KXL Pipeline [7/30/15 (Kothari) EH:1010, 1083]. That duty involved "oversight of the third-party engineering firm that was responsible for pipeline design," specifically for "routing,"[4] "materials selection," and "interfacing with other disciplines within the project team" [7/31/15 (Kothari)

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[3] TransCanada failed to present the current project engineer, hopefully licensed as an engineer in the United States, who could educate the Commission as to his or her duties and actually answer the many questions about the current design plans for the KXL Pipeline, ostensibly showing incorporation of the Commission's 50 Amended Permit Conditions, including PHMSA's 59 Special Conditions. However, choosing not to, TransCanada instead presented the former project engineer who was unlicensed in the United States to perform professional engineering services.

[4] At least prior to her testimony in 2009, Kothari had not looked at any USGS geological maps along the route which the KXL Pipeline was proposed and TransCanada previously made little mention to the Commission of the existence of a lengthy slope slide high hazardous areas at that time. 7/31/15 (Kothari) EH:1103.

EH:1052-1053]. She described herself as having not been "the responsible engineer for the base Keystone so I was not the licensed engineer in charge of authenticating the designs" and "was there to provide company oversight." 7/30/15 (Kothari) EH:1013. Kothari said she provided "engineering construction support to the project management team" during construction of Gulf Coast segment. 7/30/15 (Kothari) EH:1011-1012.

Suggestive of her qualifications as an engineering expert, her engineering skills and value of her testimony, TransCanada was "transitioning" Kothari into a new, non-engineering position in its "business development" department, which would be "non-technical" in nature and not include providing engineering advice to decision makers regarding prospective development projects and the commercial marketing groups. 7/30/15 (Kothari) EH:1009; 7/31/15 (Kothari) EH:1060. Remarkably, this was a position in business development for which Kothari had little training or education. 7/31/15 (Kothari) EH:1091.

For someone proffered as being in an oversight capacity over design and construction of the KXL Pipeline, Kothari displayed a remarkable lack of information and was even dismissive of the specifics of major safety issues clearly within duties. For some examples, Kothari acknowledged that she was unable to answer questions about:

- spills from the base Keystone pipeline system, as leaks during operation of Keystone Base were "not within" her "scope of responsibility."[5] 7/30/15 (Kothari) EH:1011, 1018-1019;
- organic chemistry questions regarding the fusion bonded epoxy (FBE) coating on the pipelines [7/30/15 (Kothari) EH:1019],[6] only "to a certain extent" the vulnerabilities of FBE [7/30/15 (Kothari) EH:1019];

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[5] While Kothari later testified: "I believe I'm aware of all the pipeline related issues specifically. That's within my scope" [7/30/15 (Kothari) EH:1030], she previously had said: "I'm not familiar with the details specific to those spills". [7/30/15 (Kothari) EH:1005].

[6] This despite Kothari having had a job as an engineer in the pipeline integrity engineer for asset responsibility for TC for nearly three and one-half years within a department that involved coating. 7/31/15 (Kothari) EH:1088-1089.

- corrosion and cathodic protection issues as a specialist [7/30/15 (Kothari) EH:1027, 1088], including describing and differentiating between AC and DC current corrosion [7/30/15 (Kothari) EH:1031];
- operational aspects of the base Keystone Pipeline [7/30/15 (Kothari) EH:1025]; about any electrical engineering issues [7/30/15 (Kothari) EH:1030];
- corrosion engineering issues [7/30/15 (Kothari) EH:1032];
- the chemistry of crude oil, including the different hydrocarbons contained therein [7/31/15 (Kothari) EH:1051-52];
- "any specific details" about "measures and verification and testing that were done during that integrity program" after a 2009 PHMSA advisory about installation of "lower strength" steel pipe 7/31/15 (Kothari) EH:1055, 1057] - nevertheless, she claimed it was still safe [7/31/15 (Kothari) EH:1058;
- root causes of pipeline deficiencies [7/31/15 (Kothari) EH:1058], and whether it was a chemistry or fabrication problem [7/31/15 (Kothari) EH:1057-1058];
- the type or specific location of the threaded fitting issues causing pump station leaks on Keystone Base in the first year [7/31/15 (Kothari) EH:1058];
- other than changed route in Nebraska, why the first application to the US State Department was denied [7/31/15 (Kothari) EH:1068];
- PHMSA's accusations against TransCanada for failure to adequately monitor pipelines by air patrols ("not specifically aware") [7/31/15 (Kothari) EH:1074-1075].

Kothari agreed, in sum, that there were quite a few skills, training, and experience that she did not have to do her job, which caused her to "rely on my engineering specialty disciplines to provide that additional review and oversight as it comes up through to the management review of those particular issues." 7/31/15 (Kothari) EH:1083. Again, the majority of TransCanada's witnesses deferred to Kothari as the former lead project engineer for the KXL Pipeline, but in the end, she was found lacking. As is

TransCanada's "substantial evidence" of its ability to comply with the Amended Conditions of the 2010 Permit.

Heidi Tillquist was TransCanada's second most deferred-to witness. Although qualified as an environmental toxicologist, Tillquist also failed to show how TransCanada was meeting each of the Amended Conditions of the 2010 Permit and would continue to do so. In fact, Tillquist's testimony revealed that TransCanada not even completed its engineering analysis for the KXL Pipeline. [EH: 825-826].

A large portion of Tillquist's testimony focused on her performance of risk analysis with respect to the probabilities of pipeline leaks and spills, as well as possible spill volumes and the environmental effects of a spill. Rather troubling, her testimony exposed serious holes in TransCanada's purported ability to comply with the Amended Conditions of the 2010 Permit, and very possibly a disregard for the safety of South Dakota's residents and environment. This was highlighted by her admission that her choice of statistical methodologies used to calculate the risks posed by the KXL Pipeline were, in part, designed for public relations purposes. [EH: 844-847].

Casting further doubt on TransCanada's presentation of the risks posed by the KXL Pipeline, Tillquist revealed a startling deficiency in her analysis by acknowledging she did not know what a "black swan even" was. [EH: 850]. The black swan theory or theory of black swan events is perhaps one of the more widely-known principles of risk analysis. It is a metaphor that describes an event that comes as a surprise, has a major effect, and is often inappropriately rationalized after the fact with the benefit of hindsight. The theory was developed by Nassim Nicholas Taleb[7] to explain: (a) the disproportionate role of high-profile, hard-to-predict, and rare events that are beyond the realm of normal expectations in history, science, finance, and technology; (b) the non-computability of the probability of the consequential rare events using scientific methods (owing to the very nature of small probabilities); and

[7] Taleb is a bestselling author, is Distinguished Professor of Risk Engineering at the New York University Polytechnic School of Engineering, and as co-Editor in Chief of the academic journal, Risk and Decision Analysis.

(c) the psychological biases that blind people, both individually and collectively, to uncertainty and to a rare event's massive role in historical affairs.

For Tillquist to hold herself out as risk analyst and have no knowledge of a key principle of risk analysis is remarkable. Instead, she admitted that her risk analysis was based largely on analysis of the PHMSA database [EH: 825-828], which she acknowledged only contained domestic data. [EH: 830-831]. She also acknowledged that her risk analysis excluded risk of spills at tanks and terminals [EH: 832], that she did not take geographical variance into account [EH: 861-863], that she was unable to factor in different construction and operation standards between pipeline companies reporting in PHMSA database [EH: 834-835], and that her risk analysis failed factor in increased likelihood of adverse weather events [EH: 867]. This last point was crucial in light of her admission that she did not take into account data on adverse weather events such as the two contiguous hurricanes that caused damage to a TransCanada pipeline in Guadalajara, Mexico [EH: 2380-81].

Tillquist's risk analysis ultimately proved to be folly. She testified that her calculation of a risk of a spills was conservative (2.2 spills over 10 years), yet real-world experience resulted in spills on the base Keystone pipeline that greatly exceeded her estimates (12 spills shortly after being placed in service). [EH: 855-856, 860]. When asked about risks from landslides, Tillquist admitted her risk data was taken from an analysis of the entire PHMSA database and was not localized to areas of high risk. She stated that TransCanada would perform a more detailed engineering analysis, but that had not been completed. [EH: 871-872].

Compliance with environmental laws and regulations designed to protect water and other natural resources from harm is a critical component of the Amended Conditions contained in the 2010 Permit. Given that Tillquist testified that hundreds of High Consequence Areas exist in South Dakota [EH: 886-887], and that the chemical constituents of the diluted bitumen to be transported by the KXL Pipeline, including the BTEX complex of chemicals, are harmful to human health in small quantities [EH: 883-885], instead of bolstering TransCanada's case, her testimony revealed a tremendous lack of substantial

evidence that TransCanada can even begin to comply, much less continue to comply, with the Amended Conditions of the 2010 Permit.

Continuing its failure to show how it can comply or continue to comply with the Amended Conditions of the 2010 Permit, including addressing the inadequacies in evaluation and analysis required for a more accurate risk analysis, TransCanada did not even present evidence that it was addressing issues noted by US State Department analysts in the 2014 FSEIS. For example:

- "at...small stream crossings, TransCanada needs to conduct location-specific analysis of fate and effects of spills...consider the use of additional valves &/or noninvasive boring technologies." 2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(24), p. 37]
- E^{x}ponent identified "additional potentially sensitive ecological areas and where Keystone's release analysis shows potential exists for medium to very large spills." 2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(24), p. 37.
- Regarding "expressions of average risk, care should be taken when stating a U.S. threat rate, or state level threat rate because downplays the absolute importance of potentially large localized and/or periodic events." [FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(15a), p. 33] and including "overland flow (spreading)" [*Id.*, 3.0(17), p. 34], "4 streams identified by E^{x}ponent" [*Id.*].
- TransCanada's risk assessment should include evaluation of potential damage of a spill "at least 10 miles downstream "...for identifying sensitive areas and contributory pipeline segments "during .. final design phase." [2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(18), p. 34]. As the FSEIS pointed out, such studies are needed to determine if "sensitive areas," in order to be "protected," whether still "additional valves would not have a net benefit." *Id.*, 3.0(18a), p. 34.

- "[I]f...PHMSA approves construction" of the KXL pipeline, the FSEIS recommended that TransCanada "should assess incident likelihood considering the benefits of (having) "alternative, preventive, protective, and mitigating features in place." 2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(15a), p. 33.
- TransCanada needs to conduct a "stream-specific scour analysis" for small streams in light of potential for flood events, specifically for small stream crossings identified by E^x^ponent where TransCanada plans to bury pipe through open cut methodology, less than five feet below creek bed. 2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(25), p. 37-38.
- TransCanada used a "query process" which utilized CAUSE and GEN__CAUSE fields "to obtain...cause/threat results." It "appears...their ouTransCanadaomes exclude the facilities which are an essential element of any pipeline system." FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(19b), p. 34. A "better approach" would "capitalize on PHMSA National Pipeline Mapping System to geolocate the historic spill records as the means to better quantify localized threats." 2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(19b), p. 35.

Of note, TransCanada failed to present substantial evidence, much less any evidence at all, as to how it would deal with these crucial risk factors in order to minimize harm to the environment and to water resources.

DRA would also ask the Commission to take administrative notice of Kothari's prior testimony before the Commission in evaluating both her credibility and the significance of prior admissions. For example, by 2007 TransCanada reported some "576" spills from its pipeline system, of which "80%" involved "equipment related spills of "hydraulic oil, lube oil, glycol and fuel." Written Testimony of Meera Kothari, HP 07-001, Ques. 19, p. 5. TransCanada had already experienced 20 "near misses" [*Id.*, Ques. 19, p. 6], 28 of which were "serious," meaning "less than 20 gallons" spilled [*Id.*], one was

“critical,” involving “approximately “100 gal. of various liquids such as lube oil [*Id*.].” In a 1996 incident at one the pump stations on the TransCanada-operated Platte Pipeline, “approximately 220 bbls of oil - were released” of which “none” recovered. Written Testimony of Kothari, HP 07-001, Ques. 21, p. 6.

To estimate the likely number of spills expected from the KXL Pipeline, the FSEIS advised TransCanada that it should include “threat-based sensitivity analysis including scope and results.” FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(14), p. 33. The FSEIS found that TransCanada had “not used” “sensitivity analysis to understand the underlying drivers for incidents when estimating spill frequencies” FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(14a), p. 33. The State Department analysts advised TransCanada that Battelle suggested that such “sensitivity analysis could help identify localized threats.” *Id*.

Risk assessment is required by PHMSA - Condition 14 and 49 CFR 195.452 for HCAs. FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(14), p. 33. The State Department analysts noted the “large differences” between “system components and facilities that comprise the discrete elements cast uncertainty on the use of aggregated metrics for risk” and equally cast uncertainty on the use of aggregated “professional engineering judgment.” [2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(26), p. 38. For example, the 2014 FSEIS further observed that seals and seats have a “higher potential for spills than (on equipment & pumps)” 2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(11)(a), p. 32. Due to “dominance” of risks “associated with mainline pipe and other system components (other than mainline valves or tanks)” the “risk assessment” required by 29 CFR 195.452 should address both “to effectively reduce risk,” observing that 97% of risk occurs in mainline pipe and “fixed facilities” (e.g., pumping stations. 2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(20a), p. 35. The State Department reported that it expected TransCanada to be “diligent” in its “material section for” these components. FSEIS,

Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(11)(a), p. 32]. Remarkably, TransCanada provided no substantial evidence during nine days of evidentiary hearings to demonstrate compliance – other than conclusory statements promising compliance.

KXL to be Safest Pipeline?

In response to Commissioner Hanson's statement during the hearing of how he had read and heard "several" times that the KXL will be "the safest pipeline ever built", Goulet gushed how no other pipeline has been requested to incorporate 59 special conditions (referencing Appendix Z of the FSEIS), and as such, other pipelines "don't have the redundancies and safety measures which we will build on KXL." 7/27/15 (Goulet) EH:302. The colloquy continued:

> Hanson: It sounds as if, though, it might be safer to say it's one of the safest pipelines....can you honestly say this is the safest....?
>
> Goulet: ....until we build the pipeline, I suppose we can't say it is ...
>
> 7/27/15 (Goulet) EH:303.

Yet, later during later under cross-examination, Goulet clarified that he "never said it will not leak" ... and "can't predict" whether a leak would be large or small. "I can't predict the future." 7/28/15 (Goulet) EH:354.

Goulet's backtracking is not surprising when seen in the light of Kothari's acknowledgment that, since 2010, TransCanada has not submitted any detailed geologic, biologic, environmental, engineering studies and current designs to the Commission for review as to sufficiency or accuracy, or to show compliance with any of the 50 Amended Conditions. Similarly, TransCanada has not submitted updated or corrected design plans and environmental studies surrounding HCAs [7/31/15 (Kothari) EH:1117], or otherwise presented the Commission with evidence it is in compliance with the many deficiencies in

evaluations, analysis, or otherwise completed to address many important issues necessary to show it can safely construct the KXL Pipeline.

TransCanada Admitted It Cannot Meet Condition 3

Significantly, TransCanada's paid corporate expert witness Jon Schmidt agreed during cross-examination that TransCanada cannot meet Amended Condition 3 of the 2010 Permit since the submission and testimony to the Commission in these proceedings were based upon a US State Department Permit Application that had been denied [7/29/15 (Schmidt) EH:542].

In addition to TransCanada's failure to meet its burden of proof to warrant certification, the hearing evidence tends to show the contrary.

Kothari testified she performed "oversight" for TransCanada of the "design and engineering" on the Gulf Coast and Keystone Base pipeline design and construction projects. 7/31/15 (Kothari) EH:1090. However, she quickly attempted to absolve herself of responsibility for any design or construction related flaws in the respective pipelines since she didn't design the pipelines and an authenticating engineer, not her, was responsible to ensure pipeline designed and built correctly. 7/31/15 (Kothari) EH:1090-1091.

Kothari agreed that "preventing leaks is a primary goal because any leak could release product into potentially sensitive ecosystems or critical resource areas" and testified it was a "one of the primary goals". 7/31/15 (Kothari) EH: 1091. However, like other parts of her testimony, her rose-tinted sugar-coated promises to comply with all Amended Conditions of the 2010 Permit can be seriously questioned by the evidence in the record.

What TransCanada would like to transport through South Dakota is a "hazardous liquid". 7/31/15 (Kothari) EH: 1092. And, "modern pipelines can fail in a number of different ways." This includes "internal and external corrosion, third party damage, equipment failure, or outside force type failures." 7/31/15 (Kothari) EH: 1092. Part of Kothari's job was to "review potential pipeline threats to the pipeline and work with our design engineers to ensure that we have safeguards and various design

requirements built in to prevent, mitigate, and monitor those particular threats to the pipeline." 7/31/15 (Kothari) EH: 1092-1093.

Despite these assuring words, the evidence in the record shows that TransCanada has a questionable ability or willingness to comply with all applicable design and construction regulations of all agencies which have established permit conditions (Condition 2), should provide, in addition to TransCanada's failure to meet its burden of proof, providing an additional basis for this Commission to deny recertification of the construction permit for TransCanada.

59 Special Conditions "were put out by PHMSA" regarding the proposed KXL pipeline. 7/31/15 (Kothari) EH: 1115. These 59 Special Conditions are eight additional to those PHMSA required on the base Keystone. 7/28/15 (Goulet) EH: 354. Amended Condition 2 provides that TransCanada comply with any conditions imposed by any permitting agency, including PHMSA (see Finding of Fact 22). Yet in a revealing moment for this Commission to consider in terms of TransCanada's willingness to comply with permit conditions, TransCanada has taken the position that the 59 Special Conditions imposed on the KXL Pipeline by PHMSA need only be complied with if the hazardous material transportation company chooses to do so. As Kothari testified, at this point in time, TransCanada has "**voluntarily adopted** to apply those Permit Conditions." 7/31/15 (Kothari) EH:1079-1080, 1105, 1110. See, Direct Testimony of Corey Goulet, HP 14-001, ¶9, p. 3; 7/27/15 (Goulet) EH:215, 216. This despite the admission that there is no correspondence from PHMSA telling TransCanada that the 59 Special Conditions are merely "advisory." 7/31/15 (Kothari) EH:1106. By way of further example, there is no SCADA requirement in Amended Conditions, although TransCanada recognizes there is one from PHMSA in the 59 Special Conditions - Appendix Z to the FSEIS. 7/31/15 (Kothari) EH:1076.

Failure to Recognize Magnitude and Risk of Routing Pipeline through High Hazard Slip Slope Areas.

Dr. (and now Professor Emeritus of geology) Arden Davis of the South Dakota School of Mines [8/3/15 (Davis) EH:1784], testified that from the USGS map in the FSEIS, he estimated the pipeline would travel within "slightly more than 150 miles of Pierre Shale." 8/3/15 (Davis) EH:1784. The Commission has in the record the USGS map of South Dakota with the pipeline drawn through the various geologic formations along its proposed route. The USGS map characterizes a significant portion as a "high landslide Hazard Area." RST EX-4, also contained within the 2014 FSEIS, Volume 2, Chapter 3, 3.1 Geology, Figure 3.l1.2-3, p. 3.1-29.

Yet, despite such evidence and TransCanada's purported commitment to follow the guidance and recommendations in the FSEIS in the construction of the KXL pipeline, and perhaps reflective of other evidence that regulatory safety requirements are merely voluntary, and defective design or construction issues seem to never involve real pipeline safety issues, just meaningless regulations, this Commission heard testimony that TransCanada considers only 1.6 miles of its proposed route to be "considered in that high hazard, high landslide type scenario." Responded Dr. Arden: "I would be very surprised to hear that." 8/3/15 (Davis) EH: 1796. And what should be of additional concern to the Commission, TransCanada is not sure if even this minute portion of the KXL Pipeline route is really in such a high hazard area. 7/31/15 (Kothari) EH:1094-1097. This despite Kothari's agreement that the USGS map in the FSEIS shows the pipeline traversing up to 150 miles of the high hazard slide topography just between four planned pump stations. 7/31/15 (Kothari) EH:1097.

To his credit, TransCanada witness John Schmidt acknowledged that slope stability is an important consideration as to routing of pipeline. 7/29/15 (Schmidt) EH:578. If "there's slope coupled with erodible...then yeah, you look to try and minimize," claiming it would become a "reclamation issue" following construction, since it would be "difficult to maintain that right of way." 7/29/15 (Schmidt) EH:581. He further agreed that bentonite soils would "potentially" create a "stability problem," especially when "coupled with water source and slope and other factors." 7/29/15 (Schmidt) EH:582.

He agreed ground movement "may" occur in this area of the State due to presence of Pierre Shale, especially the bentonite layers. 7/29/15 (Schmidt) EH:594.

Dr. Davis described the clay nature of bentonite and what should be remembered about construction where it predominates the ground-structure: "It's a platy mineral that can absorb water in betwen the sheetlike layers....up to around 190% of its own weight in water....And when it absorbs water then it's prone to failure." [8/3/15 (Davis) EH:1788].

From his knowledge of the high slide areas depicted on the USGS map, Schmidt agreed the "land forms and topography of the area" the KXL pipeline is routed to go through "is characterized by dissected plateau with river channels that have incised into the landscape" and the each has numerous tributaries that feed water into the major rivers 7/29/15 (Schmidt) EH:586-587. Such are "important" component of "watershed." 7/29/15 (Schmidt) EH:588.

Schmidt also acknowledged that additionally along the KXL Pipeline route, almost all of Haakon, Jones, and portions of Tripp County have potentially unstable "gumbo" soils. 7/29/15 (Schmidt) EH:593. He did "not" know status of any plans to compensate for weather issues during construction, as required by Amended Condition 25 [7/29/15 (Schmidt) EH:623], despite this area and the areas with bentonite soils were susceptible to instability upon weathering [7/29/15 (Schmidt) EH:594], "basic wind, sun, water...those are mainly the erosive forces." 7/29/15 (Schmidt) EH:623

However, as the TransCanada contractor charged with responsibility for "cultural surveys, biological surveys, wetlands, water bodies, things of that nature" [7/29/15 (Schmidt) EH:540], he "wasn't aware" of a recent 500 year flood, then admitting that 2, 3, 4, or 5 inches of rain "could" create a problem for the KXL Pipeline in unstable soils.[8] 7/29/15 (Schmidt) EH:583. He also did not recall seeing information in the 2014 FSEIS he reviewed [7/29/15 (Schmidt) EH:555] that a majority of pipeline through South Dakota is routed through what was described as a "high landslide hazard area," and

[8] Schmidt acknowledged that clay is well-known for absorbing large quantities of water. 7/29/15 (Schmidt) EH:591.

disagreed it did so. 7/29/15 (Schmidt) EH:583-584. He acknowledged TransCanada's proposed re-routing maps did "obviously not" remove the pipeline from such high landslide hazard areas shown on the USGS map. 7/29/15 (Schmidt) EH:584.

So far and fortunately, evidence in this record show that most of the spills from the Keystone pipeline system to the Gulf of Mexico have been relatively minor and there have only been "near misses" of potentially disastrous incidents. By way of the examples discussed below, the DRA respectfully submits that TransCanada's history of safety issues should give further pause by any Commissioner of a thought of granting certification.

2009 Incident

Kothari admitted some knowledge about pipeline integrity issues arising in pipe used by TransCanada. There was a "PHMSA advisory...issued late in 2009 related to low yield materials that potential pipeline operators would be susceptible to." [A]s we moved into operations...integrity management folks developing plans, implementing plans, to meet that advisory requirement." 7/31/15 (Kothari) EH:1055. The advisory "requested operators to verify the integrity of the pipeline" regarding a materials issue. 7/31/15 (Kothari) EH:1055. TransCanada's response included "digs involved ... locations ... identified through high resolution in-line inspection, as per the advisory requirements." 7/31/15 (Kothari) EH:1055.

Reflecting TransCanada's attitude towards safety regulations, Kothari saw nothing "wrong" with below PHMSA regulation "lower-strength" pipe being used in TransCanada's pipelines or it being insufficient to meet safety specifications from PHMSA, claiming, nevertheless, it was "[n]othing that would ensure the ongoing safe operations of the pipeline." 7/31/15 (Kothari) EH:1056-1057.

Pipeline Safety History - Spills

Kothari acknowledge that there were 14 spills in 1st year of operation of TransCanada's Keystone Base pipeline.[9] 7/30/15 (Kothari) EH:1005, 1006. Nevertheless, according to TransCanada, a pipeline which leaks 14 times in its first year is "safe" 7/30/15 (Kothari) EH:1007. Goulet admitted the number but described them all as only "minor" and were "associated with small diameter fittings and seals." 7/28/15 (Goulet) EH:355. Kothari admitted being "familiar generally we had a number of leaks at the pumping stations upon initial operations." 7/31/15 (Kothari) EH:1053.

Ludden spill

The largest spill the first year of operation of the Keystone Base pipeline was at Ludden Pump Station. *See DRA Exhibits 69, 70 and 172, attached hereto as Exhibits A, B and C*. Kothari's understanding was the problem involved a "small above-ground component, such as a fitting...some of the issues were" cause of leaks 7/31/15 (Kothari) EH:1053. "[I]t was threaded fitting," which leaked. 7/31/15 (Kothari) EH:1058. Despite her oversight responsibilities, she "wouldn't know the specific manufacturer" of the fitting. 7/31/15 (Kothari) EH:1058.

As to the Ludden Pump Station spill in May of 2001 of some 400 barrels of crude, Kothari knew that "reports are created" and was "aware there was a spill there, but...not...all the details." 7/31/15 (Kothari) EH:1197. She had not read the reports. 7/31/15 (Kothari) EH:1197-1198. She would not guarantee that a larger spill would not happen if the KXL pipeline was constructed. 7/31/15 (Kothari) EH:1199. Indeed, Kothari was unaware of Exponent's calculations that under the latest detection equipment plan given to the State Department, a spill of some 1,400 barrels of crude could take place within two hours before it was even detected electronically. 7/31/15 (Kothari) EH:1200-1201. See, also, 2014 FSEIS, Appendix B, Potential Releases & Pipeline Safety, Mitigation Measures Recommended, 3.0(1)(g), p. 28. As Kothari agreed, that is a "real lot of crude." 7/31/15 (Kothari) EH:1201.

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[9] Kothari may have been trying to distance herself from hard questions about TC's history of leaks, asserting that such leaks were "not within" her "scope of responsibility." 7/30/15 (Kothari) EH:1011, 1018-1019.

Gulf Coast Pipeline Weld Issues

Goulet testified that he was involved construction of the Gulf Coast segment of the Keystone pipeline system, his job being to make sure TransCanada had on-sight the "proper personnel, processes & systems." 7/27/15 (Goulet) EH:198. He was "accountable" for ensuring construction in compliance with TransCanada plans and agency regulations and conditions. 7/27/15 (Goulet) EH:198. For her part, Kothari was not involved in the detailed design of the Gulf Coast pipeline, "just coming in towards the very end." 7/30/15 (Kothari) EH:1012. Further, so-called operational problems with Gulf Coast were not within her ability to testify. 7/30/15 (Kothari) EH:1011.

Goulet was "personally aware" of two PHMSA warning letters [DRA Exhibits 69[10] and 70[11]]. "One associated with welding" and "one associated with...Coating," acknowledging there "might have even been one more than one feature that was talked about." 7/28/15 (Goulet) EH:344. Goulet denied that the PHMSA communications were "compliance letters," claiming they were mere an expression of "their opinions on some potential issues they've seen during their inspections of the pipeline." 7/28/15 (Goulet) EH:340.

Goulet did acknowledge that PHMSA inspectors had concerns over coating damage due to "weld splatter" and "concern over...welding rejection rate...in the early stages of one of the spreads that was

[10] DRA Exhibit 69 was excluded by the Commission for disclosure three weeks prior to the hearing. It is not a PHMSA warning letter but refers a Warning Letter dated 9/26/13 and the finding of additional PHMSA regulation violations for "failing to perform welding on Spread 3 in accordance with a procedure qualified according to §5 of API 1104" and "failing to properly qualify welders on Spread 3 in accordance with §6 of API 1104." PHMSA Evaluation Report of Liquid Pipeline Construction, "Keystone Gulf Coast Pipeline, Inspection Dates: 2011-2011, p. 2, 5, 6. There was also found to be a failure to properly inspect "all external pipe coating...just prior to lowering the pipe into the ditch." *Ibid*, p. 8. The document noted the 36 inch diameter of the pipeline. *Ibid*, p. 3.

[11] DRA Exhibit 70 was also excluded, for which reconsideration and admission is requested. According to the 9/10/13 PHMSA Warning Letter, it was "as a result of the inspection" by PHMSA representative, that violations of PHMSA regulations were noticed during Gulf Coast construction. "TransCanada did not assure that its Keystone Pipeline was installed in the ditch in a manner that minimizes the possibility of damage to the pipe." These included dents "that appear to be caused by secondary stresses on the pipe." Proffered DRA EX-70, p. 1. "In reviewing the submitted anomaly reports and PHMSA inspections it demonstrates that TransCanada is not following their Construction Specifications." There were also violations related to the failure of TransCanada to "follow its written specification, protecting excisting coating from damage due to welding," particularly "weld splatter." *Ibid*, p. 2.

used in that pipeline," the weld rejection rate being "between 10 and 20 percent in the early stages of the project." 7/28/15 (Goulet) EH:345. He contended there was "no issue with our quality control program" which was "why we found out we had a high incidence of weld failures." 7/28/15 (Goulet) EH:346.

Testified Goulet: "We were using qualified and approved welding procedure" and that "All" of the welders "passed a welding qualification test." The "concern PHMSA had...was...that the welders did not have the skill to be able to perform that welding in a productive manner on a continuous basis."[12] 7/28/15 (Goulet) EH:390.

"Near Miss" Near St. Louis

In pre-filed testimony [¶9], there was only one reference to a Fusion Bonded Epoxy (FBE) problem, being an instance of cathodic protection system interference in the Keystone Pipeline in Missouri, which Kothari testified was only offered to support a proposed Finding of Fact change. 7/30/15 (Kothari) EH:1024. Thus, based upon the Commission's rulings, it fails to show compliance with any condition.

The segment of the Keystone pipeline in involved in the incident was constructed by TransCanada in a pipeline corridor, some 40 feet ("so quite close") from two other metal pipelines, one transporting gas, the other crude oil. 7/30/15 (Kothari) EH:1027

The "near miss" involved discovery on the walls of buried and in-service pipe of a number of corrosion anomalies. "[W]e had corrosion identified through an in-line inspection run." 7/30/15 (Kothari) EH:1026. Although Goulet, despite the duties of his corporate position and the purported

[12] To the contrary, as excluded DRA EX-69 would resolve, PHMSA gave TransCanada "unsatisfactory" ratings for violations of PHMSA regulations requiring that: "Welding must be performed by qualified welders using qualified welding procedures;" "Welding procedures are qualified in accordance with §5 of API 1104;" "Welding procedures must be qualified by destructive testing;" "Each welding must be accorded in detail,...;" "Welders must be qualified...;" "Welders may not weld with a particular welding process unless within the proceeding 6 calendar months, the welder has - (1) engaged in welding in that process and (2) Had one weld tested and found acceptable under §9 of API 1104." (Excluded) DRA EX-69, *supra*, p. 7.

Company ethos of learning from incidents to build better pipelines, was unfamiliar with the not familiar with his Company's own Study of Root Cause and Contributing Factors to the Keystone Pipeline Corrosion Anomaly - Final Report of TransCanada 2-13-13 [7/28/15 (Goulet) EH:362-363, 374]. He further could not even generally estimate how many corrosion anomalies were discovered in the necessary digging up of sections of the hazardous pipeline. 7/28/15 (Goulet) EH:320.

Goulet said he was aware of the cause, however, being "result of interference of another pipeline that runs in parallel to that particular portion of pipeline in Missouri. And, there's also electrical transmission line, I believe, in that area as well." 7/28/15 (Goulet) EH:293-294.

Goulet attempted to absolve himself of responsibility for the "near miss" by telling this Commission that he did "not" have oversight of TransCanada operation of pipeline after closeout of construction and transfer of operations. 7/27/15 (Goulet) EH:200. Kothari testified the "root cause" of the "corrosion anomaly was related to cathodic protection interference" [7/30/15 (Kothari) EH:1026, 1029].

When asked whether TransCanada construction oversite included ensuring proper cathodic protection in place when pipeline near foreign pipeline, Goulet responded that "under the regulations, the cathodic protection system doesn't have to be operational when a pipeline goes into service" [7/27/15 (Goulet) EH:222] adding it was "actually required to be in service within 6 months...of placing the project into operation" [7/27/15 (Goulet) EH:223]. He later characterized this as "very early into the operation." 7/28/15 (Goulet) EH:310 It was never explained by any TransCanada witness nor any plan produced that this incident changed TransCanada procedures that at least anywhere near another metal pipeline or high intensity powerline, that a cathodic protection inspection would be done immediately to detect and remedy problematic cathodic interference immediately, and not wait until fortune of timing of an agency required inspection schedule prevents a "near miss."

Goulet expressed that he was "aware" that in the "past", TransCanada buried pipe with line strikes and weld splatters. "But our quality assurance process prevented that system from going into operation and we subsequently repaired those coating problems" 7/27/15 (Goulet) EH:225-226. This evidence reveals, as DRA contends, serious questions about the quality assurance process of the Keystone projects.[13]

When questioned with the pictures and contents of DRA EX-153, Goulet responded that he was "not familiar with all the details" regarding one of the corrosion anomalies which suffered a 97% wall loss.[14] 7/28/15 (Goulet) EH:362. However, he was somehow able to tell this Commission that the most problematic "feature, although it was as thick as a dime, it was also only the size of a dime in diameter." 7/28/15 (Goulet) EH:309. In other words, it was still safe. However, after being confronted with photographs of the anomalies with a ruler included in DRA Ex-153, Goulet agreed the feature shown in Figure 10 of TransCanada Study was "Maybe 1 3/4 average diameter." 7/28/15 (Goulet) EH:372. Challenging the idea of another anomaly having more than a 50% wall loss, he again had to agree that a photo of another anomaly on p.18 of TransCanada Report, Dig Site 2 had a "73.9%" wall loss 7/28/15 (Goulet) EH:375, 381.

TransCanada made limited acknowledgements of the pending impact of a corrosion anomaly(ies) of this depth and size if the last bit of wall went through the outer wall, then "obviously it would create a leak." 7/28/15 (Goulet) EH:362. Goulet said of what it claimed was an abnormal event, it "wouldn't **normally** result in a burst...even a full line pressure. The "feature would have to be...inches, if not feet longer for...burst." 7/28/15 (Goulet) EH:309, 361-362. Attempting to downplay the "near miss" that

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[13] In 2012, TransCanada whistle-blower Evan Vokes filed a complaint with the Canadian NEB. In her unrefuted testimony land owner along the proposed KXL pipeline route, individual Intervenor Bonnie Kilmurry told the Commission the NEB found: "Many of the allegations of regulatory noncompliance identified by the complainant were verified by TransCanada's internal audit'." 7/28/15 (Kilmurry) EH:496.

[14] The TransCanada report indicated that a one dig site alone, "Dig Site 1," where the peak depth of one anomaly was "96.8%," there were 6 anomalies caused by external corrosion. 7/28/15 (Goulet) EH:366, 371.

caused an emergency shutdown of the pipeline for four days [7/28/15 (Goulet) EH:374], Goulet said: "I don't know if I'd call it an incident, but it was a feature that was found during the in-line inspection" [7/28/15 (Goulet) EH:318-319]. He then suggested that further questions regarding this incident be directed at TransCanada rebuttal witness King. 7/28/15 (Goulet) EH:319, 320**.**

Kothari encouraged the Commission to not worry, since "no similar situation could exist in South Dakota because there are no shared utility corridors." 7/30/15 (Kothari) EH:1025. Goulet initially gave a similar assurance. 7/28/15 (Goulet) EH:294. However, this was not correct, as Goulet himself apparently forgot, previously acknowledging being "aware" the proposed KXL route crosses a metal pipeline of the major water transportation system, the "Mni Wiconi Project." 7/27/15 (Goulet) EH:223-224; 7/29/15 (Schmidt) EH:633.

Post-Construction Failure to Reclaim Land

Sue Sibson testified on behalf of DRA. Her testimony shows that TransCanada cannot meet its requirements under the Amended Conditions to reclaim land. The Sibsons raise grain and soybeans, and have feeder cattle on a farm in Miner County. [EH: 1949] Native grasses important to how they make a living. The base Keystone pipeline crosses property. [EH: 1950]. The 2009 construction of the base Keystone tore up their land and it is still not fully reclaimed. [EH: 1956-58]. The initial reclamation work was shoddy, as contractors rushed and did not reseed properly. [EH: 1958-59]. In the summer of 2010, mainly noxious weeds and no grasses were growing on the pipeline easement area. [EH: 1959]. Ms. Sibson testified extensively about TransCanada's failures to comply with land reclamation requirements and notes that the same issues affect her neighbors where the pipeline crosses their lands. [EH: 1994]. After six years, the Sibson's property over the easement area has no native grasses. Only weeds and unusable grasses. [EH 2010-2011]. TransCanada's failure to comply with reclamation requirements is indicative of its inability to comply with the Amended Conditions.

Pattern of Regulatory Non-Compliance

Finally, the Commission heard from former TransCanada employee Evan Vokes. We will not repeat his extensive testimony about welding technology and pipeline construction. However, the crucial components of Mr. Vokes's testimony were that on the base Keystone he, worked on inspecting welds. After uncovered problems, he reported to TransCanada management that between 1200-1300 welds had been inadequately inspected. Management reproached Vokes for creating "trouble" and wanted Vokes to ignore problems. [EH: 1619-24]. Critically, Vokes testified that he was asked "many times" by TransCanada management to ignore regulatory violations. [EH: 1627].

CONCLUSION

TransCanada failed to present substantial evidence that it could comply with or even continue to comply with the Amended Conditions of the 2010 Permit. In fact, such an incomplete record was presented that even an attempt at certification is premature. TransCanada has presented its case to the Commission before even being able to begin meeting its burden.

The record is remarkable for what it does not reveal. What is missing from the overall record is substantial evidence of compliance by TransCanada. What is on the record from TransCanada's own witnesses is a lack of willingness to take responsibility, a tremendous amount of buck-passing, and the consistent use of the phrase "that's not my responsibility" and "that's not in my scope."

TransCanada has failed to meet its burden. The Commission should deny its petition for certification.

Respectfully submitted,

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