

effect be dismissed. These positions cannot be reconciled and demonstrate the opportunistic nature of both motions.

2. The joint motion fails to address the documents that were provided in response to the specific discovery request that is the subject of the Affidavit of James White. The document request was number 13 from Dakota Rural Action. Keystone responded:

The Design Basis Memorandum for the Project, dated October 2008, is included in the non-confidential FTP site. It is the initial design guidance for the project and mandates compliance with codes and standards in Section 4. The IFC (Issued For Construction) drawings which provide compliance direction on a site-specific basis are included in the confidential FTP site. The IFC drawings are the result of thousands of hours of engineering, surveys, and design, at a cost of millions of dollars, and would substantially injure Keystone if publicly disclosed and made available to competitors. Keystone's Special Permit Application is included in the non-confidential FTP site. Keystone has not submitted any other waiver applications. The correspondence and specific documents related to the Department of State, PHMSA and EPA Independent Engineering Design review are included in the non-confidential FTP site. The correspondence and specific documents related to compliance with the PHMSA special conditions are included in the non-confidential FTP site. Only select conditions were the subject of correspondence based on timing set forth in the conditions relative to work Keystone was undertaking at the time (special condition 1-9 (pipe), 14 (HCAs), 18 (welding procedure development), 58 (QC) and 59 (TPIC)). The correspondence and specific documents related to the development of the special conditions are included in the non-confidential FTP site.

(Taylor Aff. ¶ 2, Ex. A.) Thus, Keystone produced a large volume of documents in response to this request. (*Id.*) The joint motion does not argue that the documents were not responsive.

3. The joint motion contends that Keystone violated the Commission's orders because it did not undertake an e-mail search of at least 1,000 persons over a seven-year period to find communications with PHMSA, the Department of State, and any other federal agency related to the project. The Intervenor's do not dispute that compliance was not reasonably possible. In fact, when counsel discussed issues related to Keystone's document production with counsel for some of the Intervenor's on April 20, opposing counsel acknowledged the factual basis for Mr. White's affidavit, and in response to an inquiry from counsel for Keystone, said that they would be willing to consider narrowing the request. (Taylor Aff. ¶ 3.) That has not

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happened. (*Id.*) Thus, when the Intervenors argue that Keystone had an “affirmative duty to make a reasonable inquiry (and) respond in a matter which was both complete and correct,” (Joint Motion Br. at 2 (citing *Hersberger v. Ethicon Endo-Surgery, Inc.*, 277 F.R.D. 299, 305 (S.D. W.Va. 2011)), Keystone does not disagree. It made a reasonable inquiry and produced a substantial volume of responsive documents. The Intervenors do not argue what is missing or how it might be relevant to the proceeding.

4. The suggestion that Keystone had several weeks to comply, not several days, and could have completed an e-mail search within that time is without merit. (Joint Motion Br. at 1-2.) First, Keystone reasonably relied on its objection to the discovery request until the motion to compel was granted. Second, as of March 26, 2015, the date mentioned in the brief in support of the joint motion, Dakota Rural Action had not filed a motion to compel discovery. Keystone’s objection was first stated on January 23, 2015, and not challenged by DRA until its motion to compel was filed on April 7. Based on this argument, Keystone would have had 10 days to conduct the search, not “several weeks.” Third, as demonstrated by White’s affidavit, even several weeks would not have been sufficient time for Keystone to comply with the request for a general e-mail search of 1,000-plus persons over seven years for all communications with PHMSA, the Department of State, or any other federal agency related to the project.

5. The argument that Keystone’s document production was made in a “haphazard” way is without basis. As indicated in the joint motion for a continuance, Keystone produced 42.54 GB of data, consisting of 6,214 total files. Keystone organized the document production with respect to particular document requests, and produced the documents through an FTP site to which counsel for the parties entitled to the discovery were given access. In opening the site, responsive documents were identified by the name of the requesting party and the number of

either the interrogatory or the document request. (Taylor Aff. ¶ 4.) The documents were organized and produced with specific reference to the request to which each document was responsive.

6. The argument that Keystone’s method of production violated SDCL § 15-6-34(b) is contrary to the plain language of the statute, which provides that the producing party “shall produce them as they are kept in the usual course of business or shall organize and label them to correspond with the categories in the request.” Keystone did both. It keeps the documents in the ordinary course of business in electronic format, and produced them by organizing and labeling them to correspond with the specific requests. Keystone further notes that the Standing Rock Sioux Tribe initially demanded that Keystone produce paper copies of the documents at its Tribal headquarters at Fort Yates, North Dakota, by 4:30 p.m. on April 17. (Taylor Aff. ¶ 5.) Keystone reasonably responded that South Dakota’s rules of civil procedure did not require that. (*Id.*)

7. The Intervenors argue that the ultimate sanctions they seek are appropriate under a standard reserving such sanctions for a failure to comply due to willfulness, bad faith, or fault. (Joint Motion Br. at 3 (citing *Haberer v. Radio Shack*, 555 N.W.2d 606, 611 (S.D. 1996)). The Intervenors also compare Keystone’s conduct to that of a number of the Intervenors who entirely failed to respond, at all, in any way, to written discovery served by Keystone. (Joint Motion Br. at 4.) Lest the Commission doubt Keystone’s good faith and its compliance with discovery in this case, attached to counsel’s affidavit in connection with this motion are all of Keystone’s discovery pleadings in response to the first and second rounds of discovery, and its supplemental responses. (Taylor Aff. ¶ 6.) Keystone respectfully submits that its compliance with the Commission’s order was substantial, made in good faith, sufficient under South Dakota’s rules of civil procedure, and not prejudicial to the Intervenors.

Conclusion

The joint motion is yet one more effort to forestall or delay the evidentiary hearing on the merits of Keystone’s petition according to the terms of the Commission’s procedural order.

Keystone respectfully requests that the motion be denied.

Dated this 27th day of April, 2015.

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CERTIFICATE OF SERVICE

I hereby certify that on the 27th day of April, 2015, I sent by United States first-class mail, postage prepaid, or e-mail transmission, a true and correct copy of Applicant’s Opposition to Joint Motion to Exclude Evidence and Testimony, to the following:

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Code and KS Base; Final PHMSA Recommended Conditions for Keystone XL State Department Presidential Permit; PHMSA Special Condition 14a High Consequence Area Design Philosophy; L-56 RMS Certified Material Test Report; Letter to PHMSA Central and Western Regions; Letter to Barrett Central Region KXL PHMSA Conditions FEIS Appendix U 14; e-mails regarding Little Rock pipe mill visit; e-mails regarding meeting with PHMSA; PHMSA Keystone XL Conditions; PHMSA Special Condition Comparison Matrix; Response to Battelle Review 8-13-13; Response to Exponent RA Review 8-15-13; RMS Systems Qualifications Weld Tracking Matrix; e-mails regarding Weld Procedure Qualifications RMS.

3. On April 20, 2015, at 4:00 p.m. central time, I participated in a telephone conference with counsel for some of the Intervenor making the motion to exclude. We discussed a number of issues related to Keystone's document production. Mr. Martinez and Mr. Capossela addressed the issues surrounding the Affidavit of James White. They acknowledged the obvious difficulties with the specific request to which the affidavit was addressed, but stated that the Commission had ordered compliance. I asked whether they would be willing to consider narrowing that and any other requests about which they had concerns. They said they would. I followed up the conference with an e-mail dated April 21, 2015, a copy of which is attached as Exhibit B. I did not receive in response any suggestions from opposing counsel to narrow any of the requests.

4. The manner of Keystone's document production was discussed at length by Keystone, and given the volume of documents to be produced and the fact that some of them would be subject to a Protective Order to be issued by the Commission, we decided that the best method of production, for Keystone and the Intervenor, was to produce electronic copies of the documents on two FTP sites to which counsel would be provided access. One site would contain

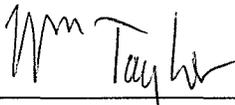
non-confidential documents, and the other confidential documents. We organized the documents contained in each site by the Intervenor making the discovery request, and the number of each interrogatory or document request. Thus, in opening the site, responsive documents were identified by the name of the requesting party and the number of either the interrogatory or the document request. Due to complaints by counsel for some of the Intervenors about the FTP sites, Keystone moved all of the documents to HighTail sites on April 20-21 and provided counsel with access to these sites. The HighTail site opened in a manner similar to the FTP site. A screen shot for the HighTail site is attached as Exhibit C. I have not received any concerns or objections from opposing counsel about these sites.

5. Keystone received from the Standing Rock Sioux Tribe a demand that paper copies of the documents be produced at its Tribal headquarters in Fort Yates, North Dakota, by 4:30 p.m. on April 17, 2015. A copy of the demand is attached as Exhibit D. In my experience, it is not uncommon for production of documents in South Dakota to be made in electronic format. It is also common for documents to be made available for inspection at a location where the documents are maintained, which is all that is required by SDCL § 15-6-34(b). In consultation with Keystone, we determined that the volume of document production was too large for it to be feasible to provide paper copies in the time allowed and that there was no central repository where paper copies of the documents were kept. We also determined that the use of an FTP site was the fastest way that we could provide electronic copies of the documents to the requesting parties by April 17, 2015, while still protecting the confidential nature of some of the documents.

6. Keystone offered seven-day-a-week IT assistance to the Intervenor to assist in site access, downloading, and any other technical issue. Several Intervenor took advantage of the service.

7. Keystone has engaged in substantial, good-faith discovery in this proceeding. Attached as Exhibit E are copies of all of Keystone's responses to the Intervenor's first round of discovery requests; Keystone's responses to the Intervenor's second round of discovery requests; and all of Keystone's supplemental responses. All of Keystone's responses have been made in an effort to comply with the South Dakota rules of civil procedure and the Commission's orders in this proceeding.

Dated this 27th day of April, 2015.



William Taylor

Subscribed and sworn to before me

this 27th day of April, 2015.



Notary Public – South Dakota

My commission expires:

**My Commission Expires
Sept. 13, 2017**

CERTIFICATE OF SERVICE

I hereby certify that on the 27th day of April, 2015, I sent by United States first-class mail, postage prepaid, or e-mail transmission, a true and correct copy of Affidavit of William Taylor Regarding Keystone's Document Production, to the following:

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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

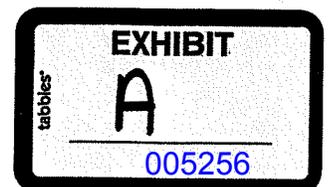
IN THE MATTER OF THE APPLICATION) BY TRANSCANADA KEYSTONE) PIPELINE, LP FOR A PERMIT UNDER THE) SOUTH DAKOTA ENERGY CONVERSION) AND TRANSMISSION FACILITIES ACT TO) CONSTRUCT THE KEYSTONE XL) PROJECT)	HP14-001 KEYSTONE'S SUPPLEMENTAL RESPONSES TO DAKOTA RURAL ACTION'S FIRST REQUEST FOR PRODUCTION OF DOCUMENTS
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Applicant TransCanada makes the following supplemental responses to interrogatories pursuant to SDCL § 15-6-33, and responses to requests for production of documents pursuant to SDCL § 15-6-34(a). These responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure. The supplemental responses are made in response to the Commission's order on Dakota Rural Action's motion to compel discovery, and are made in addition to the responses and objections previously stated.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Dakota Rural Action's First Set of Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. *See* ARSD 20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

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REQUEST FOR PRODUCTION OF DOCUMENTS

1. All documents identified or referred to in your Answers to DRA's First Interrogatories to you. *[Applicable Finding or Condition No.: all]*

ANSWER: See documents identified in the supplemental interrogatory responses.

9. All documents concerning the decision to use API 5L X70M high-strength steel for the Project in lieu of API 5L X80M high-strength steel. *[Applicable Finding or Condition No.: Finding 18]*

ANSWER: Pipeline design is addressed in Section 2.1.7.1 of the FSEIS. A copy is included in the non-confidential FTP site. TransCanada's Material Grade Selection Directive related to XM70 steel is also included in the confidential FTP site. TransCanada's engineering standards are proprietary, have substantial commercial value, and would place Keystone at a competitive disadvantage if publicly disclosed and made available to competitors.

10. All documents concerning the decision to use fusion-bonded epoxy (FBE) coating on the proposed pipeline, including but not limited to, contracts or other agreements with the manufacturer of the FBE product, and any communications between TransCanada and such manufacturer. *[Applicable Finding or Condition No.: Finding 18]*

ANSWER: Keystone has no communications with the manufacturer of the FBE coating because the FBE specification is given to the pipe mills. The pipe mill is responsible for coating application. A copy of TransCanada's Underground Coating Directive, which relates to selection of coating materials for new construction pipelines, is included in the confidential FTP site. TransCanada's directive is proprietary, has substantial commercial value, and would place Keystone at a competitive disadvantage if publicly disclosed and made available to competitors.

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12. All documents showing location of power lines for pumping stations proposed for the Project, the location of proposed pumping stations and mainline valves for the Project in South Dakota, and including, but not limited to all communications between TransCanada's or its Affiliates' staff, consultants, advisors, or other parties concerning location and operation of pumping stations, mainline valves, and the proposed conversion of valves to remote control operations. *[Applicable Finding or Condition No.: Finding 20]*

ANSWER: Powerline maps submitted to the Department of State in September 2012 are included in the non-confidential FTP site. The Management of Change documents for valve sites and pump stations are included in the non-confidential FTP site.

13. All documents concerning compliance by TransCanada with U.S. Department of Transportation, Pipeline Hazardous Materials and Safety Administration ("PHMSA") regulations set forth at 49 CFR Part 195, and the special conditions developed by PHMSA and set forth in Appendix Z to the Department of State ("DOS") January 2014 Final Supplemental Environmental Impact Statement ("Final SEIS"), including but not limited to any and all communications between TransCanada's or its Affiliates' staff, consultants, advisors, or other parties, and PHMSA, DOS, or other federal agencies concerning regulatory compliance, approvals, or waivers of applicable regulations with respect to the Project. *[Applicable Finding or Condition No.: Finding 22]*

ANSWER: The Design Basis Memorandum for the Project, dated October 2008, is included in the non-confidential FTP site. It is the initial design guidance for the project and mandates compliance with codes and standards in Section 4. The IFC (Issued For Construction) drawings which provide compliance direction on a site-specific basis are included in the

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confidential FTP site. The IFC drawings are the result of thousands of hours of engineering, surveys, and design, at a cost of millions of dollars, and would substantially injure Keystone if publicly disclosed and made available to competitors. Keystone's Special Permit Application is included in the non-confidential FTP site. Keystone has not submitted any other waiver applications. The correspondence and specific documents related to the Department of State, PHMSA and EPA Independent Engineering Design review are included in the non-confidential FTP site. The correspondence and specific documents related to compliance with the PHMSA special conditions are included in the non-confidential FTP site. Only select conditions were the subject of correspondence based on timing set forth in the conditions relative to work Keystone was undertaking at the time (special condition 1-9 (pipe), 14 (HCAs), 18 (welding procedure development), 58 (QC) and 59 (TPIC)). The correspondence and specific documents related to the development of the special conditions are included in the non-confidential FTP site.

26. All documents containing information concerning the failure of FBE coating referenced in the update to Finding 68. *[Applicable Finding or Condition No.: Finding 68]*

ANSWER: A root cause analysis of the incident is included in the non-confidential FTP site.

28. All documents containing information regarding TransCanada's (or its Affiliates') decision to use horizontal directional drilling to cross waterways, including but not limited to all documents discussing or describing the decision-making process engaged in to determine which waterways would be crossed using horizontal directional drilling. *[Applicable Finding or Condition No.: Finding 83]*

ANSWER: Section 2.1.9.2 of the FSEIS addresses the criteria for the use of HDD. A copy is included in the non-confidential FTP site. Site-specific drawings for HDD locations are included in the non-confidential FTP site.

29. All documents, including but not limited to forecasts and projections of tax revenue accruing to the State of South Dakota should construction and operation of the Project commence. *[Applicable Finding or Condition No.: Finding 107]*

ANSWER: Keystone has confirmed that it has no responsive documents.

30. All documents evidencing TransCanada's or its Affiliates' compliance efforts with applicable laws and regulations related to construction and operation of the Project. *[Applicable Finding or Condition No.: Condition 1]*

ANSWER: Keystone has not started construction or operation of the Keystone XL Pipeline. The internal corporate compliance template to be completed for submission to PHMSA is included in the non-confidential FTP site. Additional corporate policies addressing TransCanada's Code of Business Ethics, Compliance Organization, Ethics and Compliance Organization, and Corporate Compliance Charter are included in the non-confidential FTP site.

31. All documents concerning TransCanada's or its Affiliates' efforts to obtain and comply with applicable permitting referenced in Condition 2, including but not limited to copies of any permits obtained. *[Applicable Finding or Condition No.: Condition 2]*

ANSWER: The Presidential Permit Application, the draft U.S. Army Corps of Engineers pre-construction notification, and all non-environmental permits obtained in South Dakota are included in the non-confidential FTP site.

33. All documents concerning or discussing proposed adjustments or deviations in the route of the Project, including but not limited to copies of notices to affected land owners.

[Applicable Finding or Condition No.: Condition 6]

ANSWER: In addition to the route variation maps previously produced, Management of Change documentation and landowner contact reports related to the route changes are included in the non-confidential FTP site.

34. All documents concerning the appointment of a public liaison officer by TransCanada for the Project, and all documents containing information regarding communications between the public liaison officer and landowners affected by the Project.

[Applicable Finding or Condition No.: Condition 7]

ANSWER: Copies of the reports that Sarah Metcalf has submitted to the Commission are included in the non-confidential FTP site. Copies of e-mails between Metcalf and Keystone XL landowners are also included in the non-confidential FTP site.

37. All documents containing information regarding consultations, including but not limited to communications, with Natural Resources Conservation Services ("NRCS") regarding development of construction/reclamation units ("Con/Rec Units"). *[Applicable Finding or Condition No.: Condition 15]*

ANSWER: In addition to the documents previously produced, included in the non-confidential FTP site are copies of contact reports and correspondence related to development of the Con/Rec Units.

38. All Con/Rec Units developed in connection with the Project, including but not limited to drafts and supporting studies or documents. *[Applicable Finding or Condition No.: Condition 15]*

ANSWER: The 2013 Construction/Reclamation Unit Specifications are found in Appendix R of the FSEIS. Copies are included in the non-confidential FTP site.

42. All documents containing information regarding consultations between TransCanada (or its Affiliates) and South Dakota Game, Fish and Parks. *[Applicable Finding or Condition No.: Condition 20(c)]*

ANSWER: The following is a summary of Keystone consultation history with SD Game, Fish, and Parks as documented in the USFWS issued May 2013 Biological Opinion (Appendix H of the of the Department of State FSEIS (2014)).

- June 10, 2008: Keystone met with staff from USFWS and South Dakota Department of Game, Fish, and Parks (SDGFP), at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to wildlife, special status species, and sensitive habitat that could potentially occur in the Project area. The goal of the meeting was to gather input on agency recommendations based on the information sent to them in April 2008 for species occurrence, habitat assessments, and future field surveys. Keystone incorporated comments from the meeting into survey protocols and BMPs for future agency verification.
- January/February 2009: Keystone initiated section 7 consultation with the USFWS. Keystone continued discussions with BLM, and state wildlife agency offices for South Dakota that included state-specific special status species survey protocols and BMPs for the species

identified as potentially occurring during the 2008 meetings. A summary of the findings from the 2008 biological field surveys was included in the discussions.

- January 27, 2009: Keystone met with staff from the USFWS and SDGFP at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to special status species surveys. The goals of the meeting were to verify Keystone's survey approach, BMPs, discuss required field surveys, and review the information that was sent to the USFWS in the January/February 2009, informal consultation package. The USFWS and SDGFP provided additional recommendations to Keystone's sensitive species mitigation approach to be updated prior to final agency concurrence.
- October 23, 2012: A meeting was held between the USFWS, Department, SDGFP, BLM, and Keystone regarding the greater sage-grouse and a compensatory mitigation plan for the species in South Dakota. Discussions included a management plan and avoidance, minimization, and mitigation strategies.

Copies of contact reports and correspondence related to this process of consultation are included in the non-confidential FTP site.

44. All documents describing or containing information regarding TransCanada's or its Affiliates' efforts to comply with conditions regarding construction of the Project near wetlands, water bodies, and riparian areas, such documents including but not limited to compliance plans, construction plans, mitigation plans, and communications with any regulatory agency in such regard. *[Applicable Finding or Condition No.: Condition 22]*

ANSWER: Copies of Keystone's CMR Plan (Rev 4), Appendix R to the FSEIS, and the draft Preconstruction Notices to the U.S. Army Corps of Engineers are included in the non-confidential FTP site.

53. All documents containing information regarding TransCanada's or its Affiliates' efforts to comply with protection and mitigation requirements of the US Fish and Wildlife Service ("USFWS") and SDGFP with respect to any endangered species. *[Applicable Finding or Condition No.: Condition 41]*

ANSWER: The Biological Assessment and Biological Opinion are included in the non-confidential FTP site. Contact reports with USFW regarding endangered species are also included in the non-confidential FTP site. The Biological Survey Reports are included in the confidential FTP site.

55. All documents referencing or containing information concerning cultural or paleontological resources along the Project route, including but not limited to all documents identifying cultural and paleontological resources, consultations and communications with the Bureau of Land Management and Museum of Geology at the South Dakota School of Mines and Technology. *[Applicable Finding or Condition No.: Condition 44]*

ANSWER: There were no consultations with BLM (there are no BLM lands along the route in South Dakota) or the Museum of Geology at the South Dakota School of Mines and Technology for the Project route in South Dakota. The cultural survey reports are included in the confidential FTP site, as are the Paleontological Monitoring Plan and its appendices. The Programmatic Agreement (Appendix E to the FSEIS) is included in the non-confidential FTP site.

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56. The incident reports for each and every spill or leak related to a pipeline operated by TransCanada and its Affiliates since January 1, 2010. [*Applicable Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103; Conditions 32-38*]

ANSWER: The incident reports are included in the non-confidential FTP site.

Dated this 17th day of April, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

By /s/ William Taylor

William Taylor

James E. Moore

Post Office Box 5027

300 South Phillips Avenue, Suite 300

Sioux Falls, SD 57117-5027

Phone: (605) 336-3890

Fax: (605) 339-3357

Email: Bill.Taylor@woodsfuller.com

James.Moore@woodsfuller.com

Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 17th day of April, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Dakota Rural Action's First Request for Production of Documents, to the following:

Bruce Ellison
518 6th Street #6
Rapid City, SD 57701
belli4law@aol.com
Attorney for Dakota Rural Action

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BOLD Nebraska
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Minneapolis, MN 55407
paul@paulblackburn.net

Matthew Rappold
Rappold Law Office
on behalf of Rosebud Sioux Tribe
PO Box 873
Rapid City, SD 57709
matt.rappold01@gmail.com

Robin S. Martinez
Martinez Madrigal & Machicao, LLC
616 West 26th Street
Kansas City, MO 64108
robin.martinez@martinezlzaw.net
Attorney for Dakota Rural Action
Kristen Edwards
Staff Attorney
South Dakota Public Utilities Commission
500 E. Capitol Avenue
Pierre, SD 57501
kristen.edwards@state.sd.us

/s/ William Taylor
One of the attorneys for TransCanada

Melissa Wipf

From: William Taylor
Sent: Tuesday, April 21, 2015 10:55 AM
To: robin.martinez (robin.martinez@martinezlaw.net); belli4law@aol.com; Paul Blackburn (paul@paulblackburn.net); matthew rappold (matt.rappold01@gmail.com); Thomasina Real Bird (TRealBird@ndnlaw.com); Peter Capossela (pcapossela@nu-world.com); kristen.edwards@state.sd.us
Subject: Yesterday's conference call

We discussed the matters raised in yesterday's conference call with Keystone. Our response to the matters discussed follows.

1. The non-protected materials have been posted to a Hightail site, which is up and running. By separate email I'll send connecting information and passwords. The protected materials will be posted to another Hightail site today, which should be available by late afternoon. In the meantime, the FTP sites continue in operation.
2. We look forward to DRA and Standing Rock reviewing their interrogatory/document requests and narrowing the scope of the broader inquiries.
3. As you peruse the documents, please let us know of any specific documents you think should not be denominated confidential and the reasons why, and we will review and consider your requests.
4. Keystone agrees that experts may review the confidential documents, provided that each agrees to be bound by the terms of the extant order(s) to the extent they govern document management, confidentiality, security, use and return of the documents. Keystone requires that you identify the experts to whom the documents will be shown in advance, that experts make their commitment in writing, and Keystone receive a signed copy of the commitment.
5. Keystone believes it is appropriate for lawyers who have permission to see the confidential documents to show them to co-counsel within their firms, provided co-counsel agree to be bound by the terms of the order(s). Presumably they are ethically bound to the terms of the order(s) anyway.
6. Keystone will extend points four and five above to Ms. Spotted Eagle, with respect to the cultural surveys.
7. Keystone has separately addressed Standing Rock's request with respect to its HPO, through Mr. Caposella.
8. Ms. Edwards suggestion that the Commission enter an order memorializing our agreement to postpone witness/exhibit lists until the 28th is acceptable to Keystone, and I understand, acceptable to all other parties to yesterday's call.
9. Keystone will not agree to extend the date for hearing, or other milestone dates in the run-up to the hearing.

William Taylor





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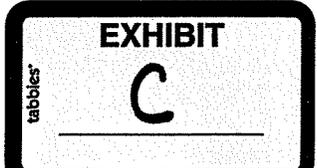
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1919 S. Bascom Avenue
Campbell, CA 95008
United States of America

From: Peter Capossela [pcapossela@nu-world.com]
Sent: Wednesday, April 15, 2015 12:06 PM
To: William Taylor; James E. Moore
Subject: TransCanada discovery

Gentlemen,

I write to thank you in advance for your prospective compliance with the PUC's order denying part and granting part of the Standing Rock Sioux Tribe discovery motion. I enclose for your convenience the discovery requests originally served on January 6,

2015. The PUC order yesterday requires TransCanada to fully answer interrogatories 15-18 and requests for production 3-9 and 11-13. Compliance will involve delivery of the documents to the Standing Rock Sioux Tribe Administration Building in Fort Yates,

N.D. by 4:30 pm central time on April 17.

During our phone conference on February 24, I explained that I have been involved in document-intensive complex federal litigation, and understand that the production of documents can involve semi-trailers worth of materials. Bill estimated that TransCanada

has 4 or 5 semi-trailers worth of documents relating to the Tribe's requests. I understand that was an off-hand remark, but take you at your word, and the Tribe is planning for the delivery of a very high volume of documents by Friday afternoon. If for

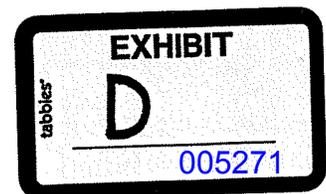
any reason your understanding of TransCanada's obligations under the PUC order differs from the above, I appreciate your informing me of this. With the time constraints we are operating under, there is no time for games.

I appreciate your delivering the documents as they are kept in the ordinary course of business. The Tribe will promptly inspect, copy and return all documents, per S.D. Rule 34. I am available to discuss this matter as may be necessary. Thank you.

Peter Capossela

--

Peter Capossela
Attorney at Law
Post Office Box 10643
Eugene, Oregon 97440
(541) 505-4883



20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

1. State the name, current address, and telephone number of the person answering these interrogatories.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. State the name, current address, and telephone number of any person, other than legal counsel, who Keystone talked with about answering these interrogatories, who assisted Keystone in answering these interrogatories, or who provided information that Keystone relied on in answering these interrogatories.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

3. Identify each witness that you will or may call as a fact witness or expert witness in any evidentiary hearing or trial of this matter. For each individual, identify and provide the name, business address, and business telephone and the name of his or her employer and/or other organization(s) with which he or she is associated in any professional capacity; the substance of the facts to which he or she is expected to testify and the substance of the opinions to which he or she is expected to testify; the individual's profession or occupation, educational background, specialized training, and employment history relevant to the proposed testimony; and the individual's previous publications within the preceding 10 years; and all other cases or proceedings in which the witness has testified as an expert within the preceding four years.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; same; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility

(5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441; Environmental Issues; CMR Plan, Con/Rec Units, HDD's

(6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

4. Identify any other names that Keystone conducts business under, in the United States and Canada.

ANSWER: None.

5. Pursuant to Condition Two of the Commission's Amended Final Decision and Order, has Keystone received any communications from any regulatory body or agency that may have jurisdiction over the project which alleges that Keystone has failed to comply with any applicable permits, law, or regulation?

ANSWER: No.

6. Pursuant to Condition Two, has Keystone a permit by any regulatory body or agency that may have jurisdiction over the construction, maintenance, or operation of any pipeline located in the United States or Canada ever been denied, revoked, or suspended by the regulatory body or agency?

ANSWER: No.

7. Pursuant to Condition Two, has Keystone been given notice by any regulatory body or agency that may have jurisdiction over the construction, maintenance or operation of any pipeline located in the United States or Canada alleging that Keystone

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has failed to comply with any applicable permits for the construction, operation or maintenance of any pipeline located in the United States?

ANSWER: No.

8. Pursuant to Condition One, please identify all required permits that Keystone has applied for within the State of South Dakota regarding the use of public water for construction, testing, drilling, or temporary discharges to waters of the state and temporary discharges of water from construction dewatering and hydrostatic testing.

ANSWER: Keystone has submitted a Notice and Intent and Certificate of Application Form to Receive Coverage Under the General Permit for Temporary Discharges and a Temporary Water Use Permit. Other permits, as required, will be filed closer to the time period of construction.

9. Pursuant to Condition Six, identify the most recent depiction of the Project route and facility locations as they currently exist as compared to the information provided in Exhibit TC-14.

ANSWER: Maps showing changes to the route since the permit was granted are attached as Keystone 0470-0583.

10. Pursuant to Condition Six, identify the dates, addresses, phone numbers, emails, and names of person(s) responsible for conducting surveys, addressing property specific issues and civil survey information.

OBJECTION AND RESPONSE: The identity of persons conducting civil surveys is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, American Burying Beetle Habitat Assessment was conducted by W. Wyatt Hoback, Department of Biology, University of Nebraska at Kearney; Biological Surveys (i.e., habitat, wetland delineations) were conducted by AECOM (Scot Patti was the principal investigator) and SCI (Scott Billing was the principal investigator); Phase I ESA Surveys were conducted by AECOM (Brian Bass was the principal investigator); Biological Surveys (i.e., threatened and endangered species, noxious weeds, reclamation) were conducted by Westech (John Beaver was the principal investigator); Cultural resources surveys were conducted by SWCA Environmental Consultants (principal investigator was Scott Phillips); the paleontological surveys were conducted by SWCA Environmental Consultants (principal investigator was Paul Murphey).

11. Pursuant to Condition Six, does Keystone recognize the Yankton Sioux Tribe, a federally recognized sovereign Indian Nation, as a "local governmental unit?"

ANSWER: Because the Project does not cross Tribal land and because the Yankton Sioux Tribe is a sovereign nation, Keystone does not consider the Tribe to be a "local governmental unit" as referenced in Condition 6.

12. Condition Seven requires Keystone to appoint a public liaison officer. Accordingly, has Keystone:

1. Appointed such public liaison officer, and if so please provide such officer's:

- a. Name;
- b. Address;
- c. Phone number; and
- d. Email address.

2. Directed such public liaison officer to contact and or consult with the Yankton Sioux Tribe?

ANSWER:

1.a. Sarah Metcalf's appointment was approved by the PUC by order dated June 2, 2010, in an order which is a matter of public record.

1.b. PO Box 904, Aberdeen, SD 57402.

1.c. 1-888-375-1370

1.d. smetcalf12@gmail.com

2. No. The project does not cross Yankton Sioux lands and Keystone does not consider the Tribe to be a "local government" in the vicinity of the project as stated in Amended Permit Condition 7.

13. Pursuant to Condition Thirteen, identify and provide the phone number, address, and email address of every each environmental inspector that Keystone has incorporated into the CMR.

OBJECTION AND ANSWER: The identity of environmental inspectors is not relevant or reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, no Environmental Inspectors have been identified or hired, because the construction of the Project has not yet started.

14. Pursuant to Condition Thirty-Seven, has Keystone ever been found non-compliant with any other permits, from any state regarding the Keystone XL Project?

ANSWER: No.

15. Pursuant to Conditions One and Two, have any contractors hired by Keystone to construct any pipeline owned or operated by Keystone or any of its affiliates received any communication from any agency or regulatory body having jurisdiction over each pipeline regarding alleged safety concerns or safety violations regarding the construction, maintenance or operation of any pipeline in the United States.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). It also seeks information that is not in Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

16. Pursuant to Conditions One and Two, have any contractors hired by Keystone to construct any pipeline owned or operated by Keystone or any of its affiliates received any communication from any agency or regulatory body having jurisdiction over each pipeline regarding alleged safety concerns or safety violations regarding the construction, maintenance or operation of any pipeline in Canada.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). It also seeks information that is not in Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

17. Pursuant to Condition Forty-Four, what steps has Keystone or any of its affiliates taken to ensure that the cultural and historic resources of the Yankton Sioux Tribe are protected?

OBJECTION AND ANSWER: Condition 44 refers to paleontological studies. Notwithstanding the objection, cultural resources survey reports are listed in Section 3.11 of the Department of State FSEIS (2014), with results of the SD surveys detailed in Table 3.11-3. Any further discussions regarding these surveys would be addressed through the course of government to government consultation with the DOS when the Yankton Sioux were afforded the opportunity to not only review those studies but also participate in the surveys themselves.

18. Pursuant to Condition Forty-Four, how many times has Keystone contacted the Yankton Sioux Tribe?

1. If Keystone did make such contact please provide the following:
 - a. Name(s) of the person(s) notified;
 - b. Title of the person(s) notified;
 - c. The physical address of the person(s) notified;
 - d. The telephone number(s) of the person(s) notified; and
 - e. The means by which Keystone made notification, i.e. written,

oral, electronic, etc.;

ANSWER: A precise record of the number of contacts with the Yankton Sioux Tribe, either through the body politic or through tribal members does not exist. Typically contacts came through the TransCanada Tribal Liaison staff. See Keystone documents 1304-1340 that document some of the contacts. With respect to Condition 44, there may not have been any paleontological specific contacts.

19. Pursuant to Condition Forty-Four, has Keystone made any new cultural and/or historic surveys along the route of the Project since its original permit was granted?

OBJECTION AND ANSWER: Condition 44 refers to paleontological studies, not cultural studies. However, all cultural resources survey reports are listed in Section

3.11 of the Department of State FSEIS (2014), with results of the SD surveys detailed in Table 3.11-3.

20. According to Keystone's original application, Keystone began cultural and historic surveys in May 2008 and at that time it had found several pre-historic stone circles were uncovered. Please provide a detailed description of these sites, including location.

ANSWER: These sites are addressed during the course of government to government consultation with the DOS. Site locations are confidential and cannot be disclosed outside of the consultation process.

21. Pursuant to Condition Forty-Four, please provide the name, address, phone number, and email of all persons involved in any cultural or historic survey conducted by Keystone. In addition, please provide a detailed description of all pertinent professional training that qualifies the surveyor as a professional who meets the standards of the Secretary of the Interior's Historic Preservation Professional Qualification Standards (48 FR 44716, September 29, 1983).

OBJECTION AND ANSWER: The identity of the surveyors is not relevant or reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, SWCA Environmental Consultants performed the survey work. The cultural resources principal investigator was Scott Phillips; the paleontological principal

investigator was Paul Murphey. Both individuals meet the SOI standards for their particular field.

22. Pursuant to Condition Forty-Four, has Keystone made any attempt to contact the Yankton Sioux Tribe Business and Claims Committee, its officers, or its Tribal Historic Preservation Office? If so, please provide the following:

- a. Name(s) of the person(s) contacted;
- b. Title of the person(s) contacted;
- c. The physical address of the person(s) contacted;
- d. The telephone number(s) of the person(s) contacted; and
- e. The means by which Keystone made contact, i.e. written, oral,

electronic, etc.;

ANSWER: *See* response to interrogatory no. 18 above.

23. Pursuant to Condition Forty-Four, provide a detailed description of cultural and historic training that Keystone provides to its construction personnel.

ANSWER: Training material developed by Keystone will be finalized and available for distribution to the construction personnel after the inventory phase is complete and prior to construction.

24. Pursuant to Condition Forty-Four, does Keystone or any of its affiliates recognize that if approved and constructed, the Keystone Pipeline will travel through the

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identified Indian Country territory from the Fort Laramie Treaty of 1851 and 1868, and as such will likely encounter undiscovered cultural and/or historic sites?

ANSWER: Keystone recognizes that the KXL Pipeline will travel through territory considered in the Treaties of Fort Laramie of 1851 and 1868. Keystone does not believe that any part of its route as currently permitted passes through Indian Country or across tribally owned lands. Keystone recognizes the possibility that undiscovered cultural and/or historic sites may be found in the course of construction. Keystone believes Conditions 43 and 44, and the provisions provided for therein, suitably accommodate cultural and paleontological resource discoveries. Tribal monitors will be hired by Keystone to monitor designated areas during ground disturbing activities relating to construction to assist in managing previously undiscovered cultural and/or historic sites that are found in the course of construction and in complying with the unanticipated discoveries plan.

25. Pursuant to Condition Forty-Four, does Keystone plan to consult with the Yankton Sioux Tribe and its General Council, Business and Claims Committee, and its Tribal Historic Preservation Office in the future?

ANSWER: Condition 44 applies to paleontological discoveries. Condition 43 applies to unanticipated discoveries. See the answer to Interrogatory 24 above.

26. Pursuant to Conditions One and Two, does Keystone recognize and acknowledge that the Yankton Sioux Tribe has federally protected Winters Doctrine water rights and that these rights apply to any permit application to use water for the construction, operation or maintenance of the Keystone Pipeline project?

ANSWER: Keystone recognizes the so-called Winters Doctrine arising from *Winters v. The United States*, 207 U.S. 564 (1908) and its progeny. Keystone does not believe that the Yankton Sioux Tribe's Winters Doctrine water rights are affected by Keystone's use of water for construction, operation, or maintenance.

27. Pursuant to Conditions One and Two, what steps, if any, has Keystone or any of its affiliates taken to ensure that the Yankton Sioux Tribe's federally protected Winters Doctrine water rights are be protected?

ANSWER: Keystone does not believe that the Yankton Sioux Tribe's Winters doctrine water rights are affected by the use of water for the construction, operation, or maintenance of the Keystone Pipeline.

28. Pursuant to Conditions One and Two, are any waterways situated on or near the Pipeline route subject to designation under the Wild and Scenic River Act of 1968? If so, identify each of the waterways.

OBJECTION AND RESPONSE: To the extent that it seeks information on the Pipeline route outside South Dakota, this request is not relevant or reasonably likely to

lead to the discovery of admissible evidence. Without waiving the objection, the Project route does not cross any waterways that are subject to designation under the Wild and Scenic River Act of 1968. There are no waterways that are subject to designation under the Wild and Scenic River Act of 1968 near the Project route in South Dakota. An evaluation of Wild and Scenic Rivers as per related to the Project is found on page 4.3-24 of the Department of State FSEIS (2014).

29. Pursuant to Conditions One and Two, are there any land areas along or near the Keystone Pipeline route that have been designated as critical habitat under the Endangered Species Act? If so identify each of the land areas.

OBJECTION AND RESPONSE: To the extent that it seeks information on the Pipeline route outside South Dakota, this request is not relevant or reasonably likely to lead to the discovery of admissible evidence. Without waiving the objection, there are no lands along or near the Project route in South Dakota that are designated as critical habitat under the Endangered Species Act. Endangered species are discussed in Section 4.8 of the Department of State FSEIS (2014).

30. Pursuant to Conditions One and Two, are there any land areas along or nearby the Keystone Pipeline route that have any Endangered Species located in that area? If so, identify the land areas and the endangered species.

OBJECTION AND RESPONSE: To the extent that it seeks information on the Pipeline route outside South Dakota, this request is not relevant or reasonably likely to lead to the discovery of admissible evidence. Without waiving the objection, the following federally-listed threatened or endangered species have the potential to occur along the Project route in South Dakota: interior least tern; piping plover; rufa red knot; whooping crane; and the American burying beetle. Section 4.8.3 of the Department of State FSEIS (2014) and Appendix H, Biological Opinion in the Department of State FSEIS (2014) discusses the potential occurrence of these federally-listed threatened and endangered species along the Project route in South Dakota and Sections 4.8.3 and 4.8.4 and Appendix H of the Department of State FSEIS (2014) discusses the potential impacts and conservation measures the Project will implement to protect listed species.

31. Pursuant to Condition Twenty-Three, will employees of Keystone or any of its contractors or subcontractors enter the exterior boundaries of the Yankton Sioux Reservation during construction of the Project? If so, for what purposes?

ANSWER: Employees of Keystone or any of its contractors or subcontractors will not enter the exterior boundaries of the Yankton Sioux Reservation during construction.

32. Pursuant to Conditions One, Two, and Thirty-Six, identify the location of all equipment staging areas, construction staging areas, construction camps, and housing

camps in South Dakota that will be used for emergency response, construction, and/or temporary housing.

OBJECTION AND RESPONSE: The request for the location of equipment and construction staging areas is not relevant and not likely to lead to the discovery of admissible evidence. It is confidential for reasons related to security. Keystone currently has not determined the specific locations that will be used for emergency response, but as required by Permit Condition 10, will timely consult with the appropriate agencies. Without waiving the objection, emergency response locations will be determined prior to the project going into service and will be determined in accordance with Federal response requirements.

Construction

Keystone has leased 11 pipe yards and 6 contractor yards in South Dakota. Pipe yards are planned in Harding, Meade, Butte, Haakon, Jones and Tripp counties. The 6 contractor yards are located in Harding, Meade, Haakon and Tripp counties. Each pipe yard is approximately 30 acres in size.

Temporary Housing

Some areas within Montana, South Dakota, and Nebraska do not have sufficient temporary housing in the vicinity of the proposed route for all construction personnel working in those areas. Temporary work camps would be constructed to meet the housing

needs of the construction workforce in these remote locations. A total of eight temporary construction camps would be established. It is currently anticipated that four construction camps would be needed in Montana (McCone, Valley [two], and Fallon counties), three camps would be required in South Dakota (Tripp, Harding, and Meade counties), and one camp would be required in Nebraska (Holt county). Figure 2.1.5-1 shows the anticipated location of six of the eight camps. The locations of two camps are unknown at this time (one in Montana and one in Nebraska). The final number and size of camps would be determined based on the time available to complete construction and to meet Keystone's commercial commitments. All construction camps would be permitted, constructed, and operated consistent with applicable county, state, and federal regulations. (FSEIS, page 2.1-31)

33. Pursuant to Condition Thirty-Six and Changed Finding of Fact No. 107, identify the contractor or company that is responsible for providing emergency response services.

ANSWER: TransCanada has agreements/contracts with corporations such as the National Response Copr. that meet the Oil Spill Response Organization (OSRO) requirements (Keystone ERP, Appendix I to the FSEIS).

The resources will be secured from a Company approved contractor.

34. Pursuant to Changed Finding of Fact No. 107, provide a breakdown of crime statistics (including violent crimes, sexual crimes, and drug and/or alcohol-related crimes) for areas in which temporary housing camps have been located for construction of comparable projects showing crime rates both before and during construction of said projects. Please also identify the source of this data and the method used to collect this data.

OBJECTION: This request seeks information that is not in Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. It is also overlybroad and unduly burdensome.

35. Pursuant to Changed Finding of Fact No. 107, identify the precautionary measures Keystone has or will implement at the temporary housing camps to protect the surrounding area from crime resulting from the temporary influx of construction workers at the temporary housing camps.

ANSWER: TransCanada Keystone will implement policies and procedures that all residents will be required to comply with during their residency at the camp. Violations may lead to removal from the camp or the appropriate level of disciplinary action. TransCanada will liaise with and engage law enforcement if any issues arise from the man-camps, as appropriate. TransCanada will consider augmenting local law enforcement staffing impacts resulting from camp operations.

Ref: FSEIS 4.10-13

Each camp site would be fully fenced and have a guard house at a single entrance. A contract security officer manning the guard house would be provided on a 24/7 basis. In addition, at all times there would be at least one additional roving security officer supplemented with off-duty law enforcement personnel, as needed. Local law enforcement agencies would also respond to violent, criminal, or illegal activities.

36. Pursuant to Changed Finding of Fact No. 107, identify the protocols and guidelines that will be utilized to respond to reports of crime in or near the temporary housing camps that reportedly involve temporary construction workers or other employees of Keystone or of its contractor or subcontractor.

ANSWER: Any reports of crime or criminal activity in or near temporary housing camps will be reported to local law enforcement for investigation and follow up. TransCanada is committed to cooperating with and assisting law enforcement with their investigation, where appropriate.

Ref: FSEIS 4.10.33

Each camp site would be fully fenced and have a guard house at a single entrance. A contract security officer manning the guard house would be provided on a 24/7 basis. In addition, at all times there would be at least one additional roving security officer

supplemented with off-duty law enforcement personnel, as needed. Local law enforcement agencies would also respond to violent, criminal, or illegal activities.

37. Pursuant to Condition Twenty-Three and the changed Finding of Fact Number Forty-One, will any of Keystone's construction equipment or crew access the Project from trust land? If so, has Keystone received the necessary consent of the United States government to access trust land on the Yankton Sioux Reservation or the affected Reservation?

ANSWER: Keystone does not cross any trust land with access to the Project in South Dakota.

38. Pursuant to Condition Twenty-Three, has Keystone made contact with or otherwise taken any action to plan for road closures which may affect the Yankton Sioux Tribe? If so, does Keystone plan to notify, coordinate or otherwise consult with the Yankton Sioux Tribe?

ANSWER: Keystone does not expect any road closures will affect the Yankton Sioux Tribe, but if such road closures should occur, Keystone will consult with the Yankton Sioux Tribe regarding same.

39. Pursuant to Condition Twenty-Three, has Keystone made contact with or otherwise taken any action to plan for emergency response which may affect the Yankton

Sioux Tribe? If so, does Keystone plan to notify, coordinate, or otherwise consult with the Yankton Sioux Tribe?

ANSWER: Yes, the Yankton Sioux Tribe will be notified if the tribe is affected by an incident. The final version of the Keystone Pipeline Emergency Response Plan (ERP) is complete and complies with 49 C.F.R. Part 194. The Keystone ERP will be amended to include Keystone XL. A redacted version of the ERP is found at Appendix I of the FSEIS.

40. Pursuant to Condition Two, please provide the following information with respect to each instance of tribal consultation with the Yankton Sioux Tribe referenced in Appendix E of the Final Supplemental Environmental Impact Statement.

- a. Name(s) of the Tribal official(s) or other person(s) contacted;
- b. Title of the Tribal official(s) or other person(s) contacted;
- c. The physical address of the Tribal official(s) or other person(s) contacted;
- d. The telephone number(s) of the Tribal official(s) or other person(s) contacted;
- e. The means by which contact with the Tribe was made, i.e. written, oral, electronic, etc.;

f. Whether any employee, official, or other agent of Keystone was present during the particular instance of consultation and if so, the name and contact information for that individual(s); and

g. Whether Keystone actively or otherwise participated during the particular instance of consultation.

ANSWER: Tribal consultation is the responsibility of the Department of State.

41. Pursuant to Conditions 6 and 43 how much land along Keystones proposed route for the KXL Project has yet to be TCP surveyed. If any, identify the land.

ANSWER: The status of TCP surveys can be found in Table 3.11-8 of the Department of State FSEIS (2014). The Yankton Sioux Tribe's report was received and accepted in March and April 2011. Any outstanding issues would be addressed through the course of government to government consultation with the DOS.

42. Pursuant to Condition 2, how many other state permits and federal permits are pending or not yet received by Keystone for the Keystone XL project.

ANSWER: The Presidential Permit is currently pending before the United States Department of State. Permit authorization from the USACE under Section 404 of the Clean Water Act has not yet been sought.

43. Pursuant to Conditions 6 and 43, have any tribes surveyed the land along the proposed route for the KXL Project? If so, which tribes and for what portion of the route, respectively?

ANSWER: Yes. The route surveys performed are summarized in Keystone documents 1151-1169.

44. Pursuant to Condition 10, has Keystone yet commenced a program of contacts with state, county and municipal emergency response, law enforcement and highway, road and other infrastructure management agencies serving the Project area? If so, please describe the program and any steps taken in furtherance of meeting Condition 10. If not, when does Keystone plan to do so?

ANSWER: No. Keystone will commence such a program not later than six months before commencing construction.

REQUESTS FOR PRODUCTION OF DOCUMENTS

1. All documents that Keystone intends to offer as exhibits at the evidentiary hearing in this matter.

ANSWER: Keystone has not yet identified hearing exhibits, but will disclose them as required by the PUC.

2. All documents relating to environmental and hydrological surveys. Changed Finding of Fact Number Forty-One.

OBJECTION: This request is overlybroad, unduly burdensome, and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). The request is unlimited in time and does not refer to any specific project.

3. All documents relating to cultural and historic surveys, training, and response plans. Condition Forty-Four.

OBJECTION: This request is overlybroad, unduly burdensome, and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). The request is unlimited in time and does not refer to any specific project.

4. All documents relating to required permits, both in South Dakota and outside South Dakota, including permit applications which were denied, revoked, or suspended.

OBJECTION: This request is overlybroad, unduly burdensome, and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b).

5. All documents related to Interrogatory No. 40, including but not limited to any correspondence between any employee, official, or other agent of Keystone and any other party pertaining to each instance of consultation and any notes or other documents generated by any employee, official, or other agent of Keystone pertaining to each instance of consultation.

ANSWER: As indicated in the answer to number 40, consultation is the responsibility of the Department of State.

6. All documents constituting Keystone's Emergency Response Plan.

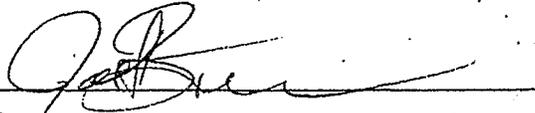
OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law, which has exclusive jurisdiction over issues of pipeline safety. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. *See* Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the emergency response plan would commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

7. All documents that support the proposed changes to the Findings of Fact identified in Appendix C to Keystone's application filed on September 14, 2014 with the PUC.

OBJECTION: This request is overlybroad, unduly burdensome, and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). Appendix C to Keystone certification petition includes citations to sources for many of the statements in the document.

Dated this 5th day of February, 2015.

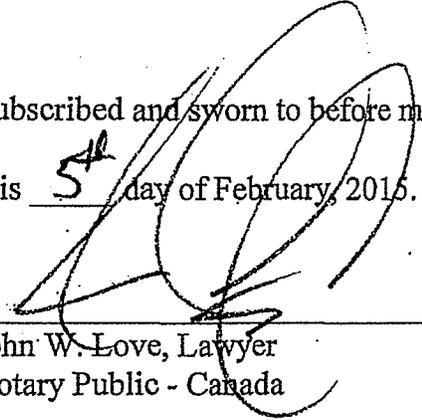
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.



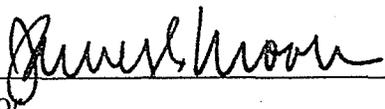
John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Yankton Sioux Tribe's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

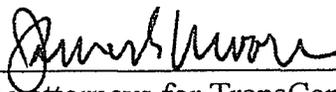
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Yankton Sioux Tribe's First Interrogatories and Request for Production of Documents, to the following:

Thomasina Real Bird
Fredericks Peebles & Morgan LLP
1900 Plaza Drive
Louisville, CO 80027
trealbird@ndnlaw.com



One of the attorneys for TransCanada

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

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IN THE MATTER OF THE APPLICATION	:	HP 14-001
BY TRANSCANADA KEYSTONE		
PIPELINE, LP FOR A PERMIT UNDER	:	KEYSTONE'S RESPONSES TO
THE SOUTH DAKOTA ENERGY		WREXIE LAINSON
CONVERSION AND TRANSMISSION	:	BARDAGLIO'S FIRST
FACILITIES ACT TO CONSTRUCT THE		INTERROGATORIES AND
KEYSTONE XL PROJECT	:	REQUEST FOR PRODUCTION OF
		DOCUMENTS
	:	

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Applicant TransCanada makes the following responses to interrogatories pursuant to SDCL § 15-6-33, and responses to requests for production of documents pursuant to SDCL § 15-6-34(a). These responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Wrexie Lainson Bardaglio's First Set of Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. *See ARSD* {01815019.1}

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUESTS FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950

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E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

12(a). How has TransCanada met the burden of proof to solicit and consider the views of the region's Tribal governing bodies?

ANSWER: TransCanada's burden of proof is established by SDCL § 49-41B-27. The PUC will determine whether Keystone has met its burden of proof.

12(b). What was the nature of TransCanada's consultation with the Tribes of the region?

ANSWER: Keystone's tribal engagement commenced early in the project planning process, in order to identify and discuss relevant preservation issues. TransCanada contacted tribal government leaders and the traditional historic preservation officers of the various South Dakota resident tribes prior to the formal initiation of Section 106 consultation by the Department of State. In early 2008, Keystone hosted a series of tribal community visits. In late 2008, Keystone hosted three meetings in Pierre, SD, with approximately seventeen tribes represented. Keystone coordinated the completion of traditional cultural property reports. Funding for the traditional cultural

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property reports was offered to every tribe, but only four tribes completed studies under the program. To date twenty-five tribal members representing twelve tribes have participated in cultural surveys.

Tribal monitors will be hired by Keystone to monitor designated areas during ground disturbing activities relating to construction, to assist with newly discovered or previously unidentified cultural and historic properties, and to assist with the implementation of the unanticipated discovery plan.

Keystone representatives have met with representatives of the Yankton Sioux Tribe, Standing Rock Sioux Tribe, Rosebud Sioux Tribe, Oglala Sioux Tribe, and Cheyenne River Sioux Tribe on numerous occasions and have met with the Rosebud Sioux Tribal Utilities Commission.

When a tribe passed a resolution opposing the project, Keystone respected the resolution and halted engagement efforts.

12(c). What is TransCanada's understanding of the development plans of the region's Tribal governments?

OBJECTION AND ANSWER: Keystone objects to interrogatory 12. c. as overly broad and burdensome. Notwithstanding the objection, Keystone has a broad understanding of tribal development plans, ranging from tribal interest in acquiring off

reservation properties through and including developing economic opportunities on the reservations.

12(d). How does TransCanada's proposed pipeline fit in the orderly development of the region's Tribal governments?

ANSWER: The Keystone KXL Pipeline will not negatively impact orderly development of South Dakota's tribal governments.

12(e). Provide documentation of the discussions with the region's Tribal governments, including participants and specific terms of understanding.

ANSWER: See Keystone documents attached as 1121-1340.

41(a). Some of these streams and rivers are the source of water supplying the Mni Wiconi Pipeline, which provides drinking water to Rosebud and Pine Ridge.

OBJECTION: This request is not a question and cannot be answered.

41(b). KXL would cross the Mni Wiconi in three places, all of which are located within the Treaty Territory lands, as stipulated by the Fort Laramie Treaties of 1851 and 1868, treaties that are binding as the law of the land under the US Constitution and contain specific retained resource rights.

OBJECTION: This request is not a question and cannot be answered.

41(c). What was the nature of TransCanada's consultation with the two affected Tribal governments regarding the siting of the pipeline over the Mni Wiconi water pipeline within the Treaty Territory?

ANSWER: The United States owns the Mni Waconi Pipeline and the easements on which it is constructed. The pipeline is managed by the Oglala Sioux Rural Water System, a subdivision of the body politic of the Oglala Sioux Tribe. The Mni Waconi easements underlying the Mni Waconi Pipeline are managed by the Bureau of Reclamation, Department of the Interior. Keystone has offered to consult with the Oglala Sioux Rural Water System regarding the proposed crossings. Keystone has consulted with the Bureau of Reclamation, Department of the Interior, with respect to its proposed crossings of the Mni Waconi Pipeline. The Bureau of Reclamation, Department of the Interior, has consulted with the Oglala Sioux Rural Water System regarding the proposed crossings.

41(d). Provide documentation of those consultations, including participants and how often.

ANSWER: The U.S. Department of State Environmental Impact Statement relied on in granting the 2010 South Dakota permit speaks for itself with respect to the questions posed.

41(e). Explain how the US Dept. of State EIS, which was relied on in the granting of the

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2010 SD permit, effectively and specifically addresses water protection concerns and water rights on reservations, Tribal communities and specifically addresses retained resource rights on Treaty Territory lands, as defined by the Fort Laramie Treaties of 1851 and 1868.

OBJECTION: Keystone objects to the question as seeking a legal opinion rather than soliciting discoverable information. The EIS speaks for itself.

54. Explain why TransCanada did not consider the usufructary implications of the Treaty Territory as outlined in the Fort Laramie Treaties of 1851 and 1868 in asserting that no Tribal or federal lands are crossed by the route.

ANSWER: Keystone objects to the question as argumentative, and seeking a legal opinion rather than soliciting discoverable information. Notwithstanding the foregoing objection, TransCanada has considered the Treatise of Fort Laramie of 1851 and 1868 with respect to its assertion that no tribal or federal lands are crossed by the route. The currently permitted route for the pipeline in South Dakota does not pass across any lands owned by the federal government nor does it pass across Indian Country as that term is defined by the laws of the United States. TransCanada acknowledges that the United States government has indirectly recognized a united form of usufructuary rights in Indian tribes arising from certain treaties under limited circumstances, but does not believe that the Treaties of Fort Laramie of 1851 and 1868 create any usufructuary

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right in lands subsequently ceded by the tribes to the United States and/or appropriated under the laws of the United States that are impacted by the construction and operation of the KXL pipeline on its currently permitted route. Article 11 of the Treaty of 1868 provides that the signator tribes "will not in the future object to the construction of . . . works of utility. . . which may be . . . permitted by the laws of the United States."

83(a). Explain how TransCanada considered retained resource rights as it consulted with the tribes of the region in evaluating the impact of its proposed HDD and other practices on game and commercial fish species in the Treaty Territory as defined by the Fort Laramie Treaties of 1851 and 1868.

ANSWER: See the answer to interrogatory 54, above. TransCanada does not believe that horizontal directional drilling will impact commercial fish species or game in any significant fashion within the boundaries of what was once the Greater Sioux Reservation as considered by the Treaties of Fort Laramie of 1851 and 1868. No consultation was undertaken directly with the tribes with respect to HDD decisions for the reasons provided in the answer to interrogatory 54, above, and herein.

83(b). What were the specific impacts TransCanada wished to avoid, and what were the responses of the Tribes of the region and Treaty Territory?

ANSWER: See the answer to interrogatory 54, above. TransCanada does not believe that horizontal directional drilling will impact commercial fish species or game in

any significant fashion within the boundaries of what was once the Greater Sioux Reservation as considered by the Treaties of Fort Laramie of 1851 and 1868. No consultation was undertaken directly with the tribes with respect to HDD decisions for the reasons provided in the answer to interrogatory 54, above, and herein.

107(a). Provide evidence that this project does not negatively impact the health, safety and welfare of the inhabitants, especially the Tribal communities, which were not properly considered.

ANSWER: The PUC concluded in its Amended Final Decision and Order, Finding 113, that the project did not negatively affect the inhabitants.

107(b). What actions did TransCanada take with the US government, as Trustee to Tribal Nations, to consult with Tribes about the protection of the land and water, specifically retained resource rights, which they rely on for subsistence, within the Treaty Territory they are entitled to use under the terms of the Fort Laramie Treaties of 1851 and 1868?

OBJECTION AND ANSWER: This request is argumentative. Without waiving the objection, to the extent there is an obligation to consult with the Tribes with respect to the Project, that legal obligation would lie with the Department of State. TransCanada has an active Tribal engagement program that it implements on a voluntary basis.

Dated this 5th day of February, 2015.

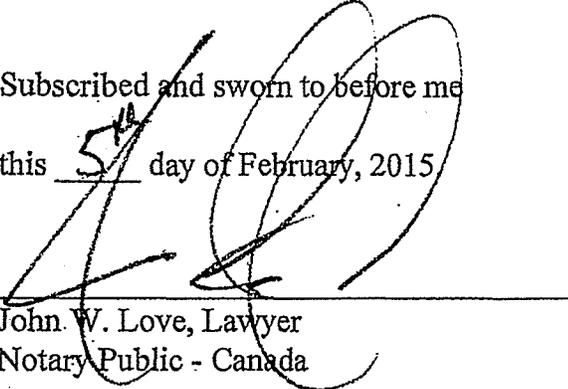
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015


John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Wrexie Lainson Bardaglio's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

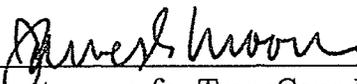
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Wrexie Lainson Bardaglio's First Interrogatories and Request for Production of Documents, to the following:

Wrexie Lainson Bardaglio
9748 Arden Road
Trumansburg, NY 14886
wrexie.bardaglio@gmail.com



One of the attorneys for TransCanada

REQUEST FOR PRODUCTION OF DOCUMENTS

1. All documents identified or referred to in your Answers to DRA's First Interrogatories to you. *[Applicable Finding or Condition No.: all]*

ANSWER: See responses to DRA interrogatories 7, 8, 12, 13, 15, 23, 24, 27, 30, 33, 34, 35, 40, 41, 50, 58, 66, 68, and 84.

2. All documents and correspondence presented to any expert in connection with the above-captioned proceedings, or received from any expert, including but not limited to emails, letters, engagement documents, resumes, curriculum vitae, reports, analysis, spreadsheets, schedules, and any drafts thereof. *[Applicable Finding or Condition No.: all]*

ANSWER: Keystone does not intend to call any retained expert witnesses.

3. The most recent resume or curriculum vitae of each expert whom you expect to call as an expert witness at the hearing before the Commission. *[Applicable Finding or Condition No.: all]*

ANSWER: Keystone does not intend to call any retained expert witnesses. Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; same; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility

(5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441; Environmental Issues; CMR Plan, Con/Rec Units, HDD's

(6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

Resumes for each witness are attached as Keystone 1341-1374.

4. The written reports of experts who are expected to testify on behalf of TransCanada. *[Applicable Finding or Condition No.: all]*

ANSWER: Keystone does not intend to call any retained expert witnesses.

5. All correspondence between TransCanada or its Affiliates and the Commission or Commission staff concerning the Project. *[Applicable Finding or Condition No.: all]*

ANSWER: With the exception of communications from Keystone's project liaison, neither TransCanada or its affiliates has had any correspondence with the Commission or its staff concerning the Project, beyond the certification filed September 15, 2014.

6. All documents concerning production and transportation of crude oil from the Williston Basin area, including but not limited to, projections of crude oil supply to be transported via the proposed Project, and any agreements or commitments entered into with oil producers and refiners with respect to any production from the Williston Basin area. *[Applicable Finding or Condition No.: Finding 14]*

OBJECTION AND RESPONSE: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect this information from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between

Keystone and its shippers and Section 15(13) of The Interstate Commerce Act. This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast; Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

7. All documents concerning a change in routing of the Project between 2010 and the present date, including but not limited to, any parcel maps showing the precise location of the proposed Project through South Dakota. *[Applicable Finding or Condition No.: Finding 16]*

ANSWER: Please refer to the route variation maps attached as Keystone 0470-0583.

8. All documents setting forth TransCanada's proposed construction schedule for the Project, and all contracts for construction of the proposed Project and all contracts or other documents relating to commitments made with respect to the Project by shippers. *[Applicable Finding or Condition No.: Finding 17]*

ANSWER: Keystone currently has not set a date to commence construction, nor does it have any construction contracts in place. Construction of the proposed Project would begin after Keystone obtains all necessary permits, approvals, and authorizations. Keystone anticipates that the proposed Project would be placed into service approximately 2 years after receiving such authorizations. (FSEIS, page 2.1-69).

9. All documents concerning the decision to use API 5L X70M high-strength steel for the Project in lieu of API 5L X80M high-strength steel. *[Applicable Finding or Condition No.: Finding 18]*

OBJECTION: This request is overlybroad and unduly burdensome because it requests “all documents” concerning the decision to use API 5L X70M high-strength steel. Without waiving the objection, API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline.

10. All documents concerning the decision to use fusion-bonded epoxy (FBE) coating on the proposed pipeline, including but not limited to, contracts or other agreements with the manufacturer of the FBE product, and any communications between TransCanada and such manufacturer. *[Applicable Finding or Condition No.: Finding 18]*

OBJECTION: This request is overlybroad and unduly burdensome because it requests “all documents” concerning the decision to use fusion-bonded epoxy coating on the proposed pipeline. It also seeks information that is not relevant or likely to lead to the discovery of

admissible evidence under SDCL 15-6-26(b) to the extent that it seeks all communications between TransCanada and the manufacturer of the coating.

11. All documents, including internal communications between TransCanada's or its Affiliates' staff, consultants, advisors, or other parties concerning the appropriate pipeline operating pressure for the Project. *[Applicable Finding or Condition No.: Finding 19]*

OBJECTION AND ANSWER: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. Without waiving the objection, the operating pressure is in accordance with 49 CFR 195.106.

12. All documents showing location of power lines for pumping stations proposed for the Project, the location of proposed pumping stations and mainline valves for the Project in South Dakota, and including, but not limited to all communications between TransCanada's or its Affiliates' staff, consultants, advisors, or other parties concerning location and operation of pumping stations, mainline valves, and the proposed conversion of valves to remote control operations. *[Applicable Finding or Condition No.: Finding 20]*

OBJECTION AND ANSWER: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. In addition, the location of pump stations and mainline valves is confidential for reasons related to homeland security. Without waiving the objection, please refer to FSEIS 2.1.12.3 Electrical Distribution Lines and Substations.

13. All documents concerning compliance by TransCanada with U.S. Department of Transportation, Pipeline Hazardous Materials and Safety Administration ("PHMSA") regulations

set forth at 49 CFR Part 195, and the special conditions developed by PHMSA and set forth in Appendix Z to the Department of State (“DOS”) January 2014 Final Supplemental Environmental Impact Statement (“Final SEIS”), including but not limited to any and all communications between TransCanada’s or its Affiliates’ staff, consultants, advisors, or other parties, and PHMSA, DOS, or other federal agencies concerning regulatory compliance, approvals, or waivers of applicable regulations with respect to the Project. *[Applicable Finding or Condition No.: Finding 22]*

OBJECTION: This request seeks information that is beyond the scope of the PUC’s jurisdiction and Keystone’s burden under SDCL 49-41B-27. This request also seeks information that is governed by federal law and is within the province of PHMSA. The request is also overlybroad and unduly burdensome by requesting any and all communications between TransCanada, including its consultants, and PHMSA related to the Project.

14. All documents concerning the increase in projected costs for the Project, including but not limited to draft or final budgets, pro-formas, estimated cost schedules, and communications between TransCanada’s or its Affiliates’ staff, consultants, advisors, or other parties regarding the increased estimated costs of the Project. *[Applicable Finding or Condition No.: Finding 23]*

OBJECTION: This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). In addition, Keystone does not maintain a breakdown of the estimated project cost in the way requested, and requiring such a breakdown of costs would require the disclosure of information that has substantial commercial

and proprietary value, and is subject to substantial efforts by Keystone to protect it from actual and potential competitors.

15. All documents setting forth forecasts of “additional crude oil production from the WCSB” and Williston Basin, including any documents discussing the impact of current low oil prices on such forecasts. *[Applicable Finding or Condition No.: Finding 24]*

OBJECTION: This request seeks information that is beyond the scope of the PUC’s jurisdiction and Keystone’s burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone’s custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

16. All documents setting forth binding shipper commitments to utilize the Project. *[Applicable Finding or Condition No.: Finding 24]*

OBJECTION: The identity of Keystone’s shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect them from actual and potential competitors, and must be maintained on a confidential

basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of the Interstate Commerce Act.

17. All documents, including but not limited to communications between TransCanada's or its Affiliates' staff, consultants, advisors, or other parties discussing or containing information stating or indicating that existing or new refineries will import less crude oil and, instead, replace it with crude oil transported via the Project. [*Applicable Finding or Condition No.: Finding 24*]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

18. All documents discussing or setting forth TransCanada's or its Affiliates' forecasts of US demand for petroleum products. [*Applicable Finding or Condition No.: Finding 25*]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

19. All documents setting forth or discussing whether or if crude oil from the WCSB is sold at a "significant discount" from other sources. [*Applicable Finding or Condition No.: Finding 27*]

ANSWER: Responsive documents are attached as Keystone 1119-1120.

20. All documents setting forth, discussing, or describing whether or if shipment of crude oil via the Project will replace rail transportation for crude oil shipments from the WCSB. [*Applicable Finding or Condition No.: Finding 27*]

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. This issue is addressed in the Final Supplemental Environmental Impact Statement and is publicly available.

21. All documents setting forth binding commitments from shippers to use the Project, including but not limited to copies of contracts between TransCanada (and its Affiliates) and such shippers. *[Applicable Finding or Condition No.: Finding 29]*

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect this information from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of The Interstate Commerce Act.

22. All documents describing soil types and conditions along the currently-proposed Project route through South Dakota. *[Applicable Finding or Condition No.: Finding 33]*

ANSWER: Appendix M of the Department of State FSEIS (2014) identifies soil types crossed by the Project route in South Dakota. Section 3.2.2.2 of the Department of State FSEIS (2014) describes the soil types crossed by the Project route in South Dakota.

23. All documents describing, discussing, or setting forth plans for the Project to cross perennial streams and rivers, intermittent streams, and ephemeral streams in South Dakota, including but not limited to all documents concerning the methodology used by TransCanada (and its Affiliates) or its agents in determining construction plans for the Project across such waterways. *[Applicable Finding or Condition No.: Finding 41]*

ANSWER: The following documents provide the requested information:

- a. The CMR Plan Rev4

b. The following portions from the Department of State FSEIS (2014): Section 4.3.3.2 and Appendix D1, Waterbody Crossing Tables.

Prior to construction, Keystone will consult with the US Army Corps of Engineers as part of the permitting process under Section 404 of the CWA regarding the proposed crossing methodology for each jurisdictional waterbody crossed in South Dakota.

24. All documents concerning the reduction in the length of the proposed Project potentially affecting High Consequence Areas. *[Applicable Finding or Condition No.: Finding 50]*

ANSWER: During the detailed engineering design phase of the Project, the route was adjusted. Please refer to the attached route variation maps. In doing so, the route deviated away from DOT designated HCA areas thereby reducing total HCA miles crossed by the Project.

25. All documents concerning TransCanada's (or its Affiliates') decision to withdraw its request to the PHMSA for a special permit referenced in Finding 60. *[Applicable Finding or Condition No.: Finding 60]*

ANSWER: The Media Advisory attached as Keystone 0647-0649 explains the decision.

26. All documents containing information concerning the failure of FBE coating referenced in the update to Finding 68. *[Applicable Finding or Condition No.: Finding 68]*

ANSWER: Base Keystone experienced a localized external corrosion wall loss due to DC stray current interference from foreign utility colocation which caused sacrificing significant amounts of protective current to other pipelines in the shared Right-of-Way. This adversely

affected CP current distribution to the Keystone line. This anomaly was found during proactive and routine high resolution in-line inspection. This issue has been reviewed, remediated and updates to the CP design where colocation occur have been implemented. In South Dakota specifically, no such location exists for colocation of multiple pipelines in a shared Right-of-Way. However, Keystone has applied these updates to its design and existing CP “construction bridge to energization” plan to address potential for DC stray current interference due to foreign utility crossings and paralleling utilities.

27. All documents containing information concerning construction/reclamation unit mapping referenced in Finding 80, including but not limited to the construction/reclamation unit mapping. *[Applicable Finding or Condition No.: Finding 80]*

ANSWER: The 2013 Construction/Reclamation Unit Specifications contain this information and are found in Appendix R of the Department of State FSEIS (2014).

28. All documents containing information regarding TransCanada’s (or its Affiliates’) decision to use horizontal directional drilling to cross waterways, including but not limited to all documents discussing or describing the decision-making process engaged in to determine which waterways would be crossed using horizontal directional drilling. *[Applicable Finding or Condition No.: Finding 83]*

ANSWER: The decision to horizontal directional drill water bodies is based on the width of the water body, terrain changes at the crossing and potential for scour and migration of the water body.

29. All documents, including but not limited to forecasts and projections of tax revenue accruing to the State of South Dakota should construction and operation of the Project commence. *[Applicable Finding or Condition No.: Finding 107]*

ANSWER: An itemization of taxes paid is attached as Keystone 0768-0773.

30. All documents evidencing TransCanada's or its Affiliates' compliance efforts with applicable laws and regulations related to construction and operation of the Project. *[Applicable Finding or Condition No.: Condition 1]*

OBJECTION: This request is overlybroad and unduly burdensome by requesting "all documents" concerning TransCanada's compliance with applicable laws and regulations related to construction and operation of the project.

31. All documents concerning TransCanada's or its Affiliates' efforts to obtain and comply with applicable permitting referenced in Condition 2, including but not limited to copies of any permits obtained. *[Applicable Finding or Condition No.: Condition 2]*

OBJECTION AND RESPONSE: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. Without waiving the objection, Keystone addressed the status of permitting in its answer to DRA's interrogatory number 3.

32. All documents concerning TransCanada's or its Affiliates' compliance with the recommendations set forth the DOS's Final Environmental Impact Statement, including but not limited to documents discussing or concerning compliance with Section 106 of the National Historic Preservation Act. *[Applicable Finding or Condition No.: Condition 3]*

OBJECTION AND RESPONSE: This request is overlybroad and unduly burdensome. Without waiving the objection, unless and until the DOS issue a Record of Decision and a Presidential Permit, the recommendations in the Final EIS are not binding on Keystone. Compliance with Section 106 of the NHPA is the responsibility of the DOS.

33. All documents concerning or discussing proposed adjustments or deviations in the route of the Project, including but not limited to copies of notices to affected land owners.
[Applicable Finding or Condition No.: Condition 6]

ANSWER: Please refer to the route variation maps attached as Keystone 0470-0583.

34. All documents concerning the appointment of a public liaison officer by TransCanada for the Project, and all documents containing information regarding communications between the public liaison officer and landowners affected by the Project.
[Applicable Finding or Condition No.: Condition 7]

OBJECTION: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. The PUC approved the liaison, and her quarterly and monthly reports are available on the PUC's website.

35. All documents containing information with respect to contacts or communications with state, county and municipal emergency response, law enforcement and highway, road and other infrastructure management agencies regarding the Project. *[Applicable Finding or Condition No.: Condition 10]*

ANSWER: Attached as Keystone 0650-0767 are documents related to contacts with state and local emergency responders related to first responder training.

36. All documents containing information concerning TransCanada's or its Affiliates' efforts to comply with mitigation measures set forth in the Construction Mitigation and Reclamation Plan submitted to the Commission. *[Applicable Finding or Condition No.: Condition 13]*

ANSWER: Unless and until the Department of State issues a Record of Decision and a Presidential Permit, the recommendations in the Final EIS are not binding on Keystone.

37. All documents containing information regarding consultations, including but not limited to communications, with Natural Resources Conservation Services ("NRCS") regarding development of construction/reclamation units ("Con/Rec Units"). *[Applicable Finding or Condition No.: Condition 15]*

OBJECTION AND ANSWER: This request is overlybroad and unduly burdensome. Without waiving the objection, attached as Keystone 0636-637 is a Contact Record with NRCS dated June 7, 2010.

38. All Con/Rec Units developed in connection with the Project, including but not limited to drafts and supporting studies or documents. *[Applicable Finding or Condition No.: Condition 15]*

ANSWER: The 2013 Construction/Reclamation Unit Specifications contain this information and are found in Appendix R of the Department of State FSEIS (2014).

39. All documents provided to landowners affected by the Project explaining trenching and topsoil and subsoil/rock removal, segregation and restoration methods for their property. *[Applicable Finding or Condition No.: Condition 16]*

ANSWER: Landowners and a project representative complete a “Keystone Pipeline Project Landowner/Tenant Construction Restrictions Binding Agreement,” which covers rock disposal, topsoil stripping, and restoration preferences. All agreements will be completed before construction begins, unless a landowner refuses to complete the agreement. A template agreement is attached as Keystone 1116-1118.

40. All documents containing information regarding trucking or hauling contractors to be used in construction of the Project, including but not limited to agreements with such trucking or hauling contractors. *[Applicable Finding or Condition No.: Condition 17]*

ANSWER: Keystone currently has no contractors retained to undertake trucking and hauling.

41. All documents containing information or describing the methodology to be used by TransCanada (or its Affiliates) for valuing trees. *[Applicable Finding or Condition No.: Condition 19]*

ANSWER: There is not a methodology for valuing merchantable timber, but if a property contains timber, it is identified on the “Keystone Pipeline Project Landowner/Tenant Construction Restrictions Binding Agreement. Keystone pays fair market value for the affected acreage.

42. All documents containing information regarding consultations between TransCanada (or its Affiliates) and South Dakota Game, Fish and Parks. *[Applicable Finding or Condition No.: Condition 20(c)]*

OBJECTION AND RESPONSE: This request is overlybroad and unduly burdensome. Without waiving the objection, the following is a summary of Keystone consultation history with SD Game, Fish, and Parks as documented in the USFWS issued May 2013 Biological Opinion (Appendix H of the of the Department of State FSEIS (2014)).

- June 10, 2008: Keystone met with staff from USFWS and South Dakota Department of Game, Fish, and Parks (SDGFP), at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to wildlife, special status species, and sensitive habitat that could potentially occur in the Project area. The goal of the meeting was to gather input on agency recommendations based on the information sent to them in April 2008 for species occurrence, habitat assessments, and future field surveys. Keystone incorporated comments from the meeting into survey protocols and BMPs for future agency verification.
- January/February 2009: Keystone initiated section 7 consultation with the USFWS. Keystone continued discussions with BLM, and state wildlife agency offices for South Dakota that included state-specific special status species survey protocols and BMPs for the species identified as potentially occurring during the 2008 meetings. A summary of the findings from the 2008 biological field surveys was included in the discussions.
- January 27, 2009: Keystone met with staff from the USFWS and SDGFP at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to special status species surveys. The goals of the meeting were to verify Keystone's survey approach, BMPs, discuss required field surveys, and review the information that was sent to the USFWS in the January/February 2009, informal consultation package. The USFWS and SDGFP provided additional recommendations

to Keystone's sensitive species mitigation approach to be updated prior to final agency concurrence.

- October 23, 2012: A meeting was held between the USFWS, Department, SDGFP, BLM, and Keystone regarding the greater sage-grouse and a compensatory mitigation plan for the species in South Dakota. Discussions included a management plan and avoidance, minimization, and mitigation strategies.

43. All documents describing the development of frac-out plans in areas where horizontal directional drilling will occur in connection with the Project, including but not limited to any frac-out plans developed. *[Applicable Finding or Condition No.: Condition 21]*

ANSWER: Keystone currently has no contractors retained to undertake construction. When Keystone employs a pipeline contractor, that contractor will develop the plan, subject to Keystone's approval as required by Condition 21. This issue is addressed in Section 7.4.5 of the CMR Plan.

44. All documents describing or containing information regarding TransCanada's or its Affiliates' efforts to comply with conditions regarding construction of the Project near wetlands, water bodies, and riparian areas, such documents including but not limited to compliance plans, construction plans, mitigation plans, and communications with any regulatory agency in such regard. *[Applicable Finding or Condition No.: Condition 22]*

ANSWER: Keystone has not yet received its permit authorization for wetland construction.

45. All documents containing or referencing adverse weather land protection plans developed in connection with the Project. *[Applicable Finding or Condition No.: Condition 25]*

ANSWER: The Adverse Weather Plan has not yet been prepared, but will be filed with the Commission two months prior to the start of construction as stated in Condition #25.

46. All documents that reference or identify private and new access roads to be used or required during construction of the Project. *[Applicable Finding or Condition No.: Condition 28]*

OBJECTION: This request seeks information that is confidential for homeland security reasons.

47. All documents referencing or containing information regarding winterization plans provided to landowners affected by the Project, including but not limited to plan(s) developed. *[Applicable Finding or Condition No.: Condition 29]*

ANSWER: TransCanada/Keystone will have a winterization plan prepared prior to construction. The winterization plan will be provided to affected landowners if winter conditions prevent reclamation until spring. No documents related to winterization plans have been provided to landowners to date.

48. All documents referencing agreements reached with landowners, including but not limited to any agreements reached with landowners modifying any requirements or conditions established by the Commission in connection with the Project. *[Applicable Finding or Condition No.: Condition 30]*

OBJECTION: This request is overlybroad, unduly burdensome, and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b).

49. All documents containing information regarding compliance by shippers with crude oil specifications. *[Applicable Finding or Condition No.: Condition 31]*

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect this information from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of The Interstate Commerce Act. Until Keystone commences operations on the Keystone XL Project and shippers begin tendering crude oil for shipment, shippers do not "comply" with the crude oil specifications in Keystone's tariff.

50. All documents containing information regarding assessments performed in connection with your activities in "high consequence areas", including but not limited to documents referencing efforts by you to comply with 49 C.F.R. Part 195, and any communications or consultations with the South Dakota Geological Survey, the Department of Game Fish and Parks ("SDGFP"), affected landowners and government officials. *[Applicable Finding or Condition No.: Condition 34]*

OBJECTION: To the extent that it seeks information about High Consequence Areas, this request seeks information that is confidential and Keystone is required by PHMSA to keep this information confidential. This request seeks information outside the jurisdiction of the PUC.

51. All documents where you have identified hydrologically sensitive areas as required by Condition Number 35. *[Applicable Finding or Condition No.: Condition 35]*

ANSWER: Based on the current route in South Dakota which was evaluated in the Department of State FSEIS (2014) in Sections 3.3 and 4.3, the High Plains Aquifer in southern Tripp County is the only vulnerable and beneficially useful aquifer identified as being crossed by the Project in South Dakota.

52. All documents containing information regarding noise-producing facilities in connection with the Project, including but not limited to any studies conducted regarding noise levels, and any noise mitigation measures. *[Applicable Finding or Condition No.: Condition 39]*

ANSWER: Responsive documents marked as Keystone 0592-0599 are attached.

53. All documents containing information regarding TransCanada's or its Affiliates' efforts to comply with protection and mitigation requirements of the US Fish and Wildlife Service ("USFWS") and SDGFP with respect to any endangered species. *[Applicable Finding or Condition No.: Condition 41]*

ANSWER: See the Biological Assessment and Biological Opinion contained in the State Department Final EIS and Final Supplemental EIS.

54. All documents containing information or details regarding location of drain tiles, including but not limited to all documents containing information regarding the potential for drain tiles to operate as conduits for contaminants in connection with construction or operation of the Project. *[Applicable Finding or Condition No.: Condition 42]*

ANSWER: There are no known drain tile crossings in South Dakota.

55. All documents referencing or containing information concerning cultural or paleontological resources along the Project route, including but not limited to all documents identifying cultural and paleontological resources, consultations and communications with the Bureau of Land Management and Museum of Geology at the South Dakota School of Mines and Technology. *[Applicable Finding or Condition No.: Condition 44]*

ANSWER: Cultural resources survey reports are listed in Section 3.11 of the Department of State FSEIS (2014), with results of the SD surveys detailed in Table 3.11-3. The Unanticipated Discovery Plan for cultural resources can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014). The paleontological survey reports are listed in Table 3.1-4 of the FSEIS, with results of the SD surveys detailed in Table 3.1-5. The paleontological monitoring plan for South Dakota is not being produced because it is confidential/privileged information. There were no consultations with BLM or the Museum of Geology at the South Dakota School of Mines and Technology for the Project route in South Dakota.

56. The incident reports for each and every spill or leak related to a pipeline operated by TransCanada and its Affiliates since January 1, 2010. *[Applicable Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103; Conditions 32-38]*

OBJECTION AND ANSWER: This request is overlybroad and unduly burdensome. Without waiving the objection, documents attached as Keystone 0774-0785 are responsive to this request.

OBJECTIONS

The objections stated to Dakota Rural Action's Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

By



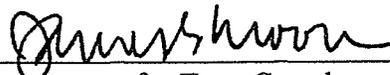
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CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Dakota Rural Action's First Request for Production of Documents, to the following:

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Attorney for Dakota Rural Action



One of the attorneys for TransCanada

INTERROGATORIES

INTERROGATORY NO. 1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation. [Applicable Finding or Condition No.: all]

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

INTERROGATORY NO. 2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action? [Applicable Finding or Condition No.: all]

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

INTERROGATORY NO. 3. Describe the current status of the following permits and plans required prior to the start of construction of the KXL Pipeline:

A. Permits from US Army Corps of Engineers, S.D. Regulatory Office, including under:

1) §§404/401 of Clean Water Act, for authorization of discharge of fill material into waters of the United States including wetlands or other action;

2) §10 Rivers and Harbors Act, for authorization of pipeline crossings of navigable waters of the United States or other action;

3) Section 106 of the Natural Historic Preservation Act (NHPA), including consultation with potentially impacted Tribes and/or other action;

B. Permits from U.S. Fish and Wildlife Service, S.D. Ecological Services Field Office, including under the Endangered Species Act, Section 7 Consultation, to consider lead agency findings of impacts on federal-listed species, to provide a Biological Opinion if the Project is likely to adversely affect federally-listed or proposed species or their habitats, or other action;

C. Permits from Farm Service Agency of the Natural Resources Conservation Service, including the Crop Reserve Program, for authorization of crossing areas enrolled in the Crop Reserve Program, or other action;

D. Permit(s) from or Plan(s) Required to the S.D. Department of Environment and Natural Resources (DENR), including under:

- 1) National Pollutant Discharge Elimination System General Permit for Discharges of Hydrostatic Test Water, regarding proposed discharge into waters of the United States and construction dewatering of waters of the State, or other action;
 - 2) Surface Water Withdrawal Permit, for temporary surface water withdrawal, or other action;
 - 3) SDCL Chapter §34A-18, required submission of an Oil Spill Response Plan or Updated Plan to DENR, or other action;
- E. Consultation with SD Game Fish and Parks Department, under State Listed Threatened and Endangered Species;
- F. Any Updated Review and Comment from S.D. State Historical Society, State Preservation Office, under §106 of the NHPA, on activities regarding jurisdictional cultural resources;
- G. Crossing Permits from S.D. Department of Transportation for crossing State highways;
- H. Crossing Permits from County Road Departments for crossing of county roads;
- I. Flood plain, Conditional Use, and building permits where required from County and Local Authorities.

[Applicable Finding or Condition No.: Conditions 1, 2; Findings 12(1)-(3), 60, 88, 90, 97-99]

ANSWER:

- A. 1) No permit applications have been submitted to the US Army Corps of Engineers, S.D. Regulatory Office.
- A. 2) No waterbody crossing in South Dakota requires permitting under the Section 10 of the Rivers and Harbor Act.

A. 3) The Department of State is the lead agency for the consultation process under the Section 106. See Section 4.11, Cultural Resources of the Department of State FSEIS (2014) for a full discussion of the Project's compliance with Section 106.

B. Keystone has not received any permits from the US Fish and Wildlife Service. The US Fish and Wildlife Service issued a Biological Opinion for the Project on May 15, 2013. The Biological Opinion is found in Appendix H of the Department of State FSEIS (2014)

C. In South Dakota, Keystone has not received any permits from the Farm Service Agency of Natural Resources Conservation Service.

D. 1) Keystone has received a General Permit for Temporary Discharge Activities on April 11, 2013 from the SD Department of Environment and Natural Resources.

D. 2) Keystone has not received a Surface Water Withdrawal Permit from SD Department of Environment and Natural Resources.

D. 3) Keystone has not submitted an Oil Response Plan to DENR.

E. The following is a summary of Keystone's consultation history with SD Game, Fish, and Parks as documented in the USFWS issued May 2013 Biological Opinion.

- June 10, 2008: Keystone met with staff from USFWS and South Dakota Department of Game, Fish, and Parks (SDGFP), at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to wildlife, special status species, and sensitive habitat that could potentially occur in the Project area. The goal of the meeting was to gather input on agency recommendations based on the information sent to them in April 2008 for species occurrence, habitat assessments, and future field surveys. Keystone incorporated comments from the meeting into survey protocols and BMPs for future agency verification.

- January/February 2009: Keystone initiated section 7 consultation with the USFWS. Keystone continued discussions with BLM, and state wildlife agency offices for South Dakota that included state-specific special status species survey protocols and BMPs for the species identified as potentially occurring during the 2008 meetings. A summary of the findings from the 2008 biological field surveys was included in the discussions.

- January 27, 2009: Keystone met with staff from the USFWS and SDGFP at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to special status species surveys. The goals of the meeting were to verify Keystone's survey approach, BMPs, discuss required field surveys, and review the information that was sent to the USFWS in the January/February 2009, informal consultation package. The USFWS and SDGFP provided additional recommendations to Keystone's sensitive species mitigation approach to be updated prior to final agency concurrence.

- October 23, 2012: A meeting was held between the USFWS, Department, SDGFP, BLM, and Keystone regarding the greater sage-grouse and a compensatory mitigation plan for the species in South Dakota. Discussions included a management plan and avoidance, minimization, and mitigation strategies.

F. Consultation with the SD SHPO is ongoing. Questions regarding specific cultural resources are resolved in a timely manner and would continue in the same manner in the future.

G. Thirteen crossing permits and twenty-four temporary approach permit applications have been filed with the State of South Dakota Department of Transportation (SD DOT) for the pipeline to cross under the state road rights-of-way. All crossing and temporary approach permits have been received from the SD DOT.

H. A total of 103 crossing permit applications have been filed for the pipeline to cross under all county road rights-of-way. Of the 103 applications filed, 101 have been acquired as of December 30, 2014.

I. The special use permits required for Harding County and Meade County pump stations have been approved. Of the remaining four pump stations, three do not require a special use permit. Special use permits applicable to valve sites, contractor yards, and contractor camps will be obtained prior to construction.

INTERROGATORY NO. 4. Do you agree that diluted bitumen spills require different spill response techniques and different equipment types and amounts as compared to (a) a spill of conventional crude oil and (b) a spill of Williston Basin light crude oil? Please explain your answer and list any scientific study(ies) providing the basis for your answer. [Applicable Finding or Condition No.: Amended Condition 31-42]

ANSWER: Crude oils are naturally variable; however, they share a range of common characteristics and properties that are important for emergency response purposes. The characteristics of the crude oils transported by Keystone XL are not unique and are transported throughout the US by truck, rail, pipelines, barges, and tankers. Crude oils has been safely transported by pipelines for decades. The Emergency Response Plan (ERP) will identify a range of appropriate standard response techniques that may be implemented in the event of a crude oil release. Ultimately, site-specific conditions, including the type of crude oil released, will assist in characterizing the nature of the release, its movement and fate within the environment, and selecting the most appropriate measures for containment and cleanup. The final version of the Keystone Pipeline Emergency Response Plan (ERP) is complete and complies with 49 C.F.R.

Part 194. The Keystone ERP will be amended to include Keystone XL. The ERP also addressed in the FSEIS at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

INTERROGATORY NO. 5. Do you agree that diluted bitumen is heavier than conventional crude and results in greater expenses to remediate leaks or spills? Please explain your answer and identify any known scientific study(ies) providing the basis for your answer.

[Applicable Finding or Condition No.: Amended Condition 31-42/]

ANSWER: Physical characteristics of diluted bitumen are comparable to heavy conventional crude oil and consequently remediation costs would be anticipated to be equivalent. Diluted bitumen (API gravity of approximately 20-22) is heavier than light conventional crude oils (API gravity of approximately 35 to 40), but is consistent with heavy conventional crude oils (API gravity of approximately 19-22). All have API gravities greater than 10, indicating that the oils will float if released into water. The physicochemical properties and environmental fate of diluted bitumen are the same as that of heavy conventional crude oils. Thus, leaks and spills of diluted bitumen would not be expected to result in greater remediation expenses. A number of scientific studies have been conducted on the environmental fate and effects of diluted bitumen and other heavy crude oils, including:

Environment Canada. 2013. Properties, Composition and Marine Spill Behaviour, Fate and Transport of Two Diluted Bitumen Products from the Canadian Oil Sands. Federal Government Technical Report.

Rymell, Matthew. 2009. RP595 Sunken and submerged oils – behavior and response. February 2009. BMT Cordah. Available from:

http://www.dft.gov.uk/mca/s_mca_019_sunken_and_submerged_oils_final_report_27_0209_pub_1.pdf

SL Ross. 2012. Meso-scale Weathering of Cold Lake Bitumen/Condensate Blend. SL Ross Environmental Research Limited. Ottawa, Ontario.

INTERROGATORY NO. 6. Do you agree that soil and rocks that are contaminated by oil spills cannot be cleaned but instead must be removed and disposed of in hazardous waste facilities? Please explain your answer and list any scientific study(ies) providing the basis for your answer.

A. If so, do you agree that reclamation efforts for oil spills of the magnitude of the worst case discharge amount for the Keystone XL Pipeline fail to recover 100% of the oil contaminating the ground?

B. Identify the Documents created by or on your behalf which would show the basis for your answer to this Interrogatory.

[Applicable Finding or Condition No.: Amended Condition 32-38]

ANSWER: Keystone does not agree with this statement. Although removal and disposal of contaminated materials is an effective and well established means of limiting the area affected by a crude oil spill, it is not the only option. In the event of a release affecting soils in South Dakota, Keystone would be required to meet the state's soil remediation standards. This can be accomplished using a number of active remediation techniques, including removal of crude oil, dual-pump recovery, total fluids recovery, bioslurping, air sparging, chemical oxidation, and enhanced biodegradation through the addition of oxygen and nutrients into the

soil (Sutherson 1997). In addition, natural biodegradation and attenuation would ultimately allow for a return to preexisting conditions in soil.

Sutherson, S.S. 1997. Remediation Engineering: Design concepts. CRC Press, Boca Raton, FL.

A. Due to the volatility of many crude oil constituents (e.g., BTEX), a significant portion of crude oil will evaporate soon after being released to the environment. Fate modeling of diluted bitumen indicates that approximately 20% of released crude oil would evaporate within 6 hours of a spill (NOAA 2015). Additional processes such as photodegradation and biodegradation also naturally decrease the volume of crude oil in the environment. Thus, a significant fraction of the discharge volume of a crude oil spill would not be available for recovery due to these natural weathering processes.

If there is an accidental release from the proposed Project, Keystone would implement the remedial measures necessary to meet the federal, state, and local standards that are designed to help ensure protection of human health and environmental quality. Cleanup standards for the state of South Dakota are available in the South Dakota Department of Environment and Natural Resources' Petroleum Assessment and Cleanup Handbook (http://denr.sd.gov/des/gw/spills/handbook/hand_book.aspx). Additional information on remediation is presented in Section 4.13 of the FSEIS, Potential Releases.

B. NOAA. 2015. ADIOS2. Oil Spill response tool – documentation.

<http://response.restoration.noaa.gov/adios>

INTERROGATORY NO. 7. For each incident since January 1, 2010 in which any pipeline transporting crude oil constructed by TransCanada and its Affiliates leaked or spilled pipeline contents, please provide the:

- A. Date;
- B. Location:
- C. Amount of materials leaked or spilled;
- D. Duration of leak or spill before (i) the control center being notified, (ii) pump shut down, (iii) valve shutoff, (iv) national response center notified, and (v) arrival of responders on the scene;
- E. Duration of reclamation of affected soil and/or water resources;
- F. Established and documented cause of leak/spill;
- G. For each such spill, provide a copy of the Integrity Management Plan, the operational manual for the pipeline, the specifications for the SCADA system, and the ERP for each spill in the US and Canada;
- H. Identify the documents which support your answers, above.

[Applicable Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103; Amended Condition 32-38]

OBJECTION AND ANSWER: Please see the spreadsheet attached as Keystone 0774-0784. Keystone's Integrity Management Plan, SCADA specifications, and Emergency Response Plan are confidential and not relevant for the reasons identified elsewhere in these responses.

INTERROGATORY NO. 8. Describe any forecasts you have developed with respect to (i) re-exports of WCSB crude oil from PADD3, (ii) product exports from PADD 3, (iii) US domestic demand for PADD 3 refinery output, and (iv) total PADD 3 refinery output.

- A. Identify the documents upon which this answer is based.

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 9. What companies, if any, were partners or investors with TransCanada in the construction and operation of the KXL pipeline in 2009 which are no longer participating in the proposed project? [Applicable Finding or Condition No.: Findings 24-29]

ANSWER: Conoco Phillips is no longer participating in the Project as of August 14, 2009.

INTERROGATORY NO. 10. Identify the companies which have binding contractual commitments with TransCanada or its Affiliates to ship WCSB or Williston Basin crude oil through the KXL Pipeline. For each such company:

A. Provide the termination dates, opt-out dates, or other material dates in the contractual commitments of shippers with the contractual commitments that underpin the viability and need for the project;

B. Identify all documents and sources for your answers.

[Applicable Finding or Condition No.: Findings 17, 24, 29]

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect this information from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of The Interstate Commerce Act.

INTERROGATORY NO. 11. Provide and describe in detail the development schedule for the Project and describe how the development schedule for the Project is consistent with the contractual commitments made by TransCanada. Identify all documents and sources for your answers. [Applicable Finding or Condition No.: Findings 17, 24, 29]

ANSWER: Currently, Keystone has not identified a date to commence construction, nor does it have a pipeline construction contract in place.

Construction of the proposed Project would begin after Keystone obtains all necessary permits, approvals, and authorizations. Keystone anticipates that the proposed Project would be placed into service approximately two years after receiving such authorizations. As currently planned, the proposed Project would be constructed using 10 spreads of approximately 46 to 122 miles long (*see* FSEIS Table 2.1-13). Final spread configurations and the final construction schedule may result in the use of more or fewer spreads than those indicated. Time periods and

key milestones including the relationship between contractor mobilization, start of construction (pre-welding), start and end of welding, post-welding and clean-up, and contractor demobilization are described in the FSEIS in Section 2.1.10.1 Schedule and Workforce. (FSEIS, pages 2.1-69 and 70).

Keystone will comply with all conditions set out in its permits including the SDPUC Order, including condition 12 to, once known, inform the Commission of the date construction will commence, report to the Commission on the date construction is started, and keep the Commission updated on construction activities. Keystone will also comply with condition 10 to, not later than six months prior to the commencement of construction, commence a program to notify and educate state, county, and municipal agencies on the planned construction schedule and the measures that such agencies should begin taking to prepare for construction impacts and the commencement of project operations. Additionally, in the Special Conditions Recommended by PHMSA, number 17 Construction Plans and Schedule, Keystone will at least 90 days prior to the anticipated construction start date submit its construction plans and schedule to the appropriate PHMSA Directors for review. Subsequent plans and schedule revisions must also be submitted to the appropriate PHMSA Directors, on a monthly basis. (FSEIS, Appendix Z, Compiled Mitigation Measures, page 70.)

INTERROGATORY NO. 12. Is there currently a growing (i) demand for crude oil US refineries, and (ii) demand for petroleum products by US consumers?

- A. Please explain your answer;
- B. Identify all sources for your answer;
- C. How and why has this changed since 2009?

[Applicable Finding or Condition No.: Findings 14, 17]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 13. Identify the forecasts of "additional crude oil production from the WCSB" and the Williston Basin that create a need for the Keystone XL Pipeline.

A. As per such forecasts, state the potential impact of current low oil prices on these forecasts.

B. Identify the basis for your answers to these Interrogatories.

[Applicable Finding or Condition No.: Finding 24]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request

also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 14. Does TransCanada agree that domestic U.S. crude oil supplies are increasing?

- A. Please explain your answer;
- B. Identify documents which support your answer to this Interrogatory.

[Applicable Finding or Condition No.: Finding 26]

ANSWER: According to the Department of State FSEIS 1.4.2.3, U.S. production of crude oil has increased significantly, from approximately 5.5 million bpd in 2010 to 6.5 million bpd in 2012 and 7.5 million bpd by mid-2013. Even with the domestic production growth the U.S. is expected to remain a net importer of crude oil well into the future.

INTERROGATORY NO. 15. Provide a list of U.S. refineries that TransCanada expects to increase demand for WCSB and Williston Basin oil.

- A. For each refinery, state the basis for TransCanada's claim that the refinery will increase such demand for crude oil;

- B. Identify the refineries in PADD 3:
- i. That could be served by the proposed KXL Project that are currently expanding refining capacity or have announced plans to expand their refining capacity;
 - ii. That TransCanada expects to import less offshore crude oil and replace it with crude oil that would be transported by the Project;
 - iii. That are “optimally configured to process heavy crude slates”;
- C. Identify the new refineries and refinery expansions that are currently proposed to be constructed in PADD 3;
- D. Itemize the annual heavy crude oil imports into PADD 3 by country since 2010. For each, state whether the costs of crude oil production in the source country are greater, the same, or less than the cost of heavy crude oil production in the WCSB;
- E. State whether pipeline expansions from the WCSB and the Williston Basin to the U.S. Gulf Coast operated by Enbridge (or companies affiliated with Enbridge) provide crude oil transportation services to the refineries that TransCanada claims would be served by the KXL Project. Please provide a detailed explanation for your answer.
- F. Identify and describe the proposed delivery locations of the Keystone System in PADD 3.
- G. Identify all pipelines in PADD 3 to which the Keystone System is connected;
- H. State the year in which TransCanada expects the Keystone XL Pipeline to be fully utilized;
- I. Describe the impact of growing crude oil production in PADD 3 on the demand in PADD 3 for crude oil from the WCSB and Williston Basin;

J. Describe the size of the potential market for Williston Basin light sweet crude oil in PADD 3 and state whether or not such market is limited in size by production of light sweet crude oil in PADD 3;

K. Identify the basis for your answers to these Interrogatories and identify all documents relied upon by you in answering this Interrogatory.

[Applicable Finding or Condition No.: Findings 24, 26 and 27]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 16. Identify each existing pipeline that comprise the "insufficient pipeline capacity" identified by TransCanada as a factor driving the need for the KXL Project. For each of these pipelines:

- A. Provide current usage as a percentage of each respective pipeline's total capacity;
- B. Identify the basis for your answers to these Interrogatories.

[Applicable Finding or Condition No.: Finding 24]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Without waiving the objection, the demand evidenced by Keystone's binding shipper commitments demonstrates insufficient pipeline capacity.

INTERROGATORY NO. 17. Given competing crude oil pipelines to Cushing, Oklahoma, and PADD 3 and forecast low oil prices, does TransCanada still contend its KXL pipeline is necessary and will allow North American crude oil to replace U.S. reliance on unstable sources of off-shore crude oil?

- A. Please explain your answer;
- B. Identify all documents and sources for your answer;
- C. How and why has this changed since 2009?

[Applicable Finding or Condition No.: Findings 14, 17]

ANSWER: Shippers have committed to long-term binding contracts, which support construction of the pipeline once all regulatory, environmental, and other approvals are received. These long-term binding shipper commitments demonstrate a material endorsement of support

for the Project, its economics, proposed route, and target market, as well as the need for additional pipeline capacity to access North Dakota and Canadian crude supplies.

INTERROGATORY NO. 18. Provide the total current capacity of existing pipelines to transport crude oil from the WCSB and the Williston Basin to the U.S. Gulf Coast and identify the source(s) for your answer. [Applicable Finding or Condition No.: Finding 24]

ANSWER: Specifics to operating capacity of third-party pipelines are under the responsibility of the pipeline owners and are beyond Keystone's control.

INTERROGATORY NO. 19. Identify all other pipeline operations of TransCanada and its Affiliates, which since 2009 are utilizing the same pipeline materials, dimensions, and seals as proposed for the KXL pipeline through South Dakota, and described in Findings 18 and 28. [Applicable Finding or Condition No.: Findings 18, 28]

OBJECTION AND RESPONSE: To the extent that it seeks information for pipelines other than crude oil pipelines, this request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. Without waiving the objection, the Keystone I, Cushing Extension and Gulf Coast segments of the Keystone system are using similar materials to that of the proposed KXL pipeline.

INTERROGATORY NO. 20. Identify each pipeline operated by TransCanada and its Affiliates which have operated at 900,000 bpd, giving the pipeline name, location, dates of such operation, together with:

A. Identification of each such pipeline which subsequently developed a leak or spill, regardless of whether the pipeline was at that time operating at 900,000 bpd, giving date, location, amount spilled/leaked, damage caused;

B. Identify the documents upon which your answer(s) to these Interrogatories were based;
[Applicable Finding or Condition No.: Findings 15, 18, 28]

ANSWER: Keystone and its affiliates do not operate any pipelines at 900,000 bpd.

INTERROGATORY NO. 21. State whether a failure by TransCanada to design, construct, test, or operate the proposed KXL Project in accordance with the special conditions developed by the Pipeline Hazardous Materials and Safety Administration (PHMSA), and set forth in Appendix Z to the Department of State, January 2014 Final Supplemental Environmental Impact Statement (FSEIS), would be a violation of federal law. If so:

- A. Identify the law(s) under which enforcement of these special conditions would be brought;
- B. Identify the enforcing agency;
- C. Identify all correspondence between TransCanada and the PHMSA.
- D. Identify the documents upon which your answer(s) to these Interrogatories were based;
[Applicable Finding or Condition No.: Conditions 1-3; Findings 22, 28]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. In addition, this request depends on a hypothetical condition and is therefore speculative and improper as to form. It is also overlybroad and burdensome to the extent that it seeks all correspondence between TransCanada and PHMSA, and asks for information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, unless and until the Department

issues a Record of Decision and a Presidential Permit, the recommendations in the Final EIS are not binding on Keystone.

INTERROGATORY NO. 22: Identify all other crude oil pipeline operations of TransCanada and its Affiliates which, since 2009, have or are operating at a maximum operating pressure (MOP) of equal to or greater than 1,440 psig generally and/or 1,600 psig MOP for specific low elevation segments of pipeline with the same design factor and pipe wall thickness as described in Finding 19, close to the discharge of pump stations:

A. For each such pipeline which subsequently developed a leak or spill, regardless of the psig MOP the pipeline was operating at the time, giving date, location, amount spilled/leaked, psig MOP at which pipeline was operating at the time, and describe the amount and nature of damage caused by such a leak or spill;

B. Identify any documents upon which your answers to these Interrogatories were based; [Applicable Finding or Condition No.: Findings 19, 28]

ANSWER: There are currently no crude oil pipelines operating equal to or greater than 1,440 psig generally and/or 1,600 psig MOP.

INTERROGATORY NO. 23: For each spill/leak incident which has occurred from a pipeline transporting WCSB crude oil operated by TransCanada and its Affiliates since 2009, state the dates on which transportation of the crude oil through that pipeline was disrupted by planned maintenance, unplanned maintenance, power outages, spills, leaks, or any other causes. Identify any documents upon which your answers to this Interrogatory was based. [Applicable Finding or Condition No.: Finding 28]

ANSWER: See the spreadsheet attached as Keystone 0774-0784.

INTERROGATORY NO. 24: Explain why TransCanada has reduced the maximum operating pressure of the KXL pipeline at most locations to 1,307 psig;

A. State whether TransCanada has any plans to subsequently increase this general operating pressure;

B. If your answer to subpart A of this interrogatory is yes, what is the subsequent maximum operating pressure being contemplated for general use during pipeline operations?

[Applicable Finding or Condition No.: Conditions 31-38; Findings 19, 20]

ANSWER: On August 5 2010, TransCanada withdrew its application to the Pipeline Hazardous Materials and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a 0.8 design factor and adopted the 57 additional safety measures that would have been required under the PHMSA special permit. The operating pressure reduction from 1,440 psig to 1,307 psig is a result of the use of the standard design factor (0.72) in accordance with 49 CFR 195.106 design pressure. TransCanada would be required to re-apply to PHMSA for a special permit in order to operate the pipeline at an increased design factor of 0.8 corresponding to an operating pressure of 1,440 psig. In addition, the attached Media Advisory, marked as Keystone 0647-0649, dated August 5, 2010, addresses this issue.

INTERROGATORY NO. 25: With regard to the plan for mainline valves to be remotely controlled, what guarantee can you give the PUC that TransCanada can prevent a cyber-security attack on the control system?

A. Describe the worst case scenario which could occur in the event of a computer systems security breach on the control system for the KXL Pipeline.

B. Describe the data security systems to be put in place to prevent any such system breach, identify any third-party vendor(s) providing system security software, hardware or monitoring, and identify the particular components or scopes of services such vendors will provide.

C. Identify any documents used to support your answer to this Interrogatory.

[Applicable Finding or Condition No.: Conditions 31-38; Finding 20]

ANSWER:

A. Once constructed, the Keystone XL pipeline will form part of North America's critical national energy infrastructure. Over time, actors such as terrorist organizations and hostile nation states can be expected to pursue their objectives by attempting to disrupt this critical infrastructure. Therefore, it is not prudent for TransCanada to publicly provide an opinion on how the adverse consequences of a cyber attack could be maximized.

B. Consistent with industry practice, TransCanada does not publicly disclose the details of the security systems it has in place. We believe that it is not prudent to make this information public because of the likelihood that it will assist, and, potentially encourage, attackers.

INTERROGATORY NO. 26. What is the current capacity contracted for WCSB crude oil from Canada? Identify any documents upon which you based your answer or which you are aware would be a basis for your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION: This request seeks information that is not within Keystone's custody and control. Keystone does not know the contractual details of other pipeline companies' commitments.

INTERROGATORY NO. 27. State whether there is a significant discount on the price currently of WCSB crude oil relative to West Texas Intermediate and Brent crude oils.

- A. Please explain your answer;
- B. Identify all documents which support your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION AND ANSWER: The scope of the question is too broad given the large number of crude oil grades available from the WCSB. The Canadian heavy benchmark discounts in 2014 range from \$13 to \$30.

- A.
 - Western Canadian crudes are priced against West Texas Intermediate (WTI).
 - Canadian crudes are traded on Net Energy and TMX (NGX) trading exchanges.
 - Canadian crude monthly blended indices are calculated using calendar month volume weighted average between the two platforms.
 - As an example, WCS blended indices for 2014 range from \$13 to \$30 discount to WTI monthly.
- B. Responsive documents are attached as Keystone 1116-1118.

INTERROGATORY NO. 28: What is the current capacity contracted for Williston Basin oil? Identify any documents which would support your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

ANSWER: Shippers have committed about 65,000 barrels per day of capacity for transportation services on Bakken Marketlink.

INTERROGATORY NO. 29: Describe the changes in contracted capacity amounts and duration since 2009 from Canada and the Williston Basin and identify any documents which would support your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

ANSWER: Shippers have committed about 65,000 barrels per day of capacity for transportation services on Bakken Marketlink. Keystone also received additional commitments on Keystone XL Pipeline that would support an expansion of its total capacity from 700,000 barrels per day to 830,000 barrels per day. The contracted capacity amounts, delivery locations and duration of each of the commitments are confidential.

INTERROGATORY NO. 30. Regarding the “U.S. demand for petroleum products,” i.e., produced for U.S. consumers and not for export to other countries:

- A. What is the percent change since 2010?
- B. What is the forecast for “U.S. demand for petroleum products” over the next 20 years?
- C. What has been the annual import of crude oil for each year since 2010?
- D. What is the forecast for offshore crude oil imports into the U.S. over the next 20 years?
- E. Of the 15 million bpd of crude oil demand identified in revised Finding of Fact 25, state whether some of this demand is used to produce petroleum products for export from the U.S. If so provide the quantity of crude oil:
 - i. Needed for domestic demand for petroleum products;
 - ii. Needed to produce petroleum products for export;
- F. Identify any documents which would support your answer;

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC’s jurisdiction and Keystone’s burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request

also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 31. What is the status of pipeline and rail capacity to move oil from oil fields in the Williston Basin to the Baker, Montana on-ramp? Identify any documents which would support your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND ANSWER: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Without waiving the objection, information regarding the Bakken on-ramp pipeline can be found in the Montana Department of Environmental Quality Certificate issued under the Montana Major Facility Siting Act available at <http://www.deq.mt.gov/mfs/keystonexl/keystonecertificate.aspx>.

INTERROGATORY NO. 32: Why would the existing Keystone I pipeline not be capable of shipping enough crude oil from the Western Canadian Sedimentary Basin (WCSB) to offset the need for unstable foreign oil supplies? Identify any documents which would support your answer. [Applicable Finding or Condition No.: Finding 14]

ANSWER: The Keystone Pipeline does not have sufficient capacity to meet additional demand.

INTERROGATORY NO. 33: What are the currently projected forecasts of production in the Western Canadian Sedimentary Basin (WCSB) and the Williston Basin over each of the next ten years? Identify any documents which would support your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 34: Describe the impact of low oil prices on crude oil production in the WCSB and Williston Basin.

A. What is the effect on the forecast of demand for crude oil transportation services from the Williston Basin and WCSB given annual average West Texas Intermediate crude oil prices of \$50/bbl, \$60/bbl, \$70/bbl, and \$80/bbl?

B. In light of low oil prices, what will be the impact of the Enbridge pipelines from the WCSB and Williston Basin to the US Gulf Coast on the need for transportation services of the KXL pipeline?

C. Identify any documents which would support your answers;

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 35: Describe in detail, route changes in the proposed KXL pipeline since 2010, on a county by county basis, identifying specific land parcels to be affected by such changes. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Finding 16]

ANSWER: Please see the attached route variation maps attached as Keystone 0470-0583.

INTERROGATORY NO. 36: Provide the dates on which pipe segments to be used in South Dakota were delivered to storage location in South Dakota or adjacent states.

A. For each such delivery of pipe segments, state the date on which an external fusion bonded epoxy (FBE) was applied;

B. Describe the materials comprising and dimensions of any covering placed over each shipment of delivered pipe segments on its arrival;

i. Provide the date of each covering of the respective pipe shipment after delivery;

C. As per the respective deliveries, state the longest time that any pipe segments were stored without protective covering;

D. Provide the FBE manufacturer's recommendations for protection of the FBE from the effects of outside storage;

E. Provide the pipeline manufacturer's recommendations for protection of FBE against the effects of outside storage;

F. Provide the manufacturer's suggested maximum amount of time of sunlight exposure of FBE without protective covering;

G. Describe the impact of UV radiation on FBE coating over time;

H. Provide the manufacturer's warranties and guarantees for the FBE coating applied to the pipe segments;

I. Provide the manufacturer's warranties and guarantees for the pipe segments, including for the FBE;

J. Explain the elimination from use in the proposed Project of API 5L X80 high strength steel;

- i. Describe how substituted material(s) would perform better than the API 5L X80 steel;
- K. Identify any documents which would support your answers;

[Applicable Finding or Condition No.: Finding 18]

ANSWER:

- A. January 2011- November 2011
- B. Covering application commenced in October 2012 and was completed July 2013
- C. Approximately 18 months
- D. The manufacturer did not provide recommendation or direction for storage. Direction for storage is per TransCanada specification.
- E. The manufacturer did not provide recommendation or direction for storage. Direction for storage is per TransCanada specification.
- F. Per manufacture, pipe coated with FBE coatings can be stored for 730 days under most climatic weather conditions without commencement of deterioration of the coating. TransCanada specification provides criteria for minimum coating thickness requirements which would supersede any exposure time period. Applicable manufacturer warranties are related to application and workmanship to the specification
- G. Sunlight exposure over a significantly extended period of time could cause a reduction in coating thickness and coating flexibility due to degradation by UV radiation

H. WARRANTY

Unless otherwise specified in the Order for Pipe, the Supplier hereby warrants that the Pipe, including, if applicable, the Work done thereto, shall meet and conform to the Specifications and the Technical Agreements, and such other product characteristics agreed to by the Parties in

writing, for a period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of all Pipe to the Delivery Point, whichever is earlier. If during the aforesaid warranty period, the Company discovers any Pipe which fails to conform, the Company shall forthwith notify in writing the Supplier of such non-conformance. The Company and the Supplier shall jointly investigate any such non-conformance in an effort, in good faith, to determine the cause thereof, provided that such investigation shall not unreasonably delay any repair or replacement of the Pipe. If the Parties are unable to agree upon the cause of the non-conformance with this Agreement within ten (10) days of the date of the discovery of such non-conformance, either Party shall have the right to request that the matter be arbitrated pursuant to single party arbitration conducted in accordance with the then current International Chamber of Commerce's Rules of Arbitration.

If such non-conformance is discovered after title to the Pipe passes to the Company, the Company may, after notification to the Supplier, to the extent the Company, acting reasonably, deems practical under the circumstances, repair the same at the Supplier's risk and expense. If repair is not practical in the Company's opinion, acting reasonably, the Company agrees that the Supplier may replace the non-conforming Pipe in the event that the Supplier can secure such replacement at delivery dates at least as favorable as those available to the Company from other sources.

Any Pipe that is repaired or replaced pursuant to the warranties specified herein shall be warranted for a further period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for

regular service or eighteen (18) calendar months from the date of delivery of the Pipe to the Delivery Point, whichever is earlier.

If the non-conforming Pipe cannot be repaired and the Company elects not to replace such Pipe, the Company shall have the right to return, at the Supplier's expense and risk, any or all of the non-conforming Pipe delivered by the Supplier to the Company whereupon the Supplier shall immediately repay the Company, without Interest, all monies previously paid by the Company to the Supplier on account of the non-conforming Pipe so returned, together with all costs and expenses incurred by the Company in returning such Pipe.

The express warranties of the Supplier in this Agreement are the only warranties as to the Pipe and are in lieu of all other warranties in respect thereof, whether written, statutory, oral, express or implied including, without limitation, any warranty of merchantability or fitness for purpose. The rights and remedies contained in this Agreement are the Company's exclusive rights and remedies against the Supplier whatsoever in relation to, or arising out of, or in connection with the performance or conformance of the Supplier's obligations under these warranties.

I. WARRANTY

Unless otherwise specified in the Order for Pipe, the Supplier hereby warrants that the Pipe, including, if applicable, the Work done thereto, shall meet and conform to the Specifications and the Technical Agreements, and such other product characteristics agreed to by the Parties in writing, for a period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of all Pipe to the

Delivery Point, whichever is earlier. If during the aforesaid warranty period, the Company discovers any Pipe which fails to conform, the Company shall forthwith notify in writing the Supplier of such non-conformance. The Company and the Supplier shall jointly investigate any such non-conformance in an effort, in good faith, to determine the cause thereof, provided that such investigation shall not unreasonably delay any repair or replacement of the Pipe. If the Parties are unable to agree upon the cause of the non-conformance with this Agreement within ten (10) days of the date of the discovery of such non-conformance, either Party shall have the right to request that the matter be arbitrated pursuant to single party arbitration conducted in accordance with the then current International Chamber of Commerce's Rules of Arbitration. If such non-conformance is discovered after title to the Pipe passes to the Company, the Company may, after notification to the Supplier, to the extent the Company, acting reasonably, deems practical under the circumstances, repair the same at the Supplier's risk and expense. If repair is not practical in the Company's opinion, acting reasonably, the Company agrees that the Supplier may replace the non-conforming Pipe in the event that the Supplier can secure such replacement at delivery dates at least as favorable as those available to the Company from other sources.

Any Pipe that is repaired or replaced pursuant to the warranties specified herein shall be warranted for a further period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of the Pipe to the Delivery Point, whichever is earlier.

If the non-conforming Pipe cannot be repaired and the Company elects not to replace such Pipe, the Company shall have the right to return, at the Supplier's expense and risk, any or all of the non-conforming Pipe delivered by the Supplier to the Company whereupon the Supplier shall immediately repay the Company, without Interest, all monies previously paid by the Company to the Supplier on account of the non-conforming Pipe so returned, together with all costs and expenses incurred by the Company in returning such Pipe.

The express warranties of the Supplier in this Agreement are the only warranties as to the Pipe and are in lieu of all other warranties in respect thereof, whether written, statutory, oral, express or implied including, without limitation, any warranty of merchantability or fitness for purpose. The rights and remedies contained in this Agreement are the Company's exclusive rights and remedies against the Supplier whatsoever in relation to, or arising out of, or in connection with the performance or conformance of the Supplier's obligations under these warranties.

J. API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline.

INTERROGATORY NO. 37: State whether any power lines have been permitted and constructed to provide power to pump stations by local power providers;

A. Identify each such power line;

B. State the cost of construction of the power line and identify the source(s) of the funds used for construction of each power line;

C. Identify the contractors or vendors who will be engaged to construct power lines.

- D. If any State or Tribal permit or other authorization is required for any planned construction of power lines to pump stations:
- i. Identify the permits which have been obtained, together with date permit granted;
 - ii. Identify permits which have not yet been obtained;
 - iii. Identify which permits have been applied for and are pending.
- E. Identify any documents which would support your answers to this interrogatory.

[Applicable Finding or Condition No.: Finding 20]

ANSWER: No power lines have been constructed to pump stations for KXL in South Dakota. All required permits pertaining to power lines are completed by the individual power providers.

INTERROGATORY NO. 38. Describe each increased estimated cost of the KXL pipeline due to each of the following:

- A. New technical requirements;
- B. Inflation;
- C. Project management;
- D. New regulatory requirements;
- E. Material storage issues;
- F. Preservation;
- G. Identify documents upon which you base your answers;

[Applicable Finding or Condition No.: Finding 23]

OBJECTION: This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). In addition, Keystone does not

maintain a breakdown of the estimated project cost in the way requested, and requiring such a breakdown of costs would require the disclosure of information that has substantial commercial and proprietary value, and is subject to substantial efforts by Keystone to protect it from actual and potential competitors.

INTERROGATORY NO. 39. Identify companies currently interested in using the KXL pipeline to “further” diversify supply away from offshore foreign crude supply.” For each company identified,

- A. State whether they are interested in “Canadian crude;”
- B. Identify documents upon which you base your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION: The identity of Keystone’s shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect this information from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. This request also seeks information that is beyond the scope of the PUC’s jurisdiction and Keystone’s burden of proof under SDCL § 49-41B-27. It is within the purview of the U.S. Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order.

INTERROGATORY NO. 40: Describe the potential for pipeline transportation to replace rail transportation for shipments from the WCSB and the Williston Basin to PADDs 1 and 5.

A. Provide the quantity of oil exported from the WCSB and the Williston Basin to PADDs 1 through 5 by rail from 2010 to the present;

B. Identify any documents which would support your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467

INTERROGATORY NO. 41: List the changes in the KXL Project route since 2010 and identify any documents which would support your answers. [Applicable Finding or Condition No.: Finding 33]

ANSWER: Please refer to the attached route variation maps attached as Keystone 0470-0583.

INTERROGATORY NO. 42: Identify paleontological studies within the Upper Cretaceous or Tertiary strata of which you have knowledge were conducted after 2009 in the

proximate location of the currently proposed KXL pipeline route and identify any documents which would support your answers. [Applicable Finding or Condition No.: Findings 34, 36; Conditions 43, 44]

ANSWER: Paleontological fieldwork methodology, literature search information, and results can be found in Sections 3.1.2.2 and 3.1.2.3 of the Department of State FSEIS (2014). A list of reports detailing the results of all pre-construction paleontological field surveys can be found in Table 3.1-4 of the Department of State FSEIS (2014).

INTERROGATORY NO. 43: Identify Section 106 type “cultural resource” studies of which you have knowledge that were conducted after 2009 in the proximate location of the currently proposed KXL pipeline route and identify any documents which would support your answers. [Applicable Finding or Condition No.: Conditions 43, 44]

ANSWER: Cultural resources survey reports are listed in Section 3.11 of the Department of State FSEIS (2014), with results of the SD surveys detailed in Table 3.11-3.

INTERROGATORY NO. 44: TransCanada is to identify the exact locations of active, shut-in, and abandoned wells and any associated underground pipelines in the construction ROW, what is the status of such identification procedures? As to the wells and pipelines to be identified:

A. How long does TransCanada expect such an identification process will take before the Company would be willing to assure the PUC that all such wells and pipelines have been identified;

B. If “appropriate precautions” prove inadequate, describe in detail a worst case scenario, especially involving a river, tributary, or other water resources, involving:

- i. An unidentified well;
 - ii. An unidentified pipeline;
 - iii. An identified well where the precautions fail;
 - iv. An identified pipeline where the precautions fail;
- C. What circumstance(s) or event(s) could potentially cause the “appropriate precautions” to fail?
- i. How is it determined what the specific appropriate precautions to be undertaken are for each kind of scenario?
 - ii. Who determines whether each specific precaution is “appropriate” to prevent environmental and/or human damage;
 - iii. As to appropriate precautions to be undertaken for each possible scenario, how is the PUC assured TransCanada actually implements or undertakes the precaution(s) necessary.
- D. What specific precautions have been or are planned to be taken to protect the soils in the Sand Hills from contamination;
- E. What specific precautions have been or are planned to be taken to protect the underground water resources of the Oglala Aquifer and other potentially affected aquifers from contamination;
- F. What specific precautions have been or are planned to protect the surface and alluvial waters of the State and respective Tribes from contamination;
- G. What type of gas or oil or related solutions or gases pumped or injected by a well within a mile or more along the general route of the KXL pipeline, could be involved in such a “worst case scenario”?

H. What type of gas or oil or related solutions or gases being transported by a pipeline within a mile or more along the general route of the KXL pipeline, could be involved in such a “worst case scenario”?

I. Identify any documents which would support your answers.

[Applicable Finding or Condition No.: Conditions 15, 16, 21, 22, 42]

ANSWER: TransCanada has not yet identified the locations of the wells and pipelines as stated. TransCanada does not differentiate between active and abandoned but does identify wells and pipeline within the construction right of way utilizing public data, survey data and One Calls at the time of construction.

INTERROGATORY NO. 45: What kind of “significant problems” are anticipated by the weathering of shale underlying almost all of Haakon, Jones and portions of Tripp Counties:

A. To access roads;

B. To structural foundations for roads, power lines, or other structures constructed in connection with the KXL pipeline (in answering, identify the type of foundations are of concern);

C. To the proposed KXL pipeline or part thereof;

D. Identify any documents which would support your answers.

[Applicable Finding or Condition No.: Conditions 15, 16, 18, 21, 22, 23, 42]

ANSWER: There are no “significant problems” anticipated concerning the weathering of shale in South Dakota.

INTERROGATORY NO. 46: Describe a leak, the existence of which “may suggest a threat to the integrity of the pipeline.”

A. Other than aerial patrols, ground patrols, and public awareness, what steps have been taken to prevent a leak of this nature and magnitude or prevent or minimize its effect on the pipeline's integrity?

B. Identify documents which support and/or were used to provide your answers.

[Applicable Finding or Condition No.: Finding 95; Conditions 31-38]

ANSWER: A confirmed leak is in fact a loss of integrity, however a direct observation reported leak may not be a result of a pipeline release (e.g. an apparent sheen on standing water near the ROW) or the release may be from another line in a multi-pipeline corridor or at a foreign pipeline crossing. In this context, a leak which "may suggest a threat to the integrity of the pipeline" is a reported potential leak that has yet to be confirmed as originating from a Keystone line.

Prevention of leaks of this magnitude are addressed in the sections of the FSEIS discussing pipeline integrity, Sections 3.13 and 4.13. In addition to these answer, in regard to remote sensing technologies, several initiatives have been undertaken by Keystone. A pilot implementation of a fixed thermal imaging system at a pump station will be tested this year, in addition to three industry projects that Keystone is participating in:

- C-FER Technologies' ELDER joint industry project (JIP) that is evaluating the performance of four different cable based leak detection systems.
- A second C-FER Technologies JIP that is quantifying the physical phenomenon that occur at the ground surface that could be detected by various technologies.
- PHMSA's project entitled "INO Technologies Assessment as Leak Detection Systems for Hazardous Liquid Pipelines".

INTERROGATORY NO. 47: Describe the status of the written manual for normal operations, maintenance activities, and handling abnormal operating and emergencies.

- A. Identify the latest draft of the written manual and all prior drafts;
- B. Identify all documents which support or were used to provide your answers.

[Applicable Finding or Condition No.: Finding 96; Conditions 31-38]

ANSWER: As required by the Department of Transportation, Pipeline and Hazardous Material Safety Administration 49 CFR §195.402 Keystone has prepared and follows a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. The current manual is version 07 and the original manual version 01 issued August 01, 2010. Other manual revisions are defined:

- Version 02 – 11/15/2011
- Version 03 – 04/15/2012
- Version 04 – 06/07/2012
- Version 05 – 07/16/2012
- Version 06 – 07/09/2013

The Operations and Maintenance (O&M) Manual U.S. Hazardous Liquids Pipelines and referenced versions were utilized in support of TransCanada's response.

INTERROGATORY NO. 48: Calculate the worst case discharge and describe in detail the worst case scenario that would result from damage caused to the Keystone XL pipeline from the "high swelling potential" of the Cretaceous and Tertiary rocks located in the Missouri River Plateau due to this land form's susceptibility to instability in the form of slumps and earth-flows, including landslides.

A. Provide the locations where such ground swelling can be anticipated;

B. Identify any documents which would support your answer;

[Applicable Finding or Condition No.: Finding 40, 77; Conditions 31-42]

OBJECTION AND RESPONSE: This request seeks information that is confidential.

The volume and location of a worst case scenario spill are kept confidential for homeland security reasons. Without waiving the objection, Section 3 of Appendix A of the 2009 Keystone XL Risk Assessment (FSEIS Appendix P) discusses the state-specific incident frequencies for a variety of pipeline hazards, including ground movement and landslides. Within Section 3.5, specific failure mechanisms and mitigation measures relating to these natural hazards are also discussed. Pipelines are remarkably resilient to landslides and seismic events (CITE). If ground movement occurred and has the potential to affect the pipe's integrity, Keystone is required by federal regulations to inspect the pipe (49 CFR 195).

TransCanada's Integrity Management Program would continue to assess the Keystone XL Pipeline Project route and threats from outside forces (e.g., landslides) would be evaluated in a comprehensive and systematic program, as required by federal pipeline safety regulations (49 CFR 195). As part of the Integrity Management Program, Keystone evaluates the potential for a release along the entire length of its pipelines and determines what resources could potentially be affected by a release. This information is shared with TransCanada's Emergency Response staff to facilitate emergency response planning and to develop appropriate training scenarios.

A. Locations of ground swelling are identified in the FSEIS, Section 3.1 Geology. In Section 3.1 of the FSEIS, Table 3.1-6 and Figure 3.1.2-3 identify the high risk category Landslide Hazard Area (LSHR) areas for swelling soils and landslides.

Table 3.1-6 Locations within LSHR High-Risk Category along the Proposed Project Corridor

State	Start (MP)	End (MP)	Length
Montana	0.2	25.5	25.3
Montana	25.5	89.2	63.7
Montana	89.2	102.0	12.8
South Dakota	308.3	313.5	5.2
South Dakota	355.6	358.1	2.5
South Dakota	358.1	370.9	12.8
South Dakota	389.5	425.9	36.4
South Dakota	425.9	426.3	0.4
South Dakota	426.3	485.1	58.8
South Dakota	485.1	525.2	40.1
South Dakota	525.2	537.1	11.9
South Dakota	537.1	571.5	34.4
Nebraska	601.5	605.3	3.8
Nebraska	606.8	637.5	30.7
Total			338.8

Sources: USGS 2009a; PHMSA-NPMS 2007b

B. 49 CFR 194.105

U.S. Department of State (USDOS). 2014. Final Supplemental Environmental Impact Statement for the Keystone XL Project. Washington D.C. Includes all appendices of the FSEIS.

INTERROGATORY NO. 49: What lessons have been learned from previous pipeline construction, current right-of-way conditions and project requirements that have been incorporated into the Construction Mitigation and Reclamation (CMR) Plan? Identify any documents which would support your answers, including but not limited to the latest version of the CMR plan. [Applicable Finding or Condition No.: Finding 32, 37, 73; Conditions 13-30]

ANSWER: Lessons learned are incorporated through the changes to Keystone’s CMR Plan, the current draft of which is attached to Exhibit C to Keystone’s certification petition as Attachment A.

INTERROGATORY NO. 50: Provide a list of changes in the proposed KXL pipeline route since 2010.

- A. For each change in the route:
 - i. State why the route was changed;
 - ii. State how the new route improves this Project when compared with the previously submitted route;
- B. Identify any documents which would support your answers.

[Applicable Finding or Condition No.: Finding 33]

ANSWER: Please refer to the attached route variation maps attached as Keystone 0470-0583.

INTERROGATORY NO. 51: Describe the status of the development of procedures for handling and disposal of unanticipated contaminated soil discovered during construction, and consultation with relevant agencies thereon.

- A. Identify any draft or final procures developed to date;
- B. Identify any documents which would support your answers.

[Applicable Finding or Condition No.: Conditions 13-30]

ANSWER: Keystone has not yet drafted the Unanticipated Contaminated Soils Plan.

INTERROGATORY NO. 52: State whether or not TransCanada or its Affiliates have conducted any assessments or studies of potential risks to the structural integrity of the proposed KXL Pipeline from seismic activity. If so, describe the results of any such assessment or studies and describe the maximum impacts that could occur with respect to a pipeline rupture resulting

from seismic activity. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Conditions 31-38]

ANSWER: Please refer to the FEIS section 3.1.4 Geologic Hazards.

INTERROGATORY NO. 53: Describe the status of TransCanada's efforts to obtain a permit process for water body crossings.

- A. List the agency(ies) to whom TransCanada has submitted a permit application;
- B. Identify all permit applications submitted;
- C. List any permits which TransCanada needs to obtain prior to its proposed KXL pipeline construction for each of the water body crossings desired to be crossed.
- D. Explain why horizontal directional drilling will not be used on water body crossing of perennial streams and intermittent water bodies;
- E. Identify any documents which would support your answers.

[Applicable Finding or Condition No.: Finding 41; Conditions 1, 2, 13-30]

ANSWER: The following is the requested information addressing the permitting of the water body crossings:

- A. To date, Keystone has not submitted any permit applications to any agencies for water body crossings in South Dakota. All permits for waterbody crossings, as required, will be filed closer to the time period of construction.
- B. To date, Keystone has not submitted any permit applications for water body crossings in South Dakota. All permits for waterbody crossings, as required, will be filed closer to the time period of construction.

C. Keystone will permit all of the water body crossings in South Dakota under the US Army Corps of Engineers Nationwide General Permit (NWP) 12. Additionally, the South Dakota Department of Environment and Natural Resources is responsible for Clean Water Act permit certification under Section 401 and would review proposed stream and river crossings where necessary and may issue project-specific conditions.

D. The decision to use the horizontal directional drilling (HDD) crossing method was based on an evaluation of engineering and environmental factors and use of an HDD does not always provide the most suitable methodology for a waterbody crossing. During the Project design, TransCanada has complied with all regulations and permit stipulations in determining the proposed crossing method for each waterbody in South Dakota.

E. The Department of State FEIS (2014) Sections 4.3, Water Resources; 4.7 Fisheries; 4.8 Threatened and Endangered Species; and Appendix H.

INTERROGATORY NO. 54: Describe the maximum impacts that could occur from expected loss of in-stream habitat through direct disturbance, loss of bank cover, disruption of fish movement, direct disturbance to spawning, water quality effects, and sedimentation effects by open-cut trenching of water crossings other than the Little Missouri, Cheyenne and White River crossings. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Finding 41; Conditions 34, 41]

ANSWER: The Department of State FSEIS (2014) evaluates the impacts to instream habitat as a result of the construction and operation of the Project in the following locations:

- a. Section 4.3.2.2, Surface Water
- b. Section 4.3.3.2, Surface Water

- c. Section 4.7.3.2, Construction impacts
- d. Section 4.7.3.3 Proposed Project Operational Impacts

INTERROGATORY NO. 55: Describe the maximum impacts that could occur during or as a result of horizontal directional drilling to cross the Little Missouri, Cheyenne, and White River crossings. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Finding 41, 82-83; Condition 22]

ANSWER: This issue is addressed several times in the FSEIS, as follows:

At page 4.3-21:

In some instances, pressurized fluids and drilling lubricants used in the HDD process have the potential to escape the active HDD bore, migrate through the soils, and come to the surface at or near the crossing construction site, an event commonly known as a frac-out. Measures identified in a required HDD contingency plan would be implemented, including monitoring of the directional drill bore, monitoring downstream for evidence of drilling fluids, and mitigation measures to address a frac-out should one occur.

At page 4.8-20 :

The HDD method avoids direct disturbance to the river, channel bed, or banks. While the HDD method poses a small risk of frac-out (i.e., release of bentonite-based drilling fluids), potential releases would be contained by best management practices that would be described within the HDD Contingency Plans required for drilled crossings. Most leaks of HDD fluids occur near the entry, exit locations for the drill, and are quickly contained and cleaned up. Frac-outs that may release drilling fluids into aquatic environments are difficult to contain primarily because bentonite readily disperses in flowing water and quickly settles in standing water.

Should this type of release occur, bentonite is non-toxic but in sufficient concentration may physically inhibit respiration of adult fish and eggs.

At page 4.7-11,12:

The HDD method for crossing waterbodies would be used to minimize disturbance to aquatic habitat, stream banks, and recreational or commercial fisheries. Impacts could occur if there is an unintended release of drilling fluids (i.e., a frac out) during the HDD operation. A frac out could release bentonitic drilling mud into the aquatic environment. The released drilling mud would readily disperse in flowing water or eventually settle in standing water.

Although bentonite is non-toxic, suspended bentonite may produce short-term impacts to the respiration of fish and aquatic invertebrates due to fouled gills. Longer-term effects could result if larval fish are covered and suffocate due to fouled gills and/or lack of oxygen. If the frac out occurred during a spawning period, egg masses of fish could be covered, thus inhibiting the flow of dissolved oxygen to the egg masses. Benthic invertebrates and the larval stages of pelagic organisms could also be covered and suffocate.

INTERROGATORY NO. 56: Describe the worst case scenario of a worst case discharge into the Little Missouri, Cheyenne, and White River crossings. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Findings 41-52, 68-69, 82-83; Conditions 31-42]

OBJECTION AND RESPONSE: This request seeks information that is confidential. The location and volume of a worst case scenario spill are kept confidential for homeland security reasons. Without waiving the objection, worst case discharge data were provided to regulatory agencies in Appendix A of the 2009 Keystone XL Risk Assessment.

The 2009 Keystone XL Risk Assessment discussed the range of impacts based on a broad range of spill volumes that encompassed 99.6 percent of all historical spill volumes, thereby describing a reasonable worst case scenario for the Keystone XL Pipeline Project. The 2009 Keystone XL Risk Assessment discussed the spill volumes and a very conservative assessment (i.e., assessment intentionally overestimates) of the magnitude of potential impacts in flowing waterbodies (2009 Keystone XL Risk Assessment, Section 4.2.3.4 Water Resources).

For streams that are HDD, most spills would not be expected to reach the river since the burial depth often can prevent a release from reaching the waterbody. However, as a worst case scenario for the purposes of this information response, a worst case scenario is assumed to reach the river. In the 2009 Keystone XL Risk Assessment, Table 4-1 from the 2009 Keystone XL Risk Assessment describes stream categories based on stream flows. The White River and Little Missouri Rivers are categorized as a stream with upper moderate flow, while the Cheyenne River would fall into the high flow Stream category. All three streams are being HDD. Based on those stream flow categories, impacts to water quality and aquatic biota can be identified in 2009 Keystone XL Risk Assessment text in Section 4.2.3.4 and Tables 4.2, and 4.3 and 4.7 to 4.10.

2009 Keystone XL Risk Assessment

Table 4-1 Stream Categories

Category	Streamflow (cubic feet per second [cfs])	Top of Bank Stream Width (feet)	Representative Streams
Low Flow Stream	10 – 100	<50	Many unnamed intermittent tributaries in all states crossed, Bear Creek (MT), South Branch Timber Creek (NE)

Lower Moderate Flow Stream	100 – 1,000	50 – 500	Upper Sevenmile Creek (MT), Lone Tree Creek (MT), Little Blue River (NE)
Upper Moderate Flow Stream	1,000 – 10,000	500 – 1,000	Yellowstone River (MT), White River (SD), Niobrara River (NE)
High Flow Stream	>10,000	1,000 – 2,500	Missouri River (MT), Loup River (NE), Platte River (NE), Canadian River (OK), Red River (TX)

INTERROGATORY NO. 57: Describe the worst case scenario which could occur from the Keystone XL pipeline as it passes under channels, adjacent flood plains and flood protection levees. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Findings 41-49; Conditions 31-42]

OBJECTION: This request seeks information that is confidential by statute. The location and volume of a worst case scenario spill are kept confidential for homeland security reasons. Without waiving the objection, when the pipe crosses channels and flood plains, scenarios would be dictated by stream flow rate (discharge) and are discussed in Section 4.2.3.4 of 2009 Keystone XL Risk Assessment. Impacts are described in Section 4.2.3.4 for channels. Floodplain crossings are covered in FEIS Section 4.3.3.3 and Section 4.3.3.4 discusses impacts to floodplains. Worst case would be spill into low flow stream (Table 4-2 in 2009 Keystone XL Risk Assessment). Spills at individual river crossings are rare with occurrence interval of 1/22,000 years to 1/830,000 years based on representative crossing distances (2009 Keystone XL Risk Assessment). Most spills are less than 3 barrels.

River crossings by pipelines are very common, number of incidents are low, and safety is not affected by material transported. Predicted Project-specific incident frequencies are provided in Section 3.0 of the 2009 Keystone XL Risk Assessment. Spills at individual river crossings are rare with occurrence interval of 1/22,000 years to 1/830,000 years based on representative crossing distances (2009 Keystone XL Risk Assessment).

INTERROGATORY NO. 58: In light of the spill risk assessment provided by TransCanada in the HP09-001 docket:

- A. Explain the number of leaks along the Keystone I pipeline since 2008;
- B. Explain the number of leaks from the other oil pipelines constructed and/or operated by TransCanada or its Affiliates;
- C. What would be a worst case scenario discharge from the KXL pipeline? Please explain your answer;
- D. Identify any documents which would support your respective answers.

[Applicable Finding or Condition No.: Findings 41-49, 51-52; Conditions 31-38]

OBJECTION AND RESPONSE: Subpart(c) requests information that is confidential by statute. The location and volume of a worst case scenario spill are confidential for homeland security reasons. Subpart (d) is overlybroad and unduly burdensome. There are thousands of pages of documents supporting Keystone's spill risk assessment. In addition, many of the documents contain information that is confidential and proprietary. Without waiving the objection:

- A. Keystone has delivered more than 760 million barrels of oil from Canada to the United States markets since it began operation in July 2010. The small number of leaks that

have occurred on the pipeline have had nothing to do with the integrity of the pipe itself. They have all occurred at our pump stations and other above-ground facilities and have been related to leakage from small-diameter fittings and seals. They have all been cleaned up with no environmental impact. We designed the pipeline to ensure that all small diameter fittings, valves and seals are located above ground where they can be easily accessed for maintenance and repairs. All of our pump stations are designed to capture and contain oil on our property. In total, less than 450 barrels of oil, out of more than 760 million barrels transported, have come out of the pipeline since it began operations five years ago TransCanada is constantly striving to improve our performance and working towards our goal of having zero leaks or safety incidents. All pipeline leaks are thoroughly investigated regardless of their size in order to understand the cause and prevent future such incidents. The leaks are identified in the spreadsheet attached as Keystone 0774-0784.

B. None.

INTERROGATORY NO. 59: Describe in detail the impact of a worst case scenario spill from the proposed KXL Pipeline through the Sand Hills in South Dakota. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

OBJECTION AND ANSWER: This request seeks information that is not within Keystone's custody or control. Without waiving the objection, there are no Sand Hills in South Dakota. See Table 3.5.-2 of the Department of State FSEIS (2014).

INTERROGATORY NO. 60: Describe in detail the impact of a worst case scenario spill into the shallow and surficial aquifers in Tripp County from the proposed KXL Pipeline. Identify

any documents which would support your answers. [Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

OBJECTION AND ANSWER: This request seeks information that is confidential by statute. The location and volume of a worst case scenario spill are confidential for homeland security reasons. Without waiving the objection, the 2009 Keystone XL Risk Assessment (FSEIS, Appendix P) described the movement of crude oil and its constituents in soils and groundwater. Field investigations of more than 600 historical petroleum hydrocarbon release sites indicate the migration of dissolved constituents typically stabilizes within several hundred feet of the crude oil source area (Newell and Conner 1998; USGS 1998). Over a longer period, the area of the contaminant plume may begin to reduce due to natural biodegradation. Removal of crude oil contamination will eliminate the source of dissolved constituents impacting the groundwater.

Spills are also discussed in the FSEIS in Section 4.1.3.4, including those in shallow and surficial aquifers. The fate and transport of benzene and other crude oil constituents is discussed in numerous studies and articles, including those referenced in the 2009 Keystone XL Risk Assessment, such as:

Freeze, R. A. and J. A. Cherry. 1979. Groundwater. Prentice Hall, Inc. Englewood Cliffs, New Jersey. 604 pp.

Minnesota Pollution Control Agency. 2005. Assessment of Natural Attenuation at Petroleum Release Sites. Guidance Document c-prp4-03, Petroleum Remediation Program, Minnesota Pollution Control Agency. April 2005. 11 pp.

- Neff, J. M. 1979. Polycyclic aromatic hydrocarbons in the aquatic environment. Applied Science publ. Ltd., London. 262 pp.
- Newell, C. J. and J. A. Connor. 1998. Characteristics of Dissolved Petroleum Hydrocarbon Plumes: Results from Four Studies. American Petroleum Institute Soil / Groundwater Technical Task Force. December 1998.
- Spence, L. R., K. T. O'Reilly, R. I. Maagaw, and W. G. Rixey. 2001. Chapter 6 – Predicting the fate and transport of hydrocarbons in soil and groundwater. In :risk-based decision-making or assessing petroleum impacts at exploration and production sites. Edited by S. McMillen, R. Magaw, R. Carovillano, Petroleum Environmental Research Forum and US Department of Energy.
- United States Geological Service (USGS). 1998. Groundwater Contamination by Crude Oil near Bemidji, Minnesota. US Geological Survey Fact Sheet 084-98, September 1998.
- Additional references on this subject from the FSEIS include:
- American Petroleum Institute (API). 1992. Review of Natural Resource Damage Assessments in Freshwater Environments: Effects of Oil Release into Freshwater Habitats. API Publ. No. 4514.
- API. 1997. Petroleum in the Freshwater Environment: An annotated Bibliography 1946-1993. API Publ. No. 4640.
- Grimaz, S., S. Allen, J. Steward, and G. Dolcetti. 2007. Predictive evaluation of the extent of the surface spreading for the case of accidental spillage of oil on ground. Selected Paper IcheaP8, AIDIC Conference series, Vol. 8, 2007, pp. 151-160.

Hult, M.F. 1984. Groundwater Contamination by Crude Oil at the Bemidji, Minnesota, Research Site: U.S. Geological Survey Toxic Waste—Ground-Water Contamination Study. Papers presented at the Toxic-Waste Technical Meeting, Tucson, Arizona, March 20-22. USGS Water Investigations Report 84-4188.

Weaver, J.W., R.J. Charbeneau, J.D. Tauxe, B.K. Lien, and J.B. Provost. 1994. The hydrocarbon spill screening model (HSSM) Volume 1: User's guide. USEPA/600/R-94/039a. U.S. Environmental Protection Agency, Office of Research and Development, Robert S. Kerr, Environmental Research Laboratory, Ada, OK

INTERROGATORY NO. 61: Identify the USGS or other geological, hydrological, geo-hydrological studies conducted in the areas including what is now the proposed KXL pipeline route through South Dakota, which:

- A. Provide the thickness of the purportedly low permeability confining materials that would underlie the entirety of the proposed route either through the Sand Hills and over any shallow High Plains Aquifer;
- B. Provide the thickness of the confining materials underlying the balance of the proposed pipeline route;
- C. Provide the permeability of the sediment or bedrock underlying the proposed pipeline route for each part of the KXL pipeline;
- D. Describe the composition of the sediments and/or bedrock underlying each part of the proposed route;

- E. Describe the absence of any fractures (including micro-fractures), faults, karsts, sinkholes within a mile of the entirety of the proposed route and which might lengthen the “unlikely” travel of crude oil more than 300 feet from a spill site;
- F. Describe the absence of channels in the underlying strata along each part of the proposed route which might lengthen the “unlikely” travel of crude oil more than 300 feet from a spill site;
- G. Describe other factors which could lengthen the travel of crude oil beyond 300 feet from a spill site;
- H. The location(s) of shallow aquifers along each part of the route;
- I. The location(s) of surficial aquifers along each part of the route;
- J. The location of domestic and livestock wells, public and private, within a mile of each part of the proposed route;
- K. Describe the “appropriate” measures that TransCanada will take to prevent groundwater contamination;
- L. Describe the “steps” to be taken to manage the flow of any ground water encountered;
- M. Identify any documents which would support your respective answers.

[Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

OBJECTION AND ANSWER: This request is overlybroad and unduly burdensome. This request may also seek information that is not within Keystone’s custody or control and is not maintained by Keystone in the ordinary course of business.

Without waiving the objection, geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

A. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

B. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

C. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

D. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

E. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

In addition, consider the following:

Whitehead et al (1996): USGS Hydrologic Atlas HA 730-I

Hammond (1994): South Dakota Geol. Survey open file report UR-68

Lobmeyer (1985): USGS Prof. Paper 1402-D

Luckey et al (1986): USGS Prof. Paper 1400-D.

F. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

G. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

Lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide the thickness data. In addition, consider the following:

Davis and Putnam (2013): USGS Scientific Inv. Report SIR 2013-5069

Downey (1986): USGS Prof. Paper 1402-E

Gutentag (1984): USGS Prof. Paper 1400-A and 1400-B.

H. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

In addition, consider the following:

Downey (1986): USGS Prof. Paper 1402-E

Gutentag et al (1984): USGS Prof. Paper 1400-B.

I. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

J. Keystone has not yet identified the location of wells, but will do so before construction.

K. “In order to reduce the risk of spills, if permitted Keystone has agreed to incorporate additional mitigation measures in the design, construction, and operation of the proposed Keystone XL Project, in some instances above what is normally required, including:

- 59 Special Conditions recommended by PHMSA;
- 25 mitigation measures recommended in the Battelle and Exponent risk reports; and
- 11 additional mitigation measures.

Many of these mitigation measures relate to reductions in the likelihood of a release occurring.

Other measures provide mitigation that reduces the consequences and impact of a spill should such an event occur. Mitigation measures are compiled in Appendix Z, Compiled Mitigation Measures, of this Supplemental EIS. Mitigation measures are actions that, if the proposed Project is determined to be in the national interest, Keystone would comply with as conditions of a Presidential Permit.” (FSEIS Executive Summary, pg. ES-19”).

In the FSEIS Appendix Z, Section 14.1, Potential Releases, Table 4, are listed the 59 Special Conditions recommended by the PHMSA. TransCanada has committed to complying with the PHMSA 59 Special Conditions as listed in Appendix Z of the FSEIS.

“These regulations are intended to ensure adequate protection for the public and to prevent crude oil pipeline accidents. Among other design standards, 49 CFR 195 and the proposed Project-specific special conditions specify pipeline material and qualification, minimum design requirements, and protection from internal, external, and atmospheric corrosion” (FSEIS Appendix H1-H2, pg. 2.0-32)”.

L. Keystone would coordinate with the South Dakota Department of Environment and Natural Resources regarding specific steps to be taken in the event that potential contamination of groundwater was suspected. These steps may include, but may not be limited to, soil and groundwater sampling, installation of monitoring wells, and use of groundwater remediation technologies.

INTERROGATORY NO. 62: Describe the direct and indirect effects to people, other animals, plants and trees, fish, when exposed individually and or in combination to components of crude oil including: benzene, toluene, ethyl benzene and xylene. Identify any documents which would support your respective answers. [Applicable Finding or Condition No.: Findings 43-49; Conditions 31-37]

ANSWER: Effects to these receptors are discussed in the 2009 Keystone XL Risk Assessment and in the FSEIS (Chapter 4). Additional information, including effects of individual compounds, can be found in the Agency for Toxic Substances and Disease Registry (ATSDR) or the Hazardous Substances Data Bank (HSDB). Benzene is often used for screening for effects in petroleum products due its combined high water solubility and ability to cause toxicity at very low concentrations.

U.S. Department of Health and Human Services. 2015. Agency for Toxic Substances and Disease Registry (ATSDR). Internet website: <http://www.atsdr.cdc.gov>. Accessed January 21, 2015.

U.S. National Library of Medicine, Toxicology Data Network (TOXNET). 2015. Hazardous Substances Data Bank (HSDB). Internet website: <http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB>. Accessed January 21, 2015.

INTERROGATORY NO. 63: Provide an explanation of why the occurrence of a spill or leak that could affect the High Consequence Area (HCA) only once every 250 years over the 34.4 miles of HCA (Finding 50), while such a spill would purportedly occur once in 7,400 years per mile of pipeline (Finding 44). Identify any documents which would support your respective answer. [Applicable Finding or Condition No.: Findings 44, 50; Conditions 15-16, 35]

ANSWER: Finding of Fact 44 in the South Dakota Public Utilities Commission Amended Order states that, “Keystone’s expert estimated the chance of a leak from the Project to be not more than one spill in 7,400 years for any given mile of pipe.” This is calculated based on historical incident data from Pipeline and Hazardous Materials Safety Administration (PHMSA), as discussed in Section 3.0. The occurrence interval of 7,400 years is calculated by taking the inverse of the incident frequency (0.000135 incidents per mile per year). The result is an estimate, in years, of the time between spills. This is similar to the concept of flood recurrence intervals (i.e., 100-year floods).

Page 4-21 of the 2009 Keystone XL Risk Assessment shows that a spill affecting a High Consequence Area (HCA) in any state crossed by the Keystone XL Pipeline Project has an

occurrence interval of 53 years. This is calculated by taking the inverse of the incident frequency (measured as incidents per mile per year) multiplied by the miles of HCAs crossed (141.2 miles).

INTERROGATORY NO. 64: Describe the contents of the “information concerning activities of concern” to be made available to landowners and others. Identify any documents which would support your respective answer. [Applicable Finding or Condition No.: Finding 57; Condition 16]

ANSWER: Condition 16 does not address “information concerning activities of concern.” With respect to Finding 57, it is landowners who are permitted to contact Keystone regarding “activities of concern.” Accordingly, Keystone does not know specifically what activities may be of concern to individual landowners. In the context of the Finding, it is likely that such activities can be expected to involve farming operations above the pipeline.

INTERROGATORY NO. 65: Describe the worst case scenario for landowners of a spill from the proposed pipeline onto only land, as well as other risks deemed “low” by the PUC. Identify any documents which would support your respective answer. [Applicable Finding or Condition No.: Findings 57; Conditions 16, 31-38]

ANSWER: Keystone cannot speak to risks deemed “low” by the PUC.

INTERROGATORY NO. 66: Provide a list of claims or complaints (of any kind) made to the Commission by landowners along the Keystone I pipeline corridor since 2008. Identify any documents which would support your respective answer. [Applicable Finding or Condition No.: Finding 57; Conditions 49-50]

OBJECTION AND ANSWER: Assuming that the request is for a list of claims or complaints made by landowners along the Keystone Pipeline corridor in eastern South Dakota to

the PUC since 2008, this information is publicly available on the PUC website. To the extent that the request is for complaints made by landowners along the Keystone XL Pipeline corridor since 2008, the request is vague, overlybroad, unduly burdensome, and seeks discovery of information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). All complaints reported to the liaison by the SDPUC are documented by the liaison and reported quarterly. These reports are available at:

<https://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx>. Without waiving the objection, attached as Keystone 0785-1115 are documents related to landowner complaints or concerns regarding damages resulting from Keystone XL's use of the easement, which is within the scope of Amended Permit Condition 49.

INTERROGATORY NO. 67: Identify the latest version of the Unanticipated Discovery Plan, including any prior drafts. [Applicable Finding or Condition No.: Finding 58; Condition 43]

ANSWER: The Unanticipated Discovery Plan can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

INTERROGATORY NO. 68. Explain why TransCanada has sought a special permit from the PHMSA for authorization "to design, construct, and operate the Project up to 80% of the steel pipe specified minimum yield strength at most locations."

- A. Identify and describe all spills/leaks from TransCanada pipeline operations since 2009 in Canada which have involved a "0.8 design factor" and therefore involving use of steel pipe up to 80% of the specified minimum yield strength.
- B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Findings 60-61]

ANSWER: Keystone is no longer seeking a special permit from PHMSA.

A. There are currently no TransCanada crude oil pipelines operating at 0.8 design factor in Canada.

B. Keystone's decision to withdraw its special permit request is explained in a Media Advisory dated August 5, 2010, attached as Keystone 0647-0649.

INTERROGATORY NO. 69: Explain why it is expected that any special permit issued by PHMSA would exclude pipeline segments in High Consequence Areas (HCAs).

A. Describe the potential risks of using pipeline segments with a design factor of 0.80 rather than 0.72, as required by 49 CFR § 195.106.

B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Findings 60-62]

ANSWER: Keystone has withdrawn its request for a Special Permit. Hypothetically, if Keystone were to reapply for a Special Permit, it is reasonable to anticipate that such a Permit would exclude pipeline segments in HCAs since the Special Permit for the original Keystone Pipeline excluded such areas.

INTERROGATORY NO. 70: Explain how application of the "0.8 design factor and API 5L PSL2 X70 high-strength steel pipe" with thinner walls would "provide a level of safety equal to or greater than that which would be provided if the pipeline were operated under the otherwise applicable regulations." [Applicable Finding or Condition No.: Finding 63]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL 49-41B-27. The issue is within the

exclusive jurisdiction of PHMSA. Keystone has withdrawn its application for a special permit. Without waiving the objection, on August 5 2010, TransCanada withdrew its application to the Pipeline Hazardous Materials and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a 0.8 design factor and adopted the 57 additional safety measures that would have been required under the PHMSA special permit.

INTERROGATORY NO. 71: With regard to over-pressure events:

- A. What are the potential causes of over-pressurization?
- B. Describe the failures of the SCADA system that could cause a full rupture of the KXL Pipeline;
- C. Describe TransCanada's maintenance and operational protocols and system redundancies that are intended to prevent failure of the SCADA system;
- D. Describe the ability of the SCADA system to detect leaks in the Keystone I pipeline from 2008 through today;
- E. Describe improvements in SCADA technology since 2010;
- F. Describe actions TransCanada has taken to prevent a cyber-attack on the SCADA monitoring system;
- G. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 72, 92-94; Conditions 31-38]

ANSWER:

- A. There are two main causes of over-pressurization in pipelines: static pressure, and dynamic pressure. Static pressure excursions can occur during steady-state operation due to differences in elevation along the pipeline. In a static pressure excursion situation, it is possible

to see pressures in excess of the pipeline's MOP at points of low elevation along the line.

Dynamic pressure excursions result from a disturbance which causes a change in fluid velocity.

Disturbances can result from events such as valve closure and pump shutdowns. Automated and independent pressure control and overpressure protection systems are designed to protect against static and dynamic overpressure.

B. Potential threats contributing to releases from small to large volumes are described within section 3.13.3.10 of the FSEIS. Equipment malfunctions including those of SCADA components are addressed within this section. Associated threats have been addressed through the following:

- Design practices including system fail safe functionality, key component and power supply redundancy (including key pressure and level sensors).
- Functional validation of systems including factory and site acceptance testing as well as comprehensive point to point verification between SCADA and associated field devices.

C. TransCanada has a dedicated team to provide operational support for its SCADA systems. The team provides 7x24 on-call SCADA support, primarily to the Oil Control Center. Additionally, automated monitoring systems alert the SCADA team in the event that a SCADA system requires maintenance. The support team ensures that routine maintenance is performed on the SCADA systems, as required. Non-routine maintenance is managed through a risk-based integrity management process. The design of the Keystone XL SCADA system includes, at a minimum, dual redundant components at both the primary and backup Oil Control Centers.

D. TransCanada utilizes a state of the art Computational Pipeline Monitoring (CPM) leak detection system capable of identifying leaks down to the size of 1.5 to 2.0% of pipeline flow rate within a 2-hour window.

TransCanada has maintained the CPM to meet or exceed this level of leak detection sensitivity since the beginning of operations. The Keystone pipeline is monitored 24/7 by a dedicated Leak Detection controller within the Oil Control Center who is trained to identify and to respond to emerging events.

E. TransCanada actively funds and participates with Industry in the evaluation and development of leak detection technologies to augment our current systems. Examples of this effort include:

1. New Generation of Rarefaction Wave Leak Detection

This technology utilizes negative pressure waves generated to detect the onset of a leak. These waves travel from the origination point down both directions of the pipeline through the pipeline fluid at the speed of sound of the fluid medium and attenuate over distance as they travel. Dynamic pressure sensors installed at facilities with power and communication accesses (pump stations, mainline valves, etc.) can then measure these pulsations and detect the start of a leak and locate the leak by calculating the difference of arrival time of the pulsations at the two ends of the pipeline section.

2. In Line Inspection Leak Detection

An acoustic In Line Inspection (ILI) tool that is launched and received on a periodic basis like any other In Line Inspection (ILI) tool and is propelled by the commodity in the line. This technology claims to be able to detect leaks smaller than the current threshold of CPM systems; however, detection only occurs as the tool passes the leak location and is therefore not a continuous real time monitoring system.

3. Infrared thermal camera for facilities

The camera based leak detection technology functions by employing Infrared and color video cameras to detect temperature differences between objects of interest and the surrounding environment. Software analytics then attempt to determine whether the detection constitutes a leak or an environmental transient such as a wild animal, weather or other event (snow, rain, etc.). In the event of a detected leak, confirmation can be obtained through color cameras and

real time notifications would be sent the Control Center and/or control room as pre-specified. This technology is still its infancy.

4. Aerial or Ground Patrol Leak Detection

This is a transportable leak detection technology designed for aerial or ground. This technology takes advantage of the difference of light absorption rates between the atmosphere and hydrocarbon vapors to detect hydrocarbon leak. Performance depends on the selected spectrum band, visible or non-visible, and the analysis algorithm vendors choose.

5. Cable Based External Leak Detection Systems

Cable based leak detection systems are buried along the pipeline to provide external means of leak detection. Different cable based technologies apply different physical principles to detect phenomena accompanying a leak as temperature change (DTS), leakage caused sound and vibration (DAS), and existence of hydrocarbon liquid (HSC) or hydrocarbon vapor molecules (VST) outside the pipe. These can be used as independent means of detection outside of the mass balance CPM systems. Despite its long history of use for leak detection at oil and gas facilities and pipeline security, application for leak detection on long-haul transmission pipelines is a recent emerging development.

Some of the above technologies are in a state of development, while others are commercially available today yet their practical application to long haul transmission pipelines such as Keystone XL has not been established. As part of our commitment to safety, TransCanada continues to evaluate these new and evolving leak detection technologies to potentially augment the best in class leak detection capabilities of our current system and for potential implementation on new pipelines including Keystone XL.

F. Consistent with industry practice, TransCanada does not publicly disclose the details of the security systems it has in place. We believe that it is not prudent to make this information public because of the likelihood that it will assist, and, potentially encourage, attackers.

INTERROGATORY NO. 72: Describe how TransCanada will report its full compliance with the CMR to the Commission, so that the Commission can confirm that TransCanada will minimize impacts on cultivated lands, grasslands, wetlands, streams, and

waterways? Identify documents upon which your answers are based. [Applicable Finding or Condition No.: Finding 73]

ANSWER: Keystone will submit quarterly progress reports to the Commission that summarize the status of construction and environmental control activities as directed by Amended Permit Condition #8. Keystone has incorporated environmental inspectors into its CMR Plan Rev4 and will obtain follow-up information reports from such inspections upon the completion of each construction spread to help ensure compliance the CMR Plan Rev4 to the Commission as directed by Amended Permit Condition #14.

INTERROGATORY NO. 73: Describe the status of TransCanada's training of each of local first responders along the proposed route of the KXL Pipeline.

- A. Identify each first responder entity along the Keystone I pipeline routes for which TransCanada has provided training and describe this training;
- B. Describe how the training for the Keystone XL Pipeline will differ from the training provided for the Keystone I pipeline;
- C. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 100; Conditions 10, 15]

ANSWER: Emergency response training is addressed in detail at Appendix D of the Keystone Pipeline System Emergency Response Plan attached as Appendix I of the State Department January 2014 Final Supplemental EIS.

See <http://keystonepipeline-xl.state.gov/documents/organization/221231.pdf>

Specific training for Keystone XL has not yet been established but will be similar to that described in the Keystone ERP above.

INTERROGATORY NO. 74: Do you admit that ground movement can cause abnormal movement of the proposed KXL pipeline?

- A. Describe incidents where ground movement has resulted in abnormal movement of the Keystone I or other pipeline similar to the proposed KXL Pipeline;
- B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 101; Conditions 31-38]

ANSWER: Because there are no areas of high ground movement potential along the Keystone XL route in South Dakota, Keystone does not expect any incidents of ground movement. There have been no incidents of ground movement resulting in abnormal movement of the Keystone I pipeline.

INTERROGATORY NO. 75: Since 49 CFR Part 195 would require TransCanada Keystone to conduct an “internal inspection” of any pipe section(s) potentially moved by abnormal ground movement, describe the timeframe within which an inspection would take place considering the time required to transport personnel and equipment from their staging area to the most distant segment of the KXL Pipeline in South Dakota, and the time required to notify and mobilize inspectors to their staging area. Identify documents upon which your answers are based. [Applicable Finding or Condition No.: Finding 101; Conditions 31-38]

ANSWER: It would take between one and two weeks to mobilize and conduct an internal inspection.

INTERROGATORY NO. 76: Identify the location(s) where slope instability poses a potential threat of ground movement along the Project route.

- A. Identify TransCanada’s most current Integrity Management Plan (IMP) showing incorporation of locations where slope instability poses a potential threat to the pipeline;
- B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 79; Conditions 8, 15, 20-21]

OBJECTION AND ANSWER: To the extent that it seeks information outside South Dakota, this request is overlybroad and unduly burdensome and seeks the discovery of information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). In addition, the request for the Integrity Management Plan is beyond the scope of the PUC’s jurisdiction and Keystone’s burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of the PHMSA. The PUC’s jurisdiction over the Integrity Management Plan is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the Integrity Management Plan would commercially disadvantage Keystone. Without waiving the objection, please refer to FSEIS Chapter 3 Affected Environment, Section 3.1.2 Environmental Setting, Section 3.1.2.5 Landslide. Also, see Chapter 4 Environmental Consequences, Section 4.1.3.4 Geologic Hazards Landslides.

INTERROGATORY NO. 77: What is the status of preparation and publication of the “public awareness programs” required to be prepared by 49 CFR Part 195? Identify the documents upon which your answers are based. [Applicable Finding or Condition No.: Finding 102; Conditions 1-3, 6-7]

ANSWER: Keystone’s existing public awareness program will be updated prior to KXL pipeline commencing service to incorporate any updated materials.

INTERROGATORY NO. 78: Describe the status of preparation of different construction and reclamation techniques for the variety of geological for differing soils conditions, slopes, vegetation and land use along the pipeline route, in consultation with the National Resource Conservation Service, construction/reclamation unit. Identify documents upon which your answers are based. [Applicable Finding or Condition No.: Finding 80; Conditions 15-16]

ANSWER: The preparation of different construction and reclamation techniques for the variety of geological for differing soils conditions, slopes, vegetation and land use along the pipeline route, in consultation with the National Resource Conservation Service, construction/reclamation unit has been completed. The 2013 Construction/Reclamation Unit Specifications contains this information and are found in Appendix R of the Department of State FSEIS (2014).

INTERROGATORY NO. 79: With regard to the inspectors that TransCanada will have “on a construction spread” during construction:

- A. What is the number of inspectors to be onsite;
- B. What is the number of such inspectors who will be “environmental inspectors;”
- C. Describe the minimum qualifications for such environmental inspectors;
- D. What is the distance of each construction spread that an individual environmental inspector will be responsible for monitoring on any given day of construction;
- E. In what manner and how often or under what circumstances will these inspectors submit their documentation of their findings to the Commission;

F. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 85; Condition 14]

ANSWER: The final Project construction schedule has not been determined.

A. The number of inspectors including Environmental Inspectors (EIs) and the configuration of the EIs along the Project route in South Dakota will not be determined until the final Project schedule is determined.

B. There will be a minimum of one environmental inspector per spread.

C. The minimum requirements for an environmental inspector will be specified by Keystone during the hiring process.

D. Environmental inspectors are not stationary. They review procedures and activities along a spread based upon what work may be occurring on that spread on a given day. They then review and report on compliance by moving between the different spread activities that are occurring on a given day.

E. Keystone will submit quarterly progress reports to the Commission that summarize the status of construction and environmental control activities as directed by Amended Permit Condition #8. Keystone has incorporated environmental inspectors into its CMR Plan Rev4 and will obtain follow-up information reports from such inspections upon the completion of each construction spread to help ensure compliance the CMR Plan Rev4 to the Commission as directed by Amended Permit Condition #14.

F. The Department of State FSEIS (2014), The Amended Permit Conditions issued by the Commission.

INTERROGATORY NO. 80: Identify all bonding requirements with which TransCanada must comply for construction of the KXL Pipeline. In answering, also state the current bond amount under SDCL §49-41B-38 for damage to highways, roads, bridges and other related facilities during and after construction.

A. Describe in detail how figures for perceived repair and reclamation were determined;

B. Has TransCanada committed itself to pay any costs of repair or reclamation above the bond amount, should the bond amount prove too low to cover the total cost thereof?

[Applicable Finding or Condition No.: Finding 88; Condition 23]

OBJECTION AND RESPONSE: This request is not relevant or likely to lead to the discovery of admissible evidence to the extent that it seeks information outside South Dakota. Without waiving the objection, the bond requirements for Keystone XL are stated in the June 2010 Amended Final Order at Condition 23(f). The amount of the bond was proposed by Keystone and recommended by staff witness Binder in Docket HP 09-001.

INTERROGATORY NO. 81: State whether or a bond requirement exists with respect to damage to rivers, streams, shallow or surface or deeper aquifers during construction. If so, state the bond amount.

A. Describe in detail how figures for perceived repair and reclamation were determined;

B. Has TransCanada committed itself to pay any costs of repair or reclamation above the bond amount, should the bond amount prove too low to cover the total cost thereof?

[Applicable Finding or Condition No.: Finding 88; Conditions 23, 49]

ANSWER: The bond requirement referenced in the response to No. 80 above is the only bond requirement in South Dakota.

INTERROGATORY NO. 82: Describe each proposed location in South Dakota and adjacent states of spill response equipment prepositioned to respond to a spill from the KXL Pipeline.

A. For each such location, estimate the time required to mobilize personnel to their assigned equipment and the time required for this equipment to travel to the most distant point on the pipeline in South Dakota from its storage location, showing the distance travelled and assumed speeds;

B. Identify the documents upon which you relied to answer these questions;

[Applicable Finding or Condition No.: Finding 98; Conditions 31-38]

ANSWER: Oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan, which was filed as a confidential document with the PUC in HP 07-001. The Keystone ERP will be amended to accommodate Keystone XL. PHMSA requires response times as outlined in the table below. TransCanada locates equipment and people that are transported by air, land and water to ensure that regulatory guidelines are meant.

INITIAL RESPONSE ACTIONS - SUMMARY PERSONNEL AND PUBLIC SAFETY IS FIRST PRIORITY			
RESPONSE TIMES*			
US DOT Tier	1	2	3
High Volume Area	6 HR	30 HR	54 HR
All Other Areas	12 HR	36 HR	60 HR

CONTROL

- Eliminate sources of ignition
- Isolate the source of the discharge, minimize further flow

NOTIFY

- Make internal and external notifications
- Activate local Company personnel as necessary
- Activate response contractors and other external resources as necessary

CONTAIN

- Begin spill mitigation and response activities
- Monitor and control the containment and clean-up effort
- Protect the public and environmental sensitive areas

* Response resources and personnel available to respond within time specified after discovery of a worst case discharge per US DOT 49 CFR Part 194.115 (Keystone ERP. Sec 3.1).

INTERROGATORY NO. 83: Identify the most recent IMP submitted to the Commission and other appropriate agencies, including but not limited to sections in it related to HCAs. [Applicable Finding or Condition No.: Finding 102; Conditions 1-2]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the integrity management plan is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks

information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the Integrity Management Plan would commercially disadvantage Keystone.

INTERROGATORY NO. 84: Itemize the property tax payments paid by TransCanada and its Affiliates to respective South Dakota towns, cities, and counties each year since 2010 for the Keystone I pipeline:

- A. Compare TransCanada's property tax estimates for the Base Keystone Pipeline prepared prior to its construction to TransCanada's actual payments and explain any discrepancy;
- B. Identify the documents upon which you relied to answer these questions;

[Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions]

ANSWER: Keystone has paid \$14,128,224 in property taxes in South Dakota from 2009 through and including 2013. 2014 real property taxes are due and payable in 2015. Keystone paid Beadle County \$1,796,731; Brookings County \$5,734; Clark County \$1,602,403; Day County \$2,294,723; Hanson County \$627,561; Hutchinson County \$2,015,399; Kingsbury County \$955,201; Marshall County \$1,533,417; McCook County \$568,591; Miner County \$1,782,412; and Yankton County \$1,040,782; 2009 through 2013. The documents on which the answer is based are the tax bills rendered by the county treasurer in each county.

In HP07-0100, the base Keystone Pipeline docket, the company first estimated ad valorem on property taxes spread among host counties in the first year as \$6.5 million, then amended the estimate to \$9.1 million. Calculations were based on an "all in" cost of construction of approximately \$300 million, later amended to \$500, million. The estimate assumed that the pipeline would be assessed based on its construction cost. The Department of

Revenue chose not to use construction cost as the basis for the assessment. In 2011, the legislature changed the way the value of agricultural property was assessed for ad valorem real property tax purposes. The change in valuation method has resulted in a substantial increase in the assessed value of agricultural property. An increase in the assessed valuation of one category of property affects the local need and local contribution calculations under the South Dakota school aid formula and affects the way the county, city, township and school levies are spread across other categories of property. A combination of the method of assessment, levies and the change in agricultural land valuation assessment methodology explains the difference. Documents used for the answer include the tax bills rendered, a summary thereof marked as Keystone 0768-0773, and Exhibit TC14 HP07-0100 Docket.

INTERROGATORY NO. 85: With respect to the jobs you allege will be brought to South Dakota by the KXL pipeline project:

- A. State the number, job title, and expected duration of the temporary construction related jobs expected;
 - i. State what percentage of current South Dakota citizens, as opposed to persons who move to South Dakota for a job, are expected to be hired for each job title.
 - ii. Is there any preference for South Dakota citizens to obtain any or all of these temporary jobs?
 - iii. State the number and percentage of the total construction jobs expected to be filled by out-of-state workers.
- B. State the number, type, and expected duration of the permanent jobs expected in South Dakota;

i. State the number of permanent jobs expected to be held by current South Dakota citizens, as opposed to someone who moves from out of state to South Dakota to take the job.

ii. Will there any preference for South Dakota citizens to obtain any or all of the permanent jobs to be created in South Dakota?

C. Identify the documents upon which you relied to answer these questions;

[Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions 1-2]

ANSWER:

A. Assuming this question refers to ‘average annual jobs’ - It is estimated that Project construction in South Dakota will support 3,500 jobs across all sectors, of which between 1,038 and 1,500 jobs will be directly construction-related. The 3,500 jobs supported by construction of the Project are considered ‘average annual jobs’, defined as one position that is filled for one year, while the 2,700 to 3,900 temporary construction personnel are expected to be employed for the 4- to 8-month seasonal construction period over 1 to 2 years.

i. It is estimated that between 270 and 390 temporary construction positions created in South Dakota will be filled by residents of the State.

ii. Jobs are filled based on the availability of qualified personnel.

iii. It is estimated that between 2,430 and 3,510 temporary construction positions created in South Dakota will be filled by non-South Dakota residents.

B. Approximately 25 permanent employees and 15 temporary contractors will be distributed along the proposed pipeline route, including the route in South Dakota. Job duration is commensurate with operations of the pipeline and titles will vary.

i. Jobs are filled based on the availability of qualified personnel.

ii. Jobs are filled based on the availability of qualified personnel.

C. Section 4.10 of the Final SEIS.

INTERROGATORY NO. 86: Should there be a worst case discharge or even a substantial release of crude oil into farmland and/or water resources and/or an explosion of the pipeline near homes or towns with people, explain how the Project will have a “minimal” effect on the health, safety, or welfare of its inhabitants. Identify the documents upon which you relied to answer these questions.

[Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions 1,2, 31-36]

OBJECTION: This request is argumentative and improper in form. It calls for speculation and assumes facts not in evidence and is therefore beyond the scope of discovery under SDCL § 15-6-26(b). The PUC found in its conclusions of law, ¶ 6, that Keystone met its burden of proof on this issue.

Dated this 5th day of February, 2015.

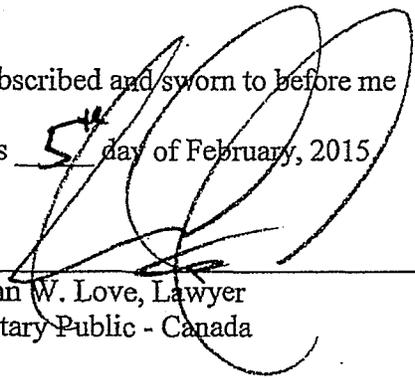
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.


John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Dakota Rural Action's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

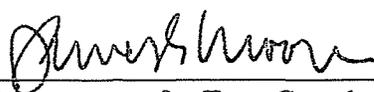
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Dakota Rural Action's First Interrogatories, to the following:

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One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

1. Please identify the person or persons providing each answer to an Interrogatory and request for production of documents, or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation. Identify the names of each person, other than legal counsel, who assisted with providing the answers and request for production of documents, or portion thereof giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street

{01815085.1}

S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

3. Identify all oil and gas pipelines that TransCanada owns and/or operates in the United States and in Canada. Amended Permit Condition 1.

ANSWER: Please refer to TransCanada web site (www.transcanada.com).

4. What is TransCanada's principal place of business?

ANSWER: Calgary, Alberta, Canada.

5. State all affiliates that have an ownership interest in the TransCanada Corporation.

ANSWER: TransCanada Corporation is the parent corporation; as such its affiliates do not hold an ownership interest.

6. Identify all other names that TransCanada may do business under, in the United States and Canada.

ANSWER: None.

7. Identify each of the applicable laws and regulations that apply to the construction of the Keystone XL Pipeline that are referred to in Amended Permit Condition 1 not including the laws listed in Amended Permit Condition 1.

OBJECTION AND RESPONSE: This request is vague, unclear, and cannot reasonably be interpreted. Without waiving the objection, applicable laws and regulations are discussed in the Department of State's Final Supplemental EIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>.

8. Identify each state that TransCanada has applied for and received a permit from for the construction of Keystone XL Pipeline as referred to in Amended Permit Condition 2.

ANSWER: Montana, South Dakota, Nebraska.

9. Has TransCanada received any communications from any regulatory body or agency that may have jurisdiction over the construction, maintenance or operation of the Keystone XL Pipeline alleging that TransCanada has failed to comply with any applicable permits for the construction, operation or maintenance of the Keystone KXL Pipeline. Amended Permit Condition 2.

ANSWER: No. Keystone has not commenced the construction, operation, or maintenance of the Keystone XL Pipeline.

10. Has TransCanada received any communications from any regulatory body or

{01815085.1}

agency that may have jurisdiction over the construction, maintenance or operation of any pipeline located in the United States alleging that TransCanada has failed to comply with any applicable permits for the construction, operation or maintenance of any pipeline located in the United States? Amended Permit Conditions 1 and 2.

OBJECTION: This request is not relevant, not likely to lead to the discovery of admissible evidence, and is overlybroad.

11. Has TransCanada received any communications from any regulatory body or agency that may have jurisdiction over the construction, maintenance or operation of any pipeline located in Canada alleging that TransCanada has failed to comply with any applicable permits for construction operation or maintenance of any pipeline located in Canada? Amended Permit Condition 2.

OBJECTION: This request is not relevant, not likely to lead to the discovery of admissible evidence, and is overlybroad.

12. What actions has TransCanada taken to comply with and implement any and all recommendations set forth in the Final Environmental Impact Statement from the United States Department of State regarding construction, operation or maintenance of the Keystone Pipeline? Amended Permit Condition 3.

ANSWER: Unless and until the Department issues a Record of Decision and a Presidential Permit, the recommendations in the Final EIS are not binding on Keystone.

13. Identify all permits that TransCanada has applied for within the State of South Dakota relating to the use of public water for construction, testing or drilling; for temporary discharges to waters of the state and temporary discharges of water from construction dewatering and hydrostatic testing referred to in Amended Permit Condition

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ANSWER: Keystone has submitted a Notice and Intent and Certificate of Application Form to Receive Coverage Under the General Permit for Temporary Discharges and a Temporary Water Use Permit.

14. Has TransCanada taken any action to transfer this permit to any other person? Amended Permit Condition 4.

ANSWER: No.

15. Has TransCanada obtained or applied for any permits in the State of South Dakota regarding railroad and road crossings from any agency or local government having jurisdiction to issue railroad and road crossing permits? Amended Permit Condition 2.

ANSWER: Two railroad crossing permits are being negotiated for the pipeline to cross under existing railroad rights-of-way. The South Dakota State Railroad application was filed November 23, 2012. The other is being negotiated with the Canadian Pacific Railway, which has been sold to the Genesee & Wyoming Railway. An agreement is pending.

16. Identify all actions undertaken and completed or attempted to complete that TransCanada and its affiliated entities committed to undertake and complete in its application, in its testimony and exhibits received in evidence at the hearing and in its responses to data requests received in evidence at the hearing on Public Utilities Commission Docket HP09-001. Amended Permit Condition 5.

ANSWER: See the quarterly and annual reports filed by Keystone in Docket No. HP 09-001.

17. Identify the most recent and accurate depiction of the Project route and facility locations as they currently exist as compared to the information provided in Exhibit TC-14. Amended Permit Condition 6.

ANSWER: Attached as Keystone 0470-0583 are maps showing changes to the route since the permit was granted.

18. Identify all route changes and the reasons for each change, since the issuance of the June 29, 2010 Amended Final Decision and Order. Amended Permit Condition 6.

ANSWER: Attached as Keystone 0470-0583 are maps showing changes to the route since Keystone's permit was granted.

19. Identify the dates, locations and names of person or persons, along with addresses, phone numbers, email addresses for each person responsible for conducting surveys, addressing property specific issues and civil survey information regarding Amended

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Permit Condition 6.

OBJECTION AND ANSWER: The identity of persons conducting civil surveys is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, American Burying Beetle Habitat Assessment was conducted by W. Wyatt Hoback, Department of Biology, University of Nebraska at Kearney; Biological Surveys (i.e., habitat, wetland delineations) were conducted by AECOM (Scot Patti was the principal investigator) and SCI (Scott Billing was the principal investigator); Phase I ESA Surveys were conducted by AECOM (Brian Bass was the principal investigator); Biological Surveys (i.e., threatened and endangered species, noxious weeds, reclamation) were conducted by Westech (John Beaver was the principal investigator); Cultural resources surveys were conducted by SWCA Environmental Consultants (principal investigator was Scott Phillips); the paleontological surveys were conducted by SWCA Environmental Consultants (principal investigator was Paul Murphey).

20. Identify all new aerial route maps that incorporate any adjustments made to the proposed project route. Amended Permit Condition 6.

ANSWER: Please refer to HP09-001 Open Docket Exhibit A for route maps and to the route variation maps attached as Keystone 0470-0583.

21. Provide the date of each communication and the name or names of person or persons responsible for providing each notification to the Commission, and all affected

{01815085.1}

landowners, utilities and local governmental units regarding the requirements of Amended Permit Condition 6.

ANSWER: In Keystone's opinion, there have been no material deviations made in the 2010 permitted route.

22. Has TransCanada identified a public liaison officer? Amended Permit Condition 6.

ANSWER: Yes. Sarah Metcalf, PO Box 904, Aberdeen, SD 57402, 1-888-375-1370, smetcalf12@gmail.com. Her appointment was approved by the PUC by order dated June 2, 2010, which is a matter of public record.

23. Does TransCanada consider the Rosebud Sioux Tribe to be a local government or local community within the vicinity of this Project? Amended Permit Condition 7.

ANSWER: No.

24. Does TransCanada consider the Rosebud Sioux Tribe to be a government that must be consulted with throughout the planning, construction, operation and maintenance of the project? Amended Permit Condition 7.

ANSWER: Keystone will provide contact information for the public liaison officer to the Tribe, as addressed in Amended Condition 7. Amended Condition 7 does not address "government consultation."

25. Has TransCanada made any modifications or changes to the Construction Mitigation and Reclamation Plan (CMR Plan)? Amended Permit Condition 13.

OBJECTION AND ANSWER: The current version of the CMR Plan is attached to Keystone's certification petition as Attachment A to Appendix C. Without waiving the objection, overall changes to the CMR Plan between the 2008 Rev1 version and the 2012 Rev4 version were made to clarify language, provide additional detail related to construction procedures, address agency comments, and incorporate lessons learned from previous pipeline construction, current right-of-way conditions and project requirements. The redline version of the CMR Plan Rev4 showing changes since the version considered in 2010 was provided in Attachment A to Appendix C of Keystone's September 2014 Recertification Petition to the Commission.

26. Has TransCanada incorporated environmental inspectors into the CMR Plan? Provide complete contact information for each environmental inspector. Amended Permit Condition 13.

OBJECTION AND RESPONSE: The identity of environmental inspectors is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, Section 2.2, Environmental Inspection of the CMR Plan Rev4 discusses the use of Environmental Inspectors during the construction of the Project. No Environmental Inspectors have been identified or hired, because the construction of the Project has not yet started.

27. Has TransCanada provided each land owner with an explanation regarding

{01815085.1}

trenching and topsoil and subsoil rock removal, segregation and restoration method options for each landowners property that is consistent with the applicable Con/Rec Unit? Amended Permit Condition 16.

ANSWER: Landowners and a project representative complete a "Keystone Pipeline Project Landowner/Tenant Construction Restrictions Binding Agreement," which covers rock disposal, topsoil stripping, and restoration preferences. All agreements will be completed before construction begins, unless a landowner refuses to complete the agreement.

28. Has TransCanada implemented sediment control practices? Amended Permit Condition 20.

ANSWER: Keystone has not initiated construction of the Project. Therefore, Keystone has not implemented any sediment control practices to-date and will not until construction starts.

29. Has TransCanada developed best management practices to prevent heavily silt-laden trench water from reaching any wetland or water bodies? Amended Permit Condition 22 f.

ANSWER: Best management practices to prevent silt-laden trench water from reaching any wetland or waterbody are identified in the CMR Plan Rev4 in Section 4.7.1, Trench Dewatering/Well Points. This section includes the following text:

{01815085.1}

“No heavily silt-laden trench water shall be allowed to enter a waterbody or wetland directly but shall instead be diverted through a well vegetated area, a geotextile filter bag, or a permeable berm (straw bale or Keystone approved equivalent).”

Additional sediment control best management practices are included in Sections 4.0, 6.0, and 7.0 of the CMR Plan Rev4 and in Appendix Z (Sections 4.0, 5.0, and 8.0 of the Department of State FSEIS (2014).

30. Has TransCanada developed policies that will permit TransCanada to comply with the requirements of Amended Permit Condition 23 a-f.

ANSWER: Yes, during the pre-construction planning period Keystone will develop and implement videotaping of road conditions prior to construction activities. Keystone, Contractor, and County Representatives will be present for evaluation and determination of road conditions.

Keystone will notify state and local governments and emergency responders to coordinate and implement road closures. All necessary permits authorizing crossing and construction use of county and township roads will be obtained.

31. Has TransCanada required that all of its shippers comply with its crude oil specifications in order to minimize the potential for internal corrosion? Amended Permit Condition 32.

ANSWER: No oil has been shipped as the pipeline has not been constructed.

Once transportation of oil commences, shippers are required to comply with the terms of Keystone's FERC tariff.

32. Have all of TransCanada's shippers agreed to comply with TransCanada's crude oil specifications? Amended Permit Condition 32.

ANSWER: Shippers are required to comply with the terms of a pipeline's FERC tariff.

33. Have any of TransCanada's shippers not agreed to comply with TransCanada's crude oil specifications? Amended Permit Condition 32.

ANSWER: Shippers are required to comply with the terms of a pipeline's FERC tariff.

34. Identify every person, along with the contact information for each, who has agreed to supply any type of product to be transported through the project. Amended Permit Condition 32.

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect them from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of the Interstate Commerce Act.

35. Has TransCanada filed any documents with the Public Utilities Commission that it

{01815085.1}

considers to be "confidential" with respect to ARSD 20:10:01:41. If so, identify each filing consistent with appropriate Administrative Rules of South Dakota. Amended Permit Condition 36.

ANSWER: Not at this time in this docket.

36. Does TransCanada operate any other pipelines in the United States or Canada that have similar requirements of Amended Permit Condition 37?

ANSWER: All of TransCanada's pipelines meet this requirement.

37. Identify each pipeline in the United States and Canada that has requirements which are similar to the requirements of Amended Permit Condition 37.

ANSWER: All of TransCanada's pipelines meet this requirement.

38. Has TransCanada ever been found to be in non-compliance with any other permits, from any state regarding the Keystone KXL Pipeline, that have similar requirements as the requirements of Amended Permit Condition 37.

ANSWER: No.

39. Identify the dates and manner of all communications sent by TransCanada to the President of the Rosebud Sioux Tribe regarding the Project. Amended Permit Condition 7.

ANSWER: Lou Thompson and Robert Hopkins, Keystone Tribal Liaisons, and other Keystone personnel, met with Rosebud Chairman Rodney Bordeaux at various

times from 2009-2012 on matters relating to the Project. Meeting dates are memorialized in the Rosebud document production. *See* Keystone documents 1121-1169.

40. Does TransCanada have a Native American Relations policy? Amended Permit Condition 7.

ANSWER: Yes.

41. Does TransCanada believe that it has followed its Native American Relations Policy with respect to its applicability to the Rosebud Sioux Tribe? Amended Permit Condition 7.

ANSWER: Yes.

42. Does TransCanada consider the Federal Bureau of Investigations a law enforcement agency that they must communicate with regarding the Project? Amended Permit Condition 7.

ANSWER: TransCanada may communicate with the FBI if circumstances warrant.

43. If TransCanada does not consider the Federal Bureau of Investigations a law enforcement agency that they must communicate with regarding the Project identify the legal basis for asserting such a position. Amended Permit Condition 7.

ANSWER: TransCanada may communicate with the FBI if circumstances

warrant.

44. Does TransCanada consider the Rosebud Sioux Tribe Law Enforcement Services a law enforcement agency that they must communicate with regarding the project?

Amended Permit Condition 7.

ANSWER: TransCanada may communicate with the Rosebud Sioux Tribe Law Enforcement Services if circumstances warrant.

45. If TransCanada does not consider the Rosebud Sioux Tribe Law Enforcement Services a law enforcement agency that they must communicate with regarding the Project identify the legal basis for asserting such a position. Amended Permit Condition 7.

ANSWER: TransCanada may communicate with the Rosebud Sioux Tribe Law Enforcement Services if circumstances warrant.

46. Identify all protection and mitigation efforts that have been identified by the US Fish and Wildlife Service and the South Dakota Game Fish and Parks. Amended Permit Condition 1, 2 and 3.

ANSWER: All of the protection measures and mitigation measures efforts that have been identified by the US Fish and Wildlife Service and the South Dakota Game Fish and Parks are found in Sections 7.0, 8.0, and 9.0 of Appendix X of the Department of State FSEIS (2014); Sections 4.6, 4.7, and 4.8 of the Department of State FSEIS (2014); and the May 2013 Biological Opinion issued by USFWS (Appendix H of the

{01815085.1}

Department of State FSEIS (2014)).

47. Has TransCanada kept a record of all drain tile system information throughout the planning and pre-construction phases of the Project? Amended Permit Condition 42.

ANSWER: Land agents work with landowners to complete a Construction Binding Agreement which identifies any drain tile systems. In South Dakota, no drain tile systems have been identified on the Keystone XL project.

48. Has TransCanada ever applied for any waivers for permit conditions with the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration for any pipeline that it owns or operates in the United States? Amended Permit Condition 2.

OBJECTION AND RESPONSE: To the extent that this request seeks information unrelated to oil pipelines, it is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, TransCanada applied for a Special Permit to operate at 80% SMYS for Keystone Mainline, Cushing Extension, and KXL. The Special Permit was issued for Keystone Mainline and Cushing Extension in 2007 Docket Number PHMSA-2006-26617. TransCanada withdrew the Special Permit request for KXL.

49. If TransCanada has applied for any waiver from the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration have any of the

{01815085.1}

requests been denied? If any request has been denied, identify the appropriate pipeline and state the reason or reasons for each denial. Amended Permit Condition 2.

OBJECTION AND RESPONSE: To the extent that this request seeks information unrelated to oil pipelines, it is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, no.

50. Identify all applications for waivers for permit conditions that were filed with the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration regarding the construction, operation or maintenance of Pipeline. Amended Permit Condition 1 and 2.

OBJECTION AND RESPONSE: To the extent that this request seeks information unrelated to oil pipelines, it is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, see answer to interrogatory no. 48.

51. Identify all sources of oil that will be transported on the proposed KXL pipeline. Appendix C # 14.

OBJECTION: This interrogatory is vague and unclear as to "all sources of oil." Without waiving the objection, crude oil for Keystone XL will primarily be sourced from the Western Canadian Sedimentary Basin and the Williston Basin. Sources could also include many other producing regions in North America for transportation services originating at Cushing, OK.

52. Identify all companies that have committed to use the KXL pipeline to ship oil. Identify the country where each company that has committed to provide oil or gas to the pipeline is incorporated. Appendix C # 14.

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect them from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of the Interstate Commerce Act.

53. Has TransCanada in its operations of any pipeline in the United States, received communications from the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration related to any of TransCanada's permits to operate a pipeline in the United States? Amended Permit Condition 1.

OBJECTION: This interrogatory is overlybroad, unduly burdensome, and seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). It is not limited in time and extends to all of TransCanada's pipeline operations of whatever kind in the United States.

54. Identify the date and substance of each communication from the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration . Amended Permit Conditions 1 and 2.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). It is not limited in time and extends to all of TransCanada's pipeline operations of whatever kind in the United States.

55. Provide copies of all safety reports submitted to any agencies with jurisdiction over the operation of the Southern Leg of the Keystone XL pipeline project. Amended Permit Conditions 1 and 2.

OBJECTION AND ANSWER: The U.S. Department of Transportation, Pipeline and Hazardous Material Safety Administration is the governing agency that has federal jurisdiction over the operations of the Keystone XL pipeline. This issue is therefore beyond the scope of this proceeding. Without waiving the objection, a spreadsheet showing leaks and spills on the Keystone XL Pipeline is attached as Keystone 0774-0784.

56. Identify all contractors that TransCanada will use to transport materials that will be used in the construction, operation or maintenance of the Keystone Pipeline. Amended Permit Condition 1.

ANSWER: Keystone anticipates the use of heavy equipment haulers to transport pipe, valves, fittings and other equipment required for the construction of the Keystone Project. There will also be a need for local transportation services for haulage of

ancillary materials and supplies required by both Keystone and its contractors and subcontractors. Keystone currently has no contractors retained to undertake trucking and hauling requirements.

57. Identify all contractors that TransCanada will use in the construction operation or maintenance of the Keystone Pipeline. Amended Permit Condition 1.

ANSWER: Keystone currently has no contractors in place to undertake construction, operation, or maintenance of the Keystone XL Pipeline.

58. Do you acknowledge that Appendix C from TransCanada's Petition for Certification identifies 30 conditions that have changed from the June 29, 2010 Order? If not, identify the number of each condition from Appendix C and state the legal basis that your denial is based on for each. Appendix C.

OBJECTION: This request is argumentative and not reasonably calculated to lead to the discovery of admissible evidence. The updated information contained in Appendix C speaks for itself.

59. Identify each contractor that TransCanada has hired to construct other pipelines in the United States. Amended Permit Condition 1.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). It is unlimited in time and extends to all of TransCanada's pipeline

{01815085.1}

operations of whatever land in the United States.

60. Have any contractors hired by TransCanada to construct any pipeline owned or operated by TransCanada or any of its affiliates received any communication from any agency or regulatory body having jurisdiction over each pipeline regarding alleged safety concerns or safety violations regarding the construction, maintenance or operation of any pipeline in the United States. Amended Permit Condition 1.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). It also seeks information that is not in Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

61. Identify each contractor that TransCanada has hired to construct other pipelines in Canada. Amended Permit Condition 1.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). It is not limited in time and extends to all of TransCanada's pipeline operations of whatever kind in Canada.

62. Have any contractors hired by TransCanada to construct any pipeline owned or operated by TransCanada or any of its affiliates received any communication from any agency or regulatory body having jurisdiction over each pipeline regarding alleged safety

{01815085.1}

concerns or safety violations regarding the construction, maintenance or operation of any pipeline in Canada. Amended Permit Condition 1.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). It also seeks information that is not in Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

63. What role does TransCanada or any of its affiliates play in scheduling local public informational meetings and hiring security for the meetings? Amended Permit Condition 7.

OBJECTION: This request is vague and unclear. It also seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b). Amended Condition 7 does not address "local public informational meetings."

64. Is TransCanada or any of its affiliates aware of the social and law enforcement concerns associated with "man-camps" that will be established to facilitate the construction, operation or maintenance of the Keystone Pipeline? Amended Permit Condition 7.

ANSWER: TransCanada is aware of numerous socioeconomic and law enforcement concerns associated with the "man-camps". These impacts are addressed in

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the following sections of the FSEIS: 4.10 Socioeconomics; 4.10.1 Introduction; 4.10.3 Impacts; 4.10.3.1 Construction (Population, Housing, Local Economic Activity, Public Services, Tax Revenues, Traffic and Transportation).

In addition, TransCanada is committed to ongoing consultation with law enforcement and has been advised of their concerns with respect to workforce camps. TransCanada will consider augmenting local law enforcement staffing shortages caused by the project. Policies and procedures have been developed to address law enforcement concerns and stakeholder engagement will continue to address future concerns.

65. Does TransCanada or any of its affiliates recognize that they have any obligations to obtain the free, prior informed consent under the United Nations Declaration of the Rights of Indigenous People regarding the construction, maintenance or operation of the Keystone Pipeline? Amended Permit Condition 1.

ANSWER: Keystone recognizes that the United Nations Declaration of the Right of Indigenous People was adopted by the United Nations on September 13, 2007. Canada and the United States voted against the adoption of the declaration. The declaration is not a legally binding instrument under international law or the law of the United States and, accordingly, Keystone is not legally bound by it.

66. What steps has TransCanada or any of its affiliates taken to ensure that all lands that the Rosebud Sioux Tribe have an interest in have had proper cultural and historic

{01815085.1}

surveys completed to the satisfaction of the Rosebud Sioux Tribe? Finding of Fact 110.

ANSWER: Keystone believes that the pipeline right-of-way as currently permitted does not pass through Indian Country or cross any land owned or held in trust for the Rosebud Sioux Tribe.

67. Does TransCanada or any of its affiliates recognize that if approved and constructed, the Keystone Pipeline will travel through the identified Indian Country territory from the Fort Laramie Treaty of 1851 and 1868? Finding of Fact 110.

ANSWER: Keystone recognizes that the KXL Pipeline route passes through lands that were considered in the Fort Laramie Treaties of 1851 and 1868.

68. Does TransCanada recognize that the Winters Doctrine of reserved tribal water rights applies to any permit application to use water for the construction, operation or maintenance of the Keystone Pipeline project? Amended Permit Condition 1.

ANSWER: Keystone recognizes the so-called Winters Doctrine arising from *Winters v. The United States*, 207 U.S. 564 (1908) and its progeny. Keystone does not believe that the Rosebud Sioux Tribe's Winters Doctrine water rights, or the Winters Doctrine water rights of any other South Dakota resident tribe, are affected by Keystone's use of water for construction, operation, or maintenance.

69. What steps has TransCanada or any of its affiliates taken to insure that tribal water rights under the Winters Doctrine will be protected? Amended Permit Condition 1.

ANSWER: Keystone does not believe that any South Dakota resident tribe's Winters Doctrine water rights are affected by the use of the water for construction, operation, or maintenance of the Keystone Pipeline.

70. Are there any land areas or waterways where the pipeline will pass through or nearby subject to any designation under the Wilderness Act of 1964? Amended Permit Condition 1.

OBJECTION AND RESPONSE: To the extent that it seeks information outside South Dakota, this request is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, there are no land areas or waterways that the Project route in South Dakota will pass through that would be subject to any designation under the Wilderness Act of 1964.

71.a. Are any waterways situated on or near the Pipeline route subject to designation under the Wild and Scenic River Act of 1968? Amended Permit Condition 1.

OBJECTION AND RESPONSE: To the extent that it seeks information outside South Dakota, this request is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, the Project route does not cross any waterways that are subject to designation under the Wild and Scenic River Act of 1968. There are no waterways that are subject to designation under the Wild and Scenic River Act of 1968 near the Project route in South Dakota. An evaluation of Wild and Scenic Rivers as per

{01815085.1}

related to the Project is found on page 4.3-24 of the Department of State FSEIS (2014).

71.b. Are there any land areas along or near the Keystone Pipeline route that have been designated as critical habitat under the Endangered Species Act? If so identify each of the land areas. Amended Permit Condition 1.

OBJECTION AND RESPONSE: To the extent that it seeks information outside South Dakota, this request is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, there are no lands along or near the Project route in South Dakota that are designated as critical habitat under the Endangered Species Act. Endangered species are discussed in Section 4.8 of the Department of State FSEIS (2014). The following federally-listed threatened or endangered species have the potential to occur along Project route in South Dakota: interior least tern; piping plover; rufa red knot; whooping crane; and the American burying beetle. Section 4.8.3 of the Department of State FSEIS (2014) and Appendix H, Biological Opinion in the Department of State FSEIS (2014) discusses the potential occurrence of these federally-listed threatened and endangered species along the Project route in South Dakota and Sections 4.8.3 and 4.8.4 and Appendix H of the Department of State FSEIS (2014) discusses the potential impacts and conservation measures the Project will implement to protect listed species.

71.c. Are there any land areas along or nearby the Keystone Pipeline route that have any

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Endangered Species located in that area? Amended Permit Condition 1.

OBJECTION AND RESPONSE: To the extent that it seeks information outside South Dakota, this request is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, there are no lands along or near the Project route in South Dakota that are designated as critical habitat under the Endangered Species Act. Endangered species are discussed in Section 4.8 of the Department of State FSEIS (2014). The following federally-listed threatened or endangered species have the potential to occur along Project route in South Dakota: interior least tern; piping plover; rufa red knot; whooping crane; and the American burying beetle. Section 4.8.3 of the Department of State FSEIS (2014) and Appendix H, Biological Opinion in the Department of State FSEIS (2014) discusses the potential occurrence of these federally-listed threatened and endangered species along the Project route in South Dakota and Sections 4.8.3 and 4.8.4 and Appendix H of the Department of State FSEIS (2014) discusses the potential impacts and conservation measures the Project will implement to protect listed species.

72. Has TransCanada obtained a National Pollutant Discharge Elimination System (NPDES) permit as required by the Clean Water Act in each state where the Keystone Pipeline will be constructed, operated or maintained? Amended Permit Condition 1.

ANSWER: In South Dakota, Keystone has received a General Permit for

Temporary Discharge Activities on April 11, 2013, from the South Dakota Department of Environment and Natural Resources. Other permits, as required, will be filed closer to the time period of construction.

73. Besides the changes identified in Appendix C of TransCanada's Petition for Certification, identify all other conditions that have changed since the Commission issued the Final Amended Order and Permit on June 29, 2010. Amended Permit Condition 1.

ANSWER: None.

74. State the name, current address, and telephone number of every fact witness that Keystone intends to call to offer testimony at the Commission's evidentiary hearing, currently scheduled for May 2015.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; same; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility
- (5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services,

Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441; Environmental Issues; CMR Plan, Con/Rec Units, HDD's

(6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

75. State the name, current address, employer name and/or organization(s) with which he or she is associated in any professional capacity, and telephone number of each expert witness pursuant to SDCL Ch. 19-15 that Keystone intends to call at the Commission's evidentiary hearing, currently scheduled for May 2015.

In addition, for each expert please provide:

- a. The subject matter on which the expert will testify;
- b. The substance of each opinion to which the expert is expected to testify;
- c. The facts on which the expert bases his or her opinion;
- d. The expert's profession or occupation, educational background, specialized training, and employment history relevant to the expert's proposed testimony;
- e. The expert's previous publications within the preceding 10 years; and
- f. All other cases or proceedings in which the witness has testified as an expert within the preceding four years.

ANSWER: Keystone does not intend to call any retained expert witnesses.

Keystone will provide a resume for each of its fact witnesses.

76. What steps, if any, has Keystone or any of its affiliates taken to ensure that the cultural and historic resources of the Rosebud Sioux Tribe are protected? Amended Permit Condition 44.

ANSWER: Keystone has taken all steps required by state and federal law to

ensure that the cultural and historic resources affected by the construction of the pipeline within the permitted right-of-way are protected.

77. Pursuant to Condition Forty-Four, has Keystone made any new cultural and/or historic surveys along the route of the Project since its original permit was granted?

Amended Permit Condition 44.

ANSWER: Yes, all cultural resources survey reports are listed in Section 3.11 of the Department of State FSEIS (2014), with results of the South Dakota surveys detailed in Table 3.11-3.

78. According to Keystone's original application, Keystone began cultural and historic surveys in May 2008 and at that time it had found several pre-historic stone circles were uncovered. Please provide a detailed description of these sites, including location.

ANSWER: These sites are addressed during the course of government to government consultation with the DOS. Site locations are confidential and cannot be disclosed outside of the consultation process.

79. Describe what effect the TransCanada Energy East Pipeline will have on the need for the Keystone KXL Pipeline Project.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to

determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. Without waiving the objection, TransCanada has long-term binding shipper agreements in support of both projects.

Dated this 5th day of February, 2015.

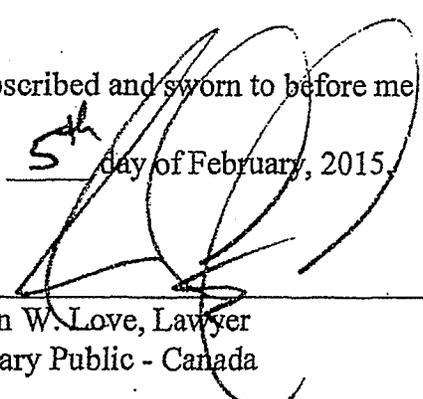
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.



John W. Love, Lawyer
Notary Public - Canada

REQUEST FOR PRODUCTION OF DOCUMENTS

1. If the answer to Interrogatory No. 22 is in the affirmative, produce all documents related to and documenting Keystone's public liaison officer's immediate access to Keystone's on site project manager, Keystone's executive project manager and to each contractor's on site managers referenced to in Amended Permit Condition 7.

OBJECTION AND ANSWER: The request for "all documents" related to the public liaison officer's access to Keystone personnel is vague, overlybroad, unduly burdensome, not relevant, and not reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, the liaison has contact information for all project team members, and can and does make contact at any time. Contractors for construction have not yet been selected.

2. Produce documentation that assures that Keystone's public liaison officer is available at all times to the PUC Staff as required by Amended Permit Condition 7.

ANSWER: The liaison's information is found on the SDPUC's website at <https://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx>.

Keystone has no documents responsive to this request.

3. Produce documentation of every concern and complaint that was communicated to the Staff and the public liaison officer from landowners or others as referenced in Amended Permit Condition 7.

OBJECTION: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. The liaison files quarterly and annual reports addressing her contacts with landowners and other members of the public.

4. Produce documentation that TransCanada has provided contact information for the public liaison to all landowners crossed by the project. Amended Permit Condition 7.

ANSWER: A letter dated December 22, 2010, from Robert E. Jones was sent to all landowners to provide information about Sarah Metcalf. A copy of the letter is attached as Keystone 0642.

5. Produce documentation that TransCanada has provided contact information for the public liaison to all law enforcement agencies and local governments within the vicinity of the project. Amended Permit Condition 7.

ANSWER: Notification to law enforcement agencies and local governments in the vicinity of the Project was completed in the first quarter of 2011 in conjunction with notice required by other conditions. The liaison continues to contact affected counties, townships and other governmental entities as the permit process takes place.

6. Produce documentation that TransCanada has provided contact information for the public liaison to the Rosebud Sioux Tribe Law Enforcement Services. Amended Permit Condition 7.

ANSWER: Notification was not made, since the project does not cross Rosebud Sioux Tribe lands, and Keystone does not consider the Rosebud Sioux tribe a "local government."

7. Produce documentation that TransCanada has provided contact information for the public liaison to the President of the Rosebud Sioux Tribe as well as the Rosebud Sioux Tribal Council. Amended Permit Condition 7.

ANSWER: Notification was not made, since the project does not cross Rosebud Sioux Tribe lands, and Keystone does not consider the Rosebud Sioux tribe a "local government."

8. Produce all changes made to or contemplated to be made to the Construction Mitigation and Reclamation Plan (CMR Plan). Amended Permit Condition 13.

ANSWER: The current version of the CMR Plan is attached to Keystone's certification petition as Attachment A to Appendix C.

9. Produce all documentation showing that TransCanada filed all changes to the CMR Plan to the Commission. Amended Permit Condition 13.

ANSWER: The current version of the CMR Plan is attached to Keystone's certification petition as Attachment A to Appendix C.

10. Provide the qualifications and work history for each environmental inspector that TransCanada has incorporated into the CMR Plan. Amended Permit Condition 13.

OBJECTION AND ANSWER: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. Without waiving the objection, no environmental inspectors have been identified or hired, because the construction of the Project has not yet started.

11. Provide copies of each communication to all landowners that contains an explanation regarding trenching and topsoil and subsoil rock removal, segregation and restoration method options for each landowners property that is consistent with the applicable Con/Rec Unit? Amended Permit Condition 16.

ANSWER: A form Keystone Pipeline Project Landowner/Tenant Construction Restrictions Binding Agreement is attached as Keystone 1116-1118.

12. Provide maps that document the location of private and municipal wells along with proposed fuel storage facilities in the Project area. Amended Permit Condition 18.

OBJECTION AND ANSWER: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. In addition, it seeks documents not within Keystone's custody or control. Without waiving the objection, maps are not available for the locations of fuel storage facilities. The fuel storage facility locations will be determined at the time of construction. Refer to FSEIS 2.1.5.3 Fuel Transfer Stations. Wells will be identified prior to the fuel storage facility final locations and will adhere to HP09-001 Condition 18.

13. Provide all documents that formalize TransCanada's sediment control practices.

Amended Permit Condition 20.

ANSWER: The CMR Plan Rev4 and the Department of State FSEIS (2014).

14. Provide the frac-out plans TransCanada developed in compliance with Amended Permit Condition 21.

ANSWER: Keystone currently has no contractors retained to undertake construction. When Keystone employs a pipeline contractor, that contractor will develop the frac-out plan subject to Keystone's approval.

15. Provide all documents relating to TransCanada's compliance with all provisions of the federal Clean Water Act. Amended Permit Condition 22.

OBJECTION AND ANSWER: This request is vague, overlybroad, and unduly burdensome. Without waiving the objection, the Project has not started construction; therefore, Keystone has not initiated any activity that requires compliance with the federal Clean Water Act.

16. Provide copies of TransCanada's best management practices relating to the prevention of heavily silt-laden trench water from reaching wetland or water bodies.

Amended Permit Condition 22 f.

ANSWER: Appendix Z, Section 4.0 of the Department of State FSEIS (2014); the Project's CMR Plan Rev 4.

17. Provide copies of TransCanada's policies that will permit TransCanada to comply with Amended Permit Condition 22 a-f.

ANSWER: The following are Keystone's policies that will permit Keystone to comply with Amended Permit Condition 22 a-f.

22a. Appendix Z, Section 5.0 of the Department of State FSEIS (2014)

22b. Section 4.4.4 of the Department of State FSEIS (2014)

22c. Appendix Z, Section 4.0 of the Department of State FSEIS (2014); The Project's CMR Plan Rev4

22d. Appendix Z, Section 4.0 of the Department of State FSEIS (2014); The Project's CMR Plan Rev4

22e. Section 4.4.4 of the Department of State FSEIS (2014)

22f. Appendix Z, Section 4.0 of the Department of State FSEIS (2014); The Project's CMR Plan Rev4

18. Provide documentation regarding TransCanada's compliance with reclamation and clean up-efforts from all other construction activities related to any other pipeline that TransCanada owns or operates in the United States and Canada. Amended Permit Condition 26.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL

15-6-26(b). It is unlimited in time and extends to all of TransCanada's operations in the United States and Canada.

19. Provide copies of TransCanada's pipeline safety records for all other pipelines that TransCanada owns or operates in the United States and Canada.

OBJECTION: This request is overlybroad and unduly burdensome and is not reasonably calculated to lead to the discovery of admissible evidence under SDCL

15-6-26(b). It is unlimited in time and extends to all of TransCanada's operations in the United States and Canada.

20. Provide copies of all documentation concerning the requirement that all of TransCanada's shippers comply with its crude oil specifications. Amended Permit Condition 32.

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect them from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. See Section 15(13) of the Interstate Commerce Act.

21. Provide the most recent Integrity Management and Emergency Response Plan. Amended Permit Condition 35.

ANSWER: This request seeks information that is beyond the scope of the PUC's

jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the emergency response plan and integrity management plan is preempted by federal law, which has exclusive jurisdiction over issues of pipeline safety. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the emergency response plan and integrity management plan would commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan and Integrity Management Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

22. Provide documentation of any allegations from any jurisdiction in the United States or Canada that TransCanada was alleged to be in noncompliance with the operation, construction or maintenance other pipelines that have similar requirements as the requirements of Amended Permit Condition 37.

OBJECTION: This request is overlybroad, unduly burdensome, and not calculated to lead to the discovery of admissible evidence. It is unlimited in time and

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place, and therefore also exceeds the jurisdiction of the Commission.

23. Provide copies of documentation to include meetings of minutes, contact with all tribal chairman of federally recognized Indian Tribes located in South Dakota, notices to area tribes, that would demonstrate compliance with SDCL 49-41B-6. Amended Permit Condition 1.

ANSWER: *See* Keystone documents 1121-1340 attached.

24. Provide copies of all documentation sent to the President of the Rosebud Sioux Tribe regarding TransCanada's compliance with the National Environmental Policy Act. Amended Permit Conditions 1 and 3.

ANSWER: *See* Keystone documents 1121-1181, attached to response no. 23 above.

25. Provide copies of all documentation sent to the Rosebud Sioux Tribal Council regarding TransCanada's compliance with the National Environmental Policy Act. Amended Permit Conditions 1 and 3.

ANSWER: *See* Keystone documents 1121-1181, attached to response no. 23 above.

26. Provide copies of all documentation sent to the President of the Rosebud Sioux Tribal Council regarding TransCanada's compliance with the National Historic Preservation Act. Amended Permit Conditions 1 and 3.

ANSWER: *See* Keystone documents 1121-1181, attached to response no. 23 above.

27. Provide copies of all documentation sent to the Rosebud Sioux Tribe's Tribal Historic Preservation Office regarding TransCanada's compliance with the National Historic Preservation Act. Amended Permit Conditions 1 and 3.

ANSWER: *See* Keystone documents 1121-1181, attached to response no. 23 above.

28. Provide copies of all documentation sent to the President of the Rosebud Sioux Tribe regarding TransCanada's compliance with the Native American Graves and Repatriation Act. Amended Permit Conditions 1 and 3.

ANSWER: *See* Keystone documents 1121-1181, attached to response no. 23 above.

29. Provide copies of all documentation sent to the Rosebud Sioux Tribal Council that demonstrates TransCanada's compliance with the Native American Graves and Repatriation Act. Amended Permit Conditions 1 and 3.

ANSWER: *See* Keystone documents 1121-1181, attached to response no. 23 above.

30. Provide copies of all communications sent by TransCanada to the President of the Rosebud Sioux Tribe and the Rosebud Sioux Tribal Council regarding the Project.

Amended Permit Conditions 1 and 3.

ANSWER: See Keystone documents 1121-1181, attached to response no. 23 above.

31. Provide copies of all documentation that demonstrates that Keystone has identified all greater prairie chicken and greater sage and sharp tailed grouse leks within the buffer distances from the construction right of way set forth for each species in the Final Environmental Impact Statement and the Biological Assessment prepared by the Department of State and the US Fish and Wildlife Services. Amended Permit Condition 41.

ANSWER: The final Biological Assessment prepared by the USFWS and DOS provides a listing of all the studies and surveys that were conducted to comply with the USFWS requirements in addressing all listed species. These can be found at Section 3.8.3 of the FSEIS and Section 3.1 of the Biological Assessment (Appendix H2 of the FSEIS). In addition, the South Dakota Game, Fish, and Parks has also reviewed and agreed to the findings of the Biological Assessment as required by recent USFWS guidance on aligning species assessments with state resource agencies.

32. Provide copies of all documentation that demonstrates TransCanada's compliance with the requirements of Amended Permit Condition 42.

ANSWER: In South Dakota, no drain tile systems have been identified on the

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Keystone XL project.

33. Provide copies of all documents that demonstrate that TransCanada has complied with the requirements of Amended Permit Condition 44 a-e.

ANSWER: Paleontological fieldwork methodology, literature search information, and results can be found in Sections 3.1.2.2 and 3.1.2.3 of the Department of State FSEIS (2014). A list of reports detailing the results of all pre-construction paleontological field surveys can be found in Table 3.1-4 of the Department of State FSEIS (2014). The paleontological mitigation report is titled: Second Confidential Draft – Paleontological Resources Mitigation Plan: Keystone XL Pipeline Project, South Dakota. The Plan is not provided because it is confidential/privileged information.

34. Provide copies of all documentation from the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration regarding denied waiver from any Pipeline and Hazardous Materials Safety Administration pipeline safety regulations. Amended Permit Condition 1 and 2.

OBJECTION: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence.

35. If the answer to Interrogatory No. 25 is in the affirmative; provide all documents that demonstrate that TransCanada has made changes to the CMR Plan and properly submitted them to the Commission. Amended Permit Condition 13.

OBJECTION: The current version of the CMR Plan is attached to Keystone's certification petition as Attachment A to Appendix C.

36. Provide all documents relating to each environmental inspector that TransCanada has incorporated into the CMR Plan as referred to by Interrogatory No. 26. Amended Permit Condition 13.

OBJECTION AND ANSWER: The identity of environmental inspectors is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, no environmental inspectors have been identified or hired, because the construction of the Project has not yet started.

37. If the answer to Interrogatory No. 27 is in the affirmative provide all documentation that supports the assertion that TransCanada has provided each landowner with an explanation regarding trenching and topsoil and subsoil rock removal, segregation and restoration method options for each landowners property that is consistent with each applicable Con/Rec Unit. Amended Permit Condition 16.

OBJECTION: This request is overlybroad and unduly burdensome.

38. If the answer to Interrogatory No. 28 is in the affirmative produce all documents that support that answer. Amended Permit Condition 20.

ANSWER: N/A.

39. If the answer to Interrogatory 22 is in the affirmative, provide the name,

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credentials, address, phone number, email address and website for the public liaison officer which was approved by the Commission referred to in Amended Permit Condition 6.

ANSWER: Sarah Metcalf, PO Box 904, Aberdeen, SD 57402, 1-888-375-1370, smetcalf12@gmail.com, <https://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx>.

40. Provide copies of all communications with the Bureau of Indian Affairs regarding the construction, operation or maintenance of the Keystone Pipeline. Amended Permit Condition 1.

ANSWER: None.

41. Provide copies of all communications with the Federal Bureau of Investigation regarding the construction, operation and maintenance of the Keystone Pipeline. Amended Permit Condition 7.

OBJECTION: This request is not related to Amended Permit Condition 7. It is also not relevant and not reasonably calculated to lead to the discovery of admissible evidence. It is also overlybroad and unduly burdensome since the Keystone Pipeline has been in operation since 2010.

42. Provide copies of all communications with the Rosebud Sioux Tribe Law Enforcement Services regarding the construction, operation and maintenance of the Keystone Pipeline. Amended Permit Condition 7.

ANSWER: See Keystone documents 1121-1181 attached to response no. 23 above. See also Ms. Metcalf's reports, published as public liaison reports on the PUC website.

43. Provide copies of all communications with each local law enforcement agency regarding the construction, operation and maintenance of the Keystone Pipeline. Amended Permit Condition 7.

OBJECTION: This request is not related to Amended Permit Condition 7. It is also not relevant and not reasonably calculated to lead to the discovery of admissible evidence. It is also overlybroad and unduly burdensome since the Keystone Pipeline has been in operation since 2010.

44. Provide copies of all documentation regarding TransCanada's efforts to acquire land through eminent domain in the State of Nebraska. Amended Permit Condition 1.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and is not relevant or reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b).

45. If the answer to Interrogatory No. 31 is in the affirmative provide copies of all

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documentation that support the affirmative answer. Amended Permit Condition 32.

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect them from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of the Interstate Commerce Act.

46. If the answer to Interrogatory No. 32 is in the affirmative provide copies of all documentation that supports the affirmative answer. Amended Permit Condition 32.

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect them from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of the Interstate Commerce Act.

47. If the answer to Interrogatory No. 33 is in the affirmative provide copies of all documentation that supports the affirmative answer. Amended Permit Condition 32.

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect them from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts

between Keystone and its shippers and Section 15(13) of the Interstate Commerce Act.

48. Provide copies of all documents regarding all materials and types of products that will be transported into South Dakota for the construction, operation and maintenance of the Keystone Pipeline. Amended Permit Condition 32.

OBJECTION: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence.

49. If the answer to Interrogatory No. 36 is in the affirmative provide copies of all documentation that supports the affirmative answer including the name of each pipeline along with the complete contact information for the contact person for each pipeline. Amended Permit Condition 37.

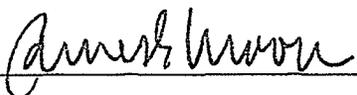
OBJECTION: This request is overlybroad and unduly burdensome. It is also not reasonably calculated to lead to the discovery of admissible evidence.

OBJECTIONS

The objections stated to Rosebud Sioux Tribe's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

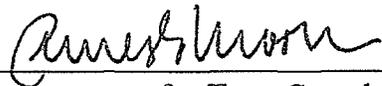
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission,
a true and correct copy of Keystone's Responses to Rosebud Sioux Tribe's First
Interrogatories and Request for Production of Documents, to the following:

Matthew L. Rappold
PO Box 873
Rapid City, SD 57709
Matt.rappold01@gmail.com



One of the attorneys for TransCanada

REQUEST FOR PRODUCTION OF DOCUMENTS

1. All exhibits to be introduced at the hearing in this matter.

ANSWER: Keystone has not yet identified hearing exhibits, but will disclose them as required by the PUC.

2. The resumes of all persons to be called as witnesses or whose testimony will be filed by TransCanada.

ANSWER: Responsive documents are attached as Keystone 1341-1374.

3. All documents prepared for the purpose of demonstrating compliance by TransCanada with the Oil Pollution Act of 1990, codified at 33 U.S.C. §1321, and the PHMSA Facility Response Plan regulations, 49 CFR Part 194, in the construction and operation of the Keystone XL Pipeline.

OBJECTION: This request seeks information that is outside the scope of the PUC's jurisdiction and Keystone's burden under SDCL 49-41B-27. This request also seeks information that is governed by federal law and is within the province of The Environmental Protection Agency for the Oil Pollution Act, and PHMSA.. The PUC's jurisdiction over the emergency response plan is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan could commercially disadvantage Keystone.

4. Integrity Management Plan and all other documents prepared for the purpose of demonstrating compliance by TransCanada with the Pipeline Safety Act, 49 U.S.C. §60101 *et seq.* and the implementing regulations, in the construction and operation of the Keystone XL Pipeline.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of the PHMSA. The PUC's jurisdiction over pipeline safety is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the Integrity Management Plan would commercially disadvantage Keystone.

5. All documents prepared or obtained for the purpose of demonstrating compliance by TransCanada with the Clean Water Act, 33 U.S.C. §§1251-1387, and the implementing regulations, and SDCL Chapter 34A-02, in the construction and operation of the Keystone XL Pipeline.

OBJECTION AND ANSWER: This request is vague, unclear, overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. This issue is addressed in the Final Supplemental Environmental Impact Statement, Section 4.3, which is publicly available at <http://keystonepipeline->

xl.state.gov/finalseis/. Without waiving the objection, the Project has not started construction; therefore, Keystone has not initiated any activity that requires compliance with the federal Clean Water Act and SDCL Chapter 34A-02. Therefore, no documents have been prepared to date. Keystone has received a General Permit for Temporary Discharge Activities on April 11, 2013 from the SD Department of Environment and Natural Resources. The conditions contained within this general permit are in compliance with the federal Clean Water Act and SDCL Chapter 34A-02.

6. All documents prepared or obtained for the purpose of demonstrating compliance with the Endangered Species Act, 16 U.S.C. §§1531-1544, and the implementing regulations, and SDCL Chapters 34A-8 and 34A-8A, in the construction and operation of the Keystone XL Pipeline.

OBJECTION AND ANSWER: This request is vague, unclear, overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. This issue is addressed in the Final Supplemental Environmental Impact Statement, Section 3.8, which is publicly available at <http://keystonepipeline-xl.state.gov/finalseis/>. Without waiving the objection, the following documents demonstrate the Project's compliance with the Endangered Species Act and SDCL Chapters 34A-8 and 34A-8A during the planning phase of the Project route in South Dakota:

The Department of State FSEIS (2014) and the May 2013 Biological Opinion which is Appendix H of the Department of State FSEIS (2014).

Keystone has not initiated construction or operation of the Project.

7. All documents relating to the environmental review of the Keystone XL Pipeline by the Department of State under the National Environmental Policy Act, 42 U.S.C. §4231 *et seq.*

OBJECTION AND ANSWER: This request is vague, unclear, overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. These extremely voluminous documents are available on the State Department's website for the Keystone XL Project. <http://keystonepipeline-xl.state.gov/>

8. All documents prepared or obtained for the purpose of demonstrating compliance with the National Historic Preservation Act of 1966, as amended, 16 U.S.C. §§470-470x-6.

OBJECTION AND ANSWER: This request is vague, unclear, overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. This issue is addressed in the Final Supplemental Environmental Impact Statement, Section 4.11, which is publicly available at <http://keystonepipeline-xl.state.gov/finalseis/>. Without waiving the objection, cultural resources survey reports are listed in Section 3.11 of the Department of State FSEIS (2014), with results of the SD surveys detailed in Table 3.11-3.

9. All documents prepared or obtained for the purpose of demonstrating compliance with the Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. §§3001-3013.

OBJECTION AND ANSWER: This request is vague, unclear, overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. This issue is addressed in the Final Supplemental Environmental Impact Statement, Section 3.11, which is publicly available at <http://keystonepipeline-xl.state.gov/finaleis/>. Without waiving the objection, the Unanticipated Discovery Plan for cultural resources can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

10. All documents relating to communications or meetings with the Standing Rock Sioux Tribe or other Indian Tribes in the United States or Canada.

OBJECTION AND ANSWER: This request is overlybroad and unduly burdensome to the extent that it goes beyond the Standing Rock Sioux Tribe. *See* Keystone documents 1121-1340.

11. Construction quality assurance plan or related documents for the Keystone XL Pipeline.

ANSWER: In its Application to the South Dakota Public Utilities Commission dated October 2009 Keystone stated that to ensure compliance with the regulations, standards, and Keystone's internal quality standards, Keystone will implement a quality

control and quality assurance plan (QC/QA Plan). The QC/QA Plan will establish technical inspection policies and procedures during manufacturing and construction, and will delineate the duties and responsibilities of each QC/QA inspector assigned to the Project. Keystone's QC/QA Plan includes periodic audits by manufacturing and construction management to confirm that inspections are being properly performed and documented. (SDPUC Application, October 2009, page 8.)

As part of its continuous improvement cycle Keystone is in the process of revising its QC/QA plans that would be used on the Keystone XL project based on Lessons Learned from recent completed projects. Impacting the final revision of the quality management plan for the Keystone XL project will be the two Special Conditions recommended by PHMSA in addition to the 57 Special Conditions listed in the FSEIS (Appendix B, Potential Releases and Pipeline Safety.)

The two additional Special Conditions include:

1. Keystone would develop and implement a Quality Management System that would apply to the construction of the entire Keystone XL project in the U.S. to ensure that this pipeline is—from the beginning—built to the highest standards by both Keystone personnel and its many contractors; and
1. 2. Keystone would hire an independent Third Party Inspection Company (TPIC) to monitor the construction of the Keystone XL project. PHMSA must approve the TPIC from among companies Keystone proposes. Keystone and PHMSA would work together to develop a scope of work to help ensure that all regulatory and technical EIS conditions are satisfied during the construction and commissioning of the pipeline project. The TPIC would oversee the execution and implementation of the Department-specified conditions and the applicable pipeline safety regulations and would provide monitoring summaries to PHMSA and Keystone concurrently. Keystone would address deficiencies or risks identified in the TPIC's assessments.³

Footnote ³: In response to a data request regarding this TPIC condition, Keystone responded: “Keystone agrees to hire an independent Third Party Inspection Company (TPIC) to monitor field construction activities of the Keystone XL project. Keystone understands that it will work jointly with PHMSA to define the scope of work, identify qualified companies and prepare a Request for Proposal. PHMSA will select the qualified TPIC and manage the work of the TPIC. PHMSA will retain authority for its mandate on the project, while the TPIC will provide supplementary resources to PHMSA staff to field monitor, examine, audit and report conditions as specified by DOS and applicable pipeline safety regulations. Keystone will address deficiencies as directed by PHMSA.” (FSEIS, Appendix B, page 27; repeated at FSEIS, Appendix Z, page 95.)

At this time a Quality Management System to comply with additional PHMSA Special Condition No. 1 is not available, and the selection of a TPIC to comply with additional PHMSA Special Condition No. 2 has not been initiated.

12. Water sampling quality assurance plan or related documents for water samples taken in relation to construction of the Keystone XL Pipeline.

ANSWER: The Project has not started construction; therefore, Keystone has not initiated any activity that requires water sampling. Additionally, Keystone has not received any permits that require water sampling for quality assurance. If water sampling is required per agency regulation or permit requirement, Keystone will sample in an appropriate methodology to be compliant with all applicable regulatory statutes or permit conditions.

13. Operations manual or related documents for the Keystone XL Pipeline.

OBJECTION: This request seeks information that is beyond the scope of the PUC’s jurisdiction and Keystone’s burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the

exclusive province of the PHMSA. The PUC's jurisdiction over the operations manual is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the operations manual would commercially disadvantage Keystone.

14. All letters, correspondence, emails or instant messages to and from the South Dakota Public Utilities Commission, its employees, attorneys or agents, since January 1, 2008.

OBJECTION AND ANSWER: This request is overlybroad and unduly burdensome. Without waiving the objection, all such materials are available on the Commission's website under Docket Nos. HP 09-001 and HP 14-001, except for communications by Keystone's public liaison directly to PUC staff.

15. All advertisements that have been purchased by TransCanada relating to the project in any South Dakota media, such as television, radio, newspaper, billboard or other.

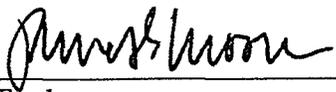
OBJECTION: This request is overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence under SDCL 15-6-26(b).

OBJECTIONS

The objections stated to Cheyenne River Sioux Tribe's Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

By 

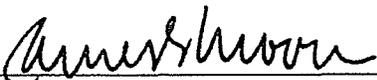
William Taylor
James E. Moore
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300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Standing Rock Sioux Tribe's First Request for Production of Documents, to the following:

Peter Capossela, P.C.
PO Box 10643
Eugene, OR 97440
pcapossela@nu-world.com

Chase Iron Eyes
Iron Eyes Law Office, PLLC
PO Box 888
Fort Yates, ND 58538
chaseironeyes@gmail.com



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

7. Provide all correspondence, if any, filed against the public liaison officer, from 2010 to present date.

ANSWER: No correspondence has been "filed against the public liaison officer."

8. Provide quarterly progress reports submitted to Commission office.

OBJECTION: These reports are available on the PUC website.

9. Provide public liaison officer's quarterly reports, 2010 to 2014.

OBJECTION: These reports are available on the PUC website.

15. Provide Con/Rec Unit data, maps, information, and notice of availability of information sent to landowners.

ANSWER: The 2013 Construction/Reclamation Unit Specifications contains this information and are found in Appendix R of the Department of State FSEIS (2014).

Keystone has produced at Keystone 0628-0635 a phone log that documents communications between Keystone and landowners regarding seed mixes.

Project Representatives work with landowners to complete a construction binding agreement, which covers seeding specifications. If a landowner would like to use a seed mixture other than the Native Grass mixture, then landowner may specify a seeding mixture on this agreement.

16. (g) Provide adverse weather plan.

ANSWER: The Adverse Weather Plan will be filed with the Commission two months prior to the start of construction as stated in Condition #25 of the SDPUC certificate.

(h) Rock - how is it determined and marked for removal? Where was the rock taken when landowner wanted it removed from his/her land? Provide any correspondence/complaints with landowners about rock issues, from 2010 to present date.

OBJECTION AND RESPONSE: The request for correspondence with landowners is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. Without waiving the objection, this issue is addressed in the following sections of the CMR Plan:

Section 4.9 Padding

The lesser of 4 feet or the actual depth of topsoil cover, shall not be backfilled with soil containing rocks of any greater concentration or size than existed prior to pipeline construction in the pipeline trench, bore pits, or other excavations.

Section 4.11.1 Relieving compaction

Any rock that is brought to the surface during decompaction activities will be removed until the quantity, size, and distribution of rock is equivalent to that found on adjacent land as determined by the Environmental Inspector.

Section 4.11.2 Rock removal

Rocks that are exposed on the surface due to construction activity shall be removed from the right-of-way prior to and after topsoil replacement. This effort will result in an equivalent quantity, size and distribution of rocks to that found on adjacent lands, as determined by the Environmental Inspectors.

Clearing of rocks may be carried out with a mechanical rock picker or by manual means, provided that preservation of topsoil is assured. Rock removed from the right-of-way shall be hauled off the landowner's premises or disposed of on the landowner's premises at a location that is mutually acceptable to the landowner and to Keystone.

(m) Provide list of original native grasses and what grasses were used to reseed for all landowners. Provide any correspondence/complaints from landowner filed from 2010 to present date.

OBJECTION AND RESPONSE: The request for correspondence with landowners is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. On Keystone XL, Project Representatives work with landowners to complete a construction binding agreement, which include seeding specifications. If a landowner prefers to use a seed mixture other than the Native Grass

mixture, an alternative seeding mixture may be specified on this agreement. Keystone has not located any responsive documents other than the phone log referenced in no. 15. A copy of the binding construction agreement is attached as Keystone 1116-1118. If any landowner addressed rock issues with Sarah Metcalf, it may be noted in the reports that she has filed with the PUC.

(n) Provide all correspondence with landowners regarding their concerns on protecting their livestock, from 2010 to present date. State whether TransCanada has drafted crop monitoring protocols and provide any documents. State whether TransCanada has drafted plan to control noxious weeds and communications with landowners related to such plan - provide documents.

OBJECTION AND RESPONSE: The request for correspondence with landowners is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence. Without waiving the objection, Keystone did not locate any responsive documents related to livestock. Crop monitoring protocols have not yet been drafted. Keystone has drafted a plan to control noxious weeds for South Dakota, a copy of which is attached as Keystone 0600-0627.

23(a). Discovery related to road repair for first Keystone Pipeline.

OBJECTION: This request is vague, overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. It is not limited in time or to South Dakota, and it is not specific as to what is requested.

23(b). Provide any complaints filed.

OBJECTION: This request is vague, overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. It is not limited in time or to South Dakota, and it is not specific as to what is requested.

29. Provide winterization plan.

ANSWER: Keystone will have a winterization plan prepared prior to construction as required by Condition 29, but the plan has not yet been completed. The winterization plan will be provided to affected landowners if winter conditions prevent reclamation until spring.

32. Provide revised CMR plan.

ANSWER: Keystone's current CMR Plan is attached to the certification petition as Attachment A to Appendix C.

33. Discovery regarding information related to maintenance of first Keystone Pipeline right of way.

OBJECTION: This request is vague and unclear. Keystone does not know what is meant by "maintenance of first Keystone Pipeline right of way." To the extent

that the reference is to maintenance work done on the right of way for the Keystone Pipeline after construction, the request is not relevant or likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b).

45(a). Provide update on repair or replacement of property related to first Keystone Pipeline.

OBJECTION: This request is vague and unclear. It is also overlybroad, burdensome, and does not seek information that is relevant or likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b).

45(b). Provide document if damages were compensated to landowners for damages or losses, such as lost productivity and crop and livestock losses.

OBJECTION: This request is vague and unclear. It is also overlybroad, burdensome, and does not seek information that is relevant or likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Compensation for damages is not within the scope of the PUC's jurisdiction. Without waiving the objection, certain responsive documents are attached as Keystone 0785-1115.

50. State whether any landowners have filed a complaint against TransCanada and provide document.

OBJECTION AND RESPONSE: This request is overlybroad because it is not limited in time or place. It also seeks information that is not relevant or likely to lead to

the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, complaints made to the public liaison are documented in the liaison's quarterly and annual reports filed with the PUC.

73-76. Discovery requests related CMR Plan.

OBJECTION: This request is vague and unclear. Keystone attached a copy of the current version of its CMR Plan to its Certification Petition as Attachment A to Appendix C. The request does not ask for any other or additional information.

80. Provide the Con/Rec Unit mapping.

ANSWER: The 2013 Construction/Reclamation Unit Specifications contain this information and are found in Appendix R of the Department of State FSEIS (2014).

88. Provide all correspondence from 2010 to the present related to repair of roads following the construction of the first Keystone Pipeline. State why Keystone believes that the road bond amount should not be adjusted for inflation.

OBJECTION AND ANSWER: The request for all correspondence from 2010 related to road construction after construction of the Keystone Pipeline is overlybroad and unduly burdensome. Without waiving the objection, the amount of the bond was determined by the PUC, based on Keystone's recommendation and the testimony of Staff Witness Binder. The amount was based on a percentage of the value of construction in the State. The amount was deemed sufficient to cover potential road repair costs and

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should remain sufficient, however, Keystone does not oppose an appropriate adjustment to the bond amount if Staff so recommends.

107-108. Provide payments of taxes in each county for the first Keystone Pipeline from 2010 to the present.

ANSWER: An itemization of taxes paid on the Keystone Pipeline is attached as Keystone 0768-0773.

Dated this 5th day of February, 2015.

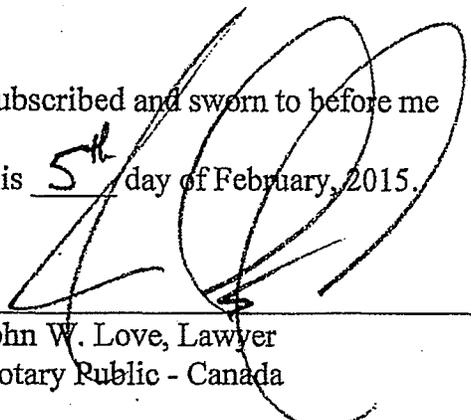
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.



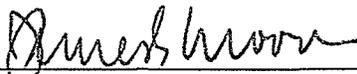
John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Byron Steskal and Diana Steskal's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

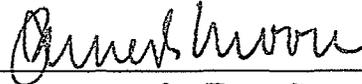
By  _____

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James E. Moore
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Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission,
a true and correct copy of Keystone's Responses to Byron Steskal and Diana Steskal's
First Interrogatories and Request for Production of Documents, to the following:

Byron and Diana Steskal
707 E. 2nd Street
Stuart, NE 68780
prairierose@nntc.net



One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 1: List the name, business address, telephone number, and position of all persons who answered these interrogatories.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. As identified in the answer to number 3, Keystone will designate witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition.

INTERROGATORY NO. 2: List the name, business address, telephone number, and position of all persons who assisted in you in answering these interrogatories or who provided information that you relied on in answering these interrogatories. As a part of your answer to this interrogatory, state what relationship, if any, each such person has with you or with your attorneys and the subject matter of their knowledge.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. As identified in the answer to number 3, Keystone will designate witnesses with overall responsibility for the responsive information as related to the

Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition.

INTERROGATORY NO. 3: State the full name, current address, telephone number, and

present employment of each person who you expect to call as a witness in Docket HP14-001, the subject matter on which each such witness is expected to testify, the substance of the facts and opinions to which each witness is expected to testify, a summary of the grounds for each opinion expected to be expressed by such witness, and for each expert witness also state:

- a. the facts supporting each opinion to which the expert is expected to testify;
- b. the expert's profession or occupation, educational background, specialized training, and employment history relevant to the expert's proposed testimony;
- c. the expert's previous publications within the preceding 10 years; and
- d. all other cases in which the witness has testified as an expert at trial.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility

(5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441; Environmental Issues; CMR Plan, Con/Rec Units, HDD's

(6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

None of these persons is a retained expert, so subparts (a) through (d) do not apply.

INTERROGATORY NO. 4: State the name and address of each expert consulted whose report or work product will be relied upon or reviewed in whole or in part by any expert witness whom you expect to call at the trial of this case.

ANSWER: Keystone's fact witnesses may all offer opinion testimony, but none are retained experts.

INTERROGATORY NO. 5: State specifically what information was furnished by TransCanada to each expert and what information was gathered by each expert. As to any books or publications upon which any expert's opinions are to be based, state the title, author, publisher and edition of each such publication, together with the page and paragraph utilized by the expert in the formation of any opinion or conclusion.

ANSWER: Keystone's fact witnesses may all offer opinion testimony, but none are retained experts.

INTERROGATORY NO. 6: Identify all exhibits you intend to introduce in the evidentiary currently scheduled for May 5-8, 2015.

ANSWER: Keystone has not yet identified exhibits but will do so as required by the PUC.

INTERROGATORY NO. 7: Describe the relationships between TransCanada and any of its parents, affiliates, and subsidiaries that have or are expected to have any financial interest in the Keystone XL Pipeline, or any responsibility for the design, construction, or possible operation of the Keystone XL Pipeline.

ANSWER: TransCanada is the parent corporation, as such, its affiliates have no ownership interest.

INTERROGATORY NO. 8: With regard to Fact Paragraphs 14, 24, and 29:

- a. identify the shippers that have committed to long-term binding contracts for capacity on the Keystone XL Pipeline;
- b. provide the total capacity of the Keystone XL Pipeline in barrels per day to which shippers have committed for transportation of crude oil from the WCSB in Canada to U.S. delivery locations;
- c. provide the total capacity of the Keystone XL Pipeline in barrels per day to which shippers have committed for transportation of crude oil via the Bakken Marketlink Project from Baker, Montana, to U.S. delivery locations;
- d. for each committed shipper, provide the capacity of the Keystone XL Pipeline in barrels per day to which the shipper has committed and the origination and delivery locations of its committed shipments and the duration in years of such commitment;
- e. describe changes in contracted capacity amounts, delivery locations, and duration since June 29, 2010, identified by shipper; and

g. describe communications between TransCanada and such shippers that relate to shipper intention or desire to reduce the committed capacity for which it contracted, to reduce the duration of such contract, to terminate such contract, or to transfer its rights under such contract to a third party.

OBJECTION AND ANSWER: To the extent that it seeks the identity of Keystone's shippers and the terms of their contracts, this request seeks information that has substantial commercial and proprietary value, is subject to substantial efforts by Keystone to protect it from actual and potential competitors, and is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. Without waiving the objection:

c. Shippers have committed about 65,000 barrels per day of capacity for transportation services on Bakken Marketlink.

e. Please refer to Answer to BOLD Nebraska Interrogatory No. 8.c. Keystone also received additional commitments on Keystone XL Pipeline that would support an expansion of its total capacity from 700,000 barrels per day to 830,000 barrels per day. The contracted capacity amounts, delivery locations and duration of each of the commitments are confidential.

INTERROGATORY NO. 9: With regard to Fact Paragraphs 14, 24, and 29, state whether any transportation services agreement with a committed shipper for transportation of crude oil on the proposed Keystone XL Pipeline has been (a) terminated; of (b) amended with regard to quantity, term, or delivery location, and describe any such terminations or amendments.

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OBJECTION AND ANSWER: To the extent that it seeks the identity of Keystone's shippers and the terms of their contracts, this request seeks information that has substantial commercial and proprietary value, is subject to substantial efforts by Keystone to protect it from actual and potential competitors, and is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. Without waiving the objection, none of the transportation services agreements has been terminated or amended with regards to quantity, term, or delivery location.

INTERROGATORY NO. 10: With regard to Fact Paragraphs 14, 24, and 27, identify each existing and proposed pipeline that is currently capable or would be capable of delivering crude oil produced by Williston Basin oil wells to the proposed Bakken Marketlink Project in Baker, Montana, and for each proposed pipeline describe its regulatory status.

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. It is the responsibility of Keystone's shippers to deliver crude oil to the Bakken Marketlink Project in Baker, Montana.

INTERROGATORY NO. 11: With regard to Fact Paragraphs 14, 24, and 27, identify each existing and proposed railroad line and associated offloading facility that currently are or would be capable of delivering crude oil produced by Williston Basin oil wells to the proposed Keystone XL Pipeline via the proposed Bakken Marketlink Project in Baker,

Montana, and for each proposed railroad line and offloading facility describe its regulatory status.

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. It is the responsibility of Keystone's shippers to deliver crude oil to the Bakken Marketlink Project in Baker, Montana.

INTERROGATORY NO. 12: With regard to Fact Paragraphs 14, 24, and 27, describe the average daily capacity of trucking to deliver crude oil produced by Williston Basin oil wells to the proposed Keystone XL Pipeline via the proposed Bakken Marketlink Project in Baker, Montana.

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. It is the responsibility of Keystone's shippers to deliver crude oil to the Bakken Marketlink Project in Baker, Montana.

INTERROGATORY NO. 13: With regard to Fact Paragraph 14, 24, and 27, describe any existing or proposed crude oil tanks in or near Baker, Montana, that would be used to store crude oil produced by Williston Basin oil wells immediately prior to its injection into the proposed Keystone XL Pipeline via the proposed Bakken Marketlink Project in Baker, Montana, including but not limited to crude oil tanks constructed by TransCanada to serve Bakken Marketlink shippers.

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. It is the responsibility of Keystone's shippers to deliver crude oil to the Bakken Marketlink Project in Baker, Montana. Without waiving the objection, Keystone's proposed tanks are addressed in Section 2.1.12.1 of the FSEIS.

INTERROGATORY NO. 14: With regard to Fact Paragraphs 14, 24, 26, and 27, describe the impact of increased light crude oil production in southern Petroleum Administration for Defense District ("PADD") 2 (Colorado, Nebraska, Kansas, and Oklahoma) and PADD 3 on the market for Williston Basin light crude oil in PADD 3.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

INTERROGATORY NO. 15: With regard to Fact Paragraphs 14, 24, 26, and 27, describe the impact of increased light crude oil production in southern PADD 2 (Colorado, Nebraska, Kansas, and Oklahoma) and PADD 3 on the market for Williston Basin light crude oil in southern PADD 2 that would be transported via the Keystone XL Pipeline and the Keystone Pipeline System to the Cushing, Oklahoma, offramp.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

INTERROGATORY NO. 16: With regard to Fact Paragraphs 14 and 26, identify the U.S. refineries that could take delivery via pipeline of the Williston Basin light crude oil that would be transported by the proposed Keystone XL Pipeline.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is

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available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, crude oil will be transported through the Keystone XL Pipeline and delivered to terminals located at Cushing, Oklahoma, Port Arthur, Texas, and Houston, Texas. Crude oil will be transported from those terminals via third-party facilities that Keystone does not own, operate, or control, and could go to any refinery in the U.S.

INTERROGATORY NO. 17: With regard to Fact Paragraphs 24, 26, and 27, identify the existing and proposed delivery locations of the Keystone Pipeline System in PADD 3, and identify all pipelines owned by connecting carriers that are connected to the proposed Keystone Pipeline in PADD 3.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information

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Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, crude oil will be transported through the Keystone XL Pipeline and delivered to terminals located at Cushing, Oklahoma, Port Arthur, Texas, and Houston, Texas. Crude oil will be transported from those terminals via third-party facilities that Keystone does not own, operate, or control, and could go to any refinery in the U.S.

INTERROGATORY NO. 18: With regard to Fact Paragraphs 14, 24, 26, and 27, provide a list of US refineries that TransCanada expects will increase demand for the WCSB crude oil that would be delivered by the proposed Keystone XL Pipeline, and for each such refinery state the basis for TransCanada's claim that the refinery will increase demand for the crude oil from this basin.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the

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following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, medium/heavy crude oil demand at the U.S. Gulf Coast is approximately 3.5 million barrels per day (*see* U.S. Energy Information Administration website). Keystone XL would assist in improving North American energy supply security by allowing U.S. Gulf Coast refiners to diversify their crude oil supply sources and help displace declining supplies from Mexico, Venezuela, Colombia, Iraq, Kuwait, and Saudi Arabia.

INTERROGATORY NO. 19: With regard to Fact Paragraphs 14, 24, 26, and 27, provide a list of US refineries that TransCanada expects to increase demand for Williston Basin crude oil that would be delivered by the proposed Keystone XL Pipeline, and for each such refinery state the basis for TransCanada's claim that the refinery will increase demand for the crude oil from this basin.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of

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transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, crude oil will be transported through the Keystone XL Pipeline and delivered to terminals located at Cushing, Oklahoma, Port Arthur, Texas, and Houston, Texas. Crude oil will be transported from those terminals via third-party facilities that Keystone does not own, operate, or control, and could go to any refinery in the U.S.

INTERROGATORY NO. 20: With regard to Fact Paragraphs 14, 24, 26, and 27, provide a list of refineries in PADD 3 that could be served by the proposed Keystone XL Pipeline that are currently expanding refining capacity or have announced plans to expand refining capacity.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order.

This request also may seek information that is not within Keystone's custody or control and {01814925.1}01808649.1}{

is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, crude oil will be transported through the Keystone XL Pipeline and delivered to terminals located at Cushing, Oklahoma, Port Arthur, Texas, and Houston, Texas. Crude oil will be transported from those terminals via third-party facilities that Keystone does not own, operate, or control, and could go to any refinery in the U.S.

INTERROGATORY NO. 21: With regard to Fact Paragraphs 14, 24, 25, 26, and 27, provide a list of refineries in PADD 3 that TransCanada expects to import less offshore crude oil and replace it with crude oil that would be transported by the proposed Keystone XL Pipeline.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order.

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This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, shippers have committed to long-term binding contracts for delivery through the Keystone XL Pipeline, and Keystone does not control where the crude oil will be delivered after leaving our facilities.

INTERROGATORY NO. 22: With regard to Fact Paragraphs 14, 24, 26, and 27, provide a list of PADD 3 refineries that are "optimally configured to process heavy crude slates" and identify which of these refineries are currently or proposed to be connected directly or via connecting pipeline carriers to the proposed Keystone XL Pipeline.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order.

This request also may seek information that is not within Keystone's custody or control and
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is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 23: With regard to Fact Paragraphs 14, 24, 26, and 27, provide a list of new refineries that are under construction or proposed to be constructed in PADD 3 and identify which of these new refineries are currently or proposed to be connected directly or via connecting pipeline carriers to the proposed Keystone XL Pipeline.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast

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information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, Keystone is not in the refining business and does not have access to specifics regarding refinery projects.

INTERROGATORY NO. 24: With regard to Fact Paragraphs 14, 15, 24, 26, and 27, describe the potential to re-export WCSB crude oil from the U.S. Gulf Coast to overseas markets.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP

Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information

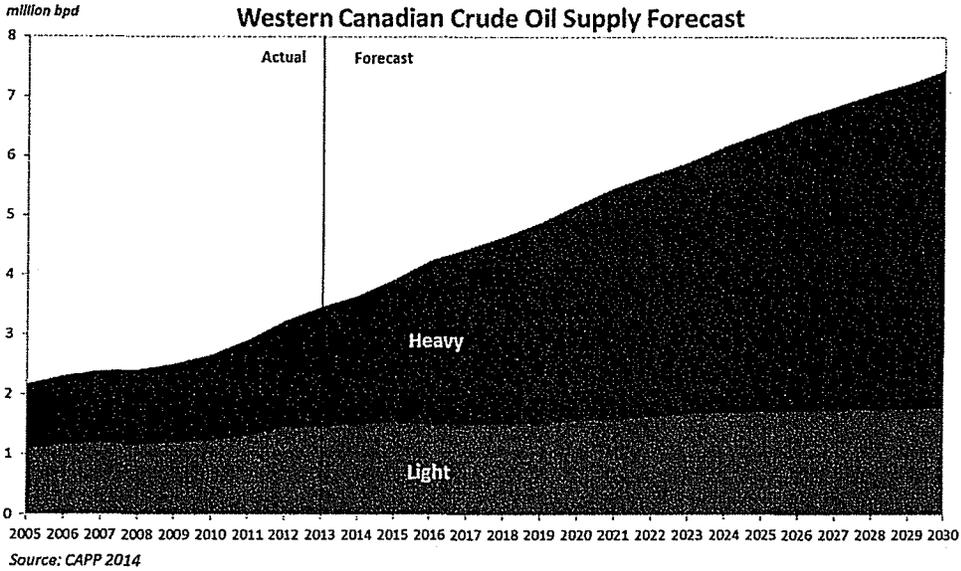
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Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

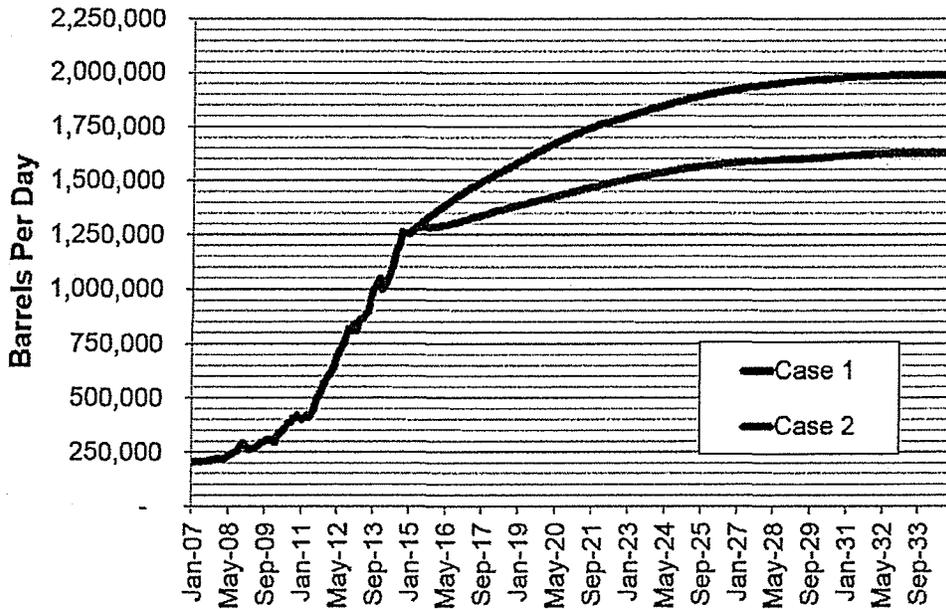
INTERROGATORY NO. 25: With regard to Fact Paragraphs 14, 24, 25, and 27, provide forecasts of crude oil production in the WCSB and Williston Basin, describe the source of these forecasts, and state whether or not these forecasts take into account current low oil prices.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, the following tables provide demand forecasts.

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Forecasting Williston Basin Oil Production, BOPD



Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.



JJ Kringstad - North Dakota Pipeline Authority

Keystone's shippers are sophisticated third parties and also have a long-term outlook as evidenced by the nature of the long-term contract commitments to the Keystone XL pipeline.

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The Keystone XL pipeline will connect one of the world largest remaining reserves of crude oil to the world's largest refining region. It is therefore expected that the pipeline will be used and useful throughout its expected commercial life.

INTERROGATORY NO. 26: With regard to Fact Paragraphs 14, 15, and 24, state the total current pipeline capacity to transport crude oil from the WCSB and the from the Williston Basin to the U.S. Gulf Coast.

ANSWER: Specifics to operating capacity of third-party pipelines are under the responsibility of the pipeline owners and beyond Keystone's control.

INTERROGATORY NO. 27: With regard to Fact Paragraphs 14, 15, and 24, describe the impact of the recent completion of the Flanagan South Pipeline and Seaway Pipeline, and its expansion, on the market for crude oil transportation services from the WCSB and the Williston Basin to Cushing and the U.S. Gulf Coast, assuming planned upstream expansions of Enbridge Lines 61 and 67 are completed to allow these pipelines to operate at their maximum capacities.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

INTERROGATORY NO. 28: With regard to Fact Paragraphs 14, 15, and 24, describe whether pipelines from the WCSB and the Williston Basin to the U.S. Gulf Coast operated by Enbridge provide service to the refineries that TransCanada claims would be served by the proposed Keystone XL Pipeline, and if they do then identify the refineries that could be served by both Enbridge and TransCanada pipeline systems.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

INTERROGATORY NO. 29: With regard to Fact Paragraph 24, identify existing pipelines that comprise the "insufficient pipeline capacity" identified by TransCanada as a factor driving need for the proposed Keystone XL Pipeline, and for each such pipeline provide its current utilization as a percentage of its total capacity.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Without waiving the objection,

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the demand evidenced by Keystone's binding shipper commitments demonstrates insufficient pipeline capacity. In addition, the lack of existing pipeline capacity from the WCSB is supported by a significant increase in Canadian crude oil exports by rail to the U.S. According to Canada's National Energy Board data, crude by rail exports to the U.S. increased from approximately 46,000 bpd in 2012 to 170,000 bpd in 2014 or 368%.

INTERROGATORY NO. 30: With regard to Fact Paragraph 15, explain the change in the Keystone XL Pipeline's capacity from the 700,000/900,000 bpd figure approved by the 2010 Final Order in HP09-001 to the 830,000 bpd currently proposed by TransCanada.

ANSWER: The capacity of 900,000 bpd was based on a maximum operating pressure of 1,440 psig and a design factor of 0.80. The 830,000 bpd is based on an operating pressure of 1,307 psig and a design factor of 0.72.

INTERROGATORY NO. 31: With regard to Fact Paragraphs 14, 15, 24, and 29, identify any committed shippers that have contracted to take delivery from the Keystone XL Pipeline in Cushing, Oklahoma, for delivery to PADD 2 refineries and the amounts and duration of these commitments.

OBJECTION: To the extent that it seeks the identity of Keystone's shippers and the terms of their contracts, this request seeks information that has substantial commercial and proprietary value, is subject to substantial efforts by Keystone to protect it from actual and potential competitors, and is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of the Interstate

Commerce Act.

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INTERROGATORY NO. 32: With regard to Fact Paragraph 16, describe any changes to the route of the Keystone XL Pipeline since June 29, 2010.

ANSWER: Please refer to the route variation maps attached as Keystone 0470-0583.

INTERROGATORY NO. 33: With regard to Fact Paragraphs 17, explain the reason for the reduction in construction spreads from five spreads to between three and four spreads.

ANSWER: Keystone's Amended Application to the South Dakota Public Utilities Commission dated October 2009 shows five spreads spanning the State of South Dakota comprising three full spreads and two partial spreads. The two partial spreads straddle the Montana/South Dakota and South Dakota/Nebraska borders, respectively.

Since 2009, Keystone has made route refinements to improve constructability, respond to landowner requests, incorporate engineering survey results, account for environmental factors brought to the fore during continued permitting activities (including receipt of the MFSA Certificate in Montana in March 2012), and to incorporate the re-route in the State of Nebraska approved by the Governor of Nebraska in January 2013, which had the effect of increasing the length of the pipeline between Canada/U.S. border and Steele City, Nebraska to approximately 875 miles from its 850.26 mile length in 2009.

The spread plan filed with the SDPUC in October 2009 contemplated 10 spreads from the Canada/U.S. border to Steele City. To maintain a 10-spread configuration after the Nebraska re-route, Keystone re-balanced the spread configuration across the entire length of the project. The current 10-spread configuration is described in the Final SEIS at Table

2.1-13 "Pipeline Construction Spreads Associated with the Proposed Project." Final spread
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configurations and the final construction schedule may result in the use of more or fewer spreads than those listed in Table 2.1-13. (FSEIS, page 2.1-42 and 43.)

INTERROGATORY NO. 34: With regard to Fact Paragraph 17, describe the construction schedule for the Keystone XL Pipeline in South Dakota in terms of major milestones by month.

ANSWER: Currently, Keystone has not set a date to commence construction, nor does it have a pipeline construction contract in place.

Construction of the proposed Project would begin after Keystone obtains all necessary permits, approvals, and authorizations. Keystone anticipates that the proposed Project would be placed into service approximately two years after receiving such authorizations. As currently planned, the proposed Project would be constructed using 10 spreads of approximately 46 to 122 miles long (*see* FSEIS Table 2.1-13). Final spread configurations and the final construction schedule may result in the use of more or fewer spreads than those indicated. Time periods and key milestones including the relationship between contractor mobilization, start of construction (pre-welding), start and end of welding, post-welding and clean-up, and contractor demobilization are described in the FSEIS in Section 2.1.10.1 Schedule and Workforce. (FSEIS, pages 2.1-69 and 70).

Keystone will comply with all conditions set out in its permits including the SDPUC Order, including condition 12 to, once known, inform the Commission of the date construction will commence, report to the Commission on the date construction is started, and keep the Commission updated on construction activities. Keystone will also comply

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with condition 10 to, not later than six months prior to the commencement of construction, commence a program to notify and educate state, county, and municipal agencies on the planned construction schedule and the measures that such agencies should begin taking to prepare for construction impacts and the commencement of project operations. Additionally, in the Special Conditions Recommended by PHMSA, number 17 Construction Plans and Schedule, Keystone will at least 90 days prior to the anticipated construction start date submit its construction plans and schedule to the appropriate PHMSA Directors for review. Subsequent plans and schedule revisions must also be submitted to the appropriate PHMSA Directors, on a monthly basis. (FSEIS, Appendix Z, Compiled Mitigation Measures, page 70.)

INTERROGATORY NO. 35: With regard to Fact Paragraph 18, describe:

- a. the impact of UV radiation on fusion bonded epoxy ("FBE") coating over time;
- b. the dates on which pipe segments to be used in South Dakota were delivered from their manufacturer to storage locations in South Dakota or adjacent states;
- c. the dates on which covering was provided over the FBE coating to protect it from damage by weathering, including but not limited to ultraviolet radiation;
- d. the longest time that any FBE on pipe segments to be used in South Dakota was stored without protective covering;
- e. the FBE manufacturer recommendation or directions for protection of the FBE applied to pipe segments to be used in South Dakota;

- f. the maximum amount of time in days that the FBE applied to the pipe segments to be used in South Dakota may be exposed to direct sunlight without damage to the FBE that could reduce the FBE's effectiveness and thereby void applicable manufacturer warranties and guaranties; and
- g. the manufacturer warranties and guaranties for the FBE coating applied to pipe segments to be used to construct the Project in South Dakota.

ANSWER:

- a. Sunlight exposure over a significantly extended period of time could cause a reduction in coating thickness and coating flexibility due to degradation by UV radiation.
- b. Pipe segments for use in South Dakota were delivered to storage between August 2011 and November 2011.
- c. Covering application commenced in October 2012 and was completed July 2013.
- d. Approximately 18 months
- e. The manufacturer did not provide recommendation or direction for storage. Direction for storage is per TransCanada specification.
- f. Per manufacture, pipe coated with FBE coatings can be stored for 730 days under most climatic weather conditions without commencement of deterioration of the coating. TransCanada specification provides criteria for minimum coating thickness requirements which would supersede any exposure time period. Applicable manufacturer warranties are related to application and workmanship to the specification.

- g. Applicable manufacturer warranties are related to application and workmanship to the specification.

WARRANTY

Unless otherwise specified in the Order for Pipe, the Supplier hereby warrants that the Pipe, including, if applicable, the Work done thereto, shall meet and conform to the Specifications and the Technical Agreements, and such other product characteristics agreed to by the Parties in writing, for a period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of all Pipe to the Delivery Point, whichever is earlier. If during the aforesaid warranty period, the Company discovers any Pipe which fails to conform, the Company shall forthwith notify in writing the Supplier of such non-conformance. The Company and the Supplier shall jointly investigate any such non-conformance in an effort, in good faith, to determine the cause thereof, provided that such investigation shall not unreasonably delay any repair or replacement of the Pipe. If the Parties are unable to agree upon the cause of the non-conformance with this Agreement within ten (10) days of the date of the discovery of such non-conformance, either Party shall have the right to request that the matter be arbitrated pursuant to single party arbitration conducted in accordance with the then current International Chamber of Commerce's Rules of Arbitration.

If such non-conformance is discovered after title to the Pipe passes to the Company, the Company may, after notification to the Supplier, to the extent the Company, acting reasonably, deems practical under the circumstances, repair the same at the Supplier's risk and expense. If repair is not practical in the Company's opinion, acting reasonably, the Company agrees that the Supplier may replace the non-conforming Pipe in the event that the Supplier can secure such replacement at delivery dates at least as favourable as those available to the Company from other sources. -

Any Pipe that is repaired or replaced pursuant to the warranties specified herein shall be warranted for a further period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of the Pipe to the Delivery Point, whichever is earlier.

If the non-conforming Pipe cannot be repaired and the Company elects not to replace such Pipe, the Company shall have the right to return, at the Supplier's expense and risk, any or all of the non-conforming Pipe delivered by the Supplier to the Company

whereupon the Supplier shall immediately repay the Company, without Interest, all monies previously paid by the Company to the Supplier on account of the non-conforming Pipe so returned, together with all costs and expenses incurred by the Company in returning such Pipe.

The express warranties of the Supplier in this Agreement are the only warranties as to the Pipe and are in lieu of all other warranties in respect thereof, whether written, statutory, oral, express or implied including, without limitation, any warranty of merchantability or fitness for purpose. The rights and remedies contained in this Agreement are the Company's exclusive rights and remedies against the Supplier whatsoever in relation to, or arising out of, or in connection with the performance or conformance of the Supplier's obligations under these warranties.

INTERROGATORY NO. 36: With regard to Fact Paragraph 18, explain the elimination of use of API 5L X80 high strength steel from use in the Keystone XL Pipeline.

ANSWER: API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline.

INTERROGATORY NO. 37: With regard to Fact Paragraph 19, explain the reason for the reduction in the proposed maximum pressure of the Keystone XL Pipeline, and describe the South Dakota Public Utilities Commission process, if any, that TransCanada would need to complete prior to an increase in this pressure to that permitted by the 2010 Final Order in Docket HP09-001.

ANSWER: The maximum pressure was reduced as a result of Keystone's withdrawal of its Special Permit application to PHMSA. Keystone does not believe any further SDPUC

process would be required to increase the pressure, if PHMSA were to approve such an increase in the future.

On August 5 2010, TransCanada withdrew its application to the Pipeline Hazardous Materials and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a 0.8 design factor and adopted the 57 additional safety measures that would have been required under the PHMSA special permit. The operating pressure reduction from 1,440 psig to 1,307 psig is a result of the use of the standard design factor (0.72) in accordance with 49 CFR 195.106 design pressure. TransCanada would be required to re-apply to PHMSA for a special permit in order to operate the pipeline at an increased design factor of 0.8 corresponding to an operating pressure of 1,440 psig.

INTERROGATORY NO. 38: With regard to Fact Paragraph 20, state whether or not any power line extensions have been permitted or constructed by local power providers, the purpose of which is to provide power to pump stations for the proposed Keystone XL Pipeline, and if any such power line extensions have been permitted or constructed, identify the location and owner of each such extension.

ANSWER: No power lines have been constructed to pump stations for KXL in South Dakota. All required permits pertaining to power lines are completed by the individual power providers.

INTERROGATORY NO. 39: With regard to Fact Paragraph 20, explain the reason that TransCanada converted all valves to remote control operation, identify the facilities from

which these valves may be remotely operated, and describe whether or not TransCanada will provide these valves with backup electrical power in the event of a loss of grid power.

ANSWER: The pipeline design was updated to include remote operability for all mainline isolation valves to comply with PHMSA special condition 32 issued February 10, 2011 as part of the Department of State Supplemental Draft FEIS. Specifically for South Dakota, this design revision was applied to the two manual isolation valves included in the swing check valve assembly located downstream in proximity to the Little Missouri and Cheyenne Rivers. This intermediate mainline valve's specific purpose is to isolate as required river crossings during operational maintenance activities and facilitate testing of the swing check valve. All mainline isolation valves are controlled from the Keystone Oil Control Center in Calgary, Alberta Canada. All mainline valve and pump station sites will be equipped with back-up power per requirements in PHMSA special condition 32.

INTERROGATORY NO. 40: With regard to Fact Paragraph 23, provide a break out of the increased estimated costs of the Project due to each of the following factors: new technical requirements, inflation, project management, regulatory, material storage, and preservation.

OBJECTION: This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). In addition, Keystone does not maintain a breakdown of the estimated project cost in the way requested, and requiring such a breakdown of costs would require the disclosure of information that has substantial

commercial and proprietary value, and is subject to substantial efforts by Keystone to protect it from actual and potential competitors.

INTERROGATORY NO. 41: With regard to Fact Paragraph 14 and 24, state the year in which TransCanada forecasts that the full capacity of the proposed Keystone XL Pipeline will be for practical purposes fully utilized over an entire year.

ANSWER: Keystone XL is fully subscribed by shippers who have committed to long-term binding contracts for delivery of crude oil through the pipeline. Keystone's shippers are sophisticated third parties and also have a long-term outlook as evidenced by the nature of the long-term contract commitments to the Keystone XL pipeline. The Keystone XL pipeline will connect one of the world largest remaining reserves of crude oil to the world's largest refining region. It is therefore expected that the pipeline will be used and useful throughout its expected commercial life.

INTERROGATORY NO. 42: With regard to Fact Paragraph 14, 24, 25, and 29, provide the percent change in "U.S. demand for petroleum products," meaning petroleum products produced for consumption by U.S. consumers and not produced for export from the U.S. to other countries, since the most recent data provided in docket HP09-001.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order.

This request also may seek information that is not within Keystone's custody or control and
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is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, please refer to Finding Number 25 in Appendix C to Keystone's Certification Petition.

INTERROGATORY NO. 43: With regard to Fact Paragraphs 14, 24, 25, and 29, provide a forecast of "U.S. demand for petroleum products," meaning petroleum products produced for consumption by U.S. consumers and not produced for export from the U.S. to other countries.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast

information that Keystone relied on in Appendix C to its Certification was derived from the

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following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 44: With regard to Fact Paragraph 25, of the 15 million bpd of crude oil demand identified in this revised paragraph, state whether some of this demand is used to produce petroleum products for export from the U.S., and if such demand is used to serve export markets, provide the quantity of crude oil needed for domestic demand for petroleum products and the quantity of crude oil needed to produce petroleum products for export from the U.S.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP

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Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 45: With regard to Condition Paragraphs 8, 34, 35, and 39, state whether TransCanada has prepared a draft spill response plan for the proposed Keystone XL Pipeline the final version of which would be intended to comply with 49 C.F.R. Part 194.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law, which has exclusive jurisdiction over issues of pipeline safety. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. *See* Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the emergency response plan would commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

INTERROGATORY NO. 46: With regard to Condition Paragraphs 8, 34, 35, and 39, state whether or not a spill response plan required by 49 C.F.R. Part 194 for the proposed
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Keystone XL Pipeline must evaluate a potential spill of Williston Basin light crude oil separately from a potential spill of diluted bitumen from the WCSB.

OBJECTION AND ANSWER: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law, which has exclusive jurisdiction over issues of pipeline safety. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. *See* Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the emergency response plan would commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

Without waiving the objection, crude oils are naturally variable; however, they share a range of common characteristics and properties that are important for emergency response purposes. The characteristics of the crude oils transported by Keystone XL are not unique and are transported throughout the US by truck, rail, pipelines, barges, and tankers. Crude oils has been safely transported by pipelines for decades. The Emergency Response Plan (ERP) will identify a range of appropriate standard response techniques that may be implemented in the

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event of a crude oil release. Ultimately, site-specific conditions, including the type of crude oil released, will assist in characterizing the nature of the release, its movement and fate within the environment, and selecting the most appropriate measures for containment and cleanup. TransCanada has defined the potential events and established procedures to identify, eliminate or mitigate the threat of a Worst Case Discharge due to these events. In compliance with 49 CFR 195.402(d), these procedures are defined in the Company's Operations Manual.

INTERROGATORY NO. 47: With regard to Condition Paragraphs 8, 34, 35, and 39, describe the differences in the response to a cleanup of diluted bitumen as compared to a cleanup Williston Basin light crude oil, including but not limited to differences in training, equipment, and spill response techniques.

ANSWER: Crude oils are naturally variable; however, they share a range of common characteristics and properties that are important for emergency response purposes. The characteristics of the crude oils transported by Keystone XL are not unique and are transported throughout the US by truck, rail, pipelines, barges, and tankers. Crude oils has been safely transported by pipelines for decades. The Emergency Response Plan (ERP) will identify a range of appropriate standard response techniques that may be implemented in the event of a crude oil release. Ultimately, site-specific conditions, including the type of crude oil released, will assist in characterizing the nature of the release, its movement and fate within the environment, and selecting the most appropriate measures for containment and cleanup. The final version of the Keystone Pipeline Emergency Response Plan (ERP) is {01814925.1}01808649.1}{

complete and complies with 49 C.F.R. Part 194. The Keystone ERP will be amended to include Keystone XL.

INTERROGATORY NO. 48: With regard to Condition Paragraphs 8, 34, 35, and 39, identify the amounts, types, and locations of existing and proposed oil spill response equipment that are or would be owned by TransCanada that would be used to respond to a spill from the proposed Keystone XL Pipeline, including spills of both Williston Basin light crude oil and WCSB heavy crude oils including but not limited to diluted bitumen.

OBJECTION AND ANSWER: To the extent that it seeks information related to the Keystone XL Pipeline outside South Dakota, this request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan in the FSEIS Appendix I.

INTERROGATORY NO. 49: With regard to Condition Paragraphs 8, 34, 35, and 39, identify the amounts, types, and locations of existing and proposed oil spill response equipment that are or would be owned by contractors to TransCanada that would be used to respond to a spill from the proposed Keystone XL Pipeline, including but not limited to spills of both Williston Basin light crude oil and WCSB heavy crude oils such as diluted bitumen.

OBJECTION: To the extent that it seeks information related to the Keystone XL Pipeline outside South Dakota, this request seeks information that is beyond the scope of the PUC's

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jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b).

INTERROGATORY NO. 50: With regard to Condition Paragraph 10, describe TransCanada's plans to train local emergency responders, including training about response techniques for both Williston Basin light crude oil and WCSB heavy crude oil such as diluted bitumen.

OBJECTION AND RESPONSE: To the extent that it seeks information related to the Keystone XL Pipeline outside South Dakota, this request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, Emergency response training is addressed in detail at Appendix D of the Keystone Pipeline System Emergency Response Plan attached as Appendix I of the State Department January 2014 Final Supplemental EIS.

See <http://keystonepipeline-xl.state.gov/documents/organization/221231.pdf>.

Specific training for Keystone XL has not yet been established but will be similar to that described in the Keystone ERP above.

INTERROGATORY NO. 51: With regard to Condition Paragraphs 8, 34, 35, and 39, describe where TransCanada would house and feed spill response workers in the event of a worst case discharge from the Keystone XL Pipeline in Harding County, South Dakota.

ANSWER: The Keystone XL ERP will have predestinated Incident Command Posts (ICP). Where response workers are housed and fed depends on the location of the incident. This will be determined at the time of the incident. However, the Keystone XL ERP will have a listing of resources that may be utilized (Hotels, Motels, Lodging). Volunteers will not be utilized by the Company for the response operations. In the U.S., all volunteers will be referred to the Federal Regional Response Team (Keystone ERP, Appendix A, A-2). The Keystone ERP will be amended to include Keystone XL and filed with PHMSA and the PUC as required by Amended Permit Condition 36.

INTERROGATORY NO. 52: With regard to Condition Paragraph 10, identify the sources of first notification to TransCanada of each spill from the Base Keystone Pipeline.

ANSWER: The source of notification for each of the spills from the Base Keystone Pipeline is the Operations Control Center (OCC) or field based TransCanada operations personnel.

INTERROGATORY NO. 53: With regard to Condition Paragraphs 31 and 36, describe any improvements in SCADA leak detection technology since 2010 and state whether any such improvements will be incorporated into the proposed Keystone XL Pipeline's SCADA system.

ANSWER: TransCanada uses a Computational Pipeline Monitoring based Leak Detection System installed and operated in line with industry best practice. This Leak Detection System continues to be the state of the art for liquid transmission pipelines. TransCanada is focusing considerable effort on research and evaluation of potential enhancements as described under Interrogatory No. 54.

INTERROGATORY NO. 54: With regard to Condition Paragraphs 31 and 36, state whether any new or improved remote sensing technologies for leak detection have become commercially available since 2010, and state whether any such technologies will be used by TransCanada for the proposed Keystone XL Pipeline.

ANSWER: TransCanada actively funds and participates with Industry in the evaluation and development of leak detection technologies to augment our current systems. Examples of this effort include:

1. New Generation of Rarefaction Wave Leak Detection

This technology utilizes negative pressure waves generated to detect the onset of a leak. These waves travel from the origination point down both directions of the pipeline through the pipeline fluid at the speed of sound of the fluid medium and attenuate over distance as they travel. Dynamic pressure sensors installed at facilities with power and communication accesses (pump stations, mainline valves, etc.) can then measure these pulsations and detect the start of a leak and locate the leak by calculating the difference of arrival time of the pulsations at the two ends of the pipeline section.

2. In Line Inspection Leak Detection

An acoustic In Line Inspection (ILI) tool that is launched and received on a periodic basis like any other In Line Inspection (ILI) tool and is propelled by the commodity in the line. This technology claims to be able to detect leaks smaller than the current threshold of CPM systems; however, detection only occurs as the tool passes the leak location and is therefore not a continuous real time monitoring system.

3. Infrared thermal camera for facilities

The camera based leak detection technology functions by employing Infrared and color video cameras to detect temperature differences between objects of interest and the surrounding environment. Software analytics then attempt to determine whether the detection constitutes a leak or an environmental transient such as a wild animal, weather or other event (snow, rain, etc.). In the event of a detected leak, confirmation can be obtained through color

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cameras and real time notifications would be sent the Control Center and/or control room as pre-specified. This technology is still its infancy.

4. Aerial or Ground Patrol Leak Detection

This is a transportable leak detection technology designed for aerial or ground. This technology takes advantage of the difference of light absorption rates between the atmosphere and hydrocarbon vapors to detect hydrocarbon leak. Performance depends on the selected spectrum band, visible or non-visible, and the analysis algorithm vendors choose.

5. Cable Based External Leak Detection Systems

Cable based leak detection systems are buried along the pipeline to provide external means of leak detection. Different cable based technologies apply different physical principles to detect phenomena accompanying a leak as temperature change (DTS), leakage caused sound and vibration (DAS), and existence of hydrocarbon liquid (HSC) or hydrocarbon vapor molecules (VST) outside the pipe. These can be used as independent means of detection outside of the mass balance CPM systems. Despite its long history of use for leak detection at oil and gas facilities and pipeline security, application for leak detection on long-haul transmission pipelines is a recent emerging development.

Some of the above technologies are in a state of development, while others are commercially available today yet their practical application to long haul transmission pipelines such as Keystone XL has not been established. As part of our commitment to safety, TransCanada continues to evaluate these new and evolving leak detection technologies to potentially augment the best in class leak detection capabilities of our current system and for potential implementation on new pipelines including Keystone XL.

INTERROGATORY NO. 55: With regard to Condition Paragraphs 35, state whether any additional surficial aquifers have been discovered to date.

ANSWER: No additional surficial aquifers have been discovered.

INTERROGATORY NO. 56: With regard to Fact Paragraph 68, describe the interference with the cathodic protection system identified in revised finding of fact paragraph 68.

ANSWER: Base Keystone experienced a localized external corrosion wall loss due to DC stray current interference from foreign utility colocation which caused sacrificing significant amounts of protective current to other pipelines in the shared Right-of-Way. This adversely affected CP current distribution to the Keystone line. This anomaly was found during proactive and routine high resolution in-line inspection. This issue has been reviewed,

remediated and updates to the CP design where collocation occur have been implemented. In South Dakota specifically, no such location exists for collocation of multiple pipelines in a shared Right-of-Way. However, Keystone's has applied these updates to its design and existing CP "construction bridge to energization" plan to address potential for DC stray current interference due to foreign utility crossings and paralleling utilities.

INTERROGATORY NO. 57: With regard to Fact Paragraph 83, explain why Bridger Creek was added to the list of crossing for which TransCanada will utilize HDD.

ANSWER: During the detailed engineering design phase of the Project, the Bridger Creek area was redesigned as an HDD in order to mitigate construction safety risk to personnel and equipment, long term slope stability and pipe integrity concerns due to installation within steeper undulating terrain entering and leaving the area.

INTERROGATORY NO. 58: With regard to Condition Paragraph 23, explain why Keystone believes that the road bond amount should not be adjusted for inflation.

ANSWER: The road bond amounts were established by the Commission consistent with the testimony of Keystone and Staff witness Binder. These recommendations did not require an inflation adjustment. (See Finding of Fact 88.)

INTERROGATORY NO. 59: With regard to Fact Paragraphs 107, provide a revised estimate of the amount of property taxes that would be paid by TransCanada on the proposed Keystone XL Pipeline, and also compare the amount of tax payments made by TransCanada from 2010 to the present in each county crossed by the Base Keystone Pipeline to the tax amount estimate provided in Docket HP07-001 by TransCanada.

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ANSWER: Finding of Fact 107 does not discuss real property taxes, although Finding of Fact 108 does. Keystone has not prepared a current estimate of real property taxes that will be paid on the Keystone XL Pipeline, once constructed. The base Keystone project has paid approximately \$14,122,951 in real property taxes from 2009 through 2013 in the counties it crosses. 2014 property taxes are payable in 2015. Keystone estimated that the project would pay approximately \$6.5 million in taxes in the first year of operation. See Paragraph 59 in the HP07-001 PUC Docket. See Finding 132.

INTERROGATORY NO. 60: With regard to Condition Paragraph 16, state whether or not TransCanada has drafted crop monitoring protocols and describe its communications with landowners related to such plan.

ANSWER: Crop monitoring protocols have not been drafted. Keystone is in the process of developing specific crop monitoring protocols for agricultural lands. These protocols will be finalized prior to the start of construction and implemented following construction. Once the protocols are completed, details will be communicated to landowners upon request.

INTERROGATORY NO. 61: With regard to Condition Paragraph 16, state whether or not TransCanada has drafted a plan to control noxious weeds and describe its communications with landowners related to such plan.

ANSWER: Yes, TransCanada has drafted a plan to control noxious weeds for South Dakota. Upon finalization of the Plan and its approval by the County Weed Board, the Plan will be available to landowners upon request.

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INTERROGATORY NO. 62: With regard to Condition Paragraph 28, provide a list of private and new access roads that will be used or required for construction of the proposed Keystone XL Pipeline.

OBJECTION: This request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. In addition, the location of access roads is confidential for reasons related to homeland security.

INTERROGATORY NO. 63: With regard to Fact Paragraph 50 and Condition Paragraph 34, provide an explanation of why the HCA length in South Dakota decreased from 34.3 to 19.9 miles, identify HCA segments that were removed or shortened, and describe any HCA's not identified during the docket HP09-001 proceeding that were added to the HCA length.

OBJECTION AND ANSWER: The identity and location of High Consequence Areas is confidential by statute and Keystone is required by PHMSA to keep this information confidential. Without waiving the objection, during the detailed engineering design phase of the Project, the route was adjusted. In doing so, the route deviated away from DOT designated HCA areas there by reducing total HCA miles crossed by the Project. Please refer to the attached route variation list and maps.

INTERROGATORY NO. 64: With regard to Condition Paragraph 44, describe:

- a. TransCanada's efforts related to its paleontological literature search; and
- b. any pre-construction paleontological field surveys performed by TransCanada.

OBJECTION AND RESPONSE: To the extent that it seeks information related to the Keystone XL Pipeline outside South Dakota, this request seeks information that is beyond the {01814925.1}01808649.1}{

scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection:

- a. Paleontological fieldwork methodology, literature search information, and results can be found in Sections 3.1.2.2 and 3.1.2.3 of the Department of State FSEIS (2014).
- b. A list of reports detailing the results of all pre-construction paleontological filed surveys can be found in Table 3.1-4 of the Department of State FSEIS (2014).

INTERROGATORY NO. 65: With regard to Condition Paragraph 45, describe any disputes with landowners related to repair or replacement of property impacted by the Base Keystone Pipeline.

OBJECTION AND RESPONSE: To the extent that it seeks information related to the Keystone XL Pipeline outside South Dakota, this request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, *see* attached documents, marked as Keystone 0785-1115, describing any disputes with landowners related to repair or replacement of property impacted by the Base Keystone Pipeline.

INTERROGATORY NO. 66: With regard to Condition Paragraph 50, describe any complaints filed by landowners against TransCanada.

OBJECTION: To the extent that it seeks information related to the Keystone XL Pipeline outside South Dakota, this request seeks information that is beyond the scope of the PUC's
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jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, all complaints reported to the liaison by the SDPUC are documented by the liaison and reported quarterly. These reports are available at: <http://puc.sd.gov/dockets/hydrocarbonpipeline/2007/construction.aspx> for base Keystone; and

<https://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx> for Keystone

XL.

Case Number: HP 14-001

Keystone's Responses to Bold Nebraska's First Interrogatories and Request for Production of Documents

Dated this 5th day of February, 2015.

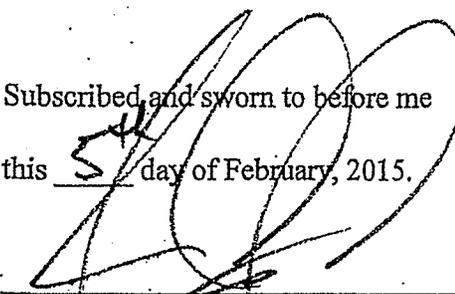
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.



John W. Love, Lawyer
Notary Public – Canada

REQUESTS FOR PRODUCTION OF DOCUMENTS

REQUEST FOR PRODUCTION NO. 1: With regard to Fact Paragraph 14, produce the *pro forma* transportation services agreement provided to prospective shippers for use of the Bakken Marketlink Project.

OBJECTION: To the extent that it seeks the identity of Keystone's shippers and the terms of their contracts, this request seeks information that has substantial commercial and proprietary value, is subject to substantial efforts by Keystone to protect it from actual and potential competitors, and is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers.

REQUEST FOR PRODUCTION NO. 2: With regard to Fact Paragraph 14, produce the transportation services agreements currently in effect and executed by the shippers that have entered into long-term commitments for capacity on the proposed Keystone XL Pipeline.

OBJECTION: To the extent that it seeks the identity of Keystone's shippers and the terms of their contracts, this request seeks information that has substantial commercial and proprietary value, is subject to substantial efforts by Keystone to protect it from actual and potential competitors, and is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of the Interstate Commerce Act.

REQUEST FOR PRODUCTION NO. 3: With regard to Fact Paragraph 16, produce all maps showing any route changes since issuance of the 2010 Final Order.

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ANSWER: Please refer to the route variation maps attached as Keystone 0470-0583.

REQUEST FOR PRODUCTION NO. 4: With regard to Fact Paragraph 18, produce the manufacturers' warranties and guaranties for the FBE applied to pipe segments that have been delivered and would be installed in South Dakota.

ANSWER:

WARRANTY

Unless otherwise specified in the Order for Pipe, the Supplier hereby warrants that the Pipe, including, if applicable, the Work done thereto, shall meet and conform to the Specifications and the Technical Agreements, and such other product characteristics agreed to by the Parties in writing, for a period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of all Pipe to the Delivery Point, whichever is earlier. If during the aforesaid warranty period, the Company discovers any Pipe which fails to conform, the Company shall forthwith notify in writing the Supplier of such non-conformance. The Company and the Supplier shall jointly investigate any such non-conformance in an effort, in good faith, to determine the cause thereof, provided that such investigation shall not unreasonably delay any repair or replacement of the Pipe. If the Parties are unable to agree upon the cause of the non-conformance with this Agreement within ten (10) days of the date of the discovery of such non-conformance, either Party shall have the right to request that the matter be arbitrated pursuant to single party arbitration conducted in accordance with the then current International Chamber of Commerce's Rules of Arbitration.

If such non-conformance is discovered after title to the Pipe passes to the Company, the Company may, after notification to the Supplier, to the extent the Company, acting reasonably, deems practical under the circumstances, repair the same at the Supplier's risk and expense. If repair is not practical in the Company's opinion, acting reasonably, the Company agrees that the Supplier may replace the non-conforming Pipe in the event that the Supplier can secure such replacement at delivery dates at least as favourable as those available to the Company from other sources.

Any Pipe that is repaired or replaced pursuant to the warranties specified herein shall be warranted for a further period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of the Pipe to the Delivery Point, whichever is earlier.

If the non-conforming Pipe cannot be repaired and the Company elects not to replace such Pipe, the Company shall have the right to return, at the Supplier's expense and risk, any or all of the non-conforming Pipe delivered by the Supplier to the Company whereupon the Supplier shall immediately repay the Company, without Interest, all monies previously paid by the Company to the Supplier on account of the non-conforming Pipe so returned, together with all costs and expenses incurred by the Company in returning such Pipe.

The express warranties of the Supplier in this Agreement are the only warranties as to the Pipe and are in lieu of all other warranties in respect thereof, whether written, statutory, oral, express or implied including, without limitation, any warranty of merchantability or fitness for purpose. The rights and remedies contained in this Agreement are the Company's exclusive rights and remedies against the Supplier whatsoever in relation to, or arising out of, or in connection with the performance or conformance of the Supplier's obligations under these warranties.

REQUEST FOR PRODUCTION NO. 5: With regard to Fact Paragraph 20, produce a map of the valve locations for the Keystone XL Pipeline.

OBJECTION: This request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. In addition, the location of access roads is confidential for reasons related to homeland security.

REQUEST FOR PRODUCTION NO. 6: With regard to Fact Paragraphs 14, 24, 25, 26, 27, and 28, produce the following forecasts and their supporting data:

a) the forecast of annual crude oil production in the WCSB relied on by TransCanada in this proceeding showing future production of light and heavy crude oil;

- b) the forecast of annual crude oil production in the Williston Basin relied on by TransCanada in this proceeding showing future production of light and heavy crude oil;
- c) a forecast of annual domestic U.S. consumer demand for petroleum products through 2030;
- d) a forecast of annual crude oil imports into PADD 3 from Canada through 2030;
- e) a forecast of annual crude oil imports into PADD 3 from countries other than Canada through 2030;
- f) a forecast of annual demand for crude oil by PADD 3 refineries through 2030;
- g) a forecast of utilization of the proposed Keystone XL Pipeline from the proposed commencement of normal operations to 2030;
- h) a forecast of crude oil production in PADD 3 through 2030;
- i) a forecast of exports of petroleum products from PADD 3 through 2030;
- j) a forecast of re-exports of WCSB crude oil from PADD 3 through 2030;
- k) a forecast of railroad transportation from the WCSB to each PADD in the U.S; and
- l) a forecast of railroad transportation from the Williston Basin to each PADD in the U.S.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that {01814925.1}01808649.1}{

Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast; Markets and Transportation June 2014 Forecast; and the Energy Information Agency Annual Energy Outlook 2014. Keystone will produce these documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>. Without waiving the objection, the following documents are attached as Keystone 0001-0467: the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and The Energy Information Agency Annual Energy Outlook 2014.

REQUEST FOR PRODUCTION NO. 7: With regard to Condition Paragraph 43, produce the most recent version of the Unanticipated Discovery Plan.

ANSWER: The Unanticipated Discovery Plan can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

REQUEST FOR PRODUCTION NO. 8: With regard to Condition Paragraph 15, produce the Con/Rec mapping.

ANSWER: The 2013 Construction/Reclamation Unit Specifications contain this information and are found in Appendix R of the Department of State FSEIS (2014).

REQUEST FOR PRODUCTION NO. 9: With regard to Condition Paragraph 7, produce all correspondence between TransCanada's public liaison officer for the Base Keystone Pipeline and the proposed Keystone XL Pipeline.

OBJECTION: Sarah Metcalf is the appointed Public Liaison Officer for both the Keystone Pipeline in eastern South Dakota and the proposed Keystone XL Pipeline. Keystone therefore has no documents responsive to this request.

REQUEST FOR PRODUCTION NO. 10: With regard to Condition Paragraph 23, produce all correspondence from June 29, 2010, to the present related to resolution of disputes over repair of roads following construction of the Base Keystone Pipeline.

OBJECTION: To the extent that it seeks information related to the Keystone Pipeline outside South Dakota, this request is overlybroad and unduly burdensome and seeks the discovery of information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). It is also overlybroad and unduly burdensome because Keystone has voluminous documents related to road repairs.

REQUEST FOR PRODUCTION NO. 11: With regard to Condition Paragraph 36, produce the most recent version of a draft spill response plan for the Proposed Keystone XL Pipeline, the final version of which is intended to meet the requirements of 49 C.F.R. Part 194, as well as any communications related to preparation of a spill response plan for the Keystone XL Pipeline between TransCanada and agencies of the State of South Dakota.

OBJECTION AND ANSWER: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction

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over the emergency response plan is preempted by federal law, which has exclusive jurisdiction over issues of pipeline safety. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the emergency response plan would commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>. Without waiving the objection, please refer to Department of State SFEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan.

REQUEST FOR PRODUCTION NO. 12: With regard to Condition Paragraph 10, produce copies of all training materials provided to first responders in the State of South Dakota.

ANSWER: TransCanada has provided educational information to possibly affected public elected officials, excavators, and first responders. This educational material comes in the form of a pamphlet and is titled Oil Pipeline for Emergency Responders. It is marked as Keystone 1523-1538.

REQUEST FOR PRODUCTION NO. 13: With regard to Condition Paragraph 50, produce copies of complaints filed by landowners against TransCanada related to the Base Keystone Pipeline and the proposed Keystone XL Pipeline.

OBJECTION: To the extent that it seeks information related to the Keystone Pipeline outside South Dakota, this request is overlybroad and unduly burdensome and seeks the discovery of information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, all complaints reported to the liaison by the SDPUC are documented by the liaison and reported quarterly. These reports are available at:

<http://puc.sd.gov/dockets/hydrcarbonpipeline/2007/construction.aspx> for base Keystone; and <http://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx> for Keystone XL.

REQUEST FOR PRODUCTION NO. 14: With regard to Condition Paragraph 25, produce the latest version of a draft adverse weather land protection plan.

ANSWER: The Adverse Weather Plan will be filed with the Commission two months prior to the start of construction as stated in Condition #25 of the SDPUC certificate.

REQUEST FOR PRODUCTION NO. 15: With regard to Condition Paragraph 29, produce the latest version of a winterization plan.

ANSWER: TransCanada/Keystone will have a winterization plan prepared prior to construction. The winterization plan will be provided to affected landowners if winter conditions prevent reclamation until spring.

REQUEST FOR PRODUCTION NO. 16: With regard to Condition Paragraph 39, produce noise data showing pump station noise at the Base Keystone Pipeline.

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ANSWER: The South Dakota portion of Keystone Pipeline extends from Ferney to Freeman, environmental noise monitoring was conducted at each pump station location and at the corresponding critical receptor location. Published meteorological data was collected from the nearby weather stations. The collected sound level data was analyzed and the sound level results were compared with the noise criteria to determine compliance. The noise level limit of each pump station is established from the South Dakota Public Utility Commission's (PUC) condition in the order granting permit. The noise monitoring indicates that the South Dakota pump stations of Keystone Pipeline comply with the noise criteria. The result summary is shown in the table below.

Pump Station Name	Measurement Result L10, dBA	Calculated L10 of Max. Load Operation, dBA	Noise Level Limit L10, dBA
Ferney	30	31	55
Carpenter	42	43	55
Roswell	45	46	55
Freeman	41	42	55

REQUEST FOR PRODUCTION NO. 17: With regard to Condition Paragraph 44, produce a copy of the latest version of the paleontological resource mitigation plan.

ANSWER: The report is titled Second Confidential Draft – Paleontological Resources Mitigation Plan: Keystone XL Pipeline Project, South Dakota. The report is not provided because it is confidential/privileged information.

REQUEST FOR PRODUCTION NO. 18: Produce copies of all responses by TransCanada in response to discovery requests submitted to TransCanada by other parties in this proceeding.

ANSWER: A way to access copies of all responses to discovery requests submitted to TransCanada will be separately provided.

OBJECTIONS

The objections stated to Bold Nebraska's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

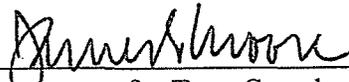
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Bold Nebraska's First Interrogatories and Request for Production of Documents, to the following:

Paul C. Blackburn
PO Box 17234
Minneapolis, MN 55407
paul@paulblackburn.net



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation. [Applicable Finding or Condition No.: all]

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action? [Applicable Finding or Condition No.: all]

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

3. Describe the current status of the following permits and plans required prior to the start of construction of the KXL Pipeline:

A. Permits from US Army Corps of Engineers, S.D. Regulatory Office, including under:

1) §§404/401 of Clean Water Act, for authorization of discharge of fill material into waters of the United States including wetlands or other action;

2) §10 Rivers and Harbors Act, for authorization of pipeline crossings of navigable waters of the United States or other action;

3) Section 106 of the Natural Historic Preservation Act (NHPA), including consultation with potentially impacted Tribes and/or other action;

4) Any consultations, discussions or conversations with any American Indian Tribal Council, Tribal Officer or Tribal Representative of any of the potentially affected Tribes in the region;

B. Permits from U.S. Fish and Wildlife Service, S.D. Ecological Services Field Office, including under the Endangered Species Act, Section 7 Consultation, to consider lead agency findings of impacts on federal-listed species, to provide a Biological Opinion if the Project is likely to adversely affect federally-listed or proposed species or their habitats, or other action;

C. Permits from Farm Service Agency of the Natural Resources Conservation Service, including the Crop Reserve Program, for authorization of crossing areas enrolled in the Crop Reserve Program, or other action;

D. Permits from the Pipeline and Hazardous Materials Safety Administration (PHMSA), including under 49 CFR Parts 194 and 195, for development of an Integrity Management Plan (IMP) and Emergency Response Plan (ERP), or other action;

E. Permit(s) from or Plan(s) Required to the S.D. Department of Environment and Natural Resources (DENR), including under:

1) National Pollutant Discharge Elimination System General Permit for Discharges of Hydrostatic Test Water, regarding proposed discharge into waters of the United States and construction dewatering of waters of the State, or other action;

2) Surface Water Withdrawal Permit, for temporary surface water withdrawal, or other action;

3) SDCL Chapter §34A-18, required submission of an Oil Spill Response Plan or Updated Plan to DENR, or other action;

F. Consultation with SD Game Fish and Parks Department, under State Listed Threatened and Endangered Species;

G. Any Updated Review and Comment from S.D. State Historical Society, State Preservation Office, under §106 of the NHPA, on activities regarding jurisdictional cultural resources;

H. Crossing Permits from S.D. Department of Transportation for crossing State highways;

I. Crossing Permits from County Road Departments for crossing of county roads;

J. Flood plain, Conditional Use, and building permits where required from County and Local Authorities;

K. Any Licenses, Permits or Conditions required by any Tribal governments in the project area or region which may have claims or concerns with regard to potentially affected resources in the project area.

[Applicable Finding or Condition No.: Conditions 1, 2; Findings 12(1)-(3), 60, 88, 90, 97-99]

ANSWER:

- A. 1) No permit applications have been submitted to the US Army Corps of Engineers, S.D. Regulatory Office.
- A. 2) No waterbody crossing in South Dakota requires permitting under the Section 10 of the Rivers and Harbor Act
- A. 3) The Department of State is the lead agency for the consultation process under Section 106. See Section 4.11, Cultural Resources of the Department of State FSEIS (2014) for a full discussion of the Project's compliance with Section 106.
- B. Keystone has not received any permits from the US Fish and Wildlife Service. The U.S. Fish and Wildlife Service issued a Biological Opinion for the Project on May 15, 2013. The Biological Opinion is found in Appendix H of the Department of State FSEIS (2014).
- C. In South Dakota, Keystone has not received any permits from the Farm Service Agency of Natural Resources Conservation Service.
- D. PHMSA has not issued any permit, but has issued a set of Special Conditions which are found in Appendix B of the Department of State FSEIS (2014).

E. 1) Keystone has received a General Permit for Temporary Discharge Activities on April 11, 2013 from the SD Department of Environment and Natural Resources.

2) Keystone has not received a Surface Water Withdrawal Permit from SD Department of Environment and Natural Resources.

3) Keystone has not submitted an Oil Response Plan to DENR.

F. The following is a summary of Keystone consultation history with SD Game, Fish, and Parks as documented in the USFWS issued May 2013 Biological Opinion.

- June 10, 2008: Keystone met with staff from USFWS and South Dakota Department of Game, Fish, and Parks (SDGFP), at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to wildlife, special status species, and sensitive habitat that could potentially occur in the Project area. The goal of the meeting was to gather input on agency recommendations based on the information sent to them in April 2008 for species occurrence, habitat assessments, and future field surveys. Keystone incorporated comments from the meeting into survey protocols and BMPs for future agency verification.

- January/February 2009: Keystone initiated section 7 consultation with the USFWS. Keystone continued discussions with BLM, and state wildlife agency offices for South Dakota that included state-specific special status species survey protocols and BMPs for the species identified as potentially occurring during the 2008 meetings. A

summary of the findings from the 2008 biological field surveys was included in the discussions.

- January 27, 2009: Keystone met with staff from the USFWS and SDGFP at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to special status species surveys. The goals of the meeting were to verify Keystone's survey approach, BMPs, discuss required field surveys, and review the information that was sent to the USFWS in the January/February 2009, informal consultation package. The USFWS and SDGFP provided additional recommendations to Keystone's sensitive species mitigation approach to be updated prior to final agency concurrence.

- October 23, 2012: A meeting was held between the USFWS, Department, SDGFP, BLM, and Keystone regarding the greater sage-grouse and a compensatory mitigation plan for the species in South Dakota. Discussions included a management plan and avoidance, minimization, and mitigation strategies.

G. Consultation with the SD SHPO is ongoing. Questions regarding specific cultural resources are resolved in a timely manner and would continue in the same manner in the future.

H. Thirteen crossing permits and twenty-four temporary approach permit applications have been filed with the State of South Dakota Department of Transportation (SD DOT)

for the pipeline to cross under the state road rights-of-way. All crossing and temporary approach permits have been received from the SD DOT.

I. A total of 103 crossing permit applications have been filed for the pipeline to cross under all county road rights-of-way. Of the 103 applications filed, 101 have been acquired as of December 30, 2014.

J. The special use permits required for Harding County and Meade County pump stations have been approved. Of the remaining four pump stations, three do not require a special use permit. Special use permits applicable to valve sites, contractor yards, and contractor camps will be obtained prior to construction.

K. There are no tribal licenses, permits, or conditions required. The project does not cross any tribal lands.

4. Do you agree that tar sands shale oil spill can be more harmful to the environment and people than a conventional oil spill? Please explain your answer and list any scientific study(ies) providing the basis for your answer. [Applicable Finding or Condition No.: Amended Condition 31-42]

ANSWER: The volatility of crude oils is dependent upon the concentrations of light constituents (e.g., alkanes, BTEX) within the oil. The concentrations of these constituents within diluted bitumen are similar to those of heavy conventional crude oils.

Thus, the volatility of diluted bitumen is not significantly different than other heavy crude oils. See <http://www.crudemonitor.ca/home.php>.

5. Do you agree that tar sands oil differs significantly from conventional crude?
 - A. If so, do you agree that tar sands oil is a lot stickier than conventional crude?
 - B. If so, do you agree that tar sands oil is a lot more volatile than conventional crude?
 - C. If so, do you agree that tar sands oil is a lot more caustic than conventional crude?

Please explain your answer and identify any known scientific study(ies) providing the basis for your answer.

[Applicable Finding or Condition No.: Amended Condition 31-42/]

ANSWER: Physical characteristics of diluted bitumen are comparable to heavy conventional crude oil and consequently remediation costs would be anticipated to be equivalent. Diluted bitumen (API gravity of approximately 20-22) is heavier than light conventional crude oils (API gravity of approximately 35 to 40), but is consistent with heavy conventional crude oils (API gravity of approximately 19-22). All have API gravities greater than 10, indicating that the oils will float if released into water. The

physicochemical properties and environmental fate of diluted bitumen are the same as that of heavy conventional crude oils. Thus, leaks and spills of diluted bitumen would not be expected to result in greater remediation expenses. A number of scientific studies have been conducted on the environmental fate and effects of diluted bitumen and other heavy crude oils, including:

Environment Canada. 2013. Properties, Composition and Marine Spill Behaviour, Fate and Transport of Two Diluted Bitumen Products from the Canadian Oil Sands. Federal Government Technical Report.

Rymell, Matthew. 2009. RP595 Sunken and submerged oils – behavior and response.

February 2009. BMT Cordah. Available from:

http://www.dft.gov.uk/mca/s_mca_019_sunken_and_submerged_oils_final_report_270209_pub_1.pdf

SL Ross. 2012. Meso-scale Weathering of Cold Lake Bitumen/Condensate Blend. SL Ross Environmental Research Limited. Ottawa, Ontario.

A. Keystone does not agree with this statement. The physicochemical properties and environmental fate of diluted bitumen are the equivalent as that of heavy conventional crude oils. Thus, leaks and spills of diluted bitumen would not be expected to result in greater harm to the environment and public. A number of scientific studies have been

conducted on the composition, environmental fate, and effects of diluted bitumen,
including:

Been, J. 2011. Comparison of the Corrosivity of Dilbit and Conventional Crude. Alberta
Innovates – Technology Futures.

Environment Canada. 2013. Properties, Composition and Marine Spill Behaviour, Fate
and Transport of Two Diluted Bitumen Products from the Canadian Oil Sands.
Federal Government Technical Report.

SL Ross. 2012. Meso-scale Weathering of Cold Lake Bitumen/Condensate Blend. SL
Ross Environmental Research Limited. Ottawa, Ontario.

B. The volatility of crude oils is dependent upon the concentrations of light constituents
(e.g., alkanes, BTEX) within the oil. The concentrations of these constituents within
diluted bitumen are similar to those of heavy conventional crude oils. Thus, the volatility
of diluted bitumen is not significantly different than other heavy crude oils.

Crude Monitor. 2015. Crudemonitor.ca. Website accessed 22 Jan 2015. Website:

<http://www.crudemonitor.ca/home.php>.

C. Keystone does not agree with this statement. The physicochemical properties and
environmental fate of diluted bitumen are the equivalent as that of heavy
conventional crude oils. A number of scientific studies that have investigated the

corrosivity of diluted bitumen and have concluded that diluted bitumen is not more corrosive to pipelines transportation than other crudes, include:

Been, J. 2011. Comparison of the Corrosivity of Dilbit and Conventional Crude. Alberta Innovates – Technology Futures.

Transportation Research Board. 2013. Effects of Diluted Bitumen on Crude Oil Transmission Pipelines. National Academy of Sciences.

6. Do you agree that tar sands oil, once leaked or spilled onto or into the ground, that everything it touches, even rocks, cannot be cleaned and need to be removed and disposed of? Please explain your answer and list any scientific study(ies) providing the basis for your answer.

A. If so, do you agree that it has not been shown during your reclamation efforts that 100% of tar sands oil spilled/leaked have been recovered?

B. Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.

[Applicable Finding or Condition No.: Amended Condition 32-38]

ANSWER: Due to the volatility of many crude oil constituents (e.g., BTEX), a significant portion of crude oil will evaporate soon after being released to the environment. Fate modeling of diluted bitumen indicates that approximately 20% of released crude oil would evaporate within 6 hours of a spill (NOAA 2015). Additional

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processes such as photodegradation and biodegradation also naturally decrease the volume of crude oil in the environment. Thus, a significant fraction of the discharge volume of a crude oil spill would not be available for recovery due to these natural weathering processes.

If there is an accidental release from the proposed Project, Keystone would implement the remedial measures necessary to meet the federal, state, and local standards that are designed to help ensure protection of human health and environmental quality.

Cleanup standards for the state of South Dakota are available in the South Dakota Department of Environment and Natural Resources' Petroleum Assessment and Cleanup Handbook (http://denr.sd.gov/des/gw/spills/handbook/hand_book.aspx). Additional information on remediation is presented in Section 4.13 of the FSEIS, Potential Releases. See NOAA. 2015. ADIOS2. Oil Spill response tool – documentation.

<http://response.restoration.noaa.gov/adios>.

7. Does TransCanada acknowledge, admit and/or concede that it has an obligation to honor and observe the Public Trust Doctrine under the laws of any of jurisdiction in which it has, or currently operates?

A. If so, please provide your understanding of the Public Trust Doctrine insofar as it would be relevant to any past or current TransCanada projects?

B. Does TransCanada acknowledge, admit and/or concede that TransCanada has an obligation to honor and observe the Public Trust Doctrine under the laws of the state of South Dakota with regard to this project?

C. If so, please provide information as to how TransCanada proposes to observe or incorporate the Public Trust Doctrine in its proposed plans protecting the air, water, and other natural resources and the public trust therein from pollution, impairment, or destruction;

D. Further, please provide information as to TransCanada's understanding of the federal trust responsibility and what obligations TransCanada may have with regard to recognizing and protecting tribal trust resources while acting under the authority of any and all federal permits;

E. Please explain your answer and list and provide any documents that would show the basis for your answer. [Applicable Finding or Condition No.: Amended Condition 32-38]

OBJECTION: This request seeks legal opinions and legal conclusions, and therefore seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b).

8. For each incident since January 1, 2010 in which any pipeline transporting tar sands oil constructed by TransCanada and its Affiliates leaked or spilled pipeline contents, please provide the:

- A. Date;
- B. Location;
- C. Amount of materials leaked or spilled before being 100% contained;
- D. Duration of leak or spill before being 100% contained;
- E. Duration of reclamation of affected soil and/or water resources;
- F. Established and documented cause of leak/spill;
- G. Provide an account of the circumstances by which the leak/spill was

noticed, discovered or otherwise identified;

H. Material composition, dimensions, and seals of incident-pipeline which leaked/spilled; additionally, describe how the respective materials, dimensions, and seals of the leaking/spilling pipeline compare with those proposed to be used through South Dakota if the KXL pipeline is constructed;

I. Actions taken to prevent re-occurrence which did not involve design or construction procedure changes in pipeline material composition or dimensions, or construction procedures for use:

- i. In the pipeline which suffered the incident;

ii. In proposed construction of the KXL pipeline;

J. Actions taken to prevent re-occurrence which involved design or construction procedure changes in pipeline material composition or dimensions, or construction procedures for use:

i. In the pipeline which suffered the incident;

ii. In proposed construction of the KXL pipeline;

K. Identify the IMP, leak detection, and emergency processes and procedures in place at the time of the leak/spill;

L. Identify what impact that any known leaks or spills may have had upon historical or cultural resources in the affected area(s).

M. Identify the documents that support your above answers.

[Applicable Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103;

Amended Condition 32-38]

ANSWER: A spreadsheet responsive to this request is attached as Keystone 0774-0784.

9. With regard to the 2010 tar sands oil pipeline leak/spill near the Kalamazoo River:

A. Do you acknowledge, admit and/or concede that the leak/spill contaminated the Kalamazoo River?

B. If so, how many miles of river, shoreline and/or subsurface and groundwater were contaminated by this leak/spill?

i. List the organic and inorganic materials which leaked/spilled from pipeline into the surrounding land and water resources.

ii. How long did it take for the pipeline leak/spill to be stopped from the time of discovery?

iii. Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.

C. What percentage of organic and/or inorganic materials which leaked/spilled from the pipeline was recovered?

i. Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.

D. List the respective level for each mineral and chemical identified remaining in the contaminated part of the river water, related alluvial waters and soil, after reclamation was considered complete.

i. Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.

E. List the respective level of each mineral and chemical identified in Interrogatory 9D for the affected water and soil area prior to the spill/leak.

i. Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.

F. List the respective level change for each mineral and chemical identified in response to Interrogatory No. 9D, from prior to the spill/leak to post-reclamation.

i. Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.

G. What was the cost of reclamation of the Kalamazoo River?

i. When was reclamation considered completed by federal, state, and local authorities?

H. Identify any violations of law that were cited against you by any federal, state, or local agency or authority in the United States and Canada as a result of this leak/spill.

[Applicable Finding or Condition No.: Amended Condition 32-38]

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The spill on the Kalamazoo River was from an Enbridge pipeline.

10. What percentage of oil from the Western Canadian Sedimentary Basin (WCSB) proposed to be transported by the KXL Pipeline currently has purchase contracts destined for retail consumers in the United States?

- A. Identify each company for which there are such current contracts.
- B. What was the percentage in 2009?
- C. Identify the percentage of crude oil produced in North Dakota that is proposed to be transported by the KXL Pipeline that currently has purchase contracts destined for retail consumers in the United States.
- D. Identify the documents upon which this answer is based.

[Applicable Finding or Condition No.: Findings 14, 24-29; Amended Condition 32-38]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude

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oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast; Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

11. What percentage of the tar sands oil and N.D. crude oil proposed to be transported by the KXL pipeline is expected to be exported to markets outside the United States?

A. Identify each company and country for which there are such current contracts.

B. What was the percentage in 2009?

C. Identify the documents upon which this answer is based.

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable

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Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

12. What companies, if any, were partners or investors with TransCanada in the construction and operation of the KXL pipeline in 2009 that are no longer participating in the proposed project? [Applicable Finding or Condition No.: Findings 24-29]

ANSWER: Conoco Phillips is no longer participating in the Project as of August 14, 2009.

13. Identify the companies that have binding contractual commitments with TransCanada or its Affiliates to ship crude and/or tar sands oil which would travel

through the KXL Pipeline, that would not otherwise be transported through the XL or other existing pipelines. For each:

- A. Provide the termination dates, opt-out dates, or other material dates in the contractual commitments of shippers with the contractual commitments that underpin the viability and need for the project;
- B. Provide the development schedule for the project; 12
- C. Describe how the future developments schedule for the pipeline is consistent with the contractual commitments made by TransCanada;
- D. Identify all documents and sources for your answers.

[Applicable Finding or Condition No.: Findings 17, 24, 29]

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect this information from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers and Section 15(13) of the Interstate Commerce Act.

14. Is there currently a growing demand by refineries and markets in the United States?

- A. Please explain your answer;
- B. Identify all sources for your answer;

C. How and why has this changed since 2009?

[Applicable Finding or Condition No.: Findings 14, 17]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as ____.

15. Identify the forecasts of "additional crude oil production from the WCSB" and the Williston Basin.

A. As per such forecasts, state the potential impact of current low oil prices.

B. Identify the basis for your answers to these Interrogatories.

[Applicable Finding or Condition No.: Finding 24]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

16. Does TransCanada agree that domestic U.S. crude oil supplies are increasing, and are not continuing to decline?

A. Please explain your answer;

B. Identify documents that support your answer to this Interrogatory.

[Applicable Finding or Condition No.: Finding 26]

ANSWER: According to the Department of State FSEIS 1.4.2.3, U.S. production of crude oil has increased significantly, from approximately 5.5 million bpd in 2010 to 6.5 million bpd in 2012 and 7.5 million bpd by mid-2013. Even with the domestic production growth the U.S. is expected to remain a net importer of crude oil well into the future.

17. Provide a list of U.S. refineries that TransCanada expects to increase demand for WCSB and Williston Basin oil.

A. For each refinery, state the basis for TransCanada's claim that the refinery will increase such demand for crude oil;

B. Identify the refineries in PADD 3:

i. That could be served by the proposed KXL Project that are currently expanding refining capacity or have announced plans to expand their refining capacity;

ii. That TransCanada expects to import less offshore crude oil and replace it with crude oil that would be transported by the Project;

iii. That are "optimally configured to process heavy crude slates";

C. Identify the new refineries that are currently proposed to be constructed in PADD 3;

- D. Itemize the annual import of heavy crude oil imports into PADD 3 by offshore sources since 2010. For each:
- i. Identify the country of origin;
 - ii. State whether the costs of crude oil production in the source country are greater, the same, or less than the cost of heavy crude oil production in the WCSB;
- E. State whether pipeline expansions from the WCSB and the Williston Basin to the U.S. Gulf Coast operated by Enbridge (or companies affiliated with Enbridge) provide the service to the refineries that TransCanada claims would be served by the KXL Project. Please provide a detailed explanation for your answer.
- F. Identify and describe the proposed delivery locations of the Keystone System in PADD 3.
- G. Identify all pipelines in PADD 3 to which the Keystone System is connected;
- H. State the year in which Trans-Canada expects the Project to be fully utilized;
- I. Describe the impact of growing crude oil production in PADD 3 on the demand for crude oil imported from WCSP and Williston Basin;

J. Describe the potential market for Williston Basin light sweet crude in PADD 3;

K. Identify the basis for your answers to these Interrogatories and identify all documents relied upon by you in answering this Interrogatory.

[Applicable Finding or Condition No.: Findings 24, 26 and 27]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at

<http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

18. Identify each existing pipeline that comprises the "insufficient pipeline capacity" identified by TransCanada as a factor driving the need for the KXL Project. For each of these pipelines:

A. Provide current usage as a percentage of each respective pipeline's total capacity;

B. Identify the basis for your answers to these Interrogatories.

[Applicable Finding or Condition No.: Finding 24]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Without waiving the objection, the demand evidenced by Keystone's binding shipper commitments demonstrates insufficient pipeline capacity.

19. Under the circumstances of today's markets and supply, does TransCanada still contend its KXL pipeline is necessary and will replace U.S. reliance on unstable sources of off-shore crude oil?

- A. Please explain your answer;
- B. Identify all documents and sources for your answer;
- C. How and why has this changed since 2009?

[Applicable Finding or Condition No.: Findings 14, 17]

ANSWER: Shippers have committed to long-term binding contracts, which support construction of the pipeline once all regulatory, environmental, and other approvals are received. These long-term binding shipper commitments demonstrate a material endorsement of support for the Project, its economics, proposed route, and target market, as well as the need for additional pipeline capacity to access North Dakota and Canadian crude supplies.

20. Provide the total current capacity of existing pipelines to transport crude oil from the WCSB and the Williston Basin to the U.S. Gulf Coast and identify the source(s) for your answer. [Applicable Finding or Condition No.: Finding 24]

ANSWER: Specifics to operating capacity of third-party pipelines are under the responsibility of the pipeline owners and beyond Keystone's control.

21. Identify all other pipeline operations of TransCanada and its Affiliates, which since 2009 are utilizing the same pipeline materials, dimensions, and seals as proposed for the KXL pipeline through South Dakota, and described in Findings 18 and 28. [Applicable Finding or Condition No.: Findings 18, 28]

OBJECTION AND RESPONSE: To the extent that it seeks information for pipelines other than crude oil pipelines, this request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. Without waiving the objection, the Keystone I, Cushing Extension and Gulf Coast segments of the Keystone system are using similar materials to that of the proposed KXL pipeline.

22. Identify each pipeline operated by TransCanada and its Affiliates which have operated at 900,000 bpd, giving the pipeline name, location, dates of such operation, together with:

A. Identification of each such pipeline which subsequently developed a leak or spill, regardless of whether the pipeline was at that time operating at 900,000 bpd, giving date, location, amount spilled/leaked, damage caused;

B. Identify the documents upon which your answer(s) to these Interrogatories were based;

[Applicable Finding or Condition No.: Findings 15, 18, 28]

ANSWER: TransCanada is not currently operating any pipelines at 900,000 bpd.

23. State whether a failure by TransCanada to design, construct, test, or operate the proposed KXL Project in accordance with the special conditions developed by the Pipeline Hazardous Materials and Safety Administration (PHMSA), and set forth in Appendix Z to the Department of State, January 2014 Final Supplemental Environmental Impact Statement (FSEIS), would be a violation of federal law. If so:

- A. Identify the law(s) under which enforcement of these special conditions would be brought;
- B. Identify the enforcing agency;
- C. Identify all correspondence between TransCanada and the PHMSA prior to and regarding any exemption(s) from compliance.
- D. Identify the documents upon which your answer(s) to these Interrogatories were based;

[Applicable Finding or Condition No.: Conditions 1-3; Findings 22, 28]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. In addition, this request depends on a hypothetical condition and is therefore speculative and improper as to form. It is also overlybroad and burdensome to the extent that it seeks all correspondence between TransCanada and PHMSA, and asks

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for information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b).

24. Identify all other pipeline operations of TransCanada and its Affiliates which, since 2009, have or are operating at a maximum operating pressure (MOP) of equal to or greater than 1,440 psig generally and/or 1,600 psig MOP for specific low elevation segments of pipeline with the same design factor and pipe wall thickness as described in Finding 19, close to the discharge of pump stations:

A. For each such pipeline which subsequently developed a leak or spill, regardless of the psig MOP the pipeline was operating at the time, giving date, location, amount spilled/leaked, psig MOP at which pipeline was operating at the time, and describe the amount and nature of damage caused by such a leak or spill;

B. Identify any documents upon which your answers to these Interrogatories were based;

[Applicable Finding or Condition No.: Findings 19, 28]

ANSWER: TransCanada currently has no crude oil pipelines operating equal to or greater than 1,440 psig generally and/or 1,600 psig MOP.

25. For each spill/leak incident which has occurred from a pipeline transporting tar sands crude oil operated by TransCanada and its Affiliates since 2009, state the time during which transportation of the tar sands crude through that pipeline was disrupted.

Identify any documents upon which your answers to this Interrogatory were based.

[Applicable Finding or Condition No.: Finding 28]

ANSWER: See the spreadsheet attached as Keystone 0774-0784.

26. Explain why TransCanada has reduced the maximum operating pressure of the KXL pipeline at most locations to 1,307 psig;

A. State whether TransCanada has any plans to subsequently increase this general operating pressure;

B. If your answer to subpart A of this interrogatory is yes, what is the subsequent maximum operating pressure being contemplated for general use during pipeline operations?

C. Explain why TransCanada wants to construct the KXL pipeline pump stations with pumps of sufficient capacity to meet the maximum design flow rate of 830,000 bpd.

[Applicable Finding or Condition No.: Conditions 31-38; Findings 19, 20]

ANSWER:

A. and B. On August 5 2010, TransCanada withdrew its application to the Pipeline Hazardous Materials and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a 0.8 design factor and adopted the 57 additional safety measures that would have been required under the PHMSA special permit. The

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operating pressure reduction from 1,440 psig to 1,307 psig is a result of the use of the standard design factor (0.72) in accordance with 49 CFR 195.106 design pressure.

TransCanada would be required to re-apply to PHMSA for a special permit in order to operate the pipeline at an increased design factor of 0.8 corresponding to an operating pressure of 1,440 psig. This issue is also addressed in a Media Advisory dated August 5, 2010, marked as Keystone 0647-0649.

27. With regard to the plan for mainline valves to be remotely controlled, what guarantee can you give the PUC that TransCanada can prevent a cyber-security attack on the control system?

A. Describe the worst case scenario which could occur in the event of a computer systems security breach on the control system for the KXL Pipeline.

B. Describe the data security systems to be put in place to prevent any such system breach, identify any third-party vendor(s) providing system security software, hardware or monitoring, and identify the particular components or scopes of services such vendors will provide.

C. Identify any documents used to support your answer to this Interrogatory.

[Applicable Finding or Condition No.: Conditions 31-38; Finding 20]

ANSWER:

A. Once constructed, the Keystone XL pipeline will form part of North America's critical national energy infrastructure. Over time, actors such as terrorist organizations and hostile nation states can be expected to pursue their objectives by attempting to disrupt this critical infrastructure. Therefore, it is not prudent for TransCanada to publicly provide an opinion on how the adverse consequences of a cyber attack could be maximized.

B. Consistent with industry practice, TransCanada does not publicly disclose the details of the security systems it has in place. We believe that it is not prudent to make this information public because of the likelihood that it will assist, and, potentially encourage, attackers.

28. What is the current capacity contracted for WCSB tar sands oil from Canada? Identify any documents upon which you based your answer or which you are aware would be a basis for your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND ANSWER: This request seeks information that is not within Keystone's custody and control. Keystone does not know the contractual details of other pipeline companies' commitments.

29. State whether there is a significant discount on the price currently of WCSB crude oil.

- A. Please explain your answer;
- B. Identify all documents which support your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION AND ANSWER: The scope of the question is too broad given the large number of crude oil grades available from the WCSB. The Canadian heavy benchmark discounts in 2014 range from \$13 to \$30.

- A.
 - Western Canadian crudes are priced against West Texas Intermediate (WTI).
 - Canadian crudes are traded on Net Energy and TMX (NGX) trading exchanges.
 - Canadian crude monthly blended indices are calculated using calendar month volume weighted average between the two platforms.
 - As an example, WCS blended indices for 2014 range from \$13 to \$30 discount to WTI monthly.
- B. Responsive documents are attached as Keystone 1116-1118.

30. What is the current capacity contracted for Williston Basin oil? Identify any documents which would support your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

ANSWER: Shippers have committed about 65,000 barrels per day of capacity for transportation services on Bakken marketlink.

31. Describe the changes in contracted capacity amounts and duration since 2009 from Canada and the Williston Basin and identify any documents that would support your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

ANSWER: Shippers have committed about 65,000 barrels per day of capacity for transportation services on Bakken Marketlink. Keystone also received additional commitments on Keystone XL Pipeline that would support an expansion of its total capacity from 700,000 barrels per day to 830,000 barrels per day. The contracted capacity amounts, delivery locations and duration of each of the commitments are confidential.

32. Regarding the "U.S. demand for petroleum products," i.e., produced for U.S. consumers and not for export to other countries:

- A. What is the percent change since 2010?
- B. What is the forecast for "U.S. demand for petroleum products" over the next 20 years?
- C. What has been the annual import of crude oil for each year since 2010?
- D. What is the forecast for offshore crude oil imports into the U.S. over the next 20 years?

E. Of the 15 million bpd of crude oil demand identified in revised Finding of Fact 25, state whether some of this demand is used to produce petroleum products for export from the U.S. If so provide the quantity of crude oil:

- i. Needed for domestic demand for petroleum products;
- ii. Needed to produce petroleum products for export;

F. Identify any documents which would support your answer;

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at

<http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone

0001-0467.

33. What is the status of pipeline and rail capacity to move oil from oil fields in the Williston Basin to the Baker, Montana on-ramp? Identify any documents which would support your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND ANSWER: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Without waiving the objection, information regarding the Bakken on-ramp pipeline can be found in the Montana Department of Environmental Quality Certificate issued under the Montana Major Facility Siting Act available at <http://www.deq.mt.gov/mfs/keystonex1/keystonecertificate.aspx>.

34. Why would the existing XL pipeline be capable of shipping enough tar sands from the Western Canadian Sedimentary Basin (WCSB) oil to offset the need for unstable foreign oil supplies? Identify any documents that would support your answer. [Applicable Finding or Condition No.: Finding 14]

OBJECTION AND RESPONSE: There is no existing Keystone XL Pipeline. This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the

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national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Moreover, the Keystone Pipeline does not have sufficient capacity to meet additional demand.

35. What is the currently projected forecast of production in the Western Canadian Sedimentary Basin (WCSB) and the Williston Basin over each of the next ten years? Identify any documents that would support your answer. [Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within

Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finaiseis/index.htm>, are marked as Keystone 0001-0467.

36. Describe the impact of low oil prices on crude oil production in the WCSB and Williston Basin.

A. What is the forecast of demand for transportation services of such low oil prices?

B. In light of low oil prices, what will be the impact of the Enbridge pipelines from the WCSB and Williston Basin to the US Gulf Coast on the need for transportation services of the KXL pipeline?

C. Identify any documents which would support your answers;

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL §

49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

37. Describe in detail, route changes in the proposed KXL pipeline since 2010, on a county-by-county basis, identifying specific land parcels to be affected by such changes. Identify any documents that would support your answers. [Applicable Finding or Condition No.: Finding 161

ANSWER: Maps showing route changes since Keystone's permit application was filed in HP 09-001 are attached as Keystone 0470-0583.

38. Provide the dates on which pipe segments to be used in South Dakota were delivered to storage location in South Dakota or adjacent states.

- A. For each such delivery of pipe segments, if applied, state the date on which an external fusion bonded epoxy (FBE) was applied;
- B. Where FBE was applied, describe the materials comprising and dimensions of any covering placed over each shipment of delivered pipe segments;
- i. Provide the date of each covering of the respective pipe shipment after delivery;
- C. As per the respective deliveries, state the longest time that any pipe segments were stored without protective covering;
- D. Provide the FBE manufacturer's recommendations for protection of the FBE applied to pipe segments to protect them against the effects of outside storage;
- E. Provide the pipeline manufacturer's recommendations for protection of pipe segments against the effects of outside storage;
- F. Provide the manufacturer's suggested maximum amount of time of sunlight exposure recommended after FBE application for pipe segments without protective covering;
- G. Describe the impact of UV radiation on FBE coating over time;
- H. Provide the manufacturer's warranties and guarantees for the FBE coating to be applied to the pipe segments;

I. Provide the manufacturer's warranties and guarantees for the pipe segments;

J. Explain the elimination from use in the proposed Project of API 5L X80 high strength steel;

i. Describe how substituted material(s) would better perform than the API 5L X80 steel;

K. Identify any documents which would support your answers;

[Applicable Finding or Condition No.: Finding 18]

ANSWER:

A. January 2011- November 2011

B. Covering application commenced in October 2012 and was completed July 2013

C. Approximately 18 months

D. The manufacturer did not provide recommendation or direction for storage.

Direction for storage is per TransCanada specification.

E. The manufacturer did not provide recommendation or direction for storage.

Direction for storage is per TransCanada specification.

F. According to the manufacturer, pipe coated with FBE coatings can be stored for 730 days under most climatic weather conditions without commencement of deterioration of the coating. TransCanada specification provides criteria for minimum coating

thickness requirements which would supersede any exposure time period. Applicable manufacturer warranties are related to application and workmanship to the specification

G. Sunlight exposure over a significantly extended period of time could cause a reduction in coating thickness and coating flexibility due to degradation by UV radiation

H. WARRANTY

Unless otherwise specified in the Order for Pipe, the Supplier hereby warrants that the Pipe, including, if applicable, the Work done thereto, shall meet and conform to the Specifications and the Technical Agreements, and such other product characteristics agreed to by the Parties in writing, for a period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of all Pipe to the Delivery Point, whichever is earlier. If during the aforesaid warranty period, the Company discovers any Pipe which fails to conform, the Company shall forthwith notify in writing the Supplier of such non-conformance. The Company and the Supplier shall jointly investigate any such non-conformance in an effort, in good faith, to determine the cause thereof, provided that such investigation shall not unreasonably delay any repair or replacement of the Pipe. If the Parties are unable to agree upon the cause of the non-conformance with this Agreement within ten (10) days of the date of the discovery of such non-conformance, either Party shall have the right to

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request that the matter be arbitrated pursuant to single party arbitration conducted in accordance with the then current International Chamber of Commerce's Rules of Arbitration.

If such non-conformance is discovered after title to the Pipe passes to the Company, the Company may, after notification to the Supplier, to the extent the Company, acting reasonably, deems practical under the circumstances, repair the same at the Supplier's risk and expense. If repair is not practical in the Company's opinion, acting reasonably, the Company agrees that the Supplier may replace the non-conforming Pipe in the event that the Supplier can secure such replacement at delivery dates at least as favorable as those available to the Company from other sources.

Any Pipe that is repaired or replaced pursuant to the warranties specified herein shall be warranted for a further period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of the Pipe to the Delivery Point, whichever is earlier.

If the non-conforming Pipe cannot be repaired and the Company elects not to replace such Pipe, the Company shall have the right to return, at the Supplier's expense and risk, any or all of the non-conforming Pipe delivered by the Supplier to the Company whereupon the Supplier shall immediately repay the Company, without Interest, all

monies previously paid by the Company to the Supplier on account of the non-conforming Pipe so returned, together with all costs and expenses incurred by the Company in returning such Pipe.

The express warranties of the Supplier in this Agreement are the only warranties as to the Pipe and are in lieu of all other warranties in respect thereof, whether written, statutory, oral, express or implied including, without limitation, any warranty of merchantability or fitness for purpose. The rights and remedies contained in this Agreement are the Company's exclusive rights and remedies against the Supplier whatsoever in relation to, or arising out of, or in connection with the performance or conformance of the Supplier's obligations under these warranties.

I. WARRANTY

Unless otherwise specified in the Order for Pipe, the Supplier hereby warrants that the Pipe, including, if applicable, the Work done thereto, shall meet and conform to the Specifications and the Technical Agreements, and such other product characteristics agreed to by the Parties in writing, for a period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of all Pipe to the Delivery Point, whichever is earlier. If during the aforesaid warranty period, the Company discovers any Pipe which fails to conform, the Company

shall forthwith notify in writing the Supplier of such non-conformance. The Company and the Supplier shall jointly investigate any such non-conformance in an effort, in good faith, to determine the cause thereof, provided that such investigation shall not unreasonably delay any repair or replacement of the Pipe. If the Parties are unable to agree upon the cause of the non-conformance with this Agreement within ten (10) days of the date of the discovery of such non-conformance, either Party shall have the right to request that the matter be arbitrated pursuant to single party arbitration conducted in accordance with the then current International Chamber of Commerce's Rules of Arbitration.

If such non-conformance is discovered after title to the Pipe passes to the Company, the Company may, after notification to the Supplier, to the extent the Company, acting reasonably, deems practical under the circumstances, repair the same at the Supplier's risk and expense. If repair is not practical in the Company's opinion, acting reasonably, the Company agrees that the Supplier may replace the non-conforming Pipe in the event that the Supplier can secure such replacement at delivery dates at least as favorable as those available to the Company from other sources.

Any Pipe that is repaired or replaced pursuant to the warranties specified herein shall be warranted for a further period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is

commissioned for regular service or eighteen (18) calendar months from the date of delivery of the Pipe to the Delivery Point, whichever is earlier.

If the non-conforming Pipe cannot be repaired and the Company elects not to replace such Pipe, the Company shall have the right to return, at the Supplier's expense and risk, any or all of the non-conforming Pipe delivered by the Supplier to the Company whereupon the Supplier shall immediately repay the Company, without Interest, all monies previously paid by the Company to the Supplier on account of the non-conforming Pipe so returned, together with all costs and expenses incurred by the Company in returning such Pipe.

The express warranties of the Supplier in this Agreement are the only warranties as to the Pipe and are in lieu of all other warranties in respect thereof, whether written, statutory, oral, express or implied including, without limitation, any warranty of merchantability or fitness for purpose. The rights and remedies contained in this Agreement are the Company's exclusive rights and remedies against the Supplier whatsoever in relation to, or arising out of, or in connection with the performance or conformance of the Supplier's obligations under these warranties.

J. API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail

design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline.

39. State whether any power lines or substations, or upgrades to existing power lines or substations, have been or will be required, permitted and/or constructed to provide power to pump stations by local power providers;

A. Identify each such power line and/or substation, their location and required rights-of-way, and the nature of its construction or upgrade;

B. State the cost of upgrading or constructing such power line and/or substation, and identify the source(s) of the funds construction of each power line;

C. If any State or Tribal permit or other authorization is required for any planned construction or upgrading of power lines and/or substations to proposed pump stations:

i. Identify the permits which have been obtained, together with date permit granted;

ii. Identify permits which have not yet been obtained;

iii. Identify which permits have been applied for and are pending.

D. Identify the funding sources committed or proposed to support any such upgrades or construction of required power lines and/or substations or other power generating assets.

E. Identify the level of energy demand required for the pipeline for any purpose, including for required pumping stations.

F. Identify to what extent, if any, the energy requirements of proposed pipeline and related facilities will be powered by renewable energy generation.

G. Identify any such proposed renewable energy generation sources by type, location, scale and ownership.

H. Identify any documents that would support your answers to this interrogatory.

[Applicable Finding or Condition No.: Finding 20]

ANSWER: No power lines have been constructed to pump stations for KXL in South Dakota. All required permits pertaining to power lines are completed by the individual power provider. Please refer to FSEIS 2.1.12.3 Electrical Distribution Lines and Substations.

40. Describe each increased estimated cost of the KXL pipeline due to each of the following:

- A. New technical requirements;
- B. Inflation;
- C. Project management;
- D. New regulatory requirements;

- E. Material storage issues;
- F. Preservation;
- G. Identify documents upon which you base your answers;

[Applicable Finding or Condition No.: Finding 23]

OBJECTION: This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). In addition, Keystone does not maintain a breakdown of the estimated project cost in the way requested, and requiring such a breakdown of costs would require the disclosure of information that has substantial commercial and proprietary value, and is subject to substantial efforts by Keystone to protect it from actual and potential competitors.

41. Identify companies currently interested in using the KXL pipeline to "further" diversify supply away from offshore foreign crude supply." For each company identified,

- A. State whether they are interested in "Canadian crude;"
- B. Identify documents upon which you base your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect this information from actual and potential competitors, and

are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. This request also seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the U.S. Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order.

42. Describe the potential for pipeline transportation to replace rail transportation for shipments to PADDs 1 and 5.

A. Provide the quantity of oil exported from the WCSB to PADDs 1 through 5 by rail from 2010 to the present;

B. Identify any documents which would support your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was

derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

43. List the changes in the KXL Project route since 2010 and identify any documents which would support your answers. [Applicable Finding or Condition No.: Finding 33]

ANSWER: Maps showing route changes since Keystone's permit application was filed in HP 09-001 are attached as Keystone 0470-0583.

44. Identify paleontological studies within the Upper Cretaceous or Tertiary strata of which you have knowledge were conducted after 2009 in the proximate location of the currently proposed KXL pipeline route and identify any documents that would support your answers. [Applicable Finding or Condition No.: Findings 34, 36; Conditions 43, 44]

ANSWER: A list of all paleontological survey efforts is outlined, by date, in Table 3.1-4 of the Department of State FSEIS (2014). Survey methodology and geological formations investigated are detailed in Section 3.1.2.3 of the Department of State FSEIS (2014).

45. Identify Section 106 type "cultural resource" studies of which you have knowledge that were conducted after 2009 in the proximate location of the currently proposed KXL pipeline route.

A. Describe the process by which Tribes were informed of the results of such studies;

B. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Conditions 43, 44]

ANSWER: Keystone currently has no contractors retained to undertake construction. When Keystone employs a pipeline contractor, that contractor will develop the plan, subject to Keystone's approval as required by Condition 21. This issue is addressed in Section 7.4.5 of the CMR Plan.

A. The Tribes were informed of the results through consultation with the DOS.

B. All cultural resource survey reports are listed in Section 3.11.3.3 of the Department of State FSEIS (2014). A summary of government-to-government consultation with Indian Tribes is included as Attachment I of Appendix E of the Department of State FSEIS (2014).

46. TransCanada is to identify the exact locations of active, shut-in, and abandoned wells and any associated underground pipelines in the construction ROW,

what is the status of such identification procedures? As to the wells and pipelines to be identified:

A. How long does TransCanada expect such an identification process will take before the Company would be willing to assure the PUC that all such wells and pipelines have been identified;

B. If "appropriate precautions" prove inadequate, describe in detail a worst case scenario, especially involving a river, tributary, or other water resources, involving:

- i. An unidentified well;
- ii. An unidentified pipeline;
- iii. An identified well where the precautions fail;
- iv. An identified pipeline where the precautions fail;

C. What circumstance(s) or event(s) could potentially cause the "appropriate precautions" to fail?

- i. How is it determined what the specific appropriate precautions to be undertaken are for each kind of scenario?
- ii. Who determines whether each specific precaution is "appropriate" to prevent environmental and/or human damage;

iii. As to appropriate precautions to be undertaken for each possible scenario, how is the PUC assured TransCanada actually implements or undertakes the precaution(s) necessary.

D. What specific precautions have been or are planned to be taken to protect the soils in the Sand Hills from contamination;

E. What specific precautions have been or are planned to be taken to protect the underground water resources of the Oglala Aquifer and other potentially affected aquifers from contamination;

F. What specific precautions have been or are planned to protect the surface and alluvial waters of the State and respective Tribes from contamination;

G. What type of gas or oil or related solutions or gases pumped or injected by a well within a mile or more along the general route of the KXL pipeline, could be involved in such a "worst case scenario"?

H. What type of gas or oil or related solutions or gases being transported by a pipeline within a mile or more along the general route of the KXL pipeline, could be involved in such a "worst case scenario"?

I. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Conditions 15, 16, 21, 22, 42]

ANSWER: TransCanada has not yet identified the locations of the wells and pipelines as stated. TransCanada does not differentiate between active and abandoned but does identify wells and pipeline within the construction right of way utilizing public data, survey data and One Calls at the time of construction.

47. What kind of "significant problems" are anticipated by the weathering of shale underlying almost all of Haakon, Jones and portions of Tripp Counties:

- A. To roads;
- B. To structural foundations (in answering, identify the type of foundations are of concern);
- C. To the proposed KXL pipeline or part thereof;
- D. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Conditions 15, 16, 18, 21, 22, 23, 42]

ANSWER: There are no "significant problems" anticipated concerning the weathering of shale in South Dakota.

48. Describe a leak, the existence of which "may suggest a threat to the integrity of the pipeline."

- A. Other than aerial patrols, ground patrols, and public awareness, what steps have been taken to prevent a leak of this nature and magnitude or prevent or minimize its effect on the pipeline's integrity?

B. Identify documents that support and/or were used to provide your answers.

[Applicable Finding or Condition No.: Finding 95; Conditions 31-38]

ANSWER: A confirmed leak is in fact a loss of integrity, however a direct observation reported leak may not be a result of a pipeline release (e.g. an apparent sheen on standing water near the ROW) or the release may be from another line in a multi-pipeline corridor or at a foreign pipeline crossing. In this context, a leak which "may suggest a threat to the integrity of the pipeline" is a reported potential leak that has yet to be confirmed as originating from a Keystone line.

Prevention of leaks of this magnitude is addressed in the sections of the FSEIS discussing pipeline integrity, Sections 3.13 and 4.13. In addition to these answer, in regard to remote sensing technologies, several initiatives have been undertaken by Keystone. A pilot implementation of a fixed thermal imaging system at a pump station will be tested this year, in addition to three industry projects that Keystone is participating in:

- C-FER Technologies' ELDER joint industry project (JIP) that is evaluating the performance of four different cable based leak detection systems.

- A second C-FER Technologies JIP that is quantifying the physical phenomenon that occur at the ground surface that could be detected by various technologies.
- PHMSA's project entitled "INO Technologies Assessment as Leak Detection Systems for Hazardous Liquid Pipelines".

49. Describe the status of the written manual for normal operations, maintenance activities, and handling abnormal operating and emergencies.

- A. Identify the latest draft of the written manual and all prior drafts;
- B. Identify all documents that support or were used to provide your answers.

[Applicable Finding or Condition No.: Finding 96; Conditions 31-38]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the operations manual is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the operations manual would commercially disadvantage Keystone.

50. Describe in detail the worst case scenario affects which could impact any part or aspect of the KXL pipeline infrastructure by the "high swelling potential" of the Cretaceous and Tertiary rocks in the Missouri River Plateau due to its susceptibility to instability in the form of slumps and earth-flows, including landslides.

- A. Provide the locations where such ground settling can be anticipated;
- B. Identify any documents which would support your answer;

[Applicable Finding or Condition No.: Finding 40, 77; Conditions 31-42]

OBJECTION AND ANSWER: This request seeks information that is confidential. The volume and location of a worst case scenario spill are kept confidential for homeland security reasons. Without waiving the objection, Section 3 of Appendix A of the 2009 Keystone XL Risk Assessment (FSEIS Appendix P) discusses the state-specific incident frequencies for a variety of pipeline hazards, including ground movement and landslides. Within Section 3.5, specific failure mechanisms and mitigation measures relating to these natural hazards are also discussed. Pipelines are remarkably resilient to landslides and seismic events (CITE). If ground movement occurred and has the potential to affect the pipe's integrity, Keystone is required by federal regulations to inspect the pipe (49 CFR 195).

TransCanada's Integrity Management Program would continue to assess the Keystone XL Pipeline Project route and threats from outside forces (e.g., landslides)

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would be evaluated in a comprehensive and systematic program, as required by federal pipeline safety regulations (49 CFR 195). As part of the Integrity Management Program, Keystone evaluates the potential for a release along the entire length of its pipelines and determines what resources could potentially be affected by a release. This information is shared with TransCanada's Emergency Response staff to facilitate emergency response planning and to develop appropriate training scenarios.

A. Locations of ground swelling are identified in the FSEIS, Section 3.1 Geology. In Section 3.1 of the FSEIS, Table 3.1-6 and Figure 3.1.2-3 identify the high risk category Landslide Hazard Area (LSHR) areas for swelling soils and landslides.

Table 3.1-6 Locations within LSHR High-Risk Category along the Proposed Project Corridor

State	Start (MP)	End (MP)	Length
Montana	0.2	25.5	25.3
Montana	25.5	89.2	63.7
Montana	89.2	102.0	12.8
South Dakota	308.3	313.5	5.2
South Dakota	355.6	358.1	2.5
South Dakota	358.1	370.9	12.8
South Dakota	389.5	425.9	36.4
South Dakota	425.9	426.3	0.4
South Dakota	426.3	485.1	58.8
South Dakota	485.1	525.2	40.1
South Dakota	525.2	537.1	11.9
South Dakota	537.1	571.5	34.4
Nebraska	601.5	605.3	3.8
Nebraska	606.8	637.5	30.7
Total			338.8

Sources: USGS 2009a; PHMSA-NPMS 2007b

B. 49 CFR 194.105

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U.S. Department of State (USDOS). 2014. Final Supplemental Environmental Impact Statement for the Keystone XL Project. Washington D.C. Includes all appendices of the FSEIS.

51. What lessons have been learned from previous pipeline construction, current right-of-way conditions and project requirements that have been incorporated into the Construction Mitigation and Reclamation (CMR) Plan? Identify any documents that would support your answers, including but not limited to the latest version of the CMR plan. [Applicable Finding or Condition No.: Finding 32, 37, 73; Conditions 13-30]

ANSWER: Overall changes to the CMR Plan between the 2008 Rev1 version and the 2012 Rev4 version were made to clarify language, provide additional detail related to construction procedures, address agency comments, and incorporate lessons learned from previous pipeline construction, current right-of-way conditions and project requirements.

The redline version of the CMR Plan Rev4 showing changes since the version considered in 2010 was provided in Appendix C as a component of Keystone's September 2014 Recertification Petition to the Commission.

52. Describe the proposed changes in the 2010 Permit Findings listed in Appendix C of your current 2014 Application for Certification.

A. Explain the nature and necessity of each of the proposed changes in the Findings in Appendix C;

B. Provide a list of all changes in the proposed KXL pipeline route since 2010.

C. For each change in the route:

i. State why the route was changed;

ii. State how the new route improves this Project when

compared with the previously submitted route;

D. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Finding 33]

ANSWER: Maps showing route changes since Keystone's permit application was filed in HP 09-001 are attached as Keystone 0470-0583.

53. Describe the status of the development of procedures for handling and disposal of unanticipated contaminated soil discovered during construction, and consultation with relevant agencies thereon.

A. Identify any draft or final procures developed to date;

B. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Conditions 13-30]

ANSWER:

- A. Keystone has not drafted the Unanticipated Contaminated Soils Plan.
- B. Since there a Plan has not been drafted there are no support documents to be identified.

54. Although the USGS has so far determined that ground motion hazard in the Project area is "low", describe the worst case scenario impact on the integrity of the proposed KXL pipeline, power stations, pump stations, or any other aspect of the project should there be unpredicted seismic activity. Identify any documents that would support your answers. [Applicable Finding or Condition No.: Conditions 31-38]

ANSWER: Section 4.1.3.4 of the Department of State FSEIS (2014) evaluates the potential impacts to the Project from geological hazards.

Appendix P (Risk Assessment) of the Department of State FSEIS (2014) evaluates the potential damage to the Project from natural hazards (e.g., landslides).

55. Describe the status of TransCanada's efforts to obtain a permit process for water body crossings.

- A. List the agency(ies) to whom TransCanada has submitted a permit application;
- B. Identify all permit applications submitted;

C. List any permits that TransCanada may need to obtain prior to its proposed KXL pipeline construction for each of the water body crossings desired to be crossed.

D. Explain why horizontal directional drilling will not be used on water body crossing of perennial streams and intermittent water bodies;

E. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Finding 41; Conditions 1, 2, 13-30]

ANSWER: The following is the requested information addressing the permitting of the water body crossings:

A. To date, Keystone has not submitted any permit applications to any agencies for water body crossings in South Dakota. All permits for waterbody crossings, as required, will be filed closer to the time period of construction.

B. To date, Keystone has not submitted any permit applications for water body crossings in South Dakota. All permits for waterbody crossings, as required, will be filed closer to the time period of construction.

C. Keystone will permit all of the water body crossings in South Dakota under the US Army Corps of Engineers Nationwide General Permit (NWP) 12. Additionally, the South Dakota Department of Environment and Natural Resources is responsible for Clean

Water Act permit certification under Section 401 and would review proposed stream and river crossings where necessary and may issue project-specific conditions.

D. The decision to use the horizontal directional drilling (HDD) crossing method was based on an evaluation of engineering and environmental factors and use of an HDD does not always provide the most suitable methodology for a waterbody crossing. During the Project design, TransCanada has complied with all regulations and permit stipulations in determining the proposed crossing method for each waterbody in South Dakota.

E. The Department of State FEIS (2014) Sections 4.3, Water Resources; 4.7 Fisheries; 4.8 Threatened and Endangered Species; and Appendix H.

56. Describe the worst case scenario which could occur from expected loss of in-stream habitat through direct disturbance, loss of bank cover, disruption of fish movement, direct disturbance to spawning, water quality effects, and sedimentation effects by open-cut trenching of water crossings other than the Little Missouri, Cheyenne and White River crossings. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Finding 41; Conditions 34, 41]

ANSWER: The Department of State FSEIS (2014) evaluates the impacts to in-stream habitat as a result of the construction and operation of the Project in the following locations:

a. Section 4.3.2.2, Surface Water

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- b. Section 4.3.3.2, Surface Water
- c. Section 4.7.3.2, Construction impacts

Section 4.7.3.3 Proposed Project Operational Impacts

57. Describe the worst case scenario which could occur during or as a result of horizontal directional drilling to cross the Little Missouri, Cheyenne, and White River crossings. Identify any documents that would support your answers. [Applicable Finding or Condition No.: Finding 41, 82-83; Condition 22]

ANSWER: This issue is addressed several times in the FSEIS, as follows:

At page 4.3-21:

In some instances, pressurized fluids and drilling lubricants used in the HDD process have the potential to escape the active HDD bore, migrate through the soils, and come to the surface at or near the crossing construction site, an event commonly known as a frac-out. Measures identified in a required HDD contingency plan would be implemented, including monitoring of the directional drill bore, monitoring downstream for evidence of drilling fluids, and mitigation measures to address a frac-out should one occur.

At page 4.8-20 :

The HDD method avoids direct disturbance to the river, channel bed, or banks. While the HDD method poses a small risk of frac-out (i.e., release of bentonite-based

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drilling fluids), potential releases would be contained by best management practices that would be described within the HDD Contingency Plans required for drilled crossings. Most leaks of HDD fluids occur near the entry, exit locations for the drill, and are quickly contained and cleaned up. Frac-outs that may release drilling fluids into aquatic environments are difficult to contain primarily because bentonite readily disperses in flowing water and quickly settles in standing water. Should this type of release occur, bentonite is non-toxic but in sufficient concentration may physically inhibit respiration of adult fish and eggs.

At page 4.7-11,12:

The HDD method for crossing waterbodies would be used to minimize disturbance to aquatic habitat, stream banks, and recreational or commercial fisheries. Impacts could occur if there is an unintended release of drilling fluids (i.e., a frac out) during the HDD operation. A frac out could release bentonitic drilling mud into the aquatic environment. The released drilling mud would readily disperse in flowing water or eventually settle in standing water.

Although bentonite is non-toxic, suspended bentonite may produce short-term impacts to the respiration of fish and aquatic invertebrates due to fouled gills. Longer-term effects could result if larval fish are covered and suffocate due to fouled gills and/or lack of oxygen. If the frac out occurred during a spawning period, egg masses of

fish could be covered, thus inhibiting the flow of dissolved oxygen to the egg masses.

Benthic invertebrates and the larval stages of pelagic organisms could also be covered and suffocate.

58. Describe the worst case scenario of a leak/spill which could occur at the site of the water body crossing, of at least the magnitude of the spill/leak into the Kalamazoo River in 2010, if such were to occur into the Little Missouri, Cheyenne, and White River water body crossings.

A. Was the pipeline involved in the Kalamazoo River spill/leak installed with FBE coating and a cathodic protection system? Explain why or why not;

B. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Findings 41-52, 68-69, 82-83; Conditions 31-42]

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone was not involved in the pipeline leak involving the Kalamazoo River in 2010.

59. Describe the worst case scenario of a leak/spill which could occur from the pipeline as it passes under channels, adjacent flood plains and flood protection levees.

Identify any documents that would support your answers. [Applicable Finding or Condition No.: Findings 41-49; Conditions 31-42]

OBJECTION AND RESPONSE: This request seeks information that is confidential by statute. The location and volume of a worst case scenario spill are kept confidential for homeland security reasons. Without waiving the objection, when the pipe crosses channels and flood plains, scenarios would be dictated by stream flow rate (discharge) and are discussed in Section 4.2.3.4 of 2009 Keystone XL Risk Assessment. Impacts are described in Section 4.2.3.4 for channels. Floodplain crossings are covered in FEIS Section 4.3.3.3 and Section 4.3.3.4 discusses impacts to floodplains. Worst case would be spill into low flow stream (Table 4-2 in 2009 Keystone XL Risk Assessment). Spills at individual river crossings are rare with occurrence interval of 1/22,000 years to 1/830,000 years based on representative crossing distances (2009 Keystone XL Risk Assessment). Most spills are less than 3 barrels.

River crossings by pipelines are very common, the number of incidents is low, and safety is not affected by material transported. Predicted Project-specific incident frequencies are provided in Section 3.0 of the 2009 Keystone XL Risk Assessment. Spills at individual river crossings are rare with occurrence interval of 1/22,000 years to 1/830,000 years based on representative crossing distances (2009 Keystone XL Risk Assessment).

60. In light of the leak/spill risk assessment conducted as to impacts to the environment, the 1 in 7,400 years likelihood of a spill/mile of pipeline, the claim that any

spill would "likely" release no more than 3 barrels of oil, comparing these studies/assessments to the real world:

- A. Explain the number of leaks along the XL pipeline since 2008;
 - i. Explain the number of leaks from the other oil pipelines constructed and/or operated by TransCanada or its Affiliates;
 - ii. Explain the number of leaks from the other pipelines constructed and/or operated by transportation companies other than TransCanada;
- B. Explain the massive leak and contamination of the Kalamazoo River in 2010;
- C. Explain the leaks of more than 3 barrels and amounts leaks as documented on the XL pipeline since 2008;
 - i. Explain the amount leaked/spilled from other oil pipelines constructed and/or operated by Trans-Canada or its subsidiaries;
 - ii. Explain the number of leaks along each of the other pipelines constructed and/or operated by transportation companies other than Trans-Canada.
- D. What would be a worst case scenario amount which could leak/spill from the KXL pipeline? Please explain your answer;
- E. Identify any documents that would support your respective answers.

[Applicable Finding or Condition No.: Findings 41-49, 51-52; Conditions 31-38]

OBJECTION: Subparts (d) and (e) are overlybroad and unduly burdensome.

There are thousands of pages of documents supporting Keystone's spill risk assessment.

In addition, many of the documents contain information that is confidential and proprietary. Without waiving the objection:

A. Keystone has delivered more than 760 million barrels of oil from Canada to the United States markets since it began operation in July 2010. The small number of leaks that have occurred on the pipeline have had nothing to do with the integrity of the pipe itself. They have all occurred at our pump stations and other above-ground facilities and have been related to leakage from small-diameter fittings and seals. They have all been cleaned up with no environmental impact. We designed the pipeline to ensure that all small diameter fittings, valves and seals are located above ground where they can be easily accessed for maintenance and repairs. All of our pump stations are designed to capture and contain oil on our property. In total, less than 450 barrels of oil, out of more than 760 million barrels transported, have come out of the pipeline system since it began operations five years ago TransCanada is constantly striving to improve our performance and working towards our goal of having zero leaks or safety incidents. All pipeline leaks are thoroughly investigated regardless of their size in order to understand the cause and prevent future such incidents.

i. Keystone has delivered more than 760 million barrels of oil from Canada to

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the United States markets since it began operation in July 2010. The small number of leaks that have occurred on the pipeline have had nothing to do with the integrity of the pipe itself. They have all occurred at our pump stations and other above-ground facilities and have been related to leakage from small-diameter fittings and seals. They have all been cleaned up with no environmental impact. We designed the pipeline to ensure that all small diameter fittings, valves and seals are located above ground where they can be easily accessed for maintenance and repairs. All of our pump stations are designed to capture and contain oil on our property. In total, less than 450 barrels of oil, out of more than 760 million barrels transported, have come out of the pipeline system since it began operations three years ago TransCanada is constantly striving to improve our performance and working towards our goal of having zero leaks or safety incidents. All pipeline leaks are thoroughly investigated regardless of their size in order to understand the cause and prevent future such incidents. Other than those releases on the Keystone Pipeline, other liquid pipelines operated by TransCanada have not experienced any reportable leaks from their liquid pipeline systems during operations in the US and Canada TransCanada has successfully transported more than 760 million barrels of crude oil since initiating operations of the Keystone Pipeline.

ii. All reportable spills are documented in the Pipeline and Hazardous Materials Safety Administration (PHMSA) national incident database, and Keystone has

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documented the analysis of the PHMSA database in the 2009 Keystone XL Risk Assessment. Publically available reports from PHMSA and the National Transportation Safety Board provide information on spills, and these agencies issue industry advisories that allow the industry to learn from other pipeline accidents. These can be found on PHMSA's website.

B. Objection. This request seeks information that is not within Keystone's custody or control.

C. The Keystone XL Pipeline has not yet been built. Thus, there have not been any spills from the pipeline.

i. Keystone has delivered more than 760 million barrels of oil from Canada to the United States markets since it began operation in July 2010. The small number of leaks that have occurred on the pipeline have had nothing to do with the integrity of the pipe itself. They have all occurred at our pump stations and other above-ground facilities and have been related to leakage from small-diameter fittings and seals. They have all been cleaned up with no environmental impact. We designed the pipeline to ensure that all small diameter fittings, valves and seals are located above ground where they can be easily accessed for maintenance and repairs. All of our pump stations are designed to capture and contain oil on our property. In total, less than 450 barrels of oil, out of more than 760 million barrels transported, have come out of the pipeline since it began

operations three years ago TransCanada is constantly striving to improve our performance and working towards our goal of having zero leaks or safety incidents. All pipeline leaks are thoroughly investigated regardless of their size in order to understand the cause and prevent future such incidents. Other than those releases on the Keystone Pipeline in the US, other liquid pipelines operated by TransCanada have not experienced any reportable leaks from their liquid pipeline systems during operations. TransCanada has successfully transported more than 7600 million barrels of crude oil since initiating operations of the Keystone.

ii. All reportable spills are documented in the Pipeline and Hazardous Materials Safety Administration (PHMSA) national incident database, and ad Keystone has documented the analysis of the PHMSA database in the 2009 Keystone XL Risk Assessment. Publically available reports from PHMSA and the National Transportation Safety Board provide information on spills, and these agencies issue industry advisories that allow the industry to learn from other pipeline accidents. These can be found on PHMSA's website.

61. Describe in detail the impact of a worst case scenario spill/leak from the proposed KXL pipeline through each portion of the Sand Hills. Identify any documents that would support your respective answers. [Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

OBJECTION: This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. There are no Sand Hills in South Dakota.

62. Describe in detail the impact of a worst case scenario spill/leak into the shallow and surficial aquifers in Tripp County from the proposed KXL pipeline. Identify any documents that would support your answers. [Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

OBJECTION AND RESPONSE: This request seeks information that is confidential. The location and volume of a worst case scenario spill are confidential for homeland security reasons. Without waiving the objection, the 2009 Keystone XL Risk Assessment (FSEIS, Appendix P) described the movement of crude oil and its constituents in soils and groundwater. Field investigations of more than 600 historical petroleum hydrocarbon release sites indicate the migration of dissolved constituents typically stabilizes within several hundred feet of the crude oil source area (Newell and Conner 1998; USGS 1998). Over a longer period, the area of the contaminant plume may begin to reduce due to natural biodegradation. Removal of crude oil contamination will eliminate the source of dissolved constituents impacting the groundwater.

Spills are also discussed in the FSEIS in Section 4.1.3.4, including those in shallow and surficial aquifers. The fate and transport of benzene and other crude oil

constituents is discussed in numerous studies and articles, including those referenced in the 2009 Keystone XL Risk Assessment, such as:

Freeze, R. A. and J. A. Cherry. 1979. Groundwater. Prentice Hall, Inc. Englewood Cliffs, New Jersey. 604 pp.

Minnesota Pollution Control Agency. 2005. Assessment of Natural Attenuation at Petroleum Release Sites. Guidance Document c-prp4-03, Petroleum Remediation Program, Minnesota Pollution Control Agency. April 2005. 11 pp.

Neff, J. M. 1979. Polycyclic aromatic hydrocarbons in the aquatic environment. Applied Science publ. Ltd., London. 262 pp.

Newell, C. J. and J. A. Connor. 1998. Characteristics of Dissolved Petroleum Hydrocarbon Plumes: Results from Four Studies. American Petroleum Institute Soil / Groundwater Technical Task Force. December 1998.

Spence, L. R., K. T. O'Reilly, R. I. Maagaw, and W. G. Rixey. 2001. Chapter 6 – Predicting the fate and transport of hydrocarbons in soil and groundwater. in: risk-based decision-making or assessing petroleum impacts at exploration and production sites. Edited by S. McMillen, R. Magaw, R. Carovillano, Petroleum Environmental Research Forum and US Department of Energy.

United States Geological Service (USGS). 1998. Groundwater Contamination by Crude Oil near Bemidji, Minnesota. US Geological Survey Fact Sheet 084-98, September 1998.

Additional references on this subject from the FSEIS include:

American Petroleum Institute (API). 1992. Review of Natural Resource Damage Assessments in Freshwater Environments: Effects of Oil Release into Freshwater Habitats. API Publ. No. 4514.

API. 1997. Petroleum in the Freshwater Environment: An annotated Bibliography 1946-1993. API Publ. No. 4640.

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Hult, M.F. 1984. Groundwater Contamination by Crude Oil at the Bemidji, Minnesota, Research Site: U.S. Geological Survey Toxic Waste—Ground-Water Contamination Study. Papers presented at the Toxic-Waste Technical Meeting, Tucson, Arizona, March 20-22. USGS Water Investigations Report 84-4188.

Weaver, J.W., R.J. Charbeneau, J.D. Tauxe, B.K. Lien, and J.B. Provost. 1994. The hydrocarbon spill screening model (HSSM) Volume 1: User's guide. USEPA/600/R-94/039a. U.S. Environmental Protection Agency, Office of

Research and Development, Robert S. Kerr, Environmental Research Laboratory,

Ada, OK

63. Identify the USGS or other geological, hydrological, geo-hydrological studies conducted in the areas including what is now the proposed KXL pipeline route through South Dakota, which:

A. The thickness of the purportedly low permeability confining materials which would underlie the entirety of the proposed route either through the Sand Hills and over any shallow High Plains Aquifer;

B. The thickness of the confining materials underlying the balance of the proposed pipeline route;

C. The permeability of the sediment or bedrock underlying the proposed pipeline route for each part of the KXL pipeline;

D. Describe the composition of the sediments and/or bedrock underlying each part of the proposed route;

E. Describe the absence of any fractures (including micro-fractures), faults, karsts, sinkholes within a mile of the entirety of the proposed route and which might lengthen the "unlikely" travel of crude oil more than 300 feet from a spill site;

F. Describe the absence of channels in the underlying strata along each part of the proposed route which might lengthen the "unlikely" travel of crude oil more than 300 feet from a spill site;

G. Describe other factors which could lengthen the travel of crude oil beyond 300 feet from a spill site;

H. The location(s) of shallow aquifers along each part of the route;

I. The location(s) of surficial aquifers along each part of the route;

J. The location of domestic and livestock wells, public and private, within a mile of each part of the proposed route;

K. Describe the "appropriate" measures that TransCanada will take to prevent groundwater contamination;

L. Describe the "steps" to be taken to manage the flow of any ground water encountered;

M. Identify any documents that would support your respective answers.

[Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

OBJECTION AND ANSWER: This request is overlybroad and unduly burdensome. This request may also seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

A. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

B. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

C. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

D. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

E. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural

Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

In addition, consider the following:

Whitehead et al (1996): USGS Hydrologic Atlas HA 730-I

Hammond (1994): South Dakota Geol. Survey open file report UR-68

Lobmeyer (1985): USGS Prof. Paper 1402-D

Luckey et al (1986): USGS Prof. Paper 1400-D.

F. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural

Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

G. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

Lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide the thickness data. In addition, consider the following:

Davis and Putnam (2013): USGS Scientific Inv. Report SIR 2013-5069

Downey (1986): USGS Prof. Paper 1402-E

Gutentag (1984): USGS Prof. Paper 1400-A and 1400-B.

H. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

In addition, consider the following:

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Downey (1986): USGS Prof. Paper 1402-E

Gutentag et al (1984): USGS Prof. Paper 1400-B.

I. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

J. Keystone has not yet identified the location of wells, but will do so before construction.

K. "Impacts to groundwater during operations are expected to be low. Groundwater along the majority of the route is not very susceptible to contamination from a pipeline release due to the depths of the aquifers and presence of confining materials. Keystone consulted with the SD DENR during the routing process to identify and subsequently avoid sensitive aquifers and recharge areas (Source Water Protection Areas) in order to minimize risk to important public groundwater resources. In those areas where shallow, unconfined aquifers exist, the likelihood of adverse effects is low due to the low

probability of a spill and the factors described in Item #10 (i.e., safeguards, spill volumes, emergency response, and remediation).”

“If a spill were to occur, Keystone would immediately implement its Emergency Response Plan to contain and cleanup the spill. Infiltration rates in most areas will allow sufficient time for Keystone to detect, contain, and clean up the crude oil before long term environmental impacts occur.”

“Keystone will employ multiple safeguards to prevent and minimize impacts from a potential pipeline release. Broadly, these safeguards encompass routing (e.g., minimize stream crossings; avoidance of sensitive resources, when practical), material selection (e.g., steel grade, pipeline coating), engineering design (e.g., valve locations, depth of cover), pre-operational testing (e.g., hydrostatic testing, non-destructive testing of welds), continuous operational monitoring (e.g., SCADA, aerial surveillance, leak detection systems, in-line inspection tools), and emergency preparedness (e.g., Emergency Response Plan, pre-positioned personnel and equipment, on-going integrity management planning). Consequently, the chance of a spill occurring is low.” South Dakota PUC HP 09-001 Heidi Tillquist Testimony.

“In order to reduce the risk of spills, if permitted Keystone has agreed to incorporate additional mitigation measures in the design, construction, and operation of

the proposed Keystone XL Project, in some instances above what is normally required, including:

- 59 Special Conditions recommended by PHMSA;
 - 25 mitigation measures recommended in the Battelle and Exponent risk reports;
- and
- 11 additional mitigation measures.

Many of these mitigation measures relate to reductions in the likelihood of a release occurring. Other measures provide mitigation that reduces the consequences and impact of a spill should such an event occur. Mitigation measures are compiled in Appendix Z, Compiled Mitigation Measures, of this Supplemental EIS. Mitigation measures are actions that, if the proposed Project is determined to be in the national interest, Keystone would comply with as conditions of a Presidential Permit.” (FSEIS Executive Summary, pg. ES-19)

L. Keystone would coordinate with the South Dakota Department of Environment and Natural Resources regarding specific steps to be taken in the event that potential contamination of groundwater was suspected. These steps may include, but may not be limited to, soil and groundwater sampling, installation of monitoring wells, and use of groundwater remediation technologies.

M. References provided with each response above.

64. Describe the direct and indirect effects to people, other animals, plants and trees, fish, when exposed individually and or in combination to components of petroleum including crude oil: benzene, toluene, ethyl benzene and xylene. Identify any documents that would support your respective answers. [Applicable Finding or Condition No.: Findings 43-49; Conditions 31-37]

ANSWER: Effects to these receptors are discussed in the 2009 Keystone XL Risk Assessment and in the FSEIS (Chapter 4). Additional information, including effects of individual compounds, can be found in the Agency for Toxic Substances and Disease Registry (ATSDR) or the Hazardous Substances Data Bank (HSDB). Benzene is often used for screening for effects in petroleum products due its combined high water solubility and ability to cause toxicity at very low concentrations. See U.S. Department of Health and Human Services. 2015. Agency for Toxic Substances and Disease Registry (ATSDR). Internet website: <http://www.atsdr.cdc.gov>. Accessed January 21, 2015; U.S. National Library of Medicine, Toxicology Data Network (TOXNET). 2015. Hazardous Substances Data Bank (HSDB). Internet website: <http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB>. Accessed January 21, 2015.

65. Provide an explanation of why the occurrence of a spill or leak that could affect the High Consequence Area (HCA) is one every 250 years over the 34.4 miles of HCA (Finding 50), while such a spill would purportedly occur once in 7,400 years per

mile of pipeline (Finding 44). Identify any documents that would support your respective answer. [Applicable Finding or Condition No.: Findings 44, 50; Conditions 15-16, 35]

ANSWER: Finding of Fact 44 in the South Dakota Public Utilities Commission Amended Order states that, "Keystone's expert estimated the chance of a leak from the Project to be not more than one spill in 7,400 years for any given mile of pipe." This is calculated based on historical incident data from Pipeline and Hazardous Materials Safety Administration (PHMSA), as discussed in Section 3.0. The occurrence interval of 7,400 years is calculated by taking the inverse of the incident frequency (0.000135 incidents per mile per year). The result is an estimate, in years, of the time between spills. This is similar to the concept of flood recurrence intervals (i.e., 100-year floods).

Page 4-21 of the 2009 Keystone XL Risk Assessment shows that a spill affecting a High Consequence Area (HCA) in any state crossed by the Keystone XL Pipeline Project has an occurrence interval of 53 years. This is calculated by taking the inverse of the incident frequency (measured as incidents per mile per year) multiplied by the miles of HCAs crossed (141.2 miles).

66. Describe the contents of the "information concerning activities of concern" to be made available to landowners and others. Identify any documents that would

support your respective answer. [Applicable Finding or Condition No.: Finding 57; Condition 16]

ANSWER: Condition 16 does not address "information concerning activities of concern." With respect to Finding 57, it is landowners who are permitted to contact Keystone regarding "activities of concern." Accordingly, Keystone does not know specifically what activities may be of concern to individual landowners. In the context of the Finding, it is likely that such activities can be expected to involve farming operations above the pipeline.

67. Describe the worst case scenario for landowners of a spill or leak from the proposed pipeline as well as other risks deemed "low" by the PUC. Identify any documents that would support your respective answer. [Applicable Finding or Condition No.: Findings 57; Conditions 16, 31-38]

ANSWER: Keystone cannot speak to risks deemed "low" by the PUC.

68. Provide a list of claims or complaints (of any kind) made by landowners along the XL pipeline corridor since 2008. Identify any documents that would support your respective answer. [Applicable Finding or Condition No.: Finding 57; Conditions 49-50]

OBJECTION AND ANSWER: Assuming that the request is for a list of claims or complaints made by landowners along the Keystone Pipeline corridor in eastern South

Dakota to the PUC since 2008, this information is publicly available on the PUC website.

To the extent that the request is for complaints made by landowners along the Keystone XL Pipeline corridor since 2008, the request is vague, overlybroad, unduly burdensome, and seeks discovery of information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). All complaints reported to the liaison by the SDPUC are documented by the liaison and reported quarterly. These reports are available at:

<https://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx>. Without

waiving the objection, attached as Keystone 0785-1115 are documents related to landowner complaints or concerns regarding damages resulting from Keystone XL's use of the easement, which is within the scope of Amended Permit Condition 49.

69. Identify the latest version of the Unanticipated Discovery Plan, including any prior drafts. [Applicable Finding or Condition No.: Finding 58; Condition 43]

ANSWER: The Unanticipated Discovery Plan can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

70. Explain why TransCanada has sought a special permit from the PHMSA for authorization "to design, construct, and operate the Project up to 80% of the steel pipe specified minimum yield strength at most locations."

A. Identify and describe all spills/leaks from TransCanada pipeline operations since 2009 in Canada which have involved a "0.8 design factor" and therefore involving steel pipe with 80% of the specified minimum yield strength.

B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Findings 60-61]

ANSWER: Keystone is no longer seeking a special permit for PHMSA.

A. There are currently no TransCanada crude oil pipelines operating at 0.8 design factor in Canada.

B. Keystone's decision to withdraw its special permit request is explained in a Media Advisory dated August 2, 2010, attached as Keystone 0647-0649.

A. Keystone is no longer seeking a special permit from PHMSA. There are currently no TransCanada crude oil pipelines operating at 0.8 design factor in Canada.

B. Keystone's decision to withdraw its special permit request is explained in a Media Advisory dated August 2, 2010, attached as Keystone 0647-0649.

71. Explain why it is expected that any special permit issued by PHMSA would exclude pipeline segments in High Consequence Areas (HCAs).

A. Describe the potential risks of using pipeline segments with 80%, rather than 100% of the specified minimum-yield strength.

B. Identify documents upon which your answers are based.

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[Applicable Finding or Condition No.: Findings 60-62]

ANSWER: Keystone has withdrawn its request for a Special Permit.

Hypothetically, if Keystone were to reapply for a Special Permit, it is reasonable to anticipate that such a Permit would exclude pipeline segments in HCAs since the Special Permit for the original Keystone Pipeline excluded such areas.

72. Explain how application of the "0.8 design factor and API 5L PSL2 X70 high-strength steel pipe" with thinner walls would "provide a level of safety equal to or greater than that which would be provided if the pipeline were operated under the otherwise applicable regulations."

A. What are the "otherwise applicable regulations" from which TransCanada is seeking an exemption?

[Applicable Finding or Condition No.: Finding 63]

OBJECTION AND ANSWER: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL 49-41B-27. The issue is within the exclusive jurisdiction of PHMSA. Keystone has withdrawn its application for a special permit. On August 5 2010, TransCanada withdrew its application to the Pipeline Hazardous Materials and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a 0.8 design factor and adopted the 57 additional safety measures that would have been required under

the PHMSA special permit. There are no regulations TransCanada is seeking an exemption from.

73. Given that over the last 4 years (since initial permitting) in the United States alone, the fossil fuel pipeline Industry has had a devastating record with regard to the over 150 documented and reported incidents of significant faults, failures, ruptures, spills, and fatal explosions in the operation of oil and gas pipelines and their associated facilities/technologies.

A. Explain what additional lessons TransCanada has learned and what changes and/or improvements TransCanada has made with regard to technologies, design and operations to its proposed project;

B. Describe any identified, industry-level lessons or improvements, if any, which have come to light over the past 4 year that TransCanada has decided not to incorporate, apply or implement to the proposed Keystone project, and explain why such a determination was made;

C. Describe the safeguards developed and proposed to be deployed to address pipeline threats.

D. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 64; Conditions 31-38]

OBJECTION AND ANSWER: This request is argumentative, assumes facts not in evidence, and is improper as to form. It is also overlybroad, unduly burdensome, vague, and is not reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, additional safeguards to address pipeline threats are set forth in FSEIS Appendix Z Compiled Mitigation Measures.

74. What would result if there was hydraulic damage caused by over-pressurization of the pipeline?
- A. What are the potential causes of over-pressurization?
 - B. Describe a worst case scenario if there was a failure of the SCADA monitoring system and describe what could cause such failure;
 - C. Describe plans in place to prevent failure of the SCADA system;
 - D. Describe the ability of the SCADA system to detect leaks in the XL pipeline from 2008 through today;
 - E. Describe improvements in SCADA technology since 2010;
 - F. Describe actions TransCanada has taken to prevent a cyber-attack on the SCADA monitoring system;
 - G. Identify documents upon which your answers are based. [Applicable Finding or Condition No.: Finding 72, 92-94; Conditions 31-38]

ANSWER:

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A. There are two main causes of over-pressurization in pipelines: static pressure, and dynamic pressure. Static pressure excursions can occur during steady-state operation due to differences in elevation along the pipeline. In a static pressure excursion situation, it is possible to see pressures in excess of the pipeline's MOP at points of low elevation along the line. Dynamic pressure excursions result from a disturbance which causes a change in fluid velocity. Disturbances can result from events such as valve closure and pump shutdowns. Automated and independent pressure control and overpressure protection systems are designed to protect against static and dynamic overpressure.

B. Potential threats contributing to releases from small to large volumes are described within section 3.13.3.10 of the FSEIS. Equipment malfunctions including those of SCADA components are addressed within this section. Associated threats have been addressed through the following:

- Design practices including system fail safe functionality, key component and power supply redundancy (including key pressure and level sensors).
- Functional validation of systems including factory and site acceptance testing as well as comprehensive point to point verification between SCADA and associated field devices.

C. TransCanada has a dedicated team to provide operational support for its SCADA systems. The team provides 7x24 on-call SCADA support, primarily to the Oil Control Center. Additionally, automated monitoring systems alert the SCADA team in the event

that a SCADA system requires maintenance. The support team ensures that routine maintenance is performed on the SCADA systems, as required. Non-routine maintenance is managed through a risk-based integrity management process. The design of the Keystone XL SCADA system includes, at a minimum, dual redundant components at both the primary and backup Oil Control Centers.

D. TransCanada utilizes a state of the art Computational Pipeline Monitoring (CPM) leak detection system capable of identifying leaks down to the size of 1.5 to 2.0% of pipeline flow rate within a 2-hour window.

TransCanada has maintained the CPM to meet or exceed this level of leak detection sensitivity since the beginning of operations. The Keystone pipeline is monitored 24/7 by a dedicated Leak Detection controller within the Oil Control Center who is trained to identify and to respond to emerging events.

E. TransCanada actively funds and participates with Industry in the evaluation and development of leak detection technologies to augment our current systems. Examples of this effort include:

1. New Generation of Rarefaction Wave Leak Detection

This technology utilizes negative pressure waves generated to detect the onset of a leak. These waves travel from the origination point down both directions of the pipeline through the pipeline fluid at the speed of sound of the fluid medium and attenuate over distance as they travel. Dynamic pressure sensors installed at facilities with power and communication accesses (pump stations, mainline valves, etc.) can then measure these pulsations and detect the start of a leak and locate the leak by calculating the difference of arrival time of the pulsations at the two ends of the pipeline section.

2. In Line Inspection Leak Detection

An acoustic In Line Inspection (ILI) tool that is launched and received on a periodic basis like any other In Line Inspection (ILI) tool and is propelled by the commodity in the line. This technology claims to be able to detect leaks smaller than the current threshold of CPM systems; however, detection only occurs as the tool passes the leak location and is therefore not a continuous real time monitoring system.

3. Infrared thermal camera for facilities

The camera based leak detection technology functions by employing Infrared and color video cameras to detect temperature differences between objects of interest and the surrounding environment. Software analytics then attempt to determine whether the detection constitutes a leak or an environmental transient such as a wild animal, weather or other event (snow, rain, etc.). In the event of a detected leak, confirmation can be obtained through color cameras and real time notifications would be sent the Control Center and/or control room as pre-specified. This technology is still its infancy.

4. Aerial or Ground Patrol Leak Detection

This is a transportable leak detection technology designed for aerial or ground. This technology takes advantage of the difference of light absorption rates between the atmosphere and hydrocarbon vapors to detect hydrocarbon leak. Performance depends on the selected spectrum band, visible or non-visible, and the analysis algorithm vendors choose.

5. Cable Based External Leak Detection Systems

Cable based leak detection systems are buried along the pipeline to provide external means of leak detection. Different cable based technologies apply different physical principles to detect phenomena accompanying a leak as temperature change (DTS), leakage caused sound and vibration (DAS), and existence of hydrocarbon liquid (HSC) or hydrocarbon vapor molecules (VST) outside the pipe. These can be used as independent means of detection outside of the mass balance CPM systems. Despite its long history of use for leak detection at oil and gas facilities and pipeline security, application for leak detection on long-haul transmission pipelines is a recent emerging development.

Some of the above technologies are in a state of development, while others are commercially available today yet their practical application to long haul transmission pipelines such as Keystone XL has not been established. As part of our commitment to safety, TransCanada continues to evaluate these new and evolving leak detection technologies to potentially augment the best in class leak detection capabilities of our current system and for potential implementation on new pipelines including Keystone XL.

F. Consistent with industry practice, TransCanada does not publicly disclose the details of the security systems it has in place. We believe that it is not prudent to make this information public because of the likelihood that it will assist, and, potentially encourage, attackers.

75. Besides saying it will, how will TransCanada ensure the Commission that it will thoroughly implement procedures in the CMR to minimize impacts on cultivated lands, grasslands, wetlands, streams, and waterways? Identify documents upon which your answers are based. [Applicable Finding or Condition No.: Finding 73]

ANSWER: Condition 13 of the Commission's June 2010 Amended Final Order requires Keystone to comply with the CMR Plan. As noted in Conclusion of Law 9 of the Amended Final Order, the Commission has authority to revoke or suspend a permit for failure to comply with its terms and conditions. *See* SDCL § 49-41B-33.

76. Describe the status of TransCanada training of each of the groups of local first responders along the proposed route.

- A. Describe the training each of the groups of local first responders received for the XL pipeline;
- B. State if and how different than on-going and/or proposed training of such first responders near and for the pipeline corridor;
- C. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 100; Conditions 10, 15]

ANSWER: Prior to in service of Keystone XL it is regulated that there is Emergency Response Training. After the pipeline is operational, TransCanada reaches out to first responders at least annually via our public awareness program which includes

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as a baseline our contact info, where our pipeline is, and how to respond. Additionally, we conduct exercises and training sessions annually to which first responders are invited to attend and participate. Training and exercises include ICS, table top, deployment and full scale exercises. Our exercise planners are required to invite first responders to full scale exercises which includes the development of an incident management team and the simultaneous deployment of equipment resources to proximate a real event. These exercises are conducted in various locations along the pipeline system.

77. Do you admit that ground movement can cause abnormal movement of the proposed KXL pipeline?

A. Describe incidents where ground movement has resulted in abnormal movement of the XL or other pipeline similar to the proposed KXL Pipeline;

B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 101; Conditions 31-38]

ANSWER: Because there are no areas of high ground movement potential along the Keystone XL route in South Dakota, Keystone does not expect any incidents of ground movement. There have been no incidents of ground movement resulting in abnormal movement of the Keystone I pipeline.

78. Since 49 CFR Part 195 would require TransCanada Keystone to conduct an "internal inspection" of any pipe section(s) potentially moved by abnormal ground

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movement, how long does "quickly" mean that such an inspection would reveal any damage:

A. From their staging area to the furthest part of the KXL pipeline to which he/she/they would first respond, how long would it reasonably take for inspectors to be notified, respond to, internally inspect pipeline for damage, and for spills to be "averted or minimized"?

B. Does "averted" mean 100% of the spill contained? i. If not, what percent contained does it mean?

C. What percent containment of such a spill would considered "minimized"?

i. After a spill has been contained to the point of being so "minimized", describe the plans for full containment.

D. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 101; Conditions 31-38]

ANSWER: It would take between one and two weeks to mobilize and conduct an internal inspection.

79. Identify the location(s) where slope instability poses a potential threat of ground movement along the Project route.

A. Identify TransCanada's most current Integrity Management Plan (IMP) showing incorporation of locations where slope instability poses a potential threat to the pipeline;

B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 79; Conditions 8, 15, 20-21]

OBJECTION AND RESPONSE: To the extent that it seeks information outside South Dakota, this request is overlybroad and unduly burdensome and seeks the discovery of information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). In addition, the request for the Integrity Management Plan is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of the PHMSA. The PUC's jurisdiction over the Integrity Management Plan is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the Integrity Management Plan would commercially disadvantage Keystone. Without waiving the objection, please refer to FSEIS Chapter 3 Affected Environment, Section 3.1.2 Environmental Setting, Section 3.1.2.5 Landslide. Also, see Chapter 4 Environmental Consequences, Section 4.1.3.4 Geologic Hazards Landslides.

80. What is the status of preparation and publication of the "public awareness programs" required to be prepared by 49 CFR Part 195? Identify the documents upon which your answers are based. [Applicable Finding or Condition No.: Finding 102; Conditions 1-3, 6-7]

ANSWER: Keystone's existing public awareness program will be updated prior to KXL pipeline commencing service to incorporate any updated materials.

81. Describe the status of preparation of different construction and reclamation techniques for the variety of geological for differing soils conditions, slopes, vegetation and land use along the pipeline route, in consultation with the National Resource Conservation Service, construction/reclamation unit. Identify documents upon which your answers are based. [Applicable Finding or Condition No.: Finding 80; Conditions 15-16]

ANSWER: The preparation of different construction and reclamation techniques for the variety of geological for differing soils conditions, slopes, vegetation and land use along the pipeline route, in consultation with the National Resource Conservation Service, construction/reclamation unit has been completed. The 2013 Construction/Reclamation Unit Specifications contains this information and are found in Appendix R of the Department of State FSEIS (2014).

82. With regard to the inspectors that TransCanada will have "on a construction spread" during construction:

- A. What is the number of inspectors to be onsite;
- B. What is the number of such inspectors who will be "environmental inspectors;"
- C. Describe the minimum qualifications for such environmental inspectors;
- D. What is the distance of each construction spread that an individual environmental inspector will be responsible for monitoring on any given day of construction;
- E. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 85; Condition 14]

ANSWER: The final Project construction schedule has not been determined.

- A. The number of inspectors including Environmental Inspectors (EIs) and the configuration of the EIs along the Project route in South Dakota will not be determined until the final Project schedule is determined.
- B. There will be a minimum of one environmental inspector per spread.
- C. The minimum requirements for an environmental inspector will be specified by Keystone during the hiring process.

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D. Environmental inspectors are not stationary. They review procedures and activities along a spread based upon what work may be occurring on that spread on a given day. They then review and report on compliance by moving between the different spread activities that are occurring on a given day.

E. The Department of State FSEIS (2014), The Amended Permit Conditions issued by the Commission.

83. What is the current bond amount under SDCL §49- 41B-38 for damage to highways, roads, bridges and other related facilities during and after construction.

[Applicable Finding or Condition No.: Finding 88; Condition 23]

OBJECTION AND ANSWER: This request is not relevant or likely to lead to the discovery of admissible evidence to the extent that it seeks information outside South Dakota. Without waiving the objection, the bond requirements for Keystone XL are stated in the June 2010 Amended Final Order at Condition 23(f). The amount of the bond was proposed by Keystone and recommended by staff witness Binder in Docket HP 09-001.

84. What is the current bond amount for damages to rivers, streams, shallow or surface or deeper aquifers during construction? [Applicable Finding or Condition No.: Finding 88; Conditions 23, 49]

ANSWER: There is no bond amount for the items listed.

85. Describe each location of emergency equipment designed to stop leaks in the pipeline.

A. In relation to each such location, what is the furthest distance from each proposed emergency equipment storage site from the area of pipeline outside his or her responsibility;

B. What kinds of leaks can be expected in this pipeline which would warrant an ERP;

C. For each location, the distance from personnel trained to assess and stop leaks or spills from this kind of pipeline, to the emergency equipment site as well as to the furthest point that site would first respond with such equipment for;

D. Identify the documents upon which you relied to answer these questions;

[Applicable Finding or Condition No.: Finding 98; Conditions 31-38]

ANSWER: Oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan, which was filed confidentially with the PUC in HP 07-001.

A. At this time it is undetermined. However this will be calculated in the future using risk assessment.

COMPANY OWNED RESPONSE EQUIPMENT

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The Company owns and operates oil spill response equipment contained within response trailers staged throughout the pipeline system. This equipment is maintained according to manufacturer's recommendations by Company and/or contracted personnel. An equipment summary detailing locations, type and amount stored in the response trailers is listed in Figure A.1. The Company also has contracts in place with Oil Spill Removal Organizations and other clean-up contractors that are capable of responding to all discharges along the Pipeline. Figure A.2 lists the contracted Oil Spill Removal Organizations.

Equipment trailers are located at strategic points along the pipeline. The locations of each trailer are listed in the response zone annex. The equipment inventory for each trailer is listed in the Keystone XL ERP (Figure A.1.).

The Qualified Individual has the authority to activate other private contractors, experts, and consultants as the situation demands.

All Pipeline personnel who might be involved in an oil spill have been informed that detergents or other surfactants are prohibited from being used on an oil spill in the water and that dispersants can only be used with the approval of the Canadian Regional Environmental Emergency Team (REET) or US Regional Response Team, the

interagency group composed of Federal and State agency representatives that coordinates oil spill response.

OTHER COMPANY RESOURCES

Additional Company spill response equipment and manpower resources are not available to supplement the response operation; however, third party contractors will be activated on an as needed basis.

CONTRACT RESOURCES

The resources will be secured from a Company approved contractor. Management will typically handle notification/implementation of these resources. Figure A.2 provides a quick reference to the Oil Spill Removal Organizations and details their response capability and estimated response times. Telephone reference is provided in Figure 2.5. (Note: The Company will ensure that each OSRO has a comprehensive maintenance program and applicable training / drills programs in place at contract renewal.)

COOPERATIVE/MUTUAL AID RESOURCES

B. A variety of potential emergencies or incidents including 'types of leaks' are outlined in the Keystone ERP. Initial response actions are those taken by local personnel immediately upon becoming aware of a discharge or emergency incident, before the Initial Response Team (described in Section 4.0) is formed and functioning. Timely

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implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

C. At this time it is undetermined. However this will be calculated in the future using risk assessment.

D. The supporting documentation is the Keystone ERP Emergency Response Plan (ERP). The Keystone ERP will be amended to accommodate Keystone XL.

86. Identify the most recent IMP submitted to the Commission and other appropriate agencies, including but not limited to HCAs. [Applicable Finding or Condition No.: Finding 102; Conditions 1-2]

OBJECTION: To the extent that this request seeks production of the Emergency Response Plan, the request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA). The PUC's jurisdiction over the emergency response plan is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan could commercially disadvantage Keystone.

87. Itemize the property tax payments to South Dakota towns, cities, and counties each year since 2010:
- A. Along the proposed KXL pipeline corridor, pump stations, or other properties related to the pipeline;
 - B. Along the existing XL pipeline corridor, pump stations, or other properties related thereto;
 - C. If less than a million dollars annually to any given public entity for any given year, please explain why "millions" were not paid to that entity that year;
 - D. Identify the documents upon which you relied to answer these questions;

[Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions]

ANSWER:

- A. Keystone has paid Butte County \$1,403, Haakon County \$77, Harding County \$375, Jones County \$98, Meade County \$881, and Tripp County \$2,439 for ad valorem real property taxes levied in the years 2010 through and including 2013.
- B. Keystone has paid taxing entities in Beadle County \$1,796,731; Brookings County \$5,734; Clark County \$1,602,403; Day County \$2,294,732; Hanson County \$627,561; Hutchinson County \$2,015,399; Kingsbury County \$855,201; Marshall County \$1,533,418; McCook County \$568,591; Miner County \$1,782,412; and Yankton County

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\$1,040,782; for a total of \$14,128,224 for ad valorem real property taxes levied with respect to the Keystone base pipeline for the years 2009 through 2013. 2014 real property taxes are paid a year in arrears in 2015.

C. Ad valorem real property taxes are calculated by applying local governmental tax levies to the assessed valuation of Keystone property interests as determined by the South Dakota Department of Revenue. Levies are determined and calculated by local taxing entities in a statutorily prescribed manner. The amount of ad valorem real property taxes payable in each county depends on the assessed valuation of Keystone property in the county's tax districts and the levy adopted each year by the local taxing entities.

D. The tax bills and a compilation thereof, marked as Keystone 0768-0773, prepared in preparation for answering this interrogatory.

88. With respect to the jobs you allege will be brought to South Dakota by the KXL pipeline project:

A. State the number, job title, and expected duration of the temporary construction related jobs expected;

i. State what percentage of current South Dakota citizens is expected to be hired for each job title.

ii. Is there any preference for South Dakota citizens to obtain any or all of these temporary jobs?

iii. State the number and percentage of the total construction jobs expected to be already be filled by out-of-state workers who have worked on other parts of the KXL or other TransCanada pipelines.

B. State the number, type, and expected duration of the permanent jobs expected;

i. State the number of permanent jobs expected to be held by current South Dakota citizens, as opposed to someone who moves from out of state to South Dakota to take the job.

ii. Will there any preference for South Dakota citizens to obtain any or all of the permanent jobs in South Dakota?

C. Identify the location(s), size and duration of the labor or "man-camps" expected to be constructed or operated during the construction phase of this project in South Dakota;

D. Identify any research that TransCanada has conducted or reviewed with regard to the costs and plans for policing said camps and protecting local reservation populations;

E. Identify the documents upon which you relied to answer these questions; [Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions 1-2]

ANSWER:

A. Assuming this question refers to 'average annual jobs' - It is estimated that Project construction in South Dakota will support 3,500 jobs across all sectors, of which between 1,038 and 1,500 jobs will be directly construction-related. The 3,500 jobs supported by construction of the Project are considered 'average annual jobs', defined as one position that is filled for one year, while the 2,700 to 3,900 temporary construction personnel are expected to be employed for the 4- to 8-month seasonal construction period over 1 to 2 years.

i. : It is estimated that between 270 and 390 temporary construction positions created in South Dakota will be filled by residents of the State.

ii. Jobs are filled based on the availability of qualified personnel.

iii. It is estimated that between 2,430 and 3,510 temporary construction positions created in South Dakota will be filled by non-South Dakota residents.

B. Approximately 25 permanent employees and 15 temporary contractors will be distributed along the proposed pipeline route, including the route in South Dakota. Job duration is commensurate with operations of the pipeline and titles will vary.

i. Approximately 25 permanent employees and 15 temporary contractors will be distributed along the proposed pipeline route, including the route in South Dakota.

ii. Jobs are filled based on the availability of qualified personnel.

C. The construction camps in South Dakota will be located in Tripp, Harding, and Meade Counties. As stated in Section 4.10.3.1 of the FSEIS, each camp would typically house 900 to 1,300 workers. The camps would be operated only as long as necessary for construction on the spread served by each camp.

D. TransCanada Keystone will implement policies and procedures that all residents will be required to comply with during their residency at the camp. Violations may lead to removal from the camp or the appropriate level of disciplinary action. TransCanada will liaise with and engage law enforcement if any issues arise from the man-camps, as appropriate including augmenting local law enforcement staffing impacts resulting from camp operations.

As stated at page 4.10-13 of the FSEIS:

Keystone states that each camp site would be fully fenced and have a guard house at a single entrance. A contract security officer manning the guard house would be provided on a 24/7 basis. In addition, at all times there would be at least one additional roving security officer supplemented with off-duty law enforcement personnel, as needed.

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Local law enforcement agencies would also respond to violent, criminal, or illegal activities.

E. The construction camps are addressed in the FSEIS.

89. Should there be a worst case scenario or even serious contamination of farmland and/or water resources and/or explosion of the pipeline near homes or towns with people, explain how TransCanada can still show the Project will have a "minimal" effect on the health, safety, or welfare of its inhabitants. Identify the documents upon which you relied to answer these questions. [Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions 1,2, 31-36]

OBJECTION: This request is argumentative and improper in form. It calls for speculation and assumes facts not in evidence and is therefore beyond the scope of discovery under SDCL § 15-6-26(b). The PUC found in its conclusions of law, ¶ 6, that Keystone met its burden of proof on this issue.

90. Identify your best estimate of the projected useful life of the proposed project, and provide any plans or proposals for decommissioning the project at the end of its useful life, and/or for the disposal of heavily contaminated and corroded sections of pipeline and surrounding soil or other materials, due to usage, leaks or spills during the course of its operation. Identify the documents upon which you relied to answer these questions. [Applicable Finding or Condition No.: Condition 33]

ANSWER: The estimate of the projected useful life of the proposed project is 50 years. There are no plans for decommissioning at this time. All applicable codes and standards will be followed.

Dated this 5th day of February, 2015.

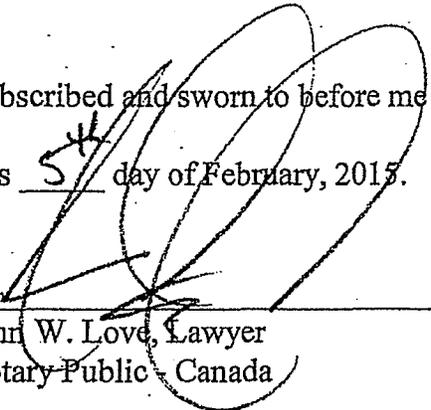
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By  _____

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.



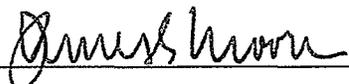
John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Intertribal COUP's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

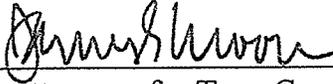
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission,
a true and correct copy of Keystone's Responses to Intertribal COUP's Initial
Interrogatories and Request for Production of Documents, to the following:

Robert P. Gough
Intertribal COUP
PO Box 25
Rosebud, SD 57570
BobGough@IntertribalCOUP.org



One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

2(a). Describe how TransCanada will comply with these Acts as they apply to the project in relation to rivers, ground water and water system crossings in South Dakota.

ANSWER: Keystone will comply with Clean Water Act 404 by permitting the crossing of all jurisdictional waterbodies in South Dakota under the US Army Corps of Engineers Nationwide General Permit (NWP) 12. As part of the permitting process of the Project route in South Dakota, Keystone will submit a NOI to the US Army Corps of Engineers, South Dakota Regulatory Office and will consult as required with the South Dakota Regulatory Office.

No waterbody crossing in South Dakota requires permitting under the Section 10 Rivers and Harbor Act.

2(b). Provide research entailing migration of benzene in watersheds, rivers and ground water.

ANSWER: The fate and transport of benzene and other crude oil constituents is discussed in numerous studies and articles, including those in the Department of State SFEIS Appendix P, 2009 Keystone XL Risk Assessment, such as:

Freeze, R. A. and J. A. Cherry. 1979. Groundwater. Prentice Hall, Inc. Englewood Cliffs, New Jersey. 604 pp.

Minnesota Pollution Control Agency. 2005. Assessment of Natural Attenuation at Petroleum Release Sites. Guidance Document c-prp4-03, Petroleum Remediation Program, Minnesota Pollution Control Agency. April 2005. 11 pp.

Neff, J. M. 1979. Polycyclic aromatic hydrocarbons in the aquatic environment. Applied Science publ. Ltd., London. 262 pp.

Newell, C. J. and J. A. Connor. 1998. Characteristics of Dissolved Petroleum Hydrocarbon Plumes: Results from Four Studies. American Petroleum Institute Soil / Groundwater Technical Task Force. December 1998.

Spence, L. R., K. T. O'Reilly, R. I. Maagaw, and W. G. Rixey. 2001. Chapter 6 – Predicting the fate and transport of hydrocarbons in soil and groundwater. in: risk-based decision-making or assessing petroleum impacts at exploration and production sites. Edited by S. McMillen, R. Magaw, R. Carovillano, Petroleum Environmental Research Forum and US Department of Energy.

United States Geological Service (USGS). 1998. Groundwater Contamination by Crude Oil near Bemidji, Minnesota. US Geological Survey Fact Sheet 084-98, September 1998.

Additional references on this subject from the FSEIS include:

American Petroleum Institute (API). 1992. Review of Natural Resource Damage Assessments in Freshwater Environments: Effects of Oil Release into Freshwater Habitats. API Publ. No. 4514.

API. 1997. Petroleum in the Freshwater Environment: An annotated Bibliography 1946-1993. API Publ. No. 4640.

Grimaz, S., S. Allen, J. Steward, and G. Dolcetti. 2007. Predictive evaluation of the extent of the surface spreading for the case of accidental spillage of oil on ground. Selected Paper IcheaP8, AIDIC Conference series, Vol. 8, 2007, pp. 151-160.

Hult, M.F. 1984. Groundwater Contamination by Crude Oil at the Bemidji, Minnesota, Research Site: U.S. Geological Survey Toxic Waste—Ground-Water Contamination Study. Papers presented at the Toxic-Waste Technical Meeting, Tucson, Arizona, March 20-22. USGS Water Investigations Report 84-4188.

Weaver, J.W., R.J. Charbeneau, J.D. Tauxe, B.K. Lien, and J.B. Provost. 1994. The hydrocarbon spill screening model (HSSM) Volume 1: User's guide. USEPA/600/R-94/039a. U.S. Environmental Protection Agency, Office of Research and Development, Robert S. Kerr, Environmental Research Laboratory, Ada, OK.

8(a). Explain what changes have been made in the Emergency Response Plan and Integrity Management Plan since 2010.

OBJECTION: To the extent that this request seeks production of the Emergency Response Plan, the request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. The PUC's jurisdiction over pipeline safety is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan and the integrity management plan could commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan

to PHMSA until sometime close to when the Keystone Pipeline is placed into operation.

Keystone's Emergency Response Plan is addressed in The Final Supplemental

Environmental Impact Statement at

<http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

8(b). Provide the Emergency Response Plan.

OBJECTION: The request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. The PUC's jurisdiction over pipeline safety is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan could commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at

<http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

8(c). Provide the Integrity Management Plan.

OBJECTION: The request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also

seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. The PUC's jurisdiction over pipeline safety is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the integrity management plan could commercially disadvantage Keystone. In addition, Keystone is not required to submit its Integrity Management Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation.

18(a). Where will fuel storage facilities be located within 200 feet of private wells and 400 feet of municipal wells?

ANSWER: The locations of the fuel storage facilities have not been determined at this point in the planning process. The fuel storage facility locations will be determined at the time of construction. Refer to Section 2.1.5.3, Fuel Transfer Stations of the DOS FSEIS (2014). Wells will be identified prior to the fuel storage facility final locations and will adhere to HP 09-001, Condition 18.

18(b). How will minimizing and exercising vigilance be enforced?

ANSWER: Keystone will minimize and exercise vigilance by providing adequate training and supervision of its contractors with respect to this provision.

21(a). Define "frac-out."

ANSWER: "Frac-out" is addressed in the FSEIS in Section 4.3.3.2 at page 4.3-21, which provides:

In some instances, pressurized fluids and drilling lubricants used in the HDD process have the potential to escape the active HDD bore, migrate through the sills, and come to the surface at or near the crossing construction site, an event commonly known as a frac-out. Measures identified in a required HDD contingency plan would be implemented, including monitoring of the directional drill bore, monitoring downstream for evidence of drilling fluids, and mitigation measures to address a frac-out should one occur.

21(b). What are concerns and safety issues related to a "frac-out."

ANSWER: This question is addressed at page 4.8-20 of the FSEIS:

The HDD method avoids direct disturbance to the river, channel bed, or banks. While the HDD method poses a small risk of frac-out (i.e., release of bentonite-based drilling fluids), potential releases would be contained by best management practices that would be described within the HDD Contingency Plans required for drilled crossings. Most leaks of HDD fluids occur near the entry, exit locations for the drill, and are quickly contained and cleaned up. Frac-outs that may release drilling fluids into aquatic environments are difficult to contain primarily because bentonite readily disperses in flowing water and quickly settles in standing water. Should this type of release occur, bentonite is non-toxic but in sufficient concentration may physically inhibit respiration of adult fish and eggs.

It is also addressed at pages 4.7-11 to -12 of Section 4.7.3.2 of the FSEIS:

The HDD method for crossing waterbodies would be used to minimize disturbance to aquatic habitat, stream banks, and recreational or commercial fisheries. Impacts could occur if there is an unintended release of drilling fluids (i.e., a frac out) during the HDD operation. A frac out could release bentonitic drilling mud into the aquatic environment. The released drilling mud would readily disperse in flowing water or eventually settle in standing

water. Although bentonite is non-toxic, suspended bentonite may produce short-term impacts to the respiration of fish and aquatic invertebrates due to fouled gills. Longer-term effects could result if larval fish are covered and suffocate due to fouled gills and/or lack of oxygen. If the frac out occurred during a spawning period, egg masses of fish could be covered, thus inhibiting the flow of dissolved oxygen to the egg masses. Benthic invertebrates and the larval stages of pelagic organisms could also be covered and suffocate.

To minimize the potential for these impacts to occur, a contingency plan would be implemented to address an HDD frac out. This plan would include preventive and response measures to control the inadvertent release of drilling fluids. The contingency plan would also include instructions for downstream monitoring for any signs of drilling fluid during drilling operations, and would describe the response plan and impact reduction measures in the event a release of drilling fluids occurred. Drill cuttings and drilling mud would be disposed of according to applicable regulations; disposal/management options may include spreading over the construction ROW in an upland location or hauling to an approved off-site, licensed landfill or other approved sites.

21(c). Provide "frac-out plan."

ANSWER: Keystone currently has no contractors retained to undertake construction. When Keystone employs a pipeline contractor, that contractor will develop the plan. See Section 7.4.5 and Appendix G.

34(a). Describe what progress has been made in the evaluation and performance assessment activities regarding high consequence areas since 2010.

OBJECTION: To the extent that this request seeks a list of High Consequence Areas, the identity and location of High Consequence Areas is confidential

and Keystone is required by PHMSA to keep this information confidential. To the extent that this request seeks production of the Emergency Response Plan, the request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. The PUC's jurisdiction over pipeline safety is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan could commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan to PHMSA until sometime close to when Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

34(b). Define "high consequence area."

OBJECTION: To the extent that this request seeks a list of High Consequence Areas, the identity and location of High Consequence Areas is confidential and Keystone is required by PHMSA to keep this information confidential. Without waiving the objection, the definition of high consequence area can be found in Department of State SFEIS chapter 3 Section 3.13.4.1 and Code of Federal Regulation 49

CFR 195.450.

34(c). Provide a completed list of high consequence areas.

OBJECTION: The identity and location of High Consequence Areas is confidential and Keystone is required by PHMSA to keep this information confidential.

34(d). Explain how project inhabitants and local communities will be informed and educated about high consequence areas.

ANSWER: TransCanada Public Awareness Program is designed to increase awareness of pipeline safety to protect the public, environment and TransCanada facilities. The PA Program reaches out to affected public, excavators/contractors, emergency officials and local public to ensure they are engaged and education about living and working safely near TransCanada facilities. This includes awareness of areas that have been defined as high consequence areas.

34(c). Provide a copy of the Emergency Response Plan. (Requested above with #8.)

OBJECTION: To the extent that this request seeks production of the Emergency Response Plan, the request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of the U.S. Department of Transportation, Pipeline and Hazardous Materials

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Safety Administration (PHMSA). The PUC's jurisdiction over the emergency response plan is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan could commercially disadvantage Keystone.

34(f). Provide Integrity Management Plan. (Requested above with #8.)

OBJECTION: The request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. The PUC's jurisdiction over pipeline safety is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the integrity management plan could commercially disadvantage Keystone. In addition, Keystone is not required to submit its Integrity Management Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation.

19. Explain what has been discussed with the SD Geological Survey, the Dept. of Game Fish and Parks, local landowners and govt. officials.

ANSWER: Keystone referenced publicly available data/reports from the SD Geological Survey. Discussion between Keystone and the South Dakota Dept. of Game, Fish, and Parks focused on the identification of the potential biological resources that may

be impacted by the Project route in South Dakota and the potential mitigation measures that could be implemented to minimize impacts.

The following is a summary of Keystone consultation history with SD Game, Fish, and Parks as documented in the USFWS issued May 2013 Biological Opinion (Appendix H of the of the Department of State FSEIS (2014))

- June 10, 2008: Keystone met with staff from USFWS and South Dakota Department of Game, Fish, and Parks (SDGFP), at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to wildlife, special status species, and sensitive habitat that could potentially occur in the Project area. The goal of the meeting was to gather input on agency recommendations based on the information sent to them in April 2008 for species occurrence, habitat assessments, and future field surveys. Keystone incorporated comments from the meeting into survey protocols and BMPs for future agency verification.
- January/February 2009: Keystone initiated section 7 consultation with the USFWS. Keystone continued discussions with BLM, and state wildlife agency offices for South Dakota that included state-specific special status species survey protocols and BMPs for the species identified as potentially occurring during the 2008 meetings. A summary of the findings from the 2008 biological field surveys was included in the discussions.

- January 27, 2009: Keystone met with staff from the USFWS and SDGFP at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to special status species surveys. The goals of the meeting were to verify Keystone's survey approach, BMPs, discuss required field surveys, and review the information that was sent to the USFWS in the January/February 2009, informal consultation package. The USFWS and SDGFP provided additional recommendations to Keystone's sensitive species mitigation approach to be updated prior to final agency concurrence.

- October 23, 2012: A meeting was held between the USFWS, Department, SDGFP, BLM, and Keystone regarding the greater sage-grouse and a compensatory mitigation plan for the species in South Dakota. Discussions included a management plan and avoidance, minimization, and mitigation strategies.

35(a). Provide the Integrity Management and Emergency Response Plans. (Requested above.)

OBJECTION: The request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. The PUC's jurisdiction over pipeline safety is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency

response plan and the integrity management plan could commercially disadvantage Keystone. In addition, Keystone is not required to submit these documents to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

35(b). Define "Unusually Sensitive Areas."

ANSWER: Unusually Sensitive Areas are defined by U.S. federal pipeline safety regulations (49 CFR 195.6) as:

As used in this part, a USA means a drinking water or ecological resource area that is unusually sensitive to environmental damage from a hazardous liquid pipeline release.

(a) An USA drinking water resource is:

- (1) The water intake for a Community Water System (CWS) or a Non-transient Non-community Water System (NTNCWS) that obtains its water supply primarily from a surface water source and does not have an adequate alternative drinking water source;
- (2) The Source Water Protection Area (SWPA) for a CWS or a NTNCWS that obtains its water supply from a Class I or Class IIA aquifer and does not have an adequate alternative drinking water

source. Where a state has not yet identified the SWPA, the Wellhead Protection Area (WHPA) will be used until the state has identified the SWPA; or

(3) The sole source aquifer recharge area where the sole source aquifer is a karst aquifer in nature.

(b) An USA ecological resource is:

(1) An area containing a critically imperiled species or ecological community;

(2) A multi-species assemblage area;

(3) A migratory waterbird concentration area;

(4) An area containing an imperiled species, threatened or endangered species, depleted marine mammal species, or an imperiled ecological community where the species or community is aquatic, aquatic dependent, or terrestrial with a limited range; or

(5) An area containing an imperiled species, threatened or endangered species, depleted marine mammal species, or imperiled ecological community where the species or community occurrence is considered to be one of the most viable, highest quality, or in the best condition, as identified by an element occurrence ranking (EORANK) of A (excellent quality) or B (good quality).”

35(c). Define "Hydrologically Sensitive Areas."

ANSWER: Hydrological sensitive areas were defined by the South Dakota Public Utilities Commission Amended Final Order as "the High Plains Aquifer area in southern Tripp County," as well as "other similarly vulnerable and beneficially useful surficial aquifers that Keystone is aware of."

35(d). Explain how unusually sensitive areas and hydrologically sensitive areas are addressed differently compared to other areas.

ANSWER: Unusually sensitive areas are High Consequence Areas (HCAs), as defined by 49 CFR 195.6. Keystone has elected to treat "hydrologically sensitive areas," as defined in the South Dakota Public Utilities Commission Order Condition 35, as operator-defined HCAs. By designating these segments as operator-defined HCAs, these locations are treated by Keystone as if they were PHMSA-identified HCAs. Portions of the pipeline that could potentially affect HCAs are subject to high levels of inspection and repair criteria, as mandated by 49 CFR 195.

35(e). Confirm that you are not fully aware of all vulnerable and beneficially useful aquifers and your intent is to only become aware of them during construction and route evaluation not yet completed.

ANSWER: Keystone does not confirm these statements. Keystone has consulted with groundwater staff with South Dakota's Department of Natural Resources (SD

DENR) and rural water districts regarding Keystone's route relative to aquifers in South Dakota. Keystone also used data available on the SDDENR website <http://denr.sd.gov/data.aspx> and published literature regarding the geology and hydrology of the along and near the pipeline ROW to assist in identifying vulnerable aquifers in South Dakota. Geological references and hydrogeological references are listed in Chapters 3 and 4 in the Department of State Supplemental FEIS. Some pertinent additional references are:

- Gutentag (1984): USGS Prof. Paper 1400-B
- Downey (1986): USGS Prof. Paper 1402-E
- Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.
- In addition, lithologic logs available from the SD DENR at

<http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

35(f). Define "unconfined aquifers."

ANSWER: From Applied Hydrogeology (1994) "*Unconfined Aquifer: Aquifer close to the surface with materials of high permeability extending from the land surface to the base of the aquifer. Water table aquifer.*"

Source: Fetter, C.W. (1994.) Applied Hydrogeology. Prentice Hall. 680 pp.

35(g). List known unconfined aquifers to be crossed by the project.

ANSWER: Department of State Table 3.3-2 (SFEIS) presents a list of unconfined aquifers in South Dakota crossed by the Keystone XL Pipeline Project. Along the route in South Dakota, the High Plains Aquifer (Ogallala Formation) in Tripp County is often unconfined. Other areas with unconfined aquifers include alluvial aquifers associated with streams, and occasional unconfined stretches in the Hell Creek, Fox Hills, and Pierre Shale aquifers. However, along the majority of the route, aquifers crossed by the Keystone XL pipeline are confined.

35(h). Explain the concern of routing through unconfined aquifers.

ANSWER: In South Dakota, unconfined aquifers are found mainly associated with streams (alluvial aquifers) and in portions of the High Plains Aquifer (Ogallala Formation) in Tripp County (FSEIS). Table 3.3-2 (FSEIS) presents the unconfined aquifers in South Dakota. The Keystone XL pipeline in South Dakota was routed to reduce impacts to a number of valuable resources, including but not limited to, unconfined aquifers.

35(i). Describe how it could be possible to route through an unknown, unconfined aquifer during construction.

ANSWER: Keystone has attempted to identify vulnerable aquifers through consultation with State agencies and rural water districts, as well as data provided South Dakota Department of Environment and Natural Resources (SD DENR)

(<http://denr.sd.gov/data.aspx>), and published literature. The location of unconfined aquifers is documented in the literature on the hydrogeology of South Dakota and the SD DENR website provides well logs for wells near the pipeline ROW, so that unconfined conditions can be identified.

It is possible that, during construction and through discussion with landowners crossed by the Project, Keystone may identify shallow wells located in unconfined aquifers. Many water-bearing units in South Dakota may be unmapped due to their small size and type of geological formation that has limited use due to low water productivity and generally lower water quality. If present, these wells are often associated with agricultural uses (e.g., livestock stock tanks).

35(j). Provide documentation of further route evaluation since 2010, including assessments for aquifers and hydrologically sensitive areas.

OBJECTION AND RESPONSE: This request is vague, overlybroad, and unduly burdensome. Without waiving the objection, since 2010, Keystone has continued to identify groundwater resources through agency consultation use of the South Dakota Department of Environment and Natural Resources (SD DENR) website (<http://denr.sd.gov/data.aspx>) and the following publications. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

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- Gutentag (1984): USGS Prof. Paper 1400-B
- Downey (1986): USGS Prof. Paper 1402-E
- Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the SD DENR at

<http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data. Since 2010, the Keystone XL pipeline route was evaluated using these data sources to identify hydrologically sensitive areas.

35(k). Explain how you will deem an aquifer vulnerable and beneficially useful?

ANSWER: Keystone relies on two primary sources to identify vulnerable and beneficially useful aquifers: Pipeline and Hazardous Materials Safety Administration (PHMSA)-identified unusually sensitive areas for drinking water, as defined in 49 CFR 195.6, and Source Water Protection Areas for groundwater as identified by the South Dakota Department of Environment and Natural Resources (SD DENR). Both PHMSA and the SD DENR have provided these data confidentially to Keystone.

35(l). This condition states: "...in some reaches of the Project in southern Tripp County, the High Plains Aquifer is present at or very near ground surface and is overlain by highly permeable sands permitting the uninhibited infiltration of contaminants."

Sandy soil and ground water at or above the surface means a pipe with expected pinhole leaks will be immersed in ground water. This is the exact type of situation of soil/ground

water which caused the route change in Nebraska. If this was reason to change the route in Nebraska, explain why it is still acceptable in South Dakota.

OBJECTION AND RESPONSE: This request is argumentative and assumes facts not in evidence. Without waiving the objection, "*Pipeline routing is optimized to reduce impacts and risks to the environment, population, and to reduce integrity concerns.*"

Routing decisions in each state were made in consultation with the various local state and federal agencies. Reroutes in Nebraska were determined based on public and agency input during the NEPA process. Routes approved in South Dakota were based on consultation with South Dakota local agencies. All routing decisions took into account the screening options outlined in the FSEIS Section 2.2.2.2 Major Pipeline Route Alternatives and Section 2.2.5.1 Screening of Major Route Alternatives. The first round of screening included the following criteria:

- "Meeting the proposed Project's purpose and need, including the extent to which additional infrastructure (pipeline) is necessary to access Bakken crude oil;
- Consistency with the proposed border crossing and therefore the approved routing in Canada;
- Availability;
- Reliability;

- Length within the United States;
- Total length of the pipeline, including both the United States and Canada;
- Estimated number of aboveground facilities;
- Length co-located within an existing corridor;
- Acres of land directly affected during construction; and
- Acres of land directly affected permanently.” (FSEIS Section 2.2.2.2 pg 2-2-2).

The second round of screening included the following criteria:

- “Total length of the pipeline, including both the United States and Canada;
- Use of the Canadian-approved Keystone XL pipeline ROW outside of the United States;
- Approximate acres affected by construction of the proposed Project (based on a typical 110-foot construction ROW)
- Federal lands crossed (miles);
- Principal aquifers crossed (miles);
- American Indian lands crossed (miles);
- Total wetlands crossed (miles);
- USFWS critical habitat for threatened and endangered species crossed (miles);

- Known cultural resource sites (listed on National Register of Historic Places) within 500 feet of proposed pipeline;
- Number of waterbodies crossed; and
- Soils designated as highly erodible by wind crossed (miles).” FSEIS Section 2.2.5.1 pg 2.2-59)

Rerouting away from the environmentally sensitive Nebraska Department of Environmental Quality (NDEQ)-identified Sand Hills Region was based on input from the NDEQ and the public.

South Dakota Public Utilities Commission's (SD PUC) Amended Order identified the southern portion of Tripp County as having a “hydrologically sensitive area” for groundwater resources due to the sandy soils and presence of unconfined portions of the High Plains Aquifer. As discussed previously, Keystone will treat “hydrologically sensitive areas”, as defined in the SD PUC Order Condition 35, as operator-defined high consequence areas (HCAs). By designating these segments as operator-defined HCAs, these locations are treated by Keystone as if they were Pipeline and Hazardous Materials Safety Administration (PHMSA)-identified HCAs. Portions of the Keystone XL pipeline that could potentially affect HCAs are subject to high levels of inspection and repair criteria, as mandated by 49 CFR 195.

Where soils are fragile (i.e., sandy soils that exhibit conditions similar to the Nebraska Department of Environmental Quality-identified Sand Hills Region that are highly susceptible to erosion by wind), special considerations and measures also would be undertaken in proposed Project areas to protect environmentally sensitive resources.

“Approximately 76 percent (11,664 acres) of the overall proposed Project would affect soils characterized as highly erodible by either wind or water (see Figure 4.2.1-1). Erosion control measures would be implemented wherever soil is exposed, steep slopes are present, or erosion potential is high. To enforce use of these methods, an environmental inspector (EI) would be assigned to each construction spread. In addition, specific procedures have been developed to address concerns related to potential erosion to the fragile soils in the southern South Dakota and northern Nebraska region; the proposed Project right-of-way (ROW) through these fragile soils would be monitored for several years to ensure that reclamation and revegetation efforts are successful (see Section 4.2.3.2, Operation Impacts).” (FSEIS Section 4.2 Soils, pg 4.2-2)

“Fragile Soils in Southern South Dakota and Northern Nebraska

In southern South Dakota and northern Nebraska, the proposed Project

route would enter an area with fragile soils (i.e., landscapes where the soil exhibits conditions similar to the NDEQ-identified Sand Hills Region and the soils are very susceptible to wind erosion; see Soils Environmental Setting Sections 3.2.2.2, South Dakota, 3.2.2.3, Nebraska, and Figure 3.2.2-2, Highly Wind Erodible Soils). To address concerns related to potential erosion in the region, specific construction, reclamation, and post-construction procedures have been developed, as described in Section 4.15 of the CMRP, Fragile Soil Clean Up and Reclamation/Revegetation, (see Appendix G). This document provides site-specific reclamation plans that itemize construction, erosion control, and revegetation procedures for these fragile areas. Additionally, Keystone would implement micro-routing adjustments where practicable and appropriate to minimize steep topography with fragile soils.

To reduce potential impacts related to severe wind and water erosion, the following provides a summary of proposed Project best management practices (BMPs) that would be implemented during construction, reclamation, and post-construction. These BMPs are included in the CMRP for fragile soil areas. Additional procedures are also described in Sandy Prairie Construction/Reclamation Unit Plan (see Appendix R,

Construction/Reclamation Plans):

- Keystone would educate construction personnel regarding the necessity to strictly adhere to the proposed Project BMPs designed to minimize impacts to fragile soil landscape areas.
- Minor route re-alignments would be incorporated through these fragile areas to avoid particularly erosion-prone locations, such as ridgetops and existing blowouts as much as practicable.
- Keystone would avoid highly saturated areas, such as wetlands, to the maximum extent possible.
- Construction soil handling procedures would strive to reduce the width of disturbance to the native prairie landscape by adopting Trench-line or Blade-width stripping procedures where practicable.
- Topsoil conservation would be conducted on all areas where excavation occurs.
- Topsoil piles would be protected from erosion through matting, mulching, watering, or tackifying as deemed practicable.
- Traffic management limitations would be employed on specific areas possessing high erosion potential or sensitive habitat.
- Native seed mixes would be developed with input from the local

NRCS offices and through collaboration with regional experts. All seed would be certified noxious weed-free and would be calculated on a pure live seed basis.

- Straw or native prairie hay may be used as mulch, applied to the ROW, and crimped into the soil to prevent wind erosion. All mulch would be documented as noxious weed-free.
- Land imprinting may be employed to create impressions in the soil, thereby reducing erosion, improving moisture retention, and creating micro-sites for seed germination. (Land imprinting adds a waffle-like texture to the soil, forming indentations that capture and absorb rainwater that otherwise runs off untreated land.)
- Sediment logs (barriers in the form of logs used to control soil erosion) or straw wattles would be used in place of slope breakers (short terraces) that are constructed of soil. Using sediment logs would result in less soil disturbance to the ROW.
- Photodegradable matting would be applied on steep slopes or areas prone to extreme wind exposure such as north- or west-facing slopes and ridge tops. Biodegradable pins would be used in place of metal staples to hold the matting in place.

- Keystone would work with landowners to evaluate fencing the ROW from livestock, or alternatively, provide compensation to rest a pasture until vegetation can become established.
- Management concerns such as livestock access to water or movement within a pasture would be addressed as necessary by Keystone working with the landowner.
- As part of post-construction monitoring and repair, Keystone would monitor reclamation on the ROW for several years and would repair erosion and reseed poorly revegetated areas as deemed necessary by Keystone. During monitoring, landowners would be informed of these efforts and intended actions going forward.
- A noxious weed management plan would be established based on consultation with state and county experts.

Fragile Soils in Southern South Dakota and in Northern Nebraska

To address concerns related to potential erosion in the fragile soil areas in southern South Dakota and northern Nebraska, specific construction, reclamation, and post-construction procedures have been developed as described in the Fragile Soils section within the CMRP (see Appendix G). This document provides a site-specific reclamation plan that itemizes

construction, erosion control, and revegetation procedures for these fragile areas. Additional procedures are also described in Sandy Prairie Construction/Reclamation Unit Plan (see Appendix R, Construction/Reclamation Plans and Documentation). The proposed Project ROW through this region would be monitored for several years to ensure that reclamation and revegetation efforts are successful. Any proposed Project areas where reclamation and revegetation efforts are initially unsuccessful would be re-evaluated and restored.

Proposed Project areas that have been revegetated would be attractive as cattle forage. Due to potentially warmer soils in the immediate vicinity of the proposed pipeline, early forage may be concentrated along the ROW over time (Dave Wedin, personal communication, June 29, 2011).

Additionally, animal trackways (i.e., a route of frequent travel by animals) can serve as incipient blowout areas. Keystone has agreed to inform landowners of this concern. Fencing of the ROW may be completed if required; however, fencing could be a serious impediment to landowner access. As described previously, Keystone would work with landowners to evaluate fencing the ROW from livestock, or alternatively, provide compensation to rest a pasture until vegetation can become established.

Also as previously indicated, Keystone would monitor reclamation on the ROW for several years and repair erosion and reseed poorly revegetated areas as necessary.

Additionally, based on input received from the NRCS, Keystone would be required to employ a method of assessment of soil productivity such as yield comparison between ROW and non-ROW areas in areas where susceptible soils have been identified with the NRCS." (FSEIS, Section 4.2 Soils).

35(m). Explain TransCanada's follow-up with suggestion by DENR staff, given in testimony, to reroute the KXL pipeline around the city of Colome's source water area.

ANSWER: Routing is an iterative process where refinements to the route are continuously made as new, substantive data are obtained. In this case, Keystone had obtained HCA data from the Pipeline and Hazardous Materials Safety Administration (PHMSA) and consulted with the South Dakota Department of Environment and Natural Resources' (SD DENR) ground water Staff. During the consultation process, Keystone received Source Water Protection Area (SWPA) data. These data sets were integrated into the routing process and, upon identification of the route through the Colome SWPA, Keystone rerouted out of the area. Keystone consulted with the SD DENR's groundwater Staff and informed them of the issue with the initially proposed route and a proposed route refinement to avoid the SWPA. SD DENR staff confirmed that the reroute was acceptable.

36(a). Identify all emergency medical response planning contained within the emergency response plan.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law, which has exclusive jurisdiction over issues of pipeline safety. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. *See* Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the emergency response plan would commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>.

36(b). What actions have been taken by TransCanada to ensure the medical communities in South Dakota are prepared and educated to treat people exposed to spills and water contamination from spills?

OBJECTION AND RESPONSE: To the extent that this request seeks production of the Emergency Response Plan, this request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law, which has exclusive jurisdiction over issues of pipeline safety. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. *See* Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the emergency response plan would commercially disadvantage Keystone. In addition, Keystone is not required to submit its Emergency Response Plan to PHMSA until sometime close to when the Keystone Pipeline is placed into operation. Keystone's Emergency Response Plan is addressed in The Final Supplemental Environmental Impact Statement at <http://keystonepipeline-xl.state.gov/documents/organization/221189.pdf>. Without waiving the objection, TransCanada has provided educational information to possible affected public elected officials, excavators, and first responders. This educational material comes in the form of a pamphlet and is titled Oil Pipeline for Emergency Responders. It is marked as Keystone 1523-1538.

36(c). How will inhabitants and communities near the project area be notified of spills?

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ANSWER: Keystone's response teams will use the National Incident Management System (NIMS) Incident Command System (ICS) to manage emergency response activities. First response to an incident will be provided by a Keystone local response team. Keystone's Regional Emergency Operations Center (EOC) will respond, to the degree necessary, to incidents exceeding local capability. Duties of the local responders are described in the TransCanada-Keystone Emergency Response Plan (see FSEIS, Appendix I) which will be adapted for use on Keystone XL.

Response teams will be led by an Incident Commander, and will include persons accountable for external notifications including a Public Information Officer (including media communications), and a Liaison Officer (including agency communications). External notifications are those made to entities outside of the Company including Federal, State and local regulatory agencies, as well as railroad and utility companies. These notifications include both verbal and written requirements. Landowners and appropriate public agencies will be notified in the case of potential groundwater contamination.

40(a). Provide documentation supporting your assertion that polyethylene water piping is permeable to BTEX.

ANSWER: Permeation of polyvinyl chloride (PVC) and polyethylene (PE) pipes by any hydrocarbon is extremely rare (Gaunt et al. 2006). Permeation incidents were

reported at a frequency of one per 14,000 miles of mains and one per 1,000,000 miles of PE/PVC service connections (Gaunt et al. 2006).

A number of studies have been conducted on the topic of hydrocarbon permeation through PVC and PE water piping, including:

Gaunt, James A. et. al. 2006. "Performance of Plastic Pipes and Pipe Gaskets In Hydrocarbon Contamination: Field Experience and Laboratory Studies". Department of Civil, Construction, and Environmental Engineering Iowa State University, Ames, IA. American Waterworks Association.

Berens, A.R. 1985. "Prediction of organic chemical permeation through PVC pipe". JAWWA 77 (11), 57-64 (1985).

40(b). Explain health concerns related to BTEX.

ANSWER: BTEX consists of benzene, toluene, ethylbenzene, and xylenes.

Benzene can result in health impacts from short term (i.e., acute) exposure or long-term (i.e., chronic) exposure. Acute effects can include drowsiness, dizziness, rapid heart rate, headaches, and unconsciousness. At extremely high concentrations, acute toxicity can result in mortality. Benzene levels at these concentrations would not be anticipated from a release from the Keystone XL Pipeline Project. Potential chronic health effects of benzene exposure include anemia and excessive bleeding. Long-term exposure to high concentrations of benzene in the air can lead to cancer (ATSDR 2007a, EPA 2015). Due

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to emergency response cleanup, sampling, and monitoring, remedial actions, and the high volatility of benzene, benzene concentrations would largely dissipate within the first 24 hours, minimizing the potential for chronic effects in humans.

Toluene exposure may cause fatigue, confusion, and weakness (ATSDR 2001, EPA 2015). At extremely high levels, toluene may cause mortality. Toluene levels at this concentration would not be expected to occur due to a release along the Keystone XL Pipeline Project.

Ethylbenzene exposure may cause eye and throat irritation or dizziness (ATSDR 2010, EPA 2015). Chronic exposure to low levels of ethylbenzene (weeks to years) may cause damage to the inner ear or kidneys. Ethylbenzene has been identified as a possible human carcinogen.

High levels of xylene exposure, either acute or chronic, can cause headaches, lack of muscle coordination, confusion, and eye, skin, throat, and nose irritation. Extremely high levels can cause unconsciousness and mortality (ATSDR 2007b, EPA 2015). Xylene levels at this concentration would not be expected to occur due to a release along the Project. Studies by the International Agency for Research on Cancer and the EPA have not been able to rule xylene out as a carcinogen.

More detailed information is available through the Agency for Toxic Substances & Disease Registry (ATSDR; <http://www.atsdr.cdc.gov/>) and the US Environmental

Protection Agency (USEPA; <http://water.epa.gov/drink/contaminants/>).

Agency for Toxic Substances and Disease Registry. 2014. ATSDR Toxic Substances Portal. Available from: <http://www.atsdr.cdc.gov/>

Agency for Toxic Substances & Disease Registry (ATSDR). 2010. ToxFAQs for Ethylbenzene. Accessed January 20, 2015.

<http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=382&tid=66>.

Agency for Toxic Substances & Disease Registry (ATSDR). 2001. ToxFAQs for Toluene. Accessed January 20, 2015.

<http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=160&tid=29>.

Agency for Toxic Substances & Disease Registry (ATSDR). 2007a. ToxFAQs for Benzene. Accessed January 20, 2015.

<http://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=38&tid=14>.

Agency for Toxic Substances & Disease Registry (ATSDR). 2007b. ToxFAQs for Xylene. Accessed January 20, 2015.

<http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=295&tid=53>.

US Environmental Protection Agency (EPA). 2015. Drinking Water Contaminants. Accessed January 20, 2015. <http://water.epa.gov/drink/contaminants/>.

Environmental Protection Agency. 2014. National Primary Drinking Water Regulations. Available from: <http://water.epa.gov/drink/contaminants/>

40(c). Provide an MSDS of all products to be transported in KXL, including the diluents.

ANSWER: Representative Material Safety Data Sheets are provided in Appendix Q of the FSEIS.

40(d). Provide list of ground water quality standards, specifically listing chemicals involved in tar sands oil product and diluents.

OBJECTION: Keystone does not determine ground water quality standards. They are established by the South Dakota Department of Environment and Natural Resources.

40(e). Describe how the decision was made to designate concern of BTEX only within 500 feet of the Project.

ANSWER: This decision was made by the PUC as part of Amended Permit Condition 40.

40(f). Confirm this safety measure will only be implemented at the request of a landowner or public water supply system.

ANSWER: Yes.

40(g). Explain why this measure is optional instead of mandatory.

ANSWER: This decision was made by the PUC as part of Amended Permit Condition 40.

40(h). TransCanada has agreed to do this: "At least forty-five days prior to commencing construction, Keystone shall publish a notice in each newspaper of general circulation in each county through which the Project will be constructed advising landowners and public water supply systems of this condition." What percent of inhabitants do you expect to reach by issuing a warning in this manner?

OBJECTION AND RESPONSE: This request is speculative and argumentative.

A notice is not a "warning." Without waiving the objection, Keystone expects that notice in newspapers of general circulation would reach a substantial portion of the inhabitants.

46(a). Provide written plan as to how you will find and provide a permanent water supply for various locations along route if a well should become contaminated, including specific alternate sources.

ANSWER: In the unlikely event of a leak, petroleum hydrocarbons generally do not move more than 300 feet through the subsurface and substantive movement takes months to years offering ample time for emergency response and containment. Therefore, impacts to private and public wells are not anticipated. Further, Keystone will comply with the South Dakota Public Utilities Commission order (Condition of Permit #46):

"In the event that a person's well is contaminated as a result of construction or pipeline operation, Keystone shall pay all costs associated with finding and providing a permanent

water supply that is at least of similar quality and quantity; and any other related damages, including but not limited to any consequences, medical or otherwise, related to water contamination.”

46(b). Define “quantity” as it is used in this condition.

ANSWER: Keystone interprets “quantity” to have its ordinary meaning.

46(c). Provide cost estimates for providing water to the city of Colome, domestic wells or an entire ranching operation should water supplies become contaminated.

ANSWER: Please refer to DOS SFEIS Appendix Z Mitigation Measures page 108 item 7. Keystone has committed, in the event that a spill contaminates potable water supplies, be responsible for cleanup and restoration. Keystone would be responsible for providing an appropriate alternative potable water supply of comparable volume and quality to those impacted or provide compensation, if this option is agreed upon by the affected parties and Keystone. For groundwater used for industrial or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities impacted, as may be agreed upon among the affected parties and Keystone. If the permit were approved, Keystone would memorialize that agreement through an appropriate written agreement with the Environmental Protection Agency.

46(d). Explain how providing a permanent water supply will be ensured into perpetuity.

ANSWER: See answer to interrogatory no. 46(a).

46(e). Explain how people and cattle using private wells and public wells can be assured their water is free of contamination from undetected leakage, particularly in Tripp County.

ANSWER: Given the leak detection methodologies that are part of the project, undetected well contamination is unlikely.

46(f). Describe what experience South Dakota has had cleaning up tar sands oil product spills into rivers and ground water.

OBJECTION: This request seeks information that is not within Keystone's custody or control.

46(g). Describe any experience the State of South Dakota or any other state has had in "sparging" ground water in order to cleanse tar sands oil product from aquifers.

OBJECTION: This request seeks information that is not within Keystone's custody or control.

46(h). Describe types of spills which may be difficult or impossible to remediate.

ANSWER: Crude oil spills can be remediated. Initial contaminant and cleanup is important to limit the area affected and to remove as much product as quickly as possible. Any residual oil can be remediated through a variety of remediation technologies as well as through natural attenuation.

As discussed in Section 2.1 of the FSEIS, Keystone has reviewed the National Transportation Safety Board 2012 Marshall, Michigan Accident Report, including the conditions that led to operational failures on the pipeline that resulted in the spill.

Keystone has stated they would include lessons learned from this spill, including the following:

- “Get big quick: timeliness of a tactical response to an oil spill into water is imperative. While Keystone has stated that it already uses this philosophy, the Kalamazoo spill reinforced this need to respond with as many resources as possible as quickly as possible. To that end, Keystone would strategically store equipment and employ personnel and contractors along the length of the pipeline to ensure a maximum 6-hour response time.
- Pre-qualify a large contractor network: Contractors would be used to supplement any response Keystone would make to an oil spill. By ensuring a large pool of trained/skilled contractors along the length of the pipeline have been pre-qualified and contracted with Keystone, the response time would be minimized and resources (equipment and personnel) available are maximized.
- Emergency response planning details need to include source

containment: source containment plans including strategies and tactics would be included in the overarching ERP.

- Equipment resources required for sunken and submerged oil:
Keystone would further identify equipment resources required to respond to sunken and submerged oil and ensure personnel are appropriately trained on the equipment. A primary strategy for oil spill response would still be to contain and recover as much oil as possible as quickly as possible to prevent oil from weathering and therefore potentially becoming submerged and sinking. In addition, Keystone already owns and practices the use of containment devices that would prevent downstream migration of submerged and sunken oil such as dams. This type of equipment would be further identified and procured for the proposed Project.”

Section 2.1 of the FSEIS also covers remediation of potential crude oil spills and construction related spills.

“Corrective remedial actions would be dictated by federal, state, and local regulations and enforced by the PHMSA Office of Pipeline Safety as well as appropriate state and/or local agencies. Required remedial actions may be large or small, dependent upon a number of factors including state

mandated remedial cleanup levels, potential effects to sensitive receptors, the volume and extent of the contamination, whether or not there is a violation of water quality standards, and the magnitude of adverse impacts caused by remedial activities. A large remediation action could include one or more of a number of approaches (such as excavation of soil, pumping and treating ground water, or natural attenuation). However, the selection of a remedial measure would be in coordination and agreement with the appropriate regulatory agency.

If, during construction, tanks or contamination are found, they would be managed according to federal, state, and/or local regulations. Further, Keystone would make individuals available who are trained in identifying and disposing of hazardous materials during construction.

If there is an accidental release from the proposed Project, Keystone would implement the remedial measures necessary to meet the federal, state, and local standards that are designed to help ensure protection of human health and environmental quality. Additional information on remediation is presented in Section 4.13 of the FSEIS, Potential Releases.”

46(i). Identify responsible parties who will conduct water analysis to assure toxins from

undetected leaks have not migrated into water resources, including frequency of testing and who will assume cost of testing.

ANSWER: If a release were to occur, Keystone would implement its Emergency Response Plan (ERP). This ERP is responsive to the size of spill and resources potentially affected. In the event surface waters were impacted, Keystone would implement its ERP and notify appropriate federal and state agencies. If the release is significant, an Incident Command Team will develop a sampling plan, determined in consultation with the appropriate state and federal agencies that identifies the appropriate sampling, frequency, and responsible payee.

46(j). Describe potential scenarios in which medical costs related to contamination will be reimbursed.

ANSWER: If it is determined that medical costs are incurred and result of contamination caused by Keystone, Keystone will reimburse such costs.

46(k). Provide a detailed listing of potential toxins which could contaminate wells.

ANSWER: The South Dakota Department of Environment and Natural Resources (SD DENR) identifies a number of compounds that can potentially contaminate wells (refer to the following list [SD DENR 2009]). Many of these chemicals are not constituents of petroleum hydrocarbons but are associated with farming, industrial activities, and urban runoff.

- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethylene
- 1,2 Dibromo-3-chloropropane (DBCP)
- 1,2,4-Trichlorobenzene
- 1,2-Dichloroethane

- 1,2-Dichloropropane
- 2,4,5-TP (Silvex)
- 2,4-d, 3-Hydroxycarbofuran
- Alachlor (Lasso)
- Aldicarb
- Aldicarb sulfone
- Aldicarb sulfoxide
- Aldrin
- Antimony (total)
- Arsenic (total)
- Atrazine
- Barium (total)
- Benzene
- Benzo[a]pyrene
- Beryllium (total)

- Butachlor
- Cadmium (total)
- Carbaryl
- Carbofuran
- Carbon tetrachloride
- Chlordane
- Chromium (total)

- cis-1,2-Dichloroethylene
- Dalapon
- Di(2-Ethylhexyl) adipate
- Di(2-ethylhexyl) phthalate

- Dicamba
- Dichloromethane (methylene chloride)

- Dieldrin
- Dinoseb
- Diquat
- Endothall
- Endrin
- Ethylbenzene
- Ethylene dibromide (EDB)
- Glyphosate
- Heptachlor
- Heptachlor epoxide
- Hexachlorobenzene (HCB)
- Hexachlorocyclopenta-diene
- Lindane
- m-Xylene
- Mercury (total inorganic)

- Methomyl
- cis-1,2-Dichloroethylene
- Dalapon
- Di(2-Ethylhexyl) adipate
- Di(2-ethylhexyl) phthalate
- Dicamba
- Dichloromethane (methylene chloride)

- Methoxychlor
- Metolachlor
- Metribuzin
- Monochlorobenzene (Chlorobenzene)
- Nitrate
- Nitrite

- o-Dichlorobenzene
- o-Xylene
- Oxamyl (Vydate)
- p-Dichlorobenzene
- p-Xylene
- Pentachlorophenol
- Picloram
- Propachlor
- Selenium (total)
- Simazine
- Styrene
- Tetrachloroethylene
- Thallium (total)
- Toluene
- Total polychlorinated biphenyls (PCBs)
- Toxaphene
- trans-1,2-Dichloroethylene
- Trichloroethylene
- Vinyl chloride

-
-
-

South Dakota Department of Environment and Natural Resources (SD DENR). 2009.

Tripp County Water User District Drinking Water Quality Report. Available from:

<http://www.ewg.org/tap-water/whatsinyourwater2/SD/tripp-county-water-user-district/4600520>.

46(l). Provide documentation detailing adverse health effects caused from exposure to these toxins, including the various routes of entry into the human body.

ANSWER: As stated in the previous response (#54), many of these compounds identified in the previous response are not constituents of crude oil.

The U.S. Environmental Protection Agency has a detailed listing of potential drinking water contaminants. This includes the toxins addressed above and their potential health effects on humans due to ingestion of contaminated drinking water. This information is available at <http://water.epa.gov/drink/contaminants/>.

Additionally, the Agency for Toxic Substances and Disease Registry (ATSDR) website includes detailed reports on potential health effects of these toxins as well as potential routes of entry into the human body. This information is available at <http://www.atsdr.cdc.gov/>.

Agency for Toxic Substances and Disease Registry. 2014. ATSDR Toxic Substances Portal. Available from: <http://www.atsdr.cdc.gov/>

Environmental Protection Agency. 2014. National Primary Drinking Water Regulations. Available from: <http://water.epa.gov/drink/contaminants/>.

18(a). Regarding an advisory warning issued in September, 2014 by the federal Pipeline

{01815033.1}

and Hazardous Materials Safety Administration, what are TransCanada's plans to ensure pipeline safety due to the fact different types of product will be transported in KXL?

OBJECTION AND RESPONSE: This request seeks information related to pipeline safety, which is within the exclusive jurisdiction of PHMSA. Without waiving the objection, PHMSA Advisory 2014-0040 is not applicable to Keystone. This advisory is related to flow reversal, product change (e.g., crude oil to refined product) and/or conversion to service (e.g., convert from natural gas to crude oil) and throughput capacity change.

18(b). PHMSA cautioned pipeline operators across the country about "the potential significant impact flow reversals, product changes and conversion to service may have on the integrity (safety) of a pipeline." The advisory adds: "Flow reversals, product changes, and conversions to service may impact various aspects of a pipeline's operation, maintenance, monitoring, integrity management, and emergency response. Pressure gradients, velocity, and the location, magnitude, and frequency of pressure surges and cycles may change. Operators may also consider increasing the throughput capacity of the pipeline. Increasing throughput may also impact the pressure profile and pressure transients. ... Leak detection and monitoring systems may be affected."

OBJECTION AND ANSWER: This request is not a question and cannot be answered. It also relates to an issue that is within the exclusive jurisdiction of PHMSA.

and is therefore not relevant or likely to lead to the discovery of admissible evidence.

Without waiving the objection, PHMSA Advisory 2014-0040 is not applicable to Keystone. This advisory is related to flow reversal, product change (e.g., crude oil to refined product) and/or conversion to service (e.g., convert from natural gas to crude oil) and throughput capacity change.

18(c). Current regulations state: "Operators must review their integrity (safety) management program. ... Operators must notify PHMSA if these changes will substantially affect their integrity management program, its implementation, or modifies the schedule for carrying out the program elements."

OBJECTION: This request is not a question and cannot be answered. It also relates to an issue that is within the exclusive jurisdiction of PHMSA and is therefore not relevant or likely to lead to the discovery of admissible evidence.

18(d). KXL is intended to transport two very different products, the much less dense and highly volatile Bakken oil product and the heavy diluted bitumen from Alberta. How will the two very different products affect KXL's operation, maintenance, monitoring, integrity management, and emergency response? How will the two very different products affect pressure gradients, velocity, and the location, magnitude, and frequency of pressure surges and cycles?

ANSWER: Please refer to Department of State FSEIS Chapter 3 Section 3.13.3.

The Keystone pipeline is designed to transport a range of crude oils. The hydraulic analysis considers various inputs such velocity, surge and cyclic loading. The operation, maintenance, monitoring, integrity management, and emergency response plans consider the range of products transported.

33(a). Provide updated maps.

OBJECTION AND ANSWER: This request is vague, overbroad, unduly burdensome, and seeks information that is not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, please refer to the attached route variation maps marked as Keystone 0470-0583.

41(a). Provide map detailing all water bodies to be crossed in S.D., to include locations KXL would cross the Missouri and Yellowstone Rivers upstream from S.D.

OBJECTION: Keystone has previously filed with the PUC maps showing the route through South Dakota, which also show where the pipeline crosses rivers and other water bodies. Waterbody crossing permitting is within the control of the United States Army Corps of Engineers, and is beyond Keystone's control.

41(b). Provide map clearly depicting all waterways crossed by route which are tributaries into the Missouri River.

OBJECTION: Keystone has previously filed with the PUC maps showing the route through South Dakota, which also show where the pipeline crosses rivers and other water bodies.

41(c). Identify distances from KXL waterway crossings to point of confluence with the Missouri River.

OBJECTION: Keystone withdraws its previous objection. For the perennial stream crossings where the downstream portions of the stream are located within the boundaries of South Dakota and have a point of confluence with the Missouri River, the distance from the KXL pipeline crossing of each waterway to the Missouri River are in Table 1 below.

Table 1. Downstream Distance to the Missouri River

Stream Name	Periodicity	Miles downstream to Missouri River
Cottonwood Creek	Perennial	87.2
Bad River	Perennial	93.4
South Fork Grand River	Perennial	290.4
Clarks Fork Creek	Perennial	285.7
South Fork Moreau River	Perennial	290.4
Pine Creek	Perennial	222.7
Dry Creek	Perennial	86.5

41(d). Provide map(s) demonstrating all public water utility intakes on the Missouri River system.

OBJECTION: This request is overlybroad, unduly burdensome, and seeks information that is not within Keystone's custody or control. In addition, the location of the information is related to HCA's and deemed confidential by PHMSA.

41(e). By what date will permitting of water body crossings be completed?

OBJECTION: Permitting of water body crossings is within the control of the United States Army Corps of Engineers, and is beyond Keystone's control.

41(f). Provide a copy of the CMR Plan. Ex TC-1, 5.4.1, pp. 45-46.

ANSWER: A current copy of the CMR Plan is attached to Keystone's certification petition and is on file with the PUC.

41(g). Provide research which describes migration of spillage in these waterways.

OBJECTION: This request is vague, overlybroad, and unduly burdensome.

41(h). Please explain and describe water protection areas located downstream of major river crossings on the proposed route.

OBJECTION: This request is overlybroad, unduly burdensome, and seeks information that is not within Keystone's custody or control. In addition, the location of the information is related to HCA's and deemed confidential by PHMSA.

41(i). Explain risks of HDD, including possibility of contaminants being released into waterways during this process.

ANSWER: This issue is addressed in the FSEIS at pages 4.3-21, 4.8-20, and 4.7-11, 12.

50(a). Provide a map depicting the High Consequence Areas.

OBJECTION: This request seeks the identity and location of High Consequence Areas, which is confidential by statute, and Keystone is required by PHMSA to keep this information confidential.

50(b). Explain why the total length of pipe affecting HCA decreased from 34.3 miles to 19.9 miles.

OBJECTION AND ANSWER: To the extent that this request seeks the identity and location of High Consequence Areas, that information is confidential by statute and Keystone is required by PHMSA to keep this information confidential. Without waiving the objection, during the detailed engineering design phase of the Project, the route was adjusted. In doing so, the route deviated away from DOT designated HCA areas there by reducing total HCA miles crossed by the Project. Please refer to the attached route variation list and maps.

50(c). Explain how the statistic which states a spill could affect a HCA no more than once in 250 years.

OBJECTION AND ANSWER: To the extent that this request seeks the identity and location of High Consequence Areas, that information is confidential by statute and

Keystone is required by PHMSA to keep this information confidential. Without waiving the objection, page 4-21 of the 2009 KXL Risk Assessment shows that a spill affecting HCA in any state crossed by the Project has an occurrence interval of 53 years. This is calculated based on historical incident data from Pipeline and Hazardous Materials Safety Administration, as discussed in Section 3.0. This is calculated by taking the inverse of the incident frequency (measured as incidents per mile per year) multiplied by the miles of high consequence areas crossed (141.2 miles). The result is an estimate, in years, of the time between spills. This is similar to the concept of flood recurrence intervals (e.g., 100-year floods).

107(a). Provide the analysis by Dr. Michael Madden which professes the Project would not (ii) substantially impair the health, safety, or welfare of the inhabitants in the project area.

OBJECTION: Dr. Madden was PUC Staff's witness in Docket 09-001, and his direct testimony is a matter of public record.

107(b). Explain how the 2010 permit, which relies on the federal environmental impact statement prepared by the Department of State, addresses specific concerns of South Dakota, including the health, safety and welfare of South Dakota citizens.

OBJECTION: This request is vague, unclear, argumentative, and seeks information that is not relevant or likely to lead to the discovery of admissible evidence.

The PUC addressed the health, safety, and welfare of South Dakota residents in the Amended Final Decision and Order in Docket 09-001. In addition, South Dakota residents had notice and opportunity to participate in the lengthy NEPA process conducted by the Department of State.

107(c). Explain your interpretation of "substantially" as it is used in state law SDCL 49-41 B-22 which states the applicant for a facility construction permit has the burden of proof to establish that:

(3) "The facility will not substantially impair the health, safety or welfare of the inhabitants."

OBJECTION: This request seeks a legal opinion or conclusion and is therefore beyond the scope of discovery and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). It was an issue for the PUC to determine in Docket HP 09-001.

107(d). State with 100% certainty that this project will have no impact on the health, safety or welfare of the people of South Dakota.

OBJECTION: This request is argumentative and seeks information that is not relevant or likely to lead to the discovery of admissible evidence. The PUC addressed the health, safety, and welfare of South Dakota residents in the Amended Final Decision and Order in Docket 09-001. Keystone has not asserted that the project would

have "no impact" on the health, safety, or welfare of the people of South Dakota.

107(e). Describe how areas of dense populations versus areas of sparse populations affect project decision.

OBJECTION AND RESPONSE: This request is vague and unclear. Without waiving the objection, to the extent feasible and consistent with other routing criteria, areas of dense population are avoided during project routing.

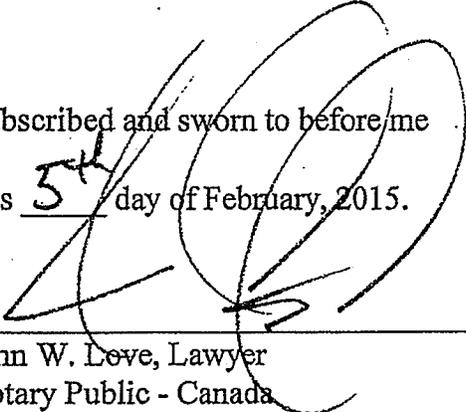
Dated this 5th day of February, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me
this 5th day of February, 2015.



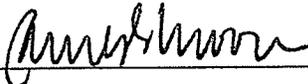
John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Cindy Myers' Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

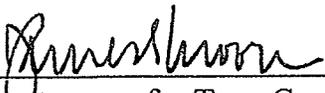
By  _____

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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Cindy Myers' First Interrogatories and Request for Production of Documents, to the following:

Cindy Myers, R.N.
PO Box 104
Stuart, NE 68780
csmyers77@hotmail.com



One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

1. Does Keystone XL have in its possession, or has it ever had in its possession, any documents related to agreements with Federally recognized Indian tribes in South Dakota?

ANSWER: Yes. Keystone XL has copies of treaties and copies of state highway rights of way, copies of documents related to crossing the Mni Waconi pipeline.

2. Does Keystone XL have in its possession or has it ever had in its possession, any documents related to any agreements pertaining to Indian trust land within the State of South Dakota?

ANSWER: Yes. *See* answer to interrogatory no. 1 above.

3. Has Keystone XL had any communication with any Federal agency involving Indian trust land within the State of South Dakota?

ANSWER: Yes. Keystone communicated with James Murray, BIA employee, concerning trust land in the southwest corner of the Cheyenne River Reservation and the Bureau of Reclamation concerning crossing Mni Waconi pipeline.

4. Does Keystone XL have in its possession any Title Status Reports involving or pertaining to Indian trust land in the State of South Dakota?

ANSWER: No. The Keystone XL route does not cross any reservation lands or lands held in trust.

5. Has Keystone XL applied for any rights-of-way on Indian trust land in the State of South Dakota?

ANSWER: No. The Keystone XL route does not cross any reservation lands or lands held in trust.

6. Has Keystone XL applied for and been denied a right-of-way across any land in the State of South Dakota?

ANSWER: A few landowners were unwilling to voluntarily grant an easement for the project right of way, and Keystone exercised its right of eminent domain as to them. Keystone has not been denied any access rights from any governmental entity as part of an application process.

7. Has Keystone XL applied for any permits or licenses with any Federal agency, for activities on Indian trust land within the State of South Dakota?

ANSWER: No. The Keystone XL route does not cross any reservation lands or lands held in trust.

8. Has Keystone XL applied for any permits or licenses with any tribal government, for activities on Indian trust land within the State of South Dakota?

ANSWER: No. The Keystone XL route does not cross any reservation lands or lands held in trust.

9. Has Keystone XL been denied any permits or licenses by a Federal agency, for activities on Indian trust land within the State of South Dakota?

ANSWER: No. The Keystone XL route does not cross any reservation lands or lands held in trust.

10. Has Keystone XL been denied any permits or licenses by a tribal government, for activities on Indian trust land within the State of South Dakota?

ANSWER: No. The Keystone XL route does not cross any reservation lands or lands held in trust.

11. Has Keystone XL researched the impact to Indian Treaty hunting and fishing rights along the pipeline route within the State of South Dakota?

ANSWER: Yes.

12. Has Keystone XL made any payment of funds to any Federal agencies in relation to Indian trust assets in South Dakota?

ANSWER: No.

13. Has Keystone XL made any payment of funds to any Federally recognized tribes in South Dakota?

ANSWER: Yes.

14. Has Keystone XL made any payment of funds to any other entity in relation to Indian trust assets in South Dakota?

ANSWER: No.

15. Has Keystone XL had any communications with any United States Federal agency regarding Indian tribal jurisdiction in South Dakota?

ANSWER: Yes.

16. Has Keystone XL had any communications with any State of South Dakota officials or agencies regarding Indian tribal jurisdiction in South Dakota?

ANSWER: Yes. Keystone's lawyers discussed jurisdiction issues concerning use of state highways in Indian Country with John Guihn and Matt Konenkamp, Deputy Attorney Generals.

17. Has Keystone XL had any communications with any Federally recognized tribe regarding tribal jurisdiction in South Dakota?

ANSWER: No.

18. Has Keystone XL reviewed the Rosebud Sioux Tribe Law & Order Code Title 20?

ANSWER: Yes.

19. Has Keystone XL every met with the Rosebud Sioux Tribe - Tribal Utility Commission regarding the pipeline?

ANSWER: Yes.

20. Has Keystone XL at any time changed the path of the pipeline through South Dakota to avoid Indian tribal jurisdiction?

ANSWER: The route does not cross tribal land. In 2011, a route variation was completed to avoid tribal burial grounds in Merrick and Hamilton Counties in Nebraska after completing the Department of State and Tribal 401 consultation process. There have been no changes to avoid tribal jurisdiction in South Dakota.

21. Has Keystone XL at any time changed the path of the pipeline through South Dakota to avoid Indian trust land?

ANSWER: The route does not cross Indian trust land. No route variations were due to avoiding Indian trust land.

REQUEST FOR PRODUCTION OF DOCUMENTS

1. If the answer to Interrogatory 1 is in the affirmative, produce all documents related to agreements with Federally recognized Indian tribes in South Dakota.

ANSWER: The treaties are in the public domain as are the Mni Waconi easements.

2. If the answer to Interrogatory 2 is in the affirmative, produce all documents related to any agreements pertaining to Indian trust land within the State of South Dakota.

ANSWER: See answers to interrogatory nos. 1 above and 3 below.

3. If the answer to Interrogatory 3 is in the affirmative, produce all documents related to any communication with any Federal agency involving Indian trust land within the State of South Dakota.

ANSWER: Please see James Murray's e-mail attached as Keystone 584-591.

4. If the answer to Interrogatory 4 is in the affirmative, produce all documents related to any Title Status Reports involving or pertaining to Indian trust land in the State of South Dakota.

ANSWER: N/A.

5. If the answer to Interrogatory 5 is in the affirmative, produce all documents related to any rights-of-way on Indian trust land in the State of South Dakota?

ANSWER: N/A.

6. If the answer to Interrogatory 6 is in the affirmative, produce all documents related to rights-of-way that have been applied for and been denied across any land in the State of South Dakota.

ANSWER: N/A.

7. If the answer to Interrogatory 7 is in the affirmative, produce all documents related to any permits or licenses with any Federal agency, for activities on Indian trust land within the State of South Dakota.

ANSWER: N/A.

8. If the answer to Interrogatory 8 is in the affirmative, produce all documents related to the application for any permits or licenses with any tribal government, for activities on Indian trust land within the State of South Dakota.

ANSWER: N/A.

9. If the answer to Interrogatory 9 is in the affirmative, produce all documents related to any permits or licenses that have been denied by a Federal agency, for activities on Indian trust land within the State of South Dakota.

ANSWER: N/A.

10. If the answer to Interrogatory 10 is in the affirmative, produce all documents related to any permits or licenses that have been denied by a tribal government, for activities on Indian trust land within the State of South Dakota.

ANSWER: N/A.

11. If the answer to Interrogatory 11 is in the affirmative, produce all documents related to research on the impact to Indian Treaty hunting and fishing rights along the pipeline route within the State of South Dakota.

ANSWER: The DOS would have all related material, and Keystone is not privy to any of the government to government consultation material. Documents created by Keystone's lawyers are privileged and not discoverable.

12. If the answer to Interrogatory 12 is in the affirmative, produce all documents related to any payment of funds to any Federal agencies in relation to Indian trust assets in South Dakota.

ANSWER: N/A.

13. If the answer to Interrogatory 13 is in the affirmative, produce all documents related to any payment of funds to any Federally recognized tribes in South Dakota.

ANSWER: Keystone funded completion of certain Traditional Cultural Property Reports prepared by Tribes and Tribal members. The amounts and documents related to such funding will be produced when they are created.

14. If the answer to Interrogatory 14 is in the affirmative, produce all documents related to any payment of funds to any other entity in relation to Indian trust assets in South Dakota.

ANSWER: N/A.

15. If the answer to Interrogatory 15 is in the affirmative, produce all documents related to any communications with any United States Federal agency regarding Indian tribal jurisdiction in South Dakota.

ANSWER: See document production for requests 1 and 2 above.

16. If the answer to Interrogatory 16 is in the affirmative, produce all documents related to any communications with any State of South Dakota officials or agencies regarding Indian tribal jurisdiction in South Dakota.

ANSWER: N/A.

17. If the answer to Interrogatory 17 is in the affirmative, produce all documents related to any communications with any Federally recognized tribe regarding tribal jurisdiction in South Dakota.

ANSWER: N/A.

18. If the answer to Interrogatory 18 is in the affirmative, produce all documents related to a review of the Rosebud Sioux Tribe Law & Order Code Title 20.

ANSWER: Documents relating to Title 20 were produced by Keystone's lawyers and are privileged.

19. If the answer to Interrogatory 19 is in the affirmative, produce all documents related to every meeting with the Rosebud Sioux Tribe - Tribal Utility Commission regarding the pipeline.

ANSWER: Responsive documents are attached as Keystone 584-591.

20. If the answer to Interrogatory 20 is in the affirmative, produce all documents related to any change in the path of the pipeline through South Dakota to avoid Indian tribal jurisdiction.

ANSWER: N/A.

21. If the answer to Interrogatory 21 is in the affirmative, produce all documents related to any change in the path of the pipeline through South Dakota to avoid Indian trust land.

ANSWER: N/A.

Case Number: HP 14-001

Keystone's Responses to Rosebud Sioux Tribe - Tribal Utility Commission's Interrogatories and Request for Production of Documents

Dated this 5th day of February, 2015.

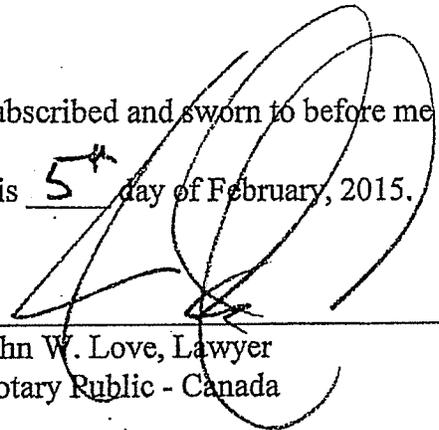
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.



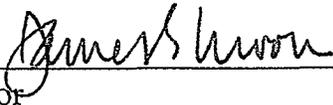
John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Rosebud Sioux Tribe - Tribal Utility Commission's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

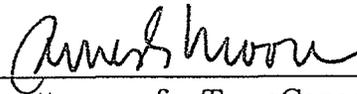
By 
William Taylor

James E. Moore
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Rosebud Sioux Tribe - Tribal Utility Commission's Interrogatories and Request for Production of Documents, to the following:

Mary Turgeon Wynne
153 South Main Street
Mission, SD 57555
mary_wynne@msn.com



One of the attorneys for TransCanada

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

0-0

IN THE MATTER OF THE APPLICATION	:	HP 14-001
BY TRANSCANADA KEYSTONE		
PIPELINE, LP FOR A PERMIT UNDER	:	KEYSTONE'S RESPONSES TO
THE SOUTH DAKOTA ENERGY		NANCY HILDING'S
CONVERSION AND TRANSMISSION	:	INTERROGATORIES AND
FACILITIES ACT TO CONSTRUCT THE		REQUEST FOR PRODUCTION OF
KEYSTONE XL PROJECT	:	DOCUMENTS
	:	

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Applicant TransCanada makes the following responses to interrogatories pursuant to SDCL § 15-6-33, and responses to requests for production of documents pursuant to SDCL § 15-6-34(a). These responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Nancy Hilding's Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

{01808657.1}

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Has TransCanada decided yet how it will deal with retired pipeline at closure of pipeline? Will TransCanada remove retired pipeline from the ground or leave it in place or both, depending on location? If there is any new technical information or a new decision on appropriate closure procedure needed for pipeline, by TransCanada or a regulatory entity, that was not disclosed to PUC or not yet decided prior to June 29, 2010, please disclose any new information or decisions available on this issue.

ANSWER: At this time, prior to construction and operation of the Project, TransCanada has not decided specifically how it will deal with the pipeline at the end of its useful life. For a comprehensive discussion of Project decommissioning, see Section 2.1.13 of the State Department's Final Supplemental EIS, available at <http://keystonepipeline-xl.state.gov/documents/organization/221154.pdf>.

2. All documents that you intend to offer as exhibits at the evidentiary hearing in this matter.

ANSWER: Keystone has not yet identified hearing exhibits, but will disclose them in advance of the hearing as required by the PUC.

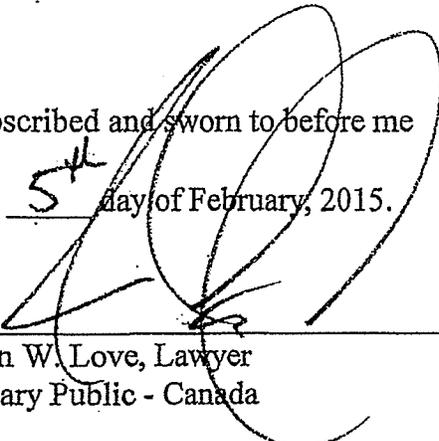
Dated this 5th day of February, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By  _____

Its Director, Authorized Signatory

Subscribed and sworn to before me
this 5th day of February, 2015.



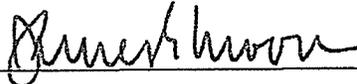
John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Nancy Hilding's First Interrogatories and Request for Production of Documents, to the following:

Nancy Hilding
6300 West Elm
Black Hawk, SD 57718
nhilshat@rapidnet.com

WOODS, FULLER, SHULTZ & SMITH P.C.

By  _____
William Taylor

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James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

INTERROGATORIES

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

3. This Interrogatory is based on Finding 54 and updated in Appendix C. Please describe the procedure utilized to insure that "No tribal or federal lands are crossed by the route."

ANSWER: All land ownership was obtained through public data files and confirmed or updated based on county tax and deed documents.

4. This Interrogatory is based on Finding 54 and updated in Appendix C. Please list all experts with appropriate contact information for said expert you consulted to insure that "No tribal or federal lands are crossed by the route."

ANSWER: All land ownership was obtained through public data files and confirmed or updated based on county tax and deed documents.

5. This Interrogatory is based on Finding 58 in relation to Condition 43. Please describe the procedure utilized to insure that all "cultural resource, historical resource or gravesite " are or have been identified and all related federal legislation adhered to with respect.

ANSWER: Section 3.11 of the Department of State FSEIS (2014) details the cultural resources work conducted for the Project, and lists all findings. Section 4.11 of the Department of State FSEIS (2014) details the potential impacts to cultural resources.

The Project's Unanticipated Discovery Plan, which outlines how discoveries during construction will be addressed, can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

6. This Interrogatory is based on Finding 58 in relation to Condition 43. Please list all experts with appropriate contact information for said expert you consulted to insure that all "cultural resource, historical resource or gravesite" are or have been identified and all related federal legislation adhered to with respect.

ANSWER: Section 3.11 of the Department of State FSEIS (2014) details the cultural resources work conducted for the Project, and lists all findings. Section 4.11 of the Department of State FSEIS (2014) details the potential impacts to cultural resources.

The Project's Unanticipated Discovery Plan, which outlines how discoveries during construction will be addressed, can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please produce all updated and detailed GPS maps displaying the pipeline route in South Dakota which includes Harding, Butte, Meade, Pennington, Haaken, Jones,

Lyman and Tripp counties. Please also include with these GPS maps all views at altitudes of 500, 800 and 1000 feet.

ANSWER: In addition to the route maps on file in HP09-001 Open Docket Exhibit A, maps showing changes to the route since then are attached as Keystone 0470-0583.

2. Please produce all documentation you have and have developed related to Interrogatories 3, 4, 5 and 6.

ANSWER: 5. Section 3.11 of the Department of State FSEIS (2014) details the cultural resources work conducted for the Project, and lists all findings. Section 4.11 of the Department of State FSEIS (2014) details the potential impacts to cultural resources.

The Project's Unanticipated Discovery Plan, which outlines how discoveries during construction will be addressed, can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

Case Number: HP 14-001

Keystone's Responses to Elizabeth Lone Eagle's First Interrogatories and Request for Production of Documents

Dated this 5th day of February, 2015.

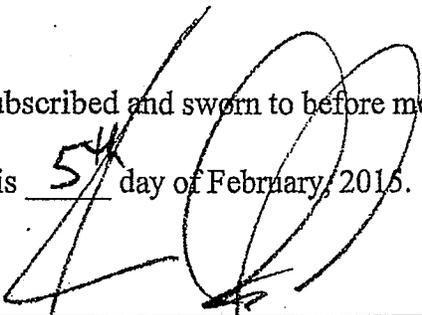
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.

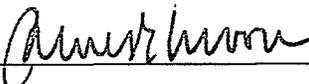

John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission and United States first-class mail, postage prepaid, a true and correct copy of Keystone's Responses to Elizabeth Lone Eagle's First Interrogatories and Request for Production of Documents, to the following:

Elizabeth Lone Eagle
PO Box 160
Howes, SD 57748
bethcbest@gmail.com

WOODS, FULLER, SHULTZ & SMITH P.C.

By 
William Taylor
James E. Moore
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300 South Phillips Avenue, Suite 300
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Phone: (605) 336-3890
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Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

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)	HP14-001 KEYSTONE'S RESPONSES TO STANDING ROCK SIOUX TRIBE'S FIRST SET OF INTERROGATORIES
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Applicant TransCanada makes the following responses to interrogatories pursuant to SDCL § 15-6-33. These responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Standing Rock Sioux Tribe's First Set of Interrogatories to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 1 State the name, job title, address, telephone number and email address of the person answering these interrogatories.

ANSWER: See Keystone's response to interrogatory no. 4.

INTERROGATORY NO. 2 Identify each person who assisted with the preparation of answers to these interrogatories, and include the name, job title, address, telephone number and email address of each such person.

ANSWER: See Keystone's response to interrogatory no. 4.

INTERROGATORY NO. 3 Identify each person whom TransCanada intends to be called as an expert witness at the hearing in this matter, and include:

- a. the name, job title, address, telephone number and email address of the expert;
- b. the subject matter on which the expert is expected to testify;
- c. the substance of the facts and opinions to which the expert is expected to testify;
- d. a summary of the grounds for each opinion; and
- e. all legal proceedings in which such person has provided expert testimony in the last 10 years.

ANSWER: Keystone does not intend to call any retained experts as witnesses, although it expects that its witnesses will offer opinion testimony.

INTERROGATORY NO. 4 Identify each person whom TransCanada intends to be called as a witness, who was not included in the answer to Interrogatory No. 3, and include:

a. the name, job title, address, telephone number and email address of the witness; and

b. the subject matter on which the witness is expected to testify.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

(1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues

(2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; same; CMR Plan, Con/Rec Units, HDD's

(3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance

(4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility

(5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441; Environmental Issues; CMR Plan, Con/Rec Units, HDD's

(6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

INTERROGATORY NO. 5 Identify each person involved with preparation of the applicant's "Tracking Table of Changes" dated September 15, 2014 and filed herein, and include the name, job title, address, telephone number and email address of each such person.

ANSWER: Various persons were involved in preparing Appendix C. The witnesses identified in no. 4 have responsibility for each item in Appendix C.

INTERROGATORY NO. 6 Identify each person who has been retained or specially employed by TransCanada in anticipation of this proceeding and who is not expected to be called as a witness at the hearing in this matter.

ANSWER: Keystone has not retained any person for this proceeding who will not be called as a witness.

INTERROGATORY NO. 7 What is the relationship between the applicant and TransCanada Northern Border, Inc.?

OBJECTION: This request is not relevant and not likely to lead to the discovery of admissible evidence.

INTERROGATORY NO. 8 What is the relationship between the ConocoPhillips and TransCanada Northern Border, Inc.?

OBJECTION: This request is not relevant and not likely to lead to the discovery of admissible evidence.

INTERROGATORY NO. 9 Describe your understanding of TransCanada's obligation to consult with the Standing Rock Sioux Tribe and other Sioux Tribes on the Keystone XL Pipeline project.

ANSWER: To the extent that there is an obligation to consult with the Tribes with respect to the Keystone XL Project, that legal obligation would lie with the Department of State under Section 106 of the NHPA. TransCanada has an active Tribal engagement program that it implements on a voluntary basis.

INTERROGATORY NO. 10 Did you consult with the Standing Rock Sioux Tribe on the project? If the answer is "yes," describe the details of such consultation, including the times, dates, topics of discussion and individuals involved.

ANSWER: Keystone consulted with Standing Rock representatives in March and April 2009 regarding the project.

INTERROGATORY NO. 11 Describe your understanding of the significance and extent of subsistence hunting and fishing conducted by the members of the Standing Rock Sioux Tribe in the area of the project, and include the basis for your response and the sources of such information.

ANSWER: Given the distance between the Standing Rock reservation boundary and the proposed route, the fact that the route crosses privately owned and occupied lands, and the

limited geographic impact of the right of way once the pipeline is constructed, it seems unlikely that subsistence hunting and fishing by tribal members would be influenced.

INTERROGATORY NO. 12 Describe your understanding of the significance and extent of the gathering of medicinal and culturally-significant plants conducted by the members of the Standing Rock Sioux Tribe in the area of the project, and include the basis for your response and the sources of such information.

ANSWER: Given the distance between the Standing Rock reservation boundary and the proposed route, the fact that the route crosses privately owned and occupied lands, and the limited geographic impact of the right of way once the pipeline is constructed, it seems unlikely that subsistence plant gathering by tribal members would be influenced.

INTERROGATORY NO. 13 Describe in detail the training to be provided to contractors and other project personnel.

ANSWER: Training to be provided to contractors and other project personnel for construction, and for normal and abnormal operations of the project is described in the following documents:

- Keystone XL Project, "Construction, Mitigation and Reclamation Plan", April 2012, Rev. 4 (CMRP)
- United States Department of State, "Final Supplemental Environmental Impact Statement for the Keystone XL Project", January 2014 (FSEIS)

The following CMRP and FSEIS excerpts and/or summaries provide details on the training to be provided to contractors and other project personnel.

CMRP: 2.0 General Conditions / 2.1 Training

1st paragraph: Experienced, well-trained personnel are essential for the successful implementation of this Plan. Keystone and its Contractors shall undergo prevention and response, as well as safety training. The program shall be designed to improve awareness

of safety requirements, pollution control laws and procedures, and proper operation and maintenance of equipment. (CMRP, page 1)

2nd paragraph: The construction contractor (Contractor), and all of his subcontractors shall ensure that persons engaged in Project construction are informed of the construction issues and concerns and that they attend and receive training regarding these requirements as well as all laws, rules and regulations applicable to the work. Prior to construction, all Project personnel will be trained on environmental permit requirements and environmental specifications, including fuel handling and storage, cultural resource protection methods, stream and wetland crossing requirements, and sensitive species protection measures. (CMRP, page 1)

3rd paragraph: Different levels of training shall be required for different groups of Contractor personnel. Contractor supervisors, managers, field foremen, and other Contractor personnel designated by Keystone shall attend a comprehensive environmental training session. All other Contractor personnel shall attend a training session before the beginning of construction and during construction as environmental issues and incidents warrant. Additional training sessions shall be held for newly assigned personnel prior to commencing work on the Project. (CMRP, page 1)

4th paragraph: All Contractor personnel shall attend the training session prior to entering the construction right-of-way. All Contractor personnel shall sign an acknowledgement of having attended the appropriate level of training and shall display a hard hat sticker that signifies attendance at environmental training. In order to ensure successful compliance, Contractor personnel shall attend repeat or supplemental training if compliance is not satisfactory or as new, significant new issues arise. (CMRP, page 1)

5th paragraph: All visitors and any other personnel without specific work assignments shall be required to attend a safety and environmental awareness orientation. (CMRP, page 1)

CMRP: 2.0 General Conditions / 2.11 Hazardous Wastes

1st paragraph: The Contractor shall ensure that all hazardous and potentially hazardous materials are transported, stored, and handled in accordance with all applicable legislation. Workers exposed to or required to handle dangerous materials shall be trained in accordance with the applicable regulator and the manufacturer's recommendations. (CMRP, page 6)

CMRP: 2.0 General Conditions / 2.19 Cultural Resources

4th paragraph: Prior to commencing construction, Keystone also will provide an appropriate level of training to all construction personnel so that the requirements of any

unanticipated discovery plan or Programmatic Agreement are understood and unanticipated discoveries quickly identified. (CMRP, page 12)

CMRP: 3.0 Spill Prevention and Containment / 3.1.2 Construction Right-of-Way

4th paragraph: The following preventive measures apply to refueling and lubricating activities on the construction right-of-way:

- *2nd bulleted point:* Refueling and lubricating of construction equipment shall be restricted to upland areas at least 100 feet away from streams and wetlands. Where this is not possible (e.g., trench dewatering pumps), the equipment shall be fueled by designated personnel with special training in refueling, spill containment, and cleanup. The Environmental Inspector shall ensure that signs are installed identifying restricted areas. (CMRP, page 15)

CMRP: 5.0 Drain Tile Systems / 5.6 Inspection/Acceptance of Drain Tile Repairs

2nd paragraph: Keystone shall designate inspector(s) for the sole purpose and responsibility for inspection of all repairs of drain tiles. These inspectors shall be, if possible, employed from local drain tile installation contractors, local farmers with extensive drain tile experience, or previously employed or retired employees of local jurisdictions familiar with drain tile installation and repair. In the event that a sufficient quantity of inspectors from these sources is not available, Keystone shall conduct in-the-field training seminars on drain tile repair for additional inspection personnel. (CMRP, page 50)

FSEIS: 2.1 Overview of the Proposed Project / 2.1.10 Construction Schedule, Workforce, and Environmental Inspection / 2.1.10.1 Schedule and Workforce

2nd paragraph: Keystone anticipates a peak workforce of approximately 5,000 to 6,000 construction personnel. These personnel would consist of Keystone employees, contractor employees, construction inspection staff, and environmental inspection staff. All workers would be trained and certified, as appropriate, for their specific field of work (e.g., welders would be qualified as required by 49 CFR 195.222 and PHMSA Special Condition 18). (FSEIS, page 2.1-69)

FSEIS: 2.1 Overview of the Proposed Project / 2.1.11 Operations and Maintenance / 2.1.11.1 Normal Operations and Routine Maintenance

1st paragraph: Keystone would prepare the manuals and written procedures for conducting normal operations, maintenance, inspection, and monitoring activities as required by the PHMSA regulations, particularly as required by 49 CFR 195.402 and in the applicable PHMSA Project-specific special conditions (see Appendix B, Potential

Releases and Pipeline Safety). This would include development and implementation of an annual Pipeline Maintenance Program to ensure the integrity of the pipeline. The Pipeline Maintenance Program would include valve maintenance, periodic inline inspections, and CP readings to ensure facilities are reliable and in service. Data collected in each year of the program would be incorporated into the decision-making process for the development of the following year's program. The proposed Project OCC (Operations Control Center) would be manned by experienced and highly trained personnel 24 hours per day, every day of the year in Calgary, Canada. In addition, a fully redundant backup OCC has been constructed and is also being operated and maintained in Canada. Primary and backup communications systems would provide real-time information from the pump stations to field personnel. The control center would have highly sophisticated pipeline monitoring systems including a leak detection system capable of identifying abnormal conditions and initiating visible and audible alarms. Automatic shut-down systems would be initiated if a valve starts to shut and all pumps upstream would turn off automatically. All other pipeline situations would require human response. (FSEIS, page 2.1-70)

FSEIS: 2.1 Overview of the Proposed Project / 2.1.11 Operations and Maintenance / 2.1.11.2 Abnormal Operations

Emergency Response Procedures (FSEIS, page 2.1-74)

11th paragraph: Keystone has reviewed the NTSB 2012 Marshall, Michigan Accident Report including the conditions that led to operational failures on the pipeline that resulted in the spill. Keystone has stated they would include lessons learned from this spill, including the following:

- *2nd bulleted point:* Pre-qualify a large contractor network: Contractors would be used to supplement any response Keystone would make to an oil spill. By ensuring a large pool of trained/skilled contractors along the length of the pipeline have been pre-qualified and contracted with Keystone, the response time would be minimized and resources (equipment and personnel) available are maximized. (FSEIS, page 2.1-76)
- *4th bulleted point:* Equipment resources required for sunken and submerged oil: Keystone would further identify equipment resources required to respond to sunken and submerged oil and ensure personnel are appropriately trained on the equipment. A primary strategy for oil spill response would still be to contain and recover as much oil as possible as quickly as possible to prevent oil from weathering and therefore potentially becoming submerged and sinking. In addition, Keystone already owns and practices the use of containment devices that would prevent downstream migration of submerged and sunken oil such as dams. This type of equipment would be further identified and procured for the proposed Project. (FSEIS, page 2.1-77)

15th paragraph: The publicly available portion of the Draft Keystone Oil Pipeline System ERP for the southern portion of the Keystone pipeline is included as Appendix I (parts of the ERP and the PSRP are considered confidential by PHMSA and the U.S. Department of Homeland Security). As described in Section 4.13, Potential Releases, the existing Keystone Oil Pipeline Project documents would be used as templates for the plans for the proposed Project. Project-specific information would be inserted into the plans as it becomes available. In addition, response equipment, including equipment and materials designated for containment and recovery of submerged oil, would be procured and strategically positioned along the route, staff would be trained in spill response and the Incident Command System, and emergency services and public officials would be educated on all aspects of the proposed Project and what their roles would be if an accidental leak were to occur. If a spill were to occur, Keystone and its contractors would be responsible for recovery and cleanup. PHMSA would require a certification from Keystone that necessary emergency response equipment is available in the event of an unplanned spill prior to providing Keystone with an authorization to begin operating the proposed Project. (FSEIS, page 2.1-77)

Remediation (FSEIS, page 2.1-80)

2nd paragraph: If, during construction, tanks or contamination are found, they would be managed according to federal, state, and/or local regulations. Further, Keystone would make individuals available who are trained in identifying and disposing of hazardous materials during construction. (FSEIS, page 2.1-80)

FSEIS: 4.1 Geology / 4.1.3 Potential Impacts / 4.1.3.2 Paleontological Resources

Construction (FSEIS, page 4.1-6)

5th paragraph: South Dakota requires a permit from the South Dakota Commissioner of School and Public Lands to survey, excavate, or remove paleontological resources from state land and to determine the repository or curation facility for paleontological collections from state lands. Condition 44 of the proposed Project's permit from the South Dakota Public Utilities Commission specifies the need for surveys in accordance with the procedures described for the South Dakota paleontological field surveys. Condition 44 also mandates the following mitigation measures:

- *1st bulleted point:* "Following the completion of field surveys, Keystone shall prepare and file with the Commission a paleontological resource mitigation plan. The mitigation plan shall specify monitoring locations, and include Bureau of Land Management (BLM) permitted monitors (Footnote 2). The onsite monitor would be required to hold a valid Paleontological Resource

Use Permit from the BLM, authorizing the monitor to survey and collect paleontological resources in anticipation or in conjunction with a land-use action and proper employee and contractor training to identify any paleontological resources discovered during construction and the procedures to be followed following such discovery. Paleontological monitoring will take place in areas within the construction ROW that are underlain by rock formations with high sensitivity (PFYC Class 4) and very high sensitivity (PFYC Class 5), and in areas underlain by rock formations with moderate sensitivity (PFYC Class 3) where significant fossils were identified during field surveys. Footnote 2: The onsite monitor would be required to hold a valid Paleontological Resource Use Permit from the BLM, authorizing the monitor to survey and collect paleontological resources in anticipation or in conjunction with a land-use action. (FSEIS, page 4.1-7; repeated at FSEIS, Appendix Z, page 2)

FSEIS: 4.3 Water Resources / 4.3.1 Introduction / Summary

Summary (FSEIS, page 4.3-2)

5th paragraph: Potential impacts to groundwater resources during the operational phase of the proposed Project and connected actions include altered groundwater quantity and quality. Measures to avoid and minimize these impacts include pipeline system testing spill and maintenance training, pipeline inspection, periodic system updates and maintenance, and others addressed in Section 4.13, Potential Releases. Federal, state, and local regulatory agency permit requirements would further reduce potential impacts to groundwater resources from construction, maintenance, and operational activities. For instance, Keystone has agreed to incorporate into its operations and maintenance plan a requirement to conduct ground inspections of all intermediate valves and non-staffed pump stations during the first year of operation to ensure that small leaks or potential failures in fittings and seals are identified. Keystone has also agreed to Pipeline and Hazardous Material Safety Administration (PHMSA) Project-specific Special Conditions developed by stakeholders to address pipeline concerns. Those conditions are presented in Appendix B, Potential Releases and Pipeline Safety. (FSEIS, page 4.3-3)

FSEIS: 4.4 Wetlands / 4.4.3 Potential Wetland Impacts

21st paragraph: Commitments described in the proposed Project CMRP (see Appendix G, Sections 6 and 7) and additional Keystone correspondence to protect and restore wetlands include the following general measures (refer to the CMRP for additional details and figures):

- *23rd bulleted point:* Install trench plugs and/or seal the trench to maintain the original wetland hydrology, where the pipeline trench may drain a wetland. Trench plugs would also be used at wetland and waterbody crossings, at the direction of the Environmental Inspector, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody. Perform all equipment maintenance, repairs, and refueling of all construction equipment in an upland area at least 100 feet from a wetland boundary, if possible. Where this is not possible (e.g., trench dewatering pumps), the equipment would be fueled by designated personnel with special training in refueling, spill containment, and cleanup. Keystone would prepare a Spill Prevention, Control, and Countermeasure Plan prior to introducing the subject fuel, oil, or hazardous material to a given location. (FSEIS, page 4.4-17; repeated at FSEIS, Appendix Z, page 22)

FSEIS: 4.8 Threatened and Endangered Species and Species of Conservation Concern / 4.8.3 Potential Impacts / 4.8.3.1 Endangered Species Act Federally Protected, Proposed, and Candidate Species

Interior Least Tern — Endangered (FSEIS, page 4.8-13)

6th paragraph: Federally Protected and Candidate Birds - The following USFWS conservation measures would apply if construction-related activities, including HDD and hydrostatic testing, were to occur during the interior least tern nesting season (May 1 to September 1):

- *13th bulleted point:* Keystone would mark and maintain a 100-foot area from river crossings, free from hazardous materials, fuel storage, and vehicle fuel transfers. These buffers would be maintained during construction except when fueling and refueling the water pump near a river edge that is required for the HDD crossing and hydrostatic test water withdrawal. Water pump fueling would be completed by trained personnel using secondary containment, and a spill kit would be onsite. (FSEIS, page 4.8-16; repeated at FSEIS, Appendix Z, page 44)

American Burying Beetle — Endangered (FSEIS, page 4.8-21)

10th paragraph: General conservation measures developed during consultation between USFWS, the Department, state agencies, and Keystone that would avoid or minimize potential impacts to the American burying beetle include:

- *12th bulleted point:* Keystone would train all workers operating in American burying beetle habitat and would include discussion of American burying beetle habitat, biology, reasons for their decline, and responsibilities of all workers for the protection of the American burying beetle (including removing food wastes from the ROW each day, reporting any American burying beetle sightings to an environmental inspector, and avoiding bringing

dogs and cats to the ROW). Keystone would produce a full color Endangered Species Card with a picture of the American burying beetle and all of this information summarized on the card. The card would be handed out to all construction workers operating in American burying beetle habitat. (FSEIS, page 4.8-27; repeated at FSEIS, Appendix Z, page 49)

FSEIS: 4.13 Potential Releases / 4.13.6 Additional Mitigation / 4.13.6.2 Safety and Spill Response

2nd paragraph: The Keystone Oil Pipeline System ERP was previously developed for the existing Keystone Mainline and Cushing Extension project and approved by PHMSA. The Keystone ERP would be used as a template for the ERP for the proposed Project and would include the necessary proposed Project-specific information. A review of the Keystone ERP (not the Keystone XL-specific plan) provided in Appendix I, SPCC and ERP, shows that response personnel, whether Keystone employees or contractors, must complete the appropriate Keystone and OSHA training in line with their responsibilities in order to implement a safe and effective response action to oil spills. All Keystone and contractor personnel are expected to follow the facility-specific safety plan for addressing a spill. Several of the aspects of responder training are provided below as listed in the ERP in Appendix I:

- Any concern regarding health or safety issues should be immediately addressed.
- The First Responder must consider the spill site as dangerous and the local atmosphere explosive until air monitoring procedures prove that the area is safe.
- The First Responder must exit the area against or across the wind, if possible, and must also evacuate others who are working in the area.
- All injuries, no matter how minor, must be reported to the Incident Commander in a timely manner.
- Prior to entering a spill area, a qualified person must perform an initial safety and health evaluation of the site. (FSEIS, page 4.13-98)

Notification Procedures (FSEIS, page 4.13-99)

3rd paragraph: Keystone would reach out to first responders at least annually via a public awareness program which includes, as a baseline, contact information, pipeline location, and how to respond. Additionally, Keystone would conduct multiple exercises and training sessions annually, which first responders would be invited to attend and participate. Training and exercises include Incident Command System (ICS), table top, deployment, and full scale exercises. Exercise planners would invite first responders to full scale exercises, which include the development of an incident management team and the simultaneous deployment of equipment resources to approximate a real event. These exercises would be conducted in various locations along the pipeline system. Keystone has stated that they would commit in their ERP to spill drills and exercises that address both floating and submerged oil. (FSEIS, page 4.13-99)

Response Actions (FSEIS, page 4.13-101)

1st paragraph: The ERP provides guidance on how first responders are to classify a spill to the environment or a complaint made within the community. These classifications—minor, serious, major, or critical—are based on the potential for impacts to public safety and the environment. Provided in the ERP is the checklist of actions to be taken to minimize the potential impact of a release as shown below:

- *6th bulleted point:* Take necessary fire response actions by trained staff and responding fire departments; (FSEIS, page 4.13-101)

Response Teams (FSEIS, page 4.13-102)

9th paragraph: The Incident Commander would request additional resources in terms of personnel, equipment, and materials from the Tier 2 and if necessary, the Tier 3 response teams. Once containment activities have been successfully concluded, efforts would then be directed toward the recovery and transfer of free oil. Site cleanup and restoration activities would then follow, all of which would be conducted in accordance with the ERP and in conjunction with regulatory agencies having jurisdiction. Keystone is required to prepare to respond to a worst-case discharge (WCD) by regulations in 49 CFR Part 194. This consists of calculating and identifying where the WCD may potentially occur, plans to ensure that adequate personnel and equipment resources are available to respond, and scenario development. By developing such plans for a WCD, Keystone could be better prepared to respond to a large-scale incident such as the 20,000 bbl spill on the Kalamazoo River in Marshall, Michigan, in 2010. Keystone would ensure internal personnel are trained to respond to oil spills through annual exercises and training sessions including full scale field exercises held in various locations in various operating environments and weather. (FSEIS, page 4.13-105)

10 paragraph: When developing the ERP, Kalamazoo River Spill lessons learned would be considered, including ensuring consultants are contracted as appropriate to facilitate a large-scale and prompt response; developing source containment plans including strategies and tactics; minimizing response times with appropriate equipment; identifying equipment resources required to respond to sunken and submerged oil, and ensuring personnel are appropriately trained. (FSEIS, page 4.13-105)

Facility Response Plan (FSEIS, page 4.13-108)

11th paragraph: Keystone has employed industry best construction and inspection practices whereby all construction and inspection staff are trained and verified to

perform activities in accordance with Special Condition 20. The final inspection of the pipeline via hydrostatic testing, high resolution deformation ILI, and physical verification of reported ILI results help ensure the pipeline's reliability and integrity prior to crude oil service. (FSEIS, 4.13-110)

Lessons Learned (FSEIS, page 4.13-111)

3rd paragraph: Environmentally, the lessons learned from the Marshall, Michigan, dilbit spill and related response implications include the following:

- *1st bulleted point:* The total volume of dilbit released to a river would not float on water indefinitely, and dilbit characteristics, water temperature, and particulate load in the water could result in much of the oil being submerged in the water column (USEPA 2013). Keystone has asserted that, in the event of a release to a body of water, Keystone would focus initially on timely containment and recovery efforts to remove floating material. However, Keystone response teams would be prepared to lend additional efforts for timely detection, containment, and recovery of submerged oil, as well, particularly in colder-temperature waterbodies with significant suspended sediment loads. Response personnel and contractors would be trained for the proper deployment and use of a number of submerged oil containment options (e.g., net booms, silt curtains, bottom-hugging weighted booms and watergate dams) and recovery alternatives (e.g., weighted sorbent, vacuum systems, dredging.) (FSEIS, 4.13-111)
- *2nd bulleted point:* Submerged oil could be suspended in the water column, suspended just above the river bed, or intermixed with sediment and trapped in the river bed and shoreline (USEPA 2013). Keystone has asserted that their response teams and contractors would be trained and prepared to employ multiple remedial alternatives for effective removal of floating, submerged, and suspended oil. To contain and recover suspended oil, multiple types of underwater filters are available and may be replaced as needed for continued recovery. (FSEIS, 4.13-111)

4th paragraph: The NTSB 2012c Marshall, Michigan, Accident Report identified conditions that led to operational failures on the pipeline and resulted in the spill. Keystone would include mitigations learned from this event, including the following:

- *2nd bulleted point:* Pre-qualify a large contractor network: Contractors would be used to supplement any response Keystone would make to an oil spill. By ensuring that a large pool of trained/skilled contractors along the length of the pipeline have been pre-qualified and contracted with Keystone, the response time would be minimized and the resources (equipment and personnel) available would be maximized. (FSEIS, 4.13-112)
- *4th bulleted point:* Equipment resources required for sunken and submerged oil: Keystone would further identify equipment resources required to respond to sunken and submerged oil and ensure personnel are appropriately trained. A

primary strategy for oil spill response would still be required to contain and recover as much oil as possible, as rapidly as possible, to prevent oil from weathering and therefore potentially becoming submerged and sinking. In addition, Keystone already owns and practices the use of containment devices that would prevent downstream migration of submerged and sunken oil such as dams. This type of equipment would be further identified and procured for the proposed Project. (FSEIS, 4.13-113)

FSEIS: 4.14 Greenhouse Gases and Climate Change / 4.14.2 Direct and Indirect Greenhouse Gas Emissions / 4.14.2.1 Construction Emissions

4th paragraph: Keystone would minimize the extent of land clearing for ROWs and expect that contractors would maintain construction equipment and vehicles in accordance with manufacturer's recommendations. Keystone would implement the following measures to minimize production of GHGs during construction:

- *1st bulleted point:* Contractors would be required to ensure that motorized equipment is operating only when required (no unnecessary idling); this requirement would be reinforced during training of the construction workforce and during construction. (FSEIS, 4.14-16)

FSEIS: APPENDIX B Potential Releases and Pipeline Safety / 2.0 Special Conditions Recommended by PHMSA

- Special Condition Recommended by PHMSA No. 10 – Field Coating: Field coating applicators must use valid qualified coating procedures and be trained to use these procedures. This condition is more prescriptive than 49 CFR Section 195.204 which requires inspection, but does not require level of specificity. This condition helps to ensure that personnel are trained and aware of the requirements when applying field joint corrosion protection. (FSEIS, Appendix B, page 6; repeated at FSEIS, Appendix Z, page 74)
- Special Condition Recommended by PHMSA No. 18 – Welding Procedures for New Pipeline Segments or Pipe Replacements: Part c) All welding procedures, AUT procedures and pipe lifting procedures for field construction crews must be documented in construction procedures and field construction crews must be trained in the procedure requirements prior to conducting welding and girth weld AUT in accordance with API 1104, Appendix A. 49 CFR Sections 195.228, 195.230, and 195.234 are less prescriptive, and only requires that 10 percent of each welder's girth welds made each day to be nondestructively tested. This condition, and Keystone's normal practices, help ensure that every weld is inspected. (FSEIS, Appendix B, page 10; repeated at FSEIS, Appendix Z, page 77)

- Special Condition Recommended by PHMSA No. 20 – Construction Tasks: Keystone must prepare and follow an Operator Qualification Program for construction tasks that can affect pipeline integrity. The Construction Operator Qualification Program must comply with 49 CFR 195.501 and must be followed throughout the construction process for the qualification of individuals performing tasks on the pipeline. If the performance of a construction task can affect the integrity of the pipeline segment, the operator (Keystone) must treat that task as a covered task, notwithstanding the definition in 49 CFR 195.501(b), and must implement the requirements of Subpart G. Keystone must retain qualification records for each individual performing covered tasks during and after the construction of the pipeline, whether company or contract employee. The requirements of 49 CFR 195 are in general, less prescriptive with respect to construction personnel training. This condition helps ensure that girth weld inspection and repair, and other tasks related to pipeline construction, are performed by qualified individuals. (FSEIS, Appendix B, page 11; repeated at FSEIS, Appendix Z, page 79)

- Special Condition Recommended by PHMSA No. 25 – SCADA System – General: Part b) iii) SCADA controller training must include simulator for controller recognition of abnormal operating conditions, in particular leak events. A generic simulator or simulation must not be allowed by itself as a means to meet this requirement. A full simulator (console screens respond and react as actual console screens) must be required and used for training of abnormal operating conditions wherever possible. 49 CFR 195 requirements are in general, less prescriptive, although most items are either explicitly listed or inferred as part of the Control Room Management (CRM) regulations through Code Section 195.446. This condition provides NTSB findings are included from previous pipeline failure investigations. (FSEIS, Appendix B, page 13; repeated at FSEIS, Appendix Z, page 81)

- Special Condition Recommended by PHMSA No. 29 – SCADA Training: The entirety of this condition, parts a) through m), covers the training and qualification plan (including simulator training) for controllers. 49 CFR 195 is in general, less prescriptive, although most items are either explicitly listed or inferred as part of the CRM (Control room management) regulations through Code Section 195.446. This condition helps provide state-of-the-art monitoring and control of the pipeline. The training and qualification plan (including simulator training) for controllers must :
 - a) Emphasize procedures for detecting and mitigating leaks,
 - b) Include a fatigue management plan and implementation of a shift rotation schedule that minimizes possible fatigue concerns and that is scientifically based, sets appropriate work and rest schedules, and considers circadian rhythms and human sleep and rest requirements in line with NTSB recommendation P-99-12 issued June 1, 1999,
 - c) Define controller maximum hours of service limitations,

- d) Meet the requirements of regulations developed as a result of the guidance provided in the American Society of Mechanical Engineers Standard B31Q, Pipeline Personnel Qualification Standard (ASME B31Q, September 2006), for developing qualification program plans,
- e) Include and implement a full training simulator capable of replaying for training purposes near-miss or lesson learned scenarios,
- f) Implement tabletop and field exercises no less than five times per year that allow controllers to provide feedback to the exercises, participate in exercise scenario development, and be active participants in the exercise,
- g) Include field visits for controllers accompanied by field personnel who will respond to call outs for that specific facility location,
- h) Provide facility specifics regarding the position to which certain equipment devices will default upon power loss,
- i) Include color blind and hearing provisions and testing if these are required to identify alarm priority or equipment status. This review must be implemented and performed at any location on the Keystone XL system where a SCADA system is used and where an individual(s) is assigned the responsibility to monitor and respond to alarm information (such as for tanks, terminals, or other associated facilities),
- j) Task-specific abnormal operating conditions and generic abnormal operating conditions training components,
- k) If controllers are required to respond to “800” calls, include a training program conveying proper procedures for responding to emergency calls, notification of other pipeline operators in the area when affecting a common pipeline corridor, and education on the types of communications supplied to emergency responders and the public using API RP 1162, Public Awareness Programs for Pipeline Operators (1st edition, December 2003, or the most recent version incorporated in 49 CFR 195.3).
- l) Implement on-the-job training component intervals established by performance review to include thorough documentation of all items covered during oral communication instruction
- m) Implement a substantiated qualification program for requalification intervals addressing program requirements for which circumstances will result in qualifications being revoked; implementing procedure documentation regarding how long a controller can be absent before a review period, shadowing, retraining, or re-qualification is required; and addressing interim performance verification measures between requalification intervals. (FSEIS, Appendix B, page 16; repeated at FSEIS, Appendix Z, page 84)

FSEIS: APPENDIX E Amended Programmatic Agreement and Record of Consultation - E1 Amended Programmatic Agreement

V. Keystone XL Project – Pipeline Construction

Part F. Construction (FSIES, Programmatic Agreement, page 15)

Subpart 1: Lead Environmental Inspector (EI): Prior to initiating vegetative clearing or construction, Keystone will employ the Lead EI whose responsibilities will include ensuring compliance with the terms of this PA. In meeting this responsibility, the Lead EI will rely on the technical expertise of on-site professionals who meet the standards established in Stipulation I.A and tribal monitors with experience outlined in Stipulation V.E.3.

- *Numbered item 2: Training:* Keystone will ensure that, if the Lead EI does not meet the professional qualification standards established in Stipulation I.A, the Lead EI will receive appropriate training in historic preservation from a professional who meets the standards established in Stipulation I.A in order to perform the requirements of this PA. Keystone also will provide an appropriate level of training in historic preservation conducted by a professional who meets the standards established in Stipulation I.A to all construction personnel (including new, added, replaced workers) so that PA requirements are understood and unanticipated discoveries quickly identified. Keystone will conduct this training prior to initiating vegetative clearing or construction activities on a spread. Keystone also will conduct periodic refresher training during construction of the spread. (FSIES, Programmatic Agreement, page 16)

Attachment E - Tribal Monitoring Plan

1.0 Background (FSEIS, Programmatic Agreement, Attachment E, page 1)

4th paragraph: Arising from these efforts, the DOS has required, through Stipulation V.E. of the PA, that Keystone provide Indian tribes the opportunity to participate as tribal monitors during construction to further reduce the potential for Project effects to previously unidentified historic properties. This Tribal Monitoring Plan provides procedures for the hiring, training, and supervising of Tribal monitors and other relevant topics. (FSEIS, Programmatic Agreement, Attachment E, page 1)

2.0 Summary (FSEIS, Programmatic Agreement, Attachment E, page 1)

2nd paragraph: The tribal monitors are required to have adequate safety training to work on the right-of-way and must follow protocols developed by Keystone while in the field. For the Keystone XL Pipeline Project, the tribal monitors shall be selected by the individual Indian tribes and

recognized as having experience in the identification of historic properties. Construction activities affecting land used historically by one or several Indian tribes should be monitored by representatives of those Indian tribes claiming historical use of that land. Their role will be to alert the Lead Environmental Inspector (Lead EI) of any previously unidentified historic properties uncovered during construction activities. (FSEIS, Programmatic Agreement, Attachment E, page 2)

5.0 Environmental Inspector (FSEIS, Programmatic Agreement, Attachment E, page 2)

3rd paragraph: Keystone will ensure that, if the Lead EI does not meet the professional qualification standards established in the PA, the Lead EI will receive appropriate training in historic preservation from a professional who meets the standards established in the PA so that the PA requirements are understood and unanticipated discoveries are quickly identified. Keystone, for the same reason, will provide an appropriate level of training in historic preservation conducted by a professional who meets the standards established in the PA to all construction personnel. Keystone will conduct this training prior to initiating vegetative clearing or construction activities on a spread, and conduct periodic refresher training, as deemed necessary, during construction of the spread. (FSEIS, Programmatic Agreement, Attachment E, page 2)

6.0 Tribal Monitors (FSEIS, Programmatic Agreement, Attachment E, page 3)

Position Description:

- *6th bulleted point:* Monitors are part of the construction team and as such, are required to participate in the safety and environmental training on site as well as in tailgate meetings. They must abide by all safety rules and wear personal protective equipment at all times while on site. (FSEIS, Programmatic Agreement, Attachment E, page 4)

8.0 Training (FSEIS, Programmatic Agreement, Attachment E, page 4)

1st paragraph: All monitors will be required to satisfactorily complete a one-day comprehensive training focused on the activities on the pipeline right-of-way. Monitors must also attend pre-construction training as coordinated by the prime contractor, including environmental and safety trainings provided to all on-site personnel. Keystone will make reasonable efforts to ensure that these trainings are accessible to tribal monitors and alternates. (FSEIS, Programmatic Agreement, Attachment E, page 4)

Attachment F - Historic Trail and Archaeological Monitoring Plan

2.0 Summary (FSEIS, Programmatic Agreement, Attachment F, page 2)

2nd paragraph: Monitors are required to meet the qualifications identified in Section 7 of this document, must have adequate training to work on the right-of-way, and must follow strict communication protocols while in the field. (FSEIS, Programmatic Agreement, Attachment F, page 3)

5.0 Cultural Resource Monitors (FSEIS, Programmatic Agreement, Attachment F, page 3)

Position Description:

- *6th bulleted point:* Monitors are responsible for reporting daily and weekly activities in a manner that describes the areas and activities monitored during the week, any issues or concerns that were encountered, and how the issues or concerns (if any) were resolved. The reports should be submitted in writing to the Lead EI. Monitors are part of the construction team and, as such, are required to participate in safety and environmental training on site, as well as in tailgate meetings. They must abide by all safety rules and wear the required protective equipment at all times while on site. (FSEIS, Programmatic Agreement, Attachment F, page 4)

7.0 Training (FSEIS, Programmatic Agreement, Attachment F, page 4)

1st paragraph: All monitors will be required to satisfactorily complete a one-day comprehensive training focused on the activities on the pipeline right-of-way. Completion of this program is compulsory. It is required that the monitors also attend the multi-day environmental/safety trainings provided to all on-site personnel. (FSEIS, Programmatic Agreement, Attachment F, page 4)

2nd paragraph: All monitors will be required to attend the pre-construction training as coordinated by the prime contractor prior to any monitoring activity. The training program consists of two phases: environmental training and safety training. These training programs are conducted by the Keystone prime contractor's environmental and safety professionals and will commence in the morning of the first day of monitoring for each spread. (FSEIS, Programmatic Agreement, Attachment F, page 4)

FSEIS: APPENDIX I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan

- 1) Keystone XL Pipeline Project Spill Prevention, Control and Countermeasure Plan
DRAFT

SPCC: Section 2 Contractor Supplied Site-Specific Information

2nd paragraph: The following information must be supplied by the Contractor for review and approval by Keystone at least 30 days prior to construction activities.

- *3rd major bulleted point:* Contractor's training program for fuel truck drivers and mechanics (FSEIS, page SPCC-2)

SPCC: Section 3 Prevention / 3.1 Training

1st paragraph: Personnel accountable for carrying out the procedures specified in this plan will be designated before construction and informed of their specific duties and responsibilities with respect to environmental compliance and hazardous materials. The Contractor will be required to provide additional spill prevention, response and hazardous materials handling training to all of their staff who handle hazardous materials, fuels and lubricants on a regular basis. The Contractor will provide the details of this training to Keystone prior to the start of work (Attachment D). At a minimum, training will include:

- A review of this SPCC Plan;
- An overview of all regulatory requirements;
- Waste minimization practices;
- Proper storage and handling methods for hazardous materials, fuels, lubricants, gases, etc.;
- Spill prevention, clean-up, and reporting requirements;
- Proper disposal techniques for hazardous materials, fuels, lubricants, etc.;
- Proper procedures for transferring fuels and containing fluids while doing maintenance on vehicles;
- Special requirements for refueling within 100 feet of wetlands and waterbodies;
- The location of the MSDSs and the SPCC Plan;
- The proper use of personal protective equipment;

- Emergency and spill response material locations, proper use, and maintenance;
- Emergency contact information and notification procedures; and
- Procedures for documenting spills and standard spill information to be provided to Keystone for agency notification.

2nd paragraph: All personnel working on the Project, including all Contractor personnel, are required to attend a Project-sponsored training session prior to starting work. Keystone will conduct training to ensure all responsible Contractor employees know of and comply with all project-specific environmental and TransCanada environmental policy requirements. The environmental training program will address refueling restrictions, hazardous materials handling, spill prevention and cleanup requirements, as well as other Project environmental and safety topics. (FSEIS, Appendix I, page SPCC-2)

Note that Attachment D is the Contractor's Training Program. Keystone currently has retained no contractor for the construction of the proposed project.

SPCC: Section 4 Spill Control and Countermeasures

1st paragraph: It is Keystone's goal to promptly stop spills, however the safety and health of Project personnel and the public is the foremost priority. Personnel should only respond to a spill if they have adequate training to do so safely. (FSEIS, Appendix I, page SPCC-8)

2) Emergency Response Plan

ERP: Executive Summary

2nd paragraph: A critical aspect of operating the Keystone Pipeline system is to have a comprehensive Emergency Management System. A key component of the system includes having an Emergency Response Plan. The Keystone emergency response plan was prepared to achieve a number of goals: ensure regulatory compliance, appropriate for all key stakeholders including field operations, include all emergencies and response measures, timely internal and external notification procedures, and training requirements. In addition, the plan contains information related to worst case discharge, company owned equipment, environmental sensitivities, contract resources, and public officials, and

tactical control plans. (FSEIS, Appendix I, page Emergency Response Plan 2)

4th paragraph: The Keystone Emergency Response Plan is combined with a rigorous training program,, retention of and access to the industry's most known response experts, and a state of the art pipeline integrity and maintenance program making emergency response for the Keystone pipeline system a priority fully endorsed at all levels within TransCanada. (FSEIS, Appendix I, page Emergency Response Plan 2)

ERP: APPENDIX D Training and Drills

References to training requirements are interspersed throughout the ERP document. Appendix D Training and Drills encapsulates the training regimen in great detail. Only the table of contents of Appendix D is provided here (FSEIS, Appendix I, Emergency Response Plan, page D. Training & Drills 1)

D.1 Response Team Training

- Emergency Response Plan Review
- Hazardous Waste Operations and Emergency Response (29 CFR 1910.120)
- Incident Command System
- Training Records Maintenance
- Contractor Training
- Training Qualifications

D. 2 Response Team Exercises

- Quarterly QI Notification Exercise
- Annual Equipment Deployment Exercise
- Annual Response Team Tabletop Exercise
- Government-Initiated Unannounced Exercise
- Area Exercises
- Exercise Documentation

D. 3 Purpose of Review and Evaluation

- Outline of Review
- Detection
- Notification
- Assessment/Evaluation
- Mobilization
- Response -Strategy

Response -Resources Used
Response -Effectiveness
Command Structure
Measurement
Government Relations
Public Relations

INTERROGATORY NO. 14 Identify the contractor that provided assistance in the preparation of the Emergency Response Plan.

ANSWER: Witt O'Briens.

INTERROGATORY NO. 15 Describe the notification procedures and identify the contact information for appropriate agencies for emergency response, for an emergency relating to the project in South Dakota.

ANSWER: External Notifications - External notifications are those made to entities outside of the Company including Federal, Province/State and local regulatory agencies, as well as railroad and utility companies. These notifications include both verbal and written requirements. The Keystone ERP meets these notification regulatory requirements. The Keystone ERP will be amended to accommodate Keystone XL. (Keystone ERP Sec.2.2). The contact information for "appropriate agencies during an emergency response" are listed in the Keystone ERP. A redacted version thereof is located at Appendix I to the FSEIS.

INTERROGATORY NO. 16 For each county in which the project would be located, identify the locations of emergency responders, the routes to be used and the anticipated response deployment times.

ANSWER: The Keystone Emergency Response Plan identifies and lists resources for use in an emergency. The ERP additionally lists possible Command Posts that may be utilized during an incident. The Keystone ERP will be amended to accommodate Keystone XL. (Keystone ERP, Sec.2.6).

INTERROGATORY NO. 17 For each county in which the project would be located, identify the equipment available to respond to a release of oil during the operation of the pipeline, the location of the equipment to be used in the clean-up, the routes to be used to transport equipment to each respective county, and the anticipated response deployment times.

ANSWER: Oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan. The Keystone ERP will be amended to accommodate Keystone XL. PHMSA requires response times as outlined in the table below. TransCanada locates equipment and people that are transported by air, land and water to ensure that regulatory guidelines are meant.

INITIAL RESPONSE ACTIONS - SUMMARY			
PERSONNEL AND PUBLIC SAFETY IS FIRST PRIORITY			
RESPONSE TIMES*			
High Volume Area	6 HR	30 HR	54 HR
All Other Areas	12 HR	36 HR	60 HR
CONTROL			
<ul style="list-style-type: none"> • Eliminate sources of ignition • Isolate the source of the discharge, minimize further flow 			
NOTIFY			
<ul style="list-style-type: none"> • Make internal and external notifications • Activate local Company personnel as necessary • Activate response contractors and other external resources as necessary 			
CONTAIN			
<ul style="list-style-type: none"> • Begin spill mitigation and response activities • Monitor and control the containment and clean-up effort • Protect the public and environmental sensitive areas 			

* Response resources and personnel available to respond within time specified after discovery of a worst case discharge per US DOT 49 CFR Part 194.115 (Keystone ERP Sec.3.1)

INTERROGATORY NO. 18 Identify the national response contractor with access to and the ability to provide large quantities of equipment to meet Oil Spill Response Organization (OSRO) requirements, the location of the equipment, the routes to be used to transport equipment as may be necessary to each respective county in which the project is located, and the anticipated response and deployment times for each county.

ANSWER: TransCanada has agreements/contracts with corporations such as the National Response Corp. that meet the Oil Spill Response Organization (OSRO) requirements (Keystone ERP, Appendix I to FSEIS).

INTERROGATORY NO. 19 Identify the local contractors to be used to provide emergency response assistance.

ANSWER: The resources will be secured from a Company approved contractor.

INTERROGATORY NO. 20 For each county in which project would be located, identify the housing that is available for response and clean-up crews in the event of an oil spill in that county.

ANSWER: Where response workers are housed and fed depends on the location of the incident. This will be determined at the time of the incident. However, the Keystone XL ERP will have a listing of resources that may be utilized (Hotels, Motels, Lodging).

INTERROGATORY NO. 21 Describe the training requirements for contractors and project personnel contained in the Emergency Response Plan.

ANSWER: Prior to in service of Keystone XL it is regulated that there is Emergency Response Training. After the pipeline is operational, TransCanada reaches out to first responders at least annually via our public awareness program which includes as a baseline our contact info, where our pipeline is, and how to respond. Additionally, we conduct exercises and training sessions annually to which first responders are invited to attend and participate. Training and exercises include ICS, table top, deployment and full scale exercises. Our exercise planners are required to invite first responders to full

scale exercises which includes the development of an incident management team and the simultaneous deployment of equipment resources to proximate a real event. These exercises are conducted in various locations along the pipeline system.

INTERROGATORY NO. 22 Describe the notification procedures and contact information or appropriate agencies contained in the Emergency Response Plan.

ANSWER: External Notifications - External notifications are those made to entities outside of the Company including Federal, Province/State and local regulatory agencies, as well as railroad and utility companies. These notifications include both verbal and written requirements are outlined in the Keystone ERP and will be amended to accommodate Keystone XL. (Keystone ERP Sec.2.2.)

INTERROGATORY NO. 23 Describe the provisions in the Emergency Response Plan addressing human error in the operation of the pipeline or in the response to an oil spill.

ANSWER: The Keystone ERP addresses a variety of incidents that potentially may occur. Addressing the human error factor is an issue that all energy organizations and companies have to prioritize

INTERROGATORY NO. 24 Identify the members of the Spill Management Team, and include the name, address and job title of each such person.

ANSWER: The first Company person on scene (First Responder) will function as the Incident Commander and person-in-charge until relieved by an authorized supervisor who will then assume the position of Incident Commander (IC). Transfer of command will take place as more senior management contract support respond to the incident. For response operations within the control of the Initial Response Team, the role of IC will typically be assumed and retained by the Qualified Individual. The number of positions/personnel required to staff the Incident Management Team will depend on the size and complexity of the incident. The duties of each position may be performed by the IC directly or delegated as the situation demands. The IC is always responsible for directing the response activities and

will assume the duties of all the primary positions until the duties can be delegated to other qualified personnel.

A complete functional ICS organization is shown in Figure 4.1. The Incident Commander should try to fill the necessary positions within the Incident Management Team and request additional support from both the Regional and Corporate Emergency Operations Centers to fill/back up all the positions as the incident may dictate. Detailed job descriptions of the primary response team positions are provided in Section 4.7.

REGIONAL EMERGENCY PREPAREDNESS TEAM (EPT).

The Emergency Preparedness Team (EPT) will activate a Regional Emergency Operations Center (EOC) to support the Initial Response Team/Incident Management Team. The number of positions/personnel required to staff the Regional EOC will depend on the size and complexity of the incident.

The Regional EOC is staffed by personnel from various Regional locations. The Regional EOC provides necessary information to the appropriate Federal, State/Province, and Local authorities with designated response roles, including the National Response Center (NRC), the Canadian National Energy Board (NEB), if necessary, State Emergency Response Commission (SERC) Provincial Ministry, and local response agencies.

INTERROGATORY NO. 25 Identify the high volume areas in which the project would be located?

OBJECTION: This request seeks information that is governed by federal law and is within the province of PHMSA. It is therefore beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27.

INTERROGATORY NO. 26 Describe with specificity the characteristics and composition of all oil products to be transported by the project.

ANSWER: This issue is addressed in the Department of State FSEIS, Chapter 3, Section 3.13.3. The Material Safety Data Sheets for the crude oil are located at Appendix Q to the FSEIS.

INTERROGATORY NO. 27 Identify the site or sites for the disposal of recovered oil products that could be released during the operation of the project, and, for each county in which the project would be located, the routes to be used for transportation to the disposal site or sites.

ANSWER: All these wastes need to be classified and segregated (i.e., oily, liquid, etc.), transported from the site, and treated and/or disposed at approved disposal sites. Specific disposal sites and transportation routes will be identified in the Keystone ERP.

INTERROGATORY NO. 28 Identify the source or sources of support to conduct the monitoring and post-use effectiveness evaluation required by the applicable Local or Area Contingency Plan, in the event of an oil spill.

ANSWER: TransCanada will refer to the Local Area Contingency Plan in the event of a spill. TransCanada is responsible for ensuring technical resources are utilized.

INTERROGATORY NO. 29 For each county in which the project would be located, describe the availability of adequate temporary storage capacity to sustain effective daily recovery of oil products that could be released during the operation of the project.

ANSWER: TransCanada will calculate how much storage is sufficient and necessary. This storage may be company-owned or be third party.

INTERROGATORY NO. 30 Describe in detail all circumstances surrounding the external corrosion of pipe that is described on page 5, finding 68, in the Tracking Table of Changes filed by the applicant, including the name and location of the pipeline, identification of the foreign utility, the effects of the corrosion and identify any resulting release of liquid or gas.

ANSWER: Base Keystone experienced a localized external corrosion wall loss due to DC stray current interference from foreign utility colocation which caused sacrificing significant amounts of

protective current to other pipelines in the shared Right-of-Way. This adversely affected CP current distribution to the Keystone line. This anomaly was found during proactive and routine high resolution in-line inspection. This issue has been reviewed, remediated and updates to the CP design where colocation occur have been implemented. In South Dakota specifically, no such location exists for colocation of multiple pipelines in a shared Right-of-Way. However, Keystone's has applied these updates to its design and existing CP "construction bridge to energization" plan to address potential for DC stray current interference due to foreign utility crossings and paralleling utilities.

INTERROGATORY NO. 31 What are acceptable airborne dust levels during construction of the project?

ANSWER: The acceptable airborne dust levels during construction of the project are identified in Table 3.12.2 Federal and Montana Ambient Air Quality Standards in the Department of State FSEIS (2104). This table contains the National Ambient Air Quality Standards for particulate matter (PM). PM includes inhalable coarse particles with aerodynamic diameter of 10 microns and less (PM10) and fine particles with an aerodynamic diameter of 2.5 microns and less (PM2.5). The State of South Dakota has adopted the Ambient Air Quality Standards equivalent to the National Ambient Air Quality Standards for PM.

INTERROGATORY NO. 32 Describe the precautions to be taken to prevent fugitive emissions during sand blastings in the course of construction.

ANSWER: The Department of State FSEIS (2014) in Section 4.12.3.1 states: "Contractors would place curtains of suitable material, as necessary, to prevent wind-blown particles as a result of sand blasting operations from reaching any residence or public building. Additional dust control measures may be required by state or local ordinances."

INTERROGATORY NO. 33 What hazardous materials shall be used by contractors or other project personnel in the course of construction?

ANSWER: The contractor(s) have not been identified or hired at this point in the Project planning process. All hazardous material that would be used by the contractor(s) would be identified within the Project's Spill Prevention Control and Countermeasures (SPCC) Plan(s). Appendix I of the Department of State FSEIS (2014) contains a draft template of the SPCC Plan. The SPCC Plan(s) will be finalized by each contractor based on all required site-specific information.

INTERROGATORY NO. 34 Identify the disposal site or sites to be used upon clean-up and remediation, in the event of a release of hazardous materials during construction.

ANSWER: The TransCanada environment department will determine the disposal sites, for hazardous materials, at the time of the incident.

INTERROGATORY NO. 35 Identify and describe the equipment or materials to be kept on the construction sites to contain a spill of hazardous materials during construction?

ANSWER: This issue is addressed in the SPCC..

INTERROGATORY NO. 36 Describe the specific measures to be utilized by contractors and project personnel during construction to contain a spill of hazardous materials during construction.

ANSWER: The specific measures to be utilized by contractors and project personnel during construction to contain a spill of hazardous materials during construction will be identified within Section 3.0 of the CMR Plan Rev4 and the Project's SPCC Plan(s). Appendix I of the Department of State FSEIS (2014) contains a draft template of the SPCC Plan. The SPCC Plan(s) will be finalized by each contractor based on all required site-specific information.

INTERROGATORY NO. 37 Identify the water bodies to be crossed in South Dakota through use of the following crossing methods:

- (a) horizontal direction drilling;
- (b) horizontal bore crossing;
- (c) flowing open cut method;

- (d) non-flowing open cut method;
- (e) dry-flume method; and
- (f) dry-dam pump method.

ANSWER: The following water bodies will be crossed by the horizontal directional drill (HDD) method: Little Missouri River, Cheyenne River, Bridger Creek, Bad River and White River. The crossing method for all other water bodies will be determined at the time of construction

INTERROGATORY NO. 38 Explain why the plan for crossing the Bridger Creek has been changed, including any new information that was unavailable during the initial determination that it would be crossed using the open-cut method.

ANSWER: During the detailed engineering design phase of the Project, the Bridger Creek area was redesigned as an HDD in order to mitigate construction safety risk to personnel and equipment, long term slope stability and pipe integrity concerns due to installation within steeper undulating terrain entering and leaving the area.

INTERROGATORY NO. 39 What steps shall be required of contractors to limit the use of equipment operating in water bodies?

ANSWER: The contractor will be required to comply with all measures that are outlined in Section 7.0, Waterbodies and Riparian Areas of the Project's CMR Plan Rev4 and all measures in Appendix Z of the Department of State FSEIS (2014), as well as measured in any applicable permits from the U.S. Army Corps of Engineers.

INTERROGATORY NO. 40 Identify with specificity the sites for hydrostatic testing.

ANSWER: Sites for hydrostatic testing will be divided along the pipeline to meet the pressure testing requirements in accordance with 49 CFR 195 Subpart E.

INTERROGATORY NO. 41 How much water is estimated to be needed for hydrostatic testing?

ANSWER: The estimated water requirements for hydrostatic testing in South Dakota are approximately 133 million gallons.

INTERROGATORY NO. 42 Identify all water bodies and the points of diversion for the withdrawal of water for use in hydrostatic testing.

ANSWER: The following are the water bodies anticipated to be utilized for hydrostatic testing: Little Missouri River, Lake Gardner, North Fork Moreau River, Cheyenne River, Bad River and White River. The point of diversion will be in proximity to the pipeline and each water body.

INTERROGATORY NO. 43 How much water is estimated to be needed for during the construction of the project for:

- a. dust suppression; and
- b. construction de-watering.

ANSWER: The estimated water requirements for dust suppression in South Dakota are approximately 79 million gallons. The construction de-watering requirements are unknown as this is dependent on conditions at the time of construction.

INTERROGATORY NO. 44 Identify all water bodies and the points of diversion for water for use for dust suppression and construction de-watering.

ANSWER: The following water bodies have been identified as potential sources to be utilized for dust suppression: Dipping Vat Creek, Little Missouri River, Lake Gardner, South Fork Grand River, Clarks Fork Creek, South Fork Moreau River, Sulphur Creek, Bridger Creek, Bad River, Dry Creek and White River.

INTERROGATORY NO. 45 Identify the approved sources for water trucks supplying water for pre-testing of roads or railroad crossings.

ANSWER: Road and railroad crossings are not pre-tested. Therefore, no water sources have been identified.

INTERROGATORY NO. 46 Identify the locations for the discharge of hydrostatic test water.

ANSWER: Hydrostatic test water will be discharged in the same watershed from which it was diverted.

INTERROGATORY NO. 47 What specific steps shall be required of contractors to ensure there is no discharge of water containing oil or other contaminants?

ANSWER: The hydrostatic test water will be monitored for contaminants per permitting requirements.

INTERROGATORY NO. 48 Identify Keystone's Public Liaison Officer for South Dakota, including such person's name, job title, qualifications, address, telephone number, email address and web site address.

ANSWER:

Sarah Metcalf
Public Liaison Officer
PO Box 904
Aberdeen, SD 57402
1-888-375-1370
Smetcalf12@gmail.com

Metcalf does not maintain a website, but her reports to the PUC are a matter of public record.

See <https://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx>

Sarah Metcalf worked as the public liaison officer for Phase I of the Keystone Pipeline. Her appointment was approved by the PUC in both Docket HP07-001 and HP09-001. A copy of her resume is attached as Keystone 0645-0646.

INTERROGATORY NO. 49 Describe the advertisements that have been purchased by TransCanada relating to the project in any South Dakota media, such as television, radio, newspaper or billboard, including the cost for each advertisement, the medium in which it was aired or published, and the date or dates of the advertisements.

OBJECTION: This request is not relevant and is not likely to lead to the discovery of admissible evidence. It is not related to or within the scope of Amended Condition 7, which relates to the public liaison officer, and which requires that Keystone maintain a website.

INTERROGATORY NO. 50 Describe TransCanada's understanding of its obligations under:

a. National Historic Preservation Act of 1966, as amended, 16 U.S.C. §§470- 470x-6. Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. §§3001-3013.

b. Archeological Resources Protection Act of 1979, 16 U.S.C. §§470aa-470mm.

ANSWER: Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by ACHP. The regulations place emphasis on consultation with Indian tribes and Native Hawaiian organizations, in keeping with the 1992 amendments to NHPA. Consultation with an Indian tribe must respect tribal sovereignty and the government-to-government relationship between the Federal Government and Indian tribes. Keystone assists the State Department in its compliance with Section 106; it does not supplant the State Department in its government-to-government consultation role with affected Tribes. Obligations under NAGPRA are summarized in a National Park Service posting available at:

<http://www.nps.gov/archeology/tools/Laws/nagpra.htm>.

Obligations under ARPA are summarized in a National Park Service posting available at:

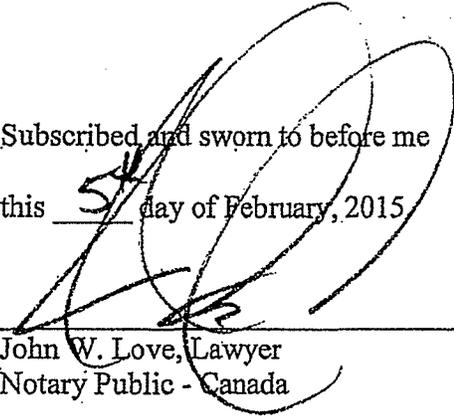
<http://www.nps.gov/archeology/tools/Laws/arpa.htm>.

Dated this 5th day of February, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 5th day of February, 2015



John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Standing Rock Sioux Tribe's First Set of Interrogatories were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

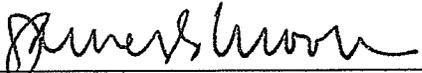
By 
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James E. Moore
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Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Standing Rock Sioux Tribe's First Set of Interrogatories, to the following:

Peter Capossela, P.C.
PO Box 10643
Eugene, OR 97440
pcapossela@nu-world.com

Chase Iron Eyes
Iron Eyes Law Office, PLLC
PO Box 888
Fort Yates, ND 58538
chaseironeyes@gmail.com


One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

3. Provide documents of the leak safeguards which are in place that protect the rivers which is water source SD citizens.

ANSWER: Please refer to Department of State SFEIS Volume 3 Section 4 clause 4.13.6 Additional Mitigation, Appendix B Pipeline Safety and Appendix Z section 4.0 Water Resources and 59 PHMSA special conditions.

4. Provide documents of shipments through the Keystone I, Shipping destinations, quantity used in U.S.

OBJECTION AND ANSWER: This request seeks the identity of Keystone's shippers and the terms of their contracts, which have substantial commercial and proprietary value and are subject to substantial efforts by Keystone to protect the information from actual and potential competitors. The information sought is required to be maintained on a confidential basis pursuant to the terms of the contracts between

Keystone and its shippers. Without waiving the objection, Keystone has safely transported over 700 million barrels of oil since commencing operations in 2010.

5. Describe "contractual commitments" of 2012. Are there opt out dates.

OBJECTION: This request seeks the identity of Keystone's shippers and the terms of their contracts, which have substantial commercial and proprietary value and are subject to substantial efforts by Keystone to protect the information from actual and potential competitors. The information sought is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers.

6. Provide information of any leaks at pump station on Keystone I.

ANSWER: Please refer to the spreadsheet attached as Keystone 0774-0784.

7. Provide document of PHMSA regulations. Provide documents on SCADA.

OBJECTION: The request for "PHMSA regulations" and "documents on SCADA" is vague, unclear, overlybroad, and not capable of being reasonably interpreted.

PHMSA's regulations are available on its website at <http://phmsa.dot.gov/regulations>.

Without waiving the objection, attached as Keystone 0468-0469 is the Keystone XL Pipeline Leak Prevention and Detection Facts Sheet, which addresses SCADA.

8. In detail provide contents of pipeline. Is benzine one component of this cancer causing concoction?

ANSWER: Please refer to Department of State FSEIS Chapter 3.13 Potential Releases sections 3.13.2 and 3.13.3. Benzene is included in the "BTEX" characteristic.

9. Provide lab locations who can test waters (well, groundwater, rivers). If labs are distant, how accurate are findings? How often will test happen?

ANSWER: Specifics related to water testing after a spill depend on the circumstances of the spill.

10. Describe in detail how soils are segregated.

ANSWER: A detailed description of how soils are segregated is presented in Sections 4.3 and 6.5 of the Project's CMR Plan Rev4, in Section 3.0 of Appendix Z of the Department of State FSEIS (2104), and in Section 4.2 of the Department of State FSEIS (2014).

11. Provide documents on compensation to landowners for contamination of land and where is contaminated soil taken relating to Keystone I.

ANSWER: In South Dakota, there were no issues of contaminated land on Keystone Phase 1.

12. Provide documents of safeguard in place for Keystone I to avoid contaminates flowing downstream.

OBJECTION AND ANSWER: The document of safeguard is the Keystone Emergency Response Plan (ERP). The Keystone ERP will be amended to accommodate

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Keystone XL. The ERP is created by adhering to Federal Regulatory guidelines, meaning a response plan will be developed, reviewed, and approved by the DOT as a condition of operations, not application. The ERP is confidential and proprietary. *See* Amended Final Order, HP 09-001, Condition ¶ 36. This also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence because the ERP is within the exclusive jurisdiction of PHMSA. *See* 49 CFR Part 194; 49 U.S.C. § 60104(c). The ERP is discussed in Appendix I to the FSEIS.

13. Can benzene be removed from water and how in a flowing river?

ANSWER: Yes, benzene can be removed from water, including flowing water, through a variety of natural processes. Most importantly, benzene is extremely volatile, so it evaporates very quickly. The half-life of benzene within water is 4.8 hours, meaning that without any intervention, benzene levels within a body of water will be halved in 4.8 hours (Kuykendall 2010). This process can be accelerated through the use of air stripping equipment. This involves bubbling air through the contaminated water to speed the evaporation of VOCs such as benzene. Additionally, benzene can be naturally biodegraded. Thus, benzene-laden waters can be decontaminated using bioremediation techniques.

Kuykendall, J. R. (2010). Benzene. In E. Jorgensen (Ed.), *Ecotoxicology* (pp. 210-215). Amsterdam, Netherlands: Academic Press.

14. Provide action plan for leak cleanup.

OBJECTION AND ANSWER: This request seeks information outside the scope of the PUC's jurisdiction. Keystone's emergency response plan is governed by federal law and within the exclusive province of PHMSA. The PUC's jurisdiction is preempted by federal law. *See* 49 CFR Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan would commercially disadvantage Keystone. The ERP is confidential and proprietary. *See* Amended Final Order, HP 09-001, Condition ¶ 36. This also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence because the ERP is within the exclusive jurisdiction of PHMSA. *See* 49 CFR Part 194; 49 U.S.C. § 60104(c). The redacted ERP for Keystone is found in Appendix I to the FSEIS.

15. Provide documents of all spills for Keystone I from 2010 to present date.

ANSWER: Please see response to question no. 6.

16. When Keystone I was constructed it was the newest and safest pipeline, can analogy be flawed?

ANSWER: Additional Keystone segments and other operator's pipelines have been constructed since Keystone I, therefore it is not the newest pipeline. All subsequent Keystone pipeline segments have been designed, constructed and operate with the

PHMSA 57 special conditions. These conditions exceed Federal code and industry standards, therefore the Keystone system is the safest pipeline system built.

17. Provide description of tarsands clean up plan in an aquifer.

ANSWER: The following procedure has been prepared in the event of a release of crude oil from the pipeline into a hydraulically sensitive groundwater resource area, but may not be currently identified as a high consequence area by PHMSA.

Options for Long term Remediation include, but are not limited to:

- Air sparging
- Vacuum extraction
- Conventional pump and treat
- Bioslurping
- Excavation
- Enhanced biodegradation/bioremediation
- Chemical addition/oxidation
- Natural Attenuation
- Enlist additional experts, as appropriate, for continuing remediation and coordination with appropriate agencies.

(Keystone ERP, Sec.3.0 & 7.5). The Keystone ERP, which is confidential and

proprietary, will be amended to include Keystone XL. The ERP is discussed in Appendix I to the FSEIS.

18. Explain "appropriate" measures to prevent groundwater contamination.

ANSWER: Please refer to answer no. 3.

19. Regarding Tripp County with highly permeable sandy soils describe cleanup plan for tarsands leaks and spills.

ANSWER: See answer to no. 17.

20. Provide documents showing that tarsand is not corrosive from inside the pipeline.

ANSWER: Please see the attached report from the National Science Academy marked as Keystone 1375-1522.

21. Provide documents of the SCADA detection system.

OBJECTION AND ANSWER: This request is overlybroad and vague.

Without waiving the objection, see the leak prevention fact sheet attached as Keystone 0468-0469.

22. Provide documents of who performs contamination tests on 'small' spills.

ANSWER: Keystone has no responsive documents. Who performs contamination tests depends on the circumstances of the spill.

23. Confirm "appropriate" measures that will prevent groundwater contamination.

ANSWER: Please see answer to no. 3.

24. Provide emergency response locations and how quickly responders can be on site.

ANSWER: Response times are set forth in PHMSA regulations as set forth below. In addition to the utilization of remotely actuated valves, TransCanada locates equipment and people (either internal assets or contracted third-party assets) that are transported by air, land and water to ensure that these regulatory guidelines are met or exceeded.

INITIAL RESPONSE ACTIONS - SUMMARY PERSONNEL AND PUBLIC SAFETY IS FIRST PRIORITY RESPONSE TIMES*			
High Volume Area	6 HR	30 HR	54 HR
All Other Areas	12 HR	36 HR	60 HR
<p>CONTROL</p> <ul style="list-style-type: none"> Eliminate sources of ignition Isolate the source of the discharge, minimize further flow <p>NOTIFY</p> <ul style="list-style-type: none"> Make internal and external notifications Activate local Company personnel as necessary Activate response contractors and other external resources as necessary <p>CONTAIN</p> <ul style="list-style-type: none"> Begin spill mitigation and response activities Monitor and control the containment and clean-up effort Protect the public and environmental sensitive areas 			

* Response resources and personnel available to respond within time specified after discovery of a worst case discharge per US DOT 49 CFR Part 194.115 (Keystone ERP Sec.3.1).

25. Provide your tarsand cleanup plans.

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OBJECTION: This request is vague, unclear, and overlybroad.

26. Tarsand is a cancer causing concoction which oozes health issues. Explain how Canadian Indigenous health issues are not related to tarsands harvesting.

OBJECTION: This request is vague, unclear, overlybroad, argumentative, and does not ask for information that is relevant or likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Information about "Canadian indigenous health issues" is not within the jurisdiction of the PUC and is irrelevant to the issues under SDCL § 49-41B-27, especially given that so called "tarsands harvesting" does not occur in South Dakota.

27. Provide all correspondence between landowners and Keystone I liaison officer from 2010 to present. Provide documents of complaints or dismissal of any liaison officer.

OBJECTION: The request for all correspondence between landowners and Keystone's Public Liaison Officer related to the Keystone Pipeline is overlybroad, unduly burdensome, irrelevant, and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). The request for "documents of complaints or dismissal" is not relevant or likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Keystone's Public Liaison Officer for the Keystone Pipeline was Sarah Metcalf, she was not dismissed during her tenure, and she was responsible to the PUC.

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28. Provide contents flowing through this pipeline. First responders need to know for their safety.

ANSWER: See Department of State SFEIS Appendix Q, Crude Oil Material Safety Data Sheets. This issue is also addressed in Section 3.13.2 of the FSEIS.

29. Describe measures that should be in place for preconstruction.

OBJECTION: This request is vague and unclear with respect to "measures that should be in place for preconstruction."

30. Provide document and maps pertaining to reclamation of hard to reclaim areas in Keystone I.

ANSWER: No areas were hard to reclaim. The construction reclamation and mitigation plan was implemented.

31. Provide any correspondence with landowners pertaining to this subject.

OBJECTION AND ANSWER: This request is overlybroad, unduly burdensome, and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, see answer to no. 30.

32. Describe in detail decompacting topsoil. If at landowners request and needs to be seeded-at whose cost.

ANSWER: A discussion of decompacting topsoil and the identification of mitigation measures developed to reduce compaction of topsoil are found in Sections

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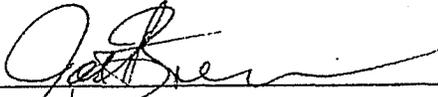
2.18, 4.6, 4.9, 4.11.1, and 4.11.7 of the Project's CMR Plan Rev4 and in Section 4.2.3.1 and 4.2.4.1 of the Department of State FSEIS (2014).

To address landowners' requests Keystone has committed to the following from Section 4.11.1 of the Project's CMR Plan Rev4:

"Keystone plans to minimize impacts on soil productivity that may result from construction activities, but recognizes that some short-to long-term decreases in agricultural productivity are possible. Keystone recognizes its responsibility to restore agricultural productivity on the pipeline ROW and to compensate landowners for demonstrated decreases in productivity that may result from any degradation of agricultural soils along the ROW."

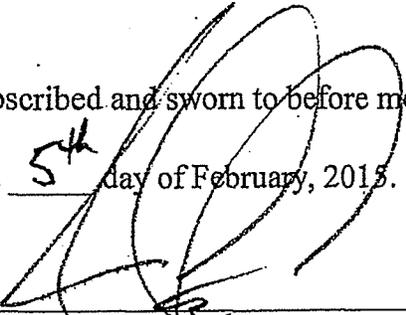
Dated this 5th day of February, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me
this 5th day of February, 2015.



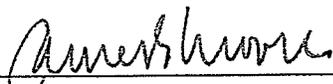
John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Bonny Kilmurry's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

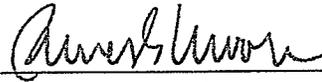
WOODS, FULLER, SHULTZ & SMITH P.C.

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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission,
a true and correct copy of Keystone's Responses to Bonny Kilmurry's First
Interrogatories and Request for Production of Documents, to the following:

Bonny Kilmurry
47798 888 Road
Atkinson, NE 68713
bjkilmurry@gmail.com



One of the attorneys for TransCanada

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Cheyenne River Sioux Tribe's First Set of Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. *See* ARSD 20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

1. State the name, current address, and telephone number of the person answering these interrogatories.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate witnesses as identified in number 3 with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition.

2. State the name, current address, and telephone number of any person, other than legal counsel, who Keystone talked with about answering these interrogatories, who assisted Keystone in answering these interrogatories, or who provided information that Keystone relied on in answering these interrogatories.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate witnesses as identified in number 3 with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition.

3. State the name, current address, and telephone number of every fact witness that Keystone intends to call to offer testimony at the Commission's evidentiary hearing, currently scheduled for May 2015.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; same; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility
- (5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441; Environmental Issues; CMR Plan, Con/Rec Units, HDD's

(6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

4. State the name, current address, employer name and/or organization(s) with which he or she is associated in any professional capacity, and telephone number of each expert witness pursuant to SDCL Ch. 19-15 that Keystone intends to call at the Commission's evidentiary hearing, currently scheduled for May 2015.

In addition, for each expert please provide:

- a. The subject matter on which the expert will testify;
- b. The substance of each opinion to which the expert is expected to testify;
- c. The facts on which the expert bases his or her opinion;
- d. The expert's profession or occupation, educational background, specialized training, and employment history relevant to the expert's proposed testimony;
- e. The expert's previous publications within the preceding 10 years; and
- f. All other cases or proceedings in which the witness has testified as an expert within the preceding four years.

ANSWER: Keystone does not intend to offer testimony from any retained experts, but its witnesses identified in the preceding answer will offer opinion testimony.

5. Prior to answering these interrogatories, has Keystone made a good faith search of all documents, records, and papers related to this action?

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

6. Where is Keystone's principal place of business?

ANSWER: Houston, Texas.

7. Identify any other names that Keystone conducts business under, in the United States and Canada.

ANSWER: Keystone does not conduct business under any other names.

TransCanada Keystone Pipeline, LP carries out certain activities through its agent, TC Oil Pipeline Operations Inc.

8. Pursuant to Condition Two of the Commission's Amended Final Decision and Order, has Keystone received any communications from any regulatory body or agency that may have jurisdiction over the project which alleges that Keystone has failed to comply with any applicable permits, law, or regulation?

ANSWER: No.

9. Pursuant to Condition Two of the Commission's Amended Final Decision and Order, has Keystone been given notice by any regulatory body or agency that may have jurisdiction over the construction, maintenance or operation of any pipeline located in the United States or Canada alleging that Keystone has failed to comply with any applicable permits for the construction, operation or maintenance of any pipeline located in the United States?

ANSWER: No.

10. Pursuant to Condition One of the Commission's Amended Final Decision and Order, please identify all required permits that Keystone has applied for within the State of South Dakota regarding the use of public water for construction, testing, drilling, or temporary discharges to waters of the state.

ANSWER: Keystone has submitted a Notice and Intent and Certificate of Application Form to Receive Coverage Under the General Permit for Temporary Discharges and a Temporary Water Use Permit. Other permits, as required, will be filed closer to the time period of construction.

11. Pursuant to Condition One of the Commission's Amended Final Decision and Order, please identify all required permits that Keystone has applied for within the State of South Dakota regarding temporary discharges of water from construction dewatering and hydrostatic testing in and around the Bridger Creek area.

ANSWER: Keystone has submitted a Notice and Intent and Certificate of Application Form to Receive Coverage Under the General Permit for Temporary Discharges and a Temporary Water Use Permit. Other permits, as required, will be filed closer to the time period of construction.

12. Pursuant to Condition Six of the Commission's Amended Final Decision and Order, identify the most recent depiction of the Project route and facility locations as

they currently exist as compared to the information provided in Exhibit TC-1, 1.4, pp. 2-3.

ANSWER: Attached are maps marked as Keystone 0470-0583 showing changes to the route since the Permit was granted.

13. Pursuant to Condition Six of the Commission's Amended Final Decision and Order, identify the dates, addresses, phone numbers, emails, and names of person(s) responsible for conducting surveys, addressing property specific issues and civil survey information.

OBJECTION: The identity of the persons who conducted civil surveys is not relevant or reasonably calculated to lead to the discovery of admissible evidence.

Without waiving the objection, American Burying Beetle Habitat Assessment was conducted by W. Wyatt Hoback, Department of Biology, University of Nebraska at Kearney; Biological Surveys (i.e., habitat, wetland delineations) were conducted by AECOM (Scot Patti was the principal investigator) and SCI (Scott Billing was the principal investigator); Phase I ESA Surveys were conducted by AECOM (Brian Bass was the principal investigator); Biological Surveys (i.e., threatened and endangered species, noxious weeds, reclamation) were conducted by Westech (John Beaver was the principal investigator); Cultural resources surveys were conducted by SWCA Environmental Consultants (principal investigator was Scott Phillips); the paleontological

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surveys were conducted by SWCA Environmental Consultants (principal investigator was Paul Murphey).

14. Pursuant to Condition Six of the Commission's Amended Final Decision and Order, does Keystone recognize the Cheyenne River Sioux Tribe, a federally recognized sovereign Indian Nation, as a "local governmental unit?"

ANSWER: The Project does not cross any Cheyenne River Sioux Tribe lands. Accordingly, the Tribe is not an affected local government unit.

15. Condition Six of the Commission's Amended Final Decision and Order requires Keystone to notify (1) the Commission, and all affected (2) landowners, (3) utilities, and (3) local governmental units as soon as practicable if material deviations are proposed to the Project's route. The table of changes contained in Appendix C of Keystone's Petition of Certification reports such a material change to Finding of Fact number forty-one. Namely, that the Project's route has been diverted to run beneath Bridger Creek via a Horizontal Directional Drilling (HDD). As such, has Keystone:

1. Made any attempt to notify the Cheyenne River Sioux Tribe or any of its officers, attorneys, or agents of Keystone's route diversion through Bridger Creek?
2. If Keystone did make such required notification please provide the following:
 - a. Name(s) of the person(s) notified;
 - b. Title of the person(s) notified;
 - c. The physical address of the person(s) notified;
 - d. The telephone number(s) of the person(s) notified; and

e. The means by which Keystone made notification, i.e. written, oral, electronic, etc.;

ANSWER: Keystone will provide the Commission with material changes to the route prior to construction. Keystone has not notified the Cheyenne River Sioux Tribe of any route changes.

16. Condition Seven of the Commission's Amended Final Decision and Order requires Keystone to appoint a public liaison officer. Accordingly, has Keystone:

1. Appointed such public liaison officer, and if so please provide such officer's:

- a. Name;
- b. Address;
- c. Phone number; and
- d. Email address.

2. Directed such public liaison officer to contact and or consult with the Cheyenne River Sioux Tribe?

ANSWER:

- 1.a. Sarah Metcalf
- 1.b. PO Box 904
Aberdeen, SD 57402
- 1.c. 1-888-375-1370
- 1.d. smetcalf12@gmail.com

2. Condition 7 does not require that the liaison consult with the Cheyenne River Sioux Tribe. The Project does not cross any lands owned by the Cheyenne River Sioux Tribe or held in trust.

17. Pursuant to Condition Thirteen of the Commission's Amended Final Decision and Order, identify and provide the phone number, address, and email address of every environmental inspector that Keystone has incorporated into the CMR.

OBJECTION AND ANSWER: The identity of environmental inspectors is not relevant or reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, no environmental inspectors have been identified or hired, because the construction of the Project has not yet started.

18. Regarding the Bridger Creek area, has Keystone implemented sediment control practices pursuant to Condition Twenty of the Commission's Amended Final Decision and Order?

ANSWER: Keystone has not started construction of the Project, including construction at Bridger Creek. Therefore, Keystone has not implemented any sediment control practices to date and will not until construction starts.

19. Pursuant to Condition Thirty-Four, has Keystone conducted any hydrological surveys in the Bridger Creek area in regard to its continuing assessment and evaluation of environmentally sensitive and high consequence areas obligation? If so, please provide the name, address, and phone number of any and all persons involved in such survey. If so, has Keystone identified any hydrological sensitive areas which may affect the Cheyenne River Sioux Tribe?

ANSWER: All applicable environmental and engineering surveys have been completed along the Bridger Creek area route. All DOT defined HCA's have been identified.

20. If Keystone has identified hydrological sensitive areas which may affect the Cheyenne River Sioux Tribe, has such an area been added to Keystone's Emergency Response Plan as a hydrologically sensitive area?

ANSWER: All identified HCA's have been included in the Emergency Response Plan.

21. Pursuant to Condition Thirty-Four, has Keystone made any attempt to seek out and consider local knowledge in the Bridger Creek area?

ANSWER: Yes. Keystone attorney William Taylor had conversations with James Murray of the Cheyenne River Agency BIA office concerning leaseholds in the area southwest of the 4 Corners Road.

22. Pursuant to Condition Thirty-Four, has Keystone made any attempt to seek out and consider local knowledge of the Cheyenne River Sioux Tribe or its officers and/or agents?

ANSWER: Not specifically with respect to Condition 34 of the Permit.

23. Pursuant to Conditions One and Thirty-Seven, has Keystone ever been found non-compliant with any other permits, from any state regarding the Project?

ANSWER: No.

24. Pursuant to Condition One and Two, have any contractors hired by Keystone to construct any pipeline owned or operated by Keystone or any of its affiliates received any communication from any agency or regulatory body having jurisdiction over each pipeline regarding alleged safety concerns or safety violations regarding the construction, maintenance or operation of any pipeline in the United States?

OBJECTION AND ANSWER : This request is overlybroad and unduly burdensome. Without waiving the objection, Keystone has not yet hired contractors for the Keystone XL Project.

25. Pursuant to Conditions One and Two, have any contractors hired by Keystone to construct any pipeline owned or operated by Keystone or any of its affiliates received any communication from any agency or regulatory body having jurisdiction over each pipeline regarding alleged safety concerns or safety violations regarding the construction, maintenance or operation of any pipeline in Canada?

OBJECTION AND ANSWER: This request is overlybroad and unduly burdensome. Without waiving the objection, Keystone has not yet hired contractors for the Keystone XL Project.

26. Pursuant to Conditions Forty-Three and Forty-Four, what steps has Keystone or any of its affiliates taken to ensure that the cultural, historic, and paleontological resources of the Cheyenne River Sioux Tribe are protected?

ANSWER: Cultural resources survey reports are listed in Section 3.11 of the Department of State FSEIS (2014), with results of the SD surveys detailed in Table 3.11-3. Any further discussions regarding these surveys would be addressed through the course of government to government consultation with the DOS when the Cheyenne River Sioux were afforded the opportunity to not only review those studies but also participate in the surveys themselves.

27. Pursuant to Condition Forty-Three, has Keystone made any new cultural and/or historic surveys along the route of the Project since its original permit was granted? If so, has Keystone made such a survey in the Bridger Creek area where the Project has since been re-routed?

ANSWER: Yes, all cultural resources survey reports are listed in Section 3.11 of the Department of State FSEIS (2014), with results of the SD surveys detailed in Table 3.11-3. Keystone has conducted cultural surveys of the proposed re-route across Bridger Creek.

28. According to Keystone's original application, Keystone began cultural and historic surveys in May 2008 and at that time it had found several pre-historic stone

circles were uncovered. Please provide a detailed description of these sites, including location.

ANSWER: These sites are addressed during the course of government to government consultation with the Department of State. Site locations are confidential and cannot be disclosed outside of the consultation process.

29. Pursuant to Conditions Forty-Three and Forty-Four, please provide the name, address, phone number, and email of all persons involved in any cultural, historic or paleontological surveys conducted by Keystone. In addition, please provide a detailed description of all pertinent professional training that qualifies the surveyor as a professional who meets the standards of the Secretary of the Interior's Historic Preservation Professional Qualification Standards (48 FR 44716, September 29, 1983).

OBJECTION AND ANSWER: The identity of the surveyors is not relevant or reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, SWCA Environmental Consultants performed the survey work. The cultural resources principal investigator was Scott Phillips; the paleontological principal investigator was Paul Murphey. Both individuals meet the SOI standards for their particular field.

30. Pursuant to Condition Forty-Four, has Keystone made any attempt to contact the Cultural Preservation Office of the Cheyenne River Sioux Tribe? If so, please provide the following:

- a. Name(s) of the person(s) contacted;
- b. Title of the person(s) contacted;
- c. The physical address of the person(s) contacted;
- d. The telephone number(s) of the person(s) contacted; and
- e. The means by which Keystone made contact, i.e. written, oral, electronic, etc.;

ANSWER: Government to government consultation is summarized in both Section 3.11.4.3 and Attachment I of Appendix E of the Department of State FSEIS (2014).

31. Pursuant to Condition Forty-Three and Forty-Four, provide a detailed description of cultural and historic training that Keystone provides to its construction personnel.

ANSWER: Keystone's training of construction personnel is addressed in Sections 2.19 and 3.1.2 of the CMR Plan, and Sections 2.1.10, 4.4.3, 4.8.3, 4.13.6, and 4.14.2 of the FSEIS. Contractor training is also addressed in the Special Conditions imposed by PHMSA, which are found in Appendix B to the FSEIS.

32. Pursuant to Conditions Forty-Three and Forty-Four and Finding of Fact Fifty-Eight, does Keystone or any of its affiliates recognize that if approved and

constructed, the Keystone Pipeline will travel through the identified Indian Country territory from the Fort Laramie Treaty of 1851 and 1868, and as such will likely encounter undiscovered cultural and/or historic sites?

ANSWER: If undiscovered sites are encountered, Keystone will comply with the Programmatic Agreement included as Appendix E to the Final Supplemental Environmental Impact Statement.

33. Pursuant to Conditions Forty-Three and Forty-Four and Finding of Fact Fifty-Eight, does Keystone plan to consult with the Cheyenne River Sioux Tribe and its Cultural Preservation Office in the future?

ANSWER: Keystone will provide tribes the opportunity to participate as tribal monitors during construction to assist with the implementation of the unexpected discovery plan.

34. Pursuant to Conditions One and Two, does Keystone recognize and acknowledge that the Cheyenne River Sioux Tribe has federally protected Winters Doctrine water rights and that these rights apply to any permit application to use water for the construction, operation or maintenance of the Keystone Pipeline project?

ANSWER: Keystone recognizes the so-called Winters Doctrine arising from *Winters v. The United States*, 207 U.S. 564 (1908) and its progeny. Keystone does not

believe that the Cheyenne River Sioux Tribe's Winters Doctrine water rights are affected by Keystone's use of water for construction, operation, or maintenance.

35. Pursuant to Conditions One and Two, what steps, if any, has Keystone or any of its affiliates taken to ensure that the Cheyenne River Sioux Tribe's federally protected Winters Doctrine water rights are be protected?

ANSWER: Keystone does not believe that the Cheyenne River Sioux Tribe's Winters doctrine water rights are affected by the use of water for the construction, operation, or maintenance of the Keystone Pipeline.

36. Pursuant to Conditions One and Two, are any waterways situated on or near the Pipeline route subject to designation under the Wild and Scenic River Act of 1968?

OBJECTION AND ANSWER: To the extent that it seeks discovery of information outside South Dakota, this interrogatory seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, the Project route in South Dakota does not cross any waterways that are subject to designation under the Wild and Scenic River Act of 1968. There are no waterways that are subject to designation under the Wild and Scenic River Act of 1968 near the Project

route in South Dakota. An evaluation of Wild and Scenic Rivers as per related to the Project is found on page 4.3-24 of the Department of State FSEIS (2014).

37. Pursuant to Conditions One and Two, are there any land areas along or near the Keystone Pipeline route that have been designated as critical habitat under the Endangered Species Act? If so identify each of the land areas.

OBJECTION AND ANSWER: To the extent that it seeks discovery of information outside South Dakota, this interrogatory seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, there are no lands along or near the Project route in South Dakota that are designated as critical habitat under the Endangered Species Act. Endangered species are discussed in Section 4.8 of the Department of State FSEIS (2014).

38. Pursuant to Conditions One and Two, are there any land areas along or nearby the Keystone Pipeline route that have any Endangered Species located in that area?

OBJECTION AND ANSWER: To the extent that it seeks discovery of information outside South Dakota, this interrogatory seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL §

49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). Without waiving the objection, the following federally-listed threatened or endangered species have the potential to occur along the Project route in South Dakota: interior least tern; piping plover; rufa red knot; whooping crane; and the American burying beetle. Section 4.8.3 of the Department of State FSEIS (2014) and Appendix H, Biological Opinion in the Department of State FSEIS (2014) discusses the potential occurrence of these federally-listed threatened and endangered species along the Project route in South Dakota and Sections 4.8.3 and 4.8.4 and Appendix H of the Department of State FSEIS (2014) discusses the potential impacts and conservation measures the Project will implement to protect listed species.

39. Pursuant to Condition Twenty-Three, will Keystone enter the Cheyenne River Sioux Reservation during construction of the Project?

ANSWER: Keystone will not enter the Cheyenne River Sioux Reservation during construction of the Project.

40. Pursuant to Condition Twenty-Three and the changed Finding of Fact Number Forty-One, will any of Keystone's construction equipment or crew access the Project from trust land? If so, has Keystone received the necessary consent of the trust

landowner and the United States government to access trust land on the Cheyenne River Sioux Reservation?

ANSWER: None of Keystone's construction equipment or crews will access the Project from trust land.

41. Pursuant to Condition Twenty-Three, has Keystone made contact with or otherwise taken any action to plan for road closures which may affect the Cheyenne River Sioux Tribe? If so, does Keystone plan to notify, coordinate or otherwise consult with the Cheyenne River Sioux Tribe?

ANSWER: Keystone is planning no road use or closures which may affect the Cheyenne River Sioux Tribe. In order to ensure public and worker safety traffic in areas outside of the Cheyenne River Sioux Reservation will be interrupted or restricted from time to time to permit crew and equipment mobilization and demobilization at ancillary sites, to access the construction ROW, and during certain construction activities. For example, if permitted by local regulators and landowners, smaller gravel roads and driveways would likely be crossed (i.e. pipe installed) using an open-cut method that would typically take between one and two days to complete. This would require temporary road closures and establishment of detours for traffic. If no reasonable detour is feasible, trenching would be staged such that at least one lane of traffic would be kept open at any point in time. Keystone would post signs at these open-cut crossings and

would implement traffic control plans to reduce traffic disturbance and protect public safety. (Final SEIS, Section 2.1.8.1 Road, Highway, and Railroad Crossings, page 2.1-58.)

42. Pursuant to Condition Thirty-One, (a) how many permanent jobs will be created in South Dakota as a result of the operation of the pipeline? For this question, a "permanent" job is considered to be a non-construction-related job that will remain once construction of the pipeline is complete. (b) How many construction-related jobs will be created in South Dakota as a result of the construction of the pipeline? (c) How many of the construction positions does Keystone anticipate will be filled by South Dakota residents? (d) How many of the construction positions will be filled by non-South Dakota residents? (e) What is the expected length of employment for each of the various types of construction jobs needed for the project?

ANSWER:

(a) Approximately 25 permanent employees and 15 temporary contractors will be distributed along the proposed pipeline route, including the route in South Dakota. It is estimated that a total of 50 people will be employed during the operational phase of the proposed Project across the Keystone system, of which approximately 35 will be permanent employees and 15 will be temporary contractors. Approximately 10 permanent employees will be located outside of South Dakota in the Omaha, Nebraska

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office, with the remaining 25 permanent employees and 15 temporary contractors distributed along the proposed pipeline route, including the route in South Dakota (Final SEIS, 4.10-31 available at <http://keystonepipeline-xl.state.gov/finalseis/>).

(b) Assuming this question refers to “average annual jobs”, it is estimated that Project construction in South Dakota will support 3,500 jobs across all sectors, of which between 1,038 and 1,500 jobs will be directly construction related. The term “job” refers to average annual jobs, defined as one position that is filled for one year (Final SEIS, 4.10-14 available at <http://keystonepipeline-xl.state.gov/finalseis/>). For example, two temporary construction positions filled for a period of six months, or three positions filled for four months each, equates to one single job. (Final SEIS, 4.10-14.) In South Dakota, an estimated 3,500 jobs (1,700 direct and 1,800 indirect and induced) will be supported by construction of the Project across all sectors, excluding jobs held by non-residents as part of the temporary construction workforce (Final SEIS, 4.10-17 available at <http://keystonepipeline-xl.state.gov/finalseis/>). Of the 1,700 direct jobs supported by construction in South Dakota, it is estimated that between 1,038 and 1,500 jobs will be directly construction related. The calculations and assumptions used to derive these estimates are presented in the following table:

South Dakota Estimate	Estimate Low	Estimate High
Total 'jobs' supported by Project construction	3,500	3,500
<i>Direct</i>	<i>1,700</i>	<i>1,700</i>
<i>Indirect + Induced</i>	<i>1,800</i>	<i>1,800</i>
Temporary workforce positions per spread (Final SEIS, 4.10-2)	900	1,300
Temporary workforce 'positions' in total, over 3 spreads (Final SEIS, Table 3.10-8)	900 x 3 spreads = 2,700	1,300 x 3 spreads = 3,900
Number of weeks of construction (Final SEIS Table 4.10-3)	19	21
'Jobs' created as a result of the temporary workforce	2,700 x 20 [average] construction weeks / 52 weeks per year = 1,038 average annual jobs	3,900 x 20 [average] construction weeks / 52 weeks per year = 1,500 average annual jobs

(c) It is estimated that between 270 and 390 temporary construction positions created in South Dakota will be filled by residents of the State. Keystone, through its construction contractors and subcontractors, would attempt to hire temporary construction staff from the local population. Assuming qualified personnel are available, Keystone conservatively estimates that 10 percent of the temporary construction positions created in South Dakota will be filled by residents of the State (Final SEIS, 4.10-11), although this may not be possible in rural areas or areas with low unemployment (Final SEIS, 2.1-69). By applying this 10% assumption we can assume that between 90 and 130 residents of South Dakota will be employed for each of the three planned construction spreads, for a total of between 270 and 390 people.

(d) It is estimated that between 2,430 and 3,510 temporary construction positions created in South Dakota will be filled by non-South Dakota residents. Assuming that qualified personnel are available, approximately 10% of the temporary

construction positions could be filled by the local workforce (Final SEIS, 4.10-11-12 available at <http://keystonepipeline-xl.state.gov/finalseis/>, implying that 90% of these positions will be filled by non-South Dakota residents. It is anticipated that Project construction will require approximately 900 to 1,300 personnel for each spread (Final SEIS, 4.10-11), with three spreads contemplated for South Dakota (Final SEIS, Table 3.10-8). Therefore, it is estimated that between 2,430 and 3,510 temporary construction positions created in South Dakota will be filled by non-South Dakota residents ($900 \times 3 \times 0.9 = 2,430$; $1,300 \times 3 \times 0.9 = 3,510$).

(e) The 3,500 jobs supported by construction of the Project are considered "average annual jobs," defined as one position that is filled for one year, while the 2,700 to 3,900 temporary construction personnel are expected to be employed for the four to eight-month seasonal construction period over one to two years. (Final SEIS, 4.10-14 available at <http://keystonepipeline-xl.state.gov/finalseis/>). The 3,500 jobs supported by Project construction in South Dakota are considered 'average annual jobs', defined in the Final SEIS as one position that is filled for one year. An average annual job could, however, consist of two positions filled for a period of 6 months each, three positions filled for 4 months each, or any combination that sums to a year of employment (Final SEIS, 4.10-14).

Construction is expected to take one to two years, and length of employment will vary. While construction-related activities may occur across all five states concurrently, actual time to complete construction in South Dakota is uncertain. Various factors including weather, workforce constraints, and timing of permits would influence the duration of construction, as would finalization of the number of construction spreads that could be operated concurrently. In general, it is expected that the 2,700 to 3,900 temporary construction positions created in South Dakota will occur over two years, during the four to eight month seasonal construction period (Final SEIS, 4.10-15 available at <http://keystonepipeline-xl.state.gov/finalseis/>).

Dated this 5th day of February, 2015.

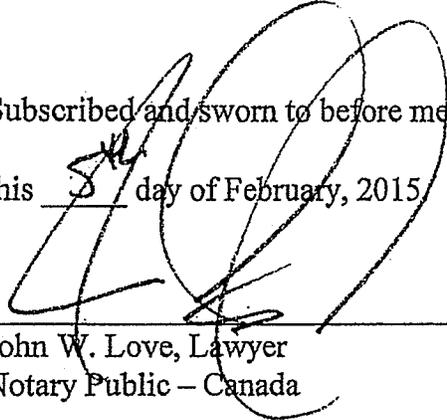
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.


John W. Love, Lawyer
Notary Public – Canada

REQUESTS FOR PRODUCTION OF DOCUMENTS

1. All documents that Keystone intends to offer as exhibits at the evidentiary hearing in this matter.

ANSWER: Keystone has not yet identified hearing exhibits. Keystone will disclose its hearing exhibits as required by the PUC.

2. All non-privileged documents relating to environmental and hydrological surveys in the Bridger Creek area. Changed Finding of Fact Number Forty-One.

ANSWER: The wetland delineation datasheets for Bridger Creek (File: S8AHK003.pdf and S312HK001.pdf) have been provided as Keystone 0638-0641.

3. All non-privileged documents relating to cultural and historic surveys, training, and response plans. Conditions Number Forty-Three and Forty-Four.

OBJECTION: This request is overlybroad and unduly burdensome. It is not limited in time. It is not specific to what kind of training and to whom, or what kind of response plans. To the extent that it requests Keystone's emergency response plan, it seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of the PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is

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confidential and proprietary. Public disclosure of the emergency response plan could commercially disadvantage Keystone. Without waiving the objection, all cultural resources survey reports are listed in Section 3.11 of the FSEIS, with results of the SD surveys detailed in Table 3.11-3. Paleontological fieldwork methodology, literature search information, and results can be found in Sections 3.1.2.2 and 3.1.2.3 of the Department of State FSEIS (2014). A list of reports detailing the results of all pre-construction paleontological field surveys can be found in Table 3.1-4 of the Department of State FSEIS (2014). The paleontological mitigation report is confidential.

4. All non-privileged documents relating to required permits, both in South Dakota and outside South Dakota, including permit applications which were denied. Condition Number One.

OBJECTION AND RESPONSE: This request is overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, no permit applications have been denied.

5. Keystone's Unanticipated Discoveries Plan, as referenced in Condition Number 43.

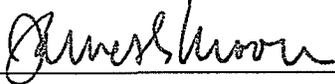
ANSWER: The Unanticipated Discovery Plan can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

OBJECTIONS

The objections stated to Cheyenne River Sioux Tribe's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

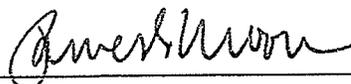
By 

William Taylor
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Cheyenne River Sioux Tribe's First Interrogatories and Request for Production of Documents, to the following:

Tracey A. Zephier
Fredericks Peebles & Morgan LLP
910 5th Street, Suite 104
Rapid City, SD 57701
tzephier@ndnlaw.com



One of the attorneys for TransCanada

answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Please provide the following additional details with regards to the Bakken

MarketLink Project:

- a. Summary of the project and how it impacts operation of the Project in South Dakota;
- b. How Bakken oil differs from Canadian tar sands oil and how the oils will be mixed;
- c. Changes to the internal corrosion analysis provided in HP09-001.

ANSWER:

A. Please refer to FSEIS Chapter 1.2 Overview of Proposed Project and Chapter 3.13.6.1 The Bakken Marketlink Project.

B. Please refer to FSEIS Chapter 3.13.2 Crude Oil Characteristics, Chapter 3.13.3 General Description of Proposed Pipeline Transported Crude Oils and Appendix Q Crude Oil Material Safety Data Sheets.

C. There is no change in the internal corrosion mitigation measures within the IMP related to the Bakken Marketlink. The special conditions for PHMSA also address requirements for internal corrosion mitigation in the pipeline. The crude oil being shipped must comply to the specifications in Keystone's tariff. The internal corrosion integrity management plan takes into account the entire range of crude products light to heavy.

3. Please provide the reasoning for limiting the Project's capacity to 830,000 bpd rather than the original potential of 900,000 bpd stated in HP09-001.

ANSWER: On August 5, 2010, TransCanada withdrew its application to the Pipeline Hazardous Material and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a slightly higher pressure than current federal regulations (subject to building the pipeline with additional safety conditions).

TransCanada voluntarily adopted the 57 special conditions that would have been required

under the PHMSA special permit. These measures offer an enhanced level of safety and would allow TransCanada to request a special permit in the future. Without the special permit, Keystone XL will meet all of its initial commercial commitments to serve Gulf Coast refineries. The capacity of 900,000 bpd was based on a maximum operating pressure of 1,440 psig and a design factor of 0.80. The 830,000 bpd is based on an operating pressure of 1,307 psig and the use of the standard design factor (0.72) in accordance with 49 CFR 195.106 design pressure. This issue is also addressed in a Media Advisory dated August 5, 2010, marked as Keystone 0647-0649.

4. Please provide the reasoning for adding four additional valves and making all valves remotely operational.

ANSWER: The pipeline design was updated to include a maximum mainline valve spacing of twenty (20) miles and remote operability for all mainline isolation valves to comply with PHMSA special condition 32 issued February 10, 2011 as part of the Department of State Supplemental Draft FEIS. Specifically for South Dakota, this design revision was applied to add four additional intermediate mainline valves and remotely actuate two manual valves included within the swing check valve assembly located downstream in proximity to the Little Missouri and Cheyenne Rivers. All mainline isolation valves will be controlled from the Keystone Oil Control Center in Calgary,

Alberta Canada. All mainline valve and pump station sites will be equipped with back-up power per requirements in PHMSA special condition 32.

5. Given the changes listed in interrogatory 4, please describe how these changes will affect the operation and safety of the pipeline in South Dakota.

ANSWER: The changes listed in response to interrogatory 4 will affect the operation of the pipeline as it relates to additional maintenance and infrastructure (single phase power, access roads). The implementation of this condition provides a level of safety equal to or greater than that provided if the pipeline were operated under the current standard.

6. Does the addition of more mainline valves change the maximum volume of the potential worst case oil spill in South Dakota that was provided in HP09-001?

ANSWER: The reduction in pressure, throughput and installation of addition intermediate mainline valves reduces the potential worst case spill volume in South Dakota.

7. Does a change in pipe material to API 5L X70M high strength steel from API 5L X70 or X80 high strength steel and pipeline wall thickness change the potential pipeline failure risk analysis as provided in Exhibit TC-12 in docket HP09-001?

ANSWER: The pipeline risk and consequence analysis provided in Exhibit TC-12 was completed using API grade X70 material and the corresponding pipe wall

thickness and operating pressure using a 0.8 design factor. As a result of the withdrawal of the application for the special permit and subsequent pressure and capacity reduction, addition of mainline valves etc , the pipeline failure risk analysis provided in Exhibit TC-12 is more conservative than the analysis reflective of the pipeline's current design. API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline. Latest API 5L standard for line pipe added the rolling method suffix "M" (thermo mechanically rolled) to the grade type to align with ISO 3138 European standard for line pipe. Additionally, the minimum yield strength of X70 steel grade category increased from 70,000 pounds per square inch to 70,300 pounds per square inch. This does not represent a significant change to the steel grade.

8. Does a change in pipe material to API 5L X70M high strength steel from API 5L X70 or X80 high strength steel and pipeline wall thickness require a change to any corrosion control and/or other pipeline integrity management measures and plans?

ANSWER: No. API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline. Latest API 5L standard for line pipe added the rolling

method suffix "M" (thermo mechanically rolled) to the grade type to align with ISO 3138 European standard for line pipe. Additionally, the minimum yield strength of X70 steel grade category increased from 70,000 pounds per square inch to 70,300 pounds per square inch. This does not represent a significant change to the steel grade listed in the application. The applicable PHMSA special conditions to X80 steel grade material are not applicable.

9. Does a change in pipe material to API 5L X70M high strength steel from API 5L X70 or X80 high strength steel and pipeline wall thickness result in a change to puncture resistance, which is identified as being 51 tons of digging force in Finding No. 57?

ANSWER: No. API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline. Latest API 5L standard for line pipe added the rolling method suffix "M" (thermo mechanically rolled) to the grade type to align with ISO 3138 European standard for line pipe. Additionally, the minimum yield strength of X70 steel grade category increased from 70,000 pounds per square inch to 70,300 pounds per square inch. This does not represent a significant change to the steel. The pipeline steel properties will meet the minimum puncture resistance requirements in accordance with the PHMSA special conditions.

10. Please provide a brief explanation of any route changes occurring since Keystone received the permit to construct.

ANSWER: Attached as Keystone 0470-0583 are maps showing the changes to the route since the permit was granted.

11. Please provide the reasoning for Keystone withdrawing its request to PHMSA for a special permit (Special Permit).

ANSWER: The attached media advisory, marked as Keystone 0647-0649, dated August 5, 2010, addresses this issue.

12. Does the withdrawal of the PHMSA special permit request change the results of the pipeline risk analysis completed in docket HP09-001 (see exhibit TC-12)?

ANSWER: No. The 59 Special Conditions recommended by PHMSA are listed in the FSEIS Appendix Z, Section 14.1, Potential Releases, Table 4. These 59 Special Conditions include the conditions that would have been required for the special permit request from PHMSA. The 2009 Keystone XL Risk Assessment analysis was predicated on the PHMSA Special Conditions. The pipeline risk analysis is conservative.

13. Please provide a comparison between conditions in the requested Special Permit, as described in Keystone's application in HP09-001, and the 59 additional safety measures set forth in the DOS Final SEIS, Appendix Z.

ANSWER: Please refer to DOS FINAL SEIS Appendix B section 2.0 for comparison table. Condition 58 and 59 are the only additional measures not listed in HP09-001.

14. Please provide the reasoning for a decreased maximum operating pressure throughout most of the Project.

ANSWER: On August 5, 2010, TransCanada withdrew its application to the Pipeline Hazardous Material and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a slightly higher pressure than current federal regulations (subject to building the pipeline with additional safety conditions). Without the special permit, Keystone XL will meet all of its initial commercial commitments to serve Gulf Coast refineries. The decrease in maximum operating pressure from 1,440 psig to 1,307 psig is based on the use of the standard design factor (0.72) in accordance with 49 CFR 195.106 design pressure.

15. Please provide a detailed analysis of the exception listed in Keystone's changes to finding 68, including evidence as to why no similar situations exist on the Project in South Dakota.

ANSWER: Base Keystone experienced a localized external corrosion wall loss due to DC stray current interference from foreign utility colocation which caused sacrificing significant amounts of protective current to other pipelines in the shared

Right-of-Way. This adversely affected CP current distribution to the Keystone line. This anomaly was found during proactive and routine high resolution in-line inspection. This issue has been reviewed, remediated and updates to the CP design where collocation occur have been implemented. In South Dakota specifically, no such location exists for collocation of multiple pipelines in a shared Right-of-Way. However, Keystone's has applied these updates to its design and existing CP "construction bridge to energization" plan to address potential for DC stray current interference due to foreign utility crossings and paralleling utilities.

16. In Finding 50, please explain the reason for the reduction in the length of pipe with the potential to impact HCA from 34.3 miles to 19.9 miles.

ANSWER: During the detailed engineering design phase of the Project, the route was adjusted. In doing so, the route deviated away from DOT designated HCA areas thereby reducing total HCA miles crossed by the Project. Please refer to the attached route variation list and maps.

17. For finding 63, please explain why the currently proposed pipeline wall thickness of 0.465 inches is not the recommended 0.512 inches (for a 0.72 design factor as described in the original finding) since the special permit request from PHMSA was withdrawn.

ANSWER: The 0.512 inch wall thickness corresponds to a 0.72 design factor using an operating pressure of 1,440psig and 70,000 pounds per square inch grade (X70). The 0.465 wall thickness complies with the standard design factor of 0.72 at an operating pressure of 1,307 psig and steel pipe grade X70M (70,300 pounds per square inch grade). The formula is provided in code of Federal Regulation 49 CFR 195.106 Design Pressure.

18. Were finalized "Con/Rec Units" included in the CMR in order to identify soil handling and reclamation methods for each Con/Rec Unit identified? If not, where are soil handling methods provided for each Con/Rec unit within South Dakota?

ANSWER: The finalized Con/Rec units are not included in the CMR Plan Rev4. This information is contained in Appendix R of the Department of State FSEIS (2014).

19. In condition 23 of the "Amended Final Decision and Order: Notice of Entry" for docket HP09-001, it was determined that Keystone shall obtain a bond of \$15.6 million in the construction year and again in the next year thereafter for road repair. Please provide justification as to why this bond amount is still reasonable given that the cost of the project more than doubled.

ANSWER: The amount of the bond was determined by the PUC, based on Keystone's recommendation and the testimony of Staff Witness Binder. The amount was based on a percentage of the value of construction in the State. The amount was deemed sufficient to cover potential road repair costs and should remain sufficient,

however, Keystone does not oppose an appropriate adjustment to the bond amount if Staff so recommends.

20. Do the changes to conditions identified in Appendix C result in the need to change any Applicant testimony provided in docket HP09-001, upon which the conditions were originally based? If so, please identify what testimony would be different today and reasoning for the difference.

ANSWER: Keystone will file testimony in this docket adopting the changes set forth in Appendix C.

21. With regard to findings 24-29, please explain how the price of crude oil impacts crude oil production in the WCSB. Further, please identify if there is the potential for the price of crude to adversely impact the Keystone XL project and at what price of crude oil would the adverse impacts occur.

OBJECTION AND ANSWER: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is

transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467. Without waiving the objection, shippers have committed to long-term binding contracts for delivery through the Keystone XL Pipeline. Keystone does not control where the crude oil will be delivered after leaving our facilities.

REQUEST FOR PRODUCTION OF DOCUMENTS

1. Provide copies of all interrogatories and requests for discovery Keystone received from any party in the proceeding, as well as Keystone's answers to those interrogatories and requests.

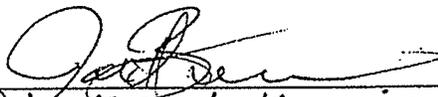
ANSWER: Keystone will separately provide access to this information.

2. Please provide a current set of maps similar to Exhibit TC-14 in HP09-001.

ANSWER: Maps showing route changes since the permit was granted are marked Keystone 0470-0583.

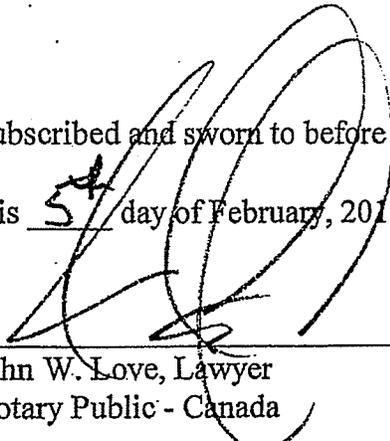
Dated this 5th day of February, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.



John W. Love, Lawyer
Notary Public - Canada

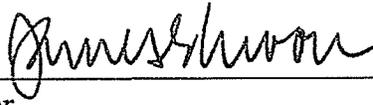
OBJECTIONS

The objections stated to Commission Staff's First Set of Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

By _____



William Taylor

James E. Moore

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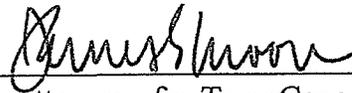
James.Moore@woodsfuller.com

Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Commission Staff's First Set of Interrogatories and Request for Production of Documents, to the following:

Kristen N. Edwards
Staff Attorney
South Dakota Public Utilities Commission
500 East Capitol Avenue
Pierre, SD 57501



One of the attorneys for TransCanada

See ARSD 20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 1: Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation. [*Applicable Finding or Condition No.: all*]

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

{01815268.1}

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950
E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

INTERROGATORY NO. 2: Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action? [*Applicable Finding or Condition No.: all*]

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

INTERROGATORY NO. 3: Describe the current status of the following permits and plans required prior to the start of construction of the KXL Pipeline:

A. Permits from US Army Corps of Engineers, S.D. Regulatory Office,
including under:

- 1) §§404/401 of Clean Water Act, for authorization of discharge of fill material into waters of the United States including wetlands or other action;
- 2) §10 Rivers and Harbors Act, for authorization of pipeline crossings of navigable waters of the United States or other action;

- 3) Section 106 of the Natural Historic Preservation Act (NHPA), including consultation with potentially impacted Tribes and/or other action;
- B. Permits from U.S. Fish and Wildlife Service, S.D. Ecological Services Field Office, including under the Endangered Species Act, Section 7 Consultation, to consider lead agency findings of impacts on federal-listed species, to provide a Biological Opinion if the Project is likely to adversely affect federally-listed or proposed species or their habitats, or other action;
 - C. Permits from Farm Service Agency of the Natural Resources Conservation Service, including the Crop Reserve Program, for authorization of crossing areas enrolled in the Crop Reserve Program, or other action;
 - D. Permits from the Pipeline and Hazardous Materials Safety Administration (PHMSA), including under 49 CFR Parts 194 and 195, for development of an Integrity Management Plan (IMP) and Emergency Response Plan (ERP), or other action;
 - E. Permit(s) from or Plan(s) Required to the S.D. Department of Environment and Natural Resources (DENR), including under:
 - 1) National Pollutant Discharge Elimination System General Permit for Discharges of Hydrostatic Test Water, regarding proposed discharge

into waters of the United States and construction dewatering of waters of the State, or other action;

2) Surface Water Withdrawal Permit, for temporary surface water withdrawal, or other action;

3) SDCL Chapter §34A-18, required submission of an Oil Spill Response Plan or Updated Plan to DENR, or other action;

F. Consultation with SD Game Fish and Parks Department, under State Listed Threatened and Endangered Species;

G. Any Updated Review and Comment from S.D. State Historical Society, State Preservation Office, under §106 of the NHPA, on activities regarding jurisdictional cultural resources;

H. Crossing Permits from S.D. Department of Transportation for crossing State highways;

I. Crossing Permits from County Road Departments for crossing of county roads;

J. Flood plain, Conditional Use, and building permits where required from County and Local Authorities.

[Applicable Finding or Condition No.: Conditions 1, 2; Findings 12(1)-(3), 60, 88, 90,

97-99]

{01815268.1}

ANSWER:

- A. 1) No permit applications have been submitted to the US Army Corps of Engineers, S.D. Regulatory Office.
- A. 2) No waterbody crossing in South Dakota requires permitting under Section 10 of the Rivers and Harbor Act.
- A. 3) The Department of State is the lead agency for the consultation process under the Section 106. See Section 4.11, Cultural Resources of the Department of State FSEIS (2014) for a full discussion of the Project's compliance with Section 106.
- B. Keystone has not received any permits from the US Fish and Wildlife Service. The US Fish and Wildlife Service issued a Biological Opinion for the Project on May 15, 2013. The Biological Opinion is found in Appendix H of the Department of State FSEIS (2014)
- C. In South Dakota, Keystone has not received any permits from the Farm Service Agency of Natural Resources Conservation Service.
- D. 1) Keystone has received a General Permit for Temporary Discharge Activities on April 11, 2013 from the SD Department of Environment and Natural Resources.
- D. 2) Keystone has not received a Surface Water Withdrawal Permit from SD Department of Environment and Natural Resources.

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D. 3) Keystone has not submitted an Oil Response Plan to DENR.

E. The following is a summary of Keystone's consultation history with SD Game, Fish, and Parks as documented in the USFWS issued May 2013 Biological Opinion.

- June 10, 2008: Keystone met with staff from USFWS and South Dakota Department of Game, Fish, and Parks (SDGFP), at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to wildlife, special status species, and sensitive habitat that could potentially occur in the Project area. The goal of the meeting was to gather input on agency recommendations based on the information sent to them in April 2008 for species occurrence, habitat assessments, and future field surveys. Keystone incorporated comments from the meeting into survey protocols and BMPs for future agency verification.

- January/February 2009: Keystone initiated section 7 consultation with the USFWS. Keystone continued discussions with BLM, and state wildlife agency offices for South Dakota that included state-specific special status species survey protocols and BMPs for the species identified as potentially occurring during the 2008 meetings. A summary of the findings from the 2008 biological field surveys was included in the discussions.

- January 27, 2009: Keystone met with staff from the USFWS and SDGFP at

the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to special status species surveys. The goals of the meeting were to verify Keystone's survey approach, BMPs, discuss required field surveys, and review the information that was sent to the USFWS in the January/February 2009, informal consultation package. The USFWS and SDGFP provided additional recommendations to Keystone's sensitive species mitigation approach to be updated prior to final agency concurrence.

- October 23, 2012: A meeting was held between the USFWS, Department, SDGFP, BLM, and Keystone regarding the greater sage-grouse and a compensatory mitigation plan for the species in South Dakota. Discussions included a management plan and avoidance, minimization, and mitigation strategies.

F. Consultation with the SD SHPO is ongoing. Questions regarding specific cultural resources are resolved in a timely manner and would continue in the same manner in the future.

G. Thirteen crossing permits and twenty-four temporary approach permit applications have been filed with the State of South Dakota Department of Transportation (SD DOT) for the pipeline to cross under the state road rights-of-way. All crossing and temporary approach permits have been received from the SD DOT.

H. Thirteen crossing permits and twenty-four temporary approach permit applications

have been filed with the State of South Dakota Department of Transportation (SD DOT) for the pipeline to cross under the state road rights-of-way. All crossing and temporary approach permits have been received from the SD DOT.

I. A total of 103 crossing permit applications have been filed for the pipeline to cross under all county road rights-of-way. Of the 103 applications filed, 101 have been acquired as of December 30, 2014.

J. The special use permits required for Harding County and Meade County pump stations have been approved. Of the remaining four pump stations, three do not require a special use permit. Special use permits applicable to valve sites, contractor yards, and contractor camps will be obtained prior to construction.

INTERROGATORY NO. 4: Describe the current status of the Bakken on-ramp pipeline and provide copies of any permits and plans required for its connection to the Keystone XL pipeline.

- A. Please provide any communication with the South Dakota Public Utility Commission staff regarding the Bakken on-ramp pipeline.
- B. Please provide any contracts or commitments with North Dakota crude oil suppliers for this pipeline.
- C. Please provide any permits, contracts or applications filed with any federal or state agency regarding the Bakken on-ramp pipeline.

[Applicable Finding or Condition No.: Amended Condition 14]

ANSWER: Information regarding the Bakken on-ramp pipeline can be found in the Montana Department of Environmental Quality Certificate issued under the Montana Major Facility Siting Act available at

<http://www.deq.mt.gov/mfs/keystonexl/keystonecertificate.mcpX>.

A. None.

B. Objection. This request seeks information that is confidential and proprietary. Keystone's shipping contracts require confidentiality. The contracts are also confidential under Section 15(13) of the Interstate Commerce Act.

C. None.

INTERROGATORY NO. 5: Please describe the circumstances and changed conditions for the increased nominal carrying capacity of the pipeline from 700,000 barrels per day (bpd) initially to 830,000 bpd.

A. Please provide any information on any mechanical and structural changes, including safety plans, that have been made to accommodate this increased pumping capacity.

B. Please provide any communication with the Commission or its staff.

C. Please provide any contracts and any other information filed with any federal or state agency regarding this nominal increased pumping capacity.

D. Please provide information and internal communication about the safety concerns which decreased the maximum pumping capacity from 900,000 bpd to 830,000 bpd.

[Applicable Finding or Condition No.: Amended Condition 15]

ANSWER:

A. There were no mechanical or structural changes as the nominal pumping capacity has not increased. The capacity of 900,000 bpd was based on a maximum operating pressure of 1,440 psig and a design factor of 0.80. The 830,000 bpd is based on an operating pressure of 1,307 psig and the standard design factor of 0.72.

B. None.

C. None.

D. Please see the Media Advisory dated August 5, 2010, attached as Keystone 0647-0649.

INTERROGATORY NO. 6: Please provide documentation of consultation on material changes to the pipeline and its route with the federally recognized Tribes,(governmental units) whose homelands and reserved treaty lands and rights are underneath and adjacent to the pipeline route including the Standing Rock Sioux Tribe, Cheyenne River Sioux Tribe, Rosebud Sioux Tribe, Oglala Sioux Tribe and the Yankton Sioux Tribe. *[Applicable Finding or Condition No.: Condition 6]*

ANSWER: Considerable consultation with the South Dakota resident tribes has occurred, but no documents specific to tribal consultations about "material changes to the pipeline and its route" have been identified.

INTERROGATORY NO. 7: Please provide additional information reducing the construction spreads from five to either three or four thus increasing the impact in more concentrated areas with more roads being traveled.

A. Please provide information on how Keystone is planning to accommodate this changed condition with regards to safety at the three planned construction camps.

[Applicable Finding or Condition No.: Amended Condition 17]

ANSWER: Keystone's amended Application to the South Dakota Public Utilities Commission dated October 2009 shows five spreads spanning the State of South Dakota comprising 3 full spreads and 2 partial spreads. The 2 partial spreads straddle the Montana/South Dakota and South Dakota/Nebraska borders, respectively.

Since 2009 Keystone has made route refinements to improve constructability, respond to landowner requests, incorporate engineering survey results, account for environmental factors brought to the fore during continued permitting activities (including receipt of the MFSA Certificate in Montana in March 2012), and to incorporate the re-route in the state of Nebraska approved by the Governor of Nebraska in

January 2013 which had the effect of increasing the length of the pipeline between the Canada/US border and Steele City, Nebraska to approximately 875 miles from its 850.26 mile length in 2009.

The spread plan filed with the SDPUC in October 2009 contemplated 10 spreads from the Canada/US border to Steele City. To maintain a 10 spread configuration after the Nebraska re-route Keystone re-balanced the spread configuration across the entire length of the project. The current 10-spread configuration is described in the Final SEIS at Table 2.1-13 "Pipeline Construction Spreads Associated with the Proposed Project". Final spread configurations and the final construction schedule may result in the use of more or fewer spreads than those listed in Table 2.1-13. (FSEIS, page 2.1-42 and 43.)

In the current spread configuration and in any reconfiguration contemplating the use of more or fewer spreads there will be no overall increase in impact on roads being traveled.

A. The final number and size of camps would be determined based on the time available to complete construction and to meet Keystone's commercial commitments. All construction camps would be permitted, constructed, and operated consistent with applicable county, state, and federal regulations. The relevant regulations that would have to be complied with and the permits required for the construction camps are presented in Table 2.1-11. (FSEIS, Section 2.1.5.4 Construction Camps, page 2.1-31.)

Regardless of the number of construction spreads ultimately used to construct the project, the roads used to construct each spread will not change. The workforce camps planned in South Dakota will be dedicated to a specific spread and no one camp will be used to simultaneously support more than one spread's workforce requirements. Camp safety protocol for each camp will remain unchanged.

INTERROGATORY NO. 8. Please provide additional information about the decreased length of the pipeline from 1,707 miles with 1,380 miles in the US to 1,202 with 876 miles in the US.

A. Please provide updated detailed route maps along with any maps showing anticipated spill flows.

[Applicable Finding or Condition No.: Amended Condition 16]

ANSWER: On February 27, 2012, Keystone advised the Department of State that the portion of the previously proposed Keystone XL Project that will directly serve the Gulf Coast has its own independent utility as a standalone project. The reduction in route length reflects the removal of the Gulf Coast pipeline from the Project scope. Please refer to Department of State FSEIS Chapter 1 Section 1.2 Overview of Proposed Project (page 1.2.-1). Please refer to Department of State FSEIS Chapter 1 Section 1.2 figure 1.2-1 and Figure 1.2-1.1 (1.2-3, 1.2-4). No maps of anticipated spills flows are available please refer to Department of State FSEIS Appendix T Oil Spill Modeling.

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INTERROGATORY NO. 9. Please provide additional information reducing the construction spreads from five to either three or four thus increasing the impact in more concentrated areas with more roads being traveled.

A. Please provide information on how Keystone is planning to accommodate this changed condition with regards to safety at the three planned construction camps.

[Applicable Finding or Condition No.: Amended Condition 17]

ANSWER: *See answer to Interrogatory no. 7.*

INTERROGATORY NO. 10. Please provide additional information about the construction of the pipeline and additional detail about why the pipeline will no longer be constructed using API 5L X80 high strength steel. *[Applicable Finding or Condition No.: Amended Condition 18]*

OBJECTION AND ANSWER: This request is overlybroad and vague by requesting "additional information about the construction of the pipeline." Without waiving the objection, API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline.

INTERROGATORY NO. 11. Please provide additional information and communication regarding why the maximum operating pressure will be reduced from 1,440 psig to 1,307 psig for the entire route of the pipeline.

[Applicable Finding or Condition No.: Amended Condition 19]

ANSWER: On August 5 2010, TransCanada withdrew its application to the Pipeline Hazardous Materials and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a 0.8 design factor and adopted the 57 additional safety measures that would have been required under the PHMSA special permit. The operating pressure reduction from 1,440 psig to 1,307 psig is a result of the use of the standard design factor (0.72) in accordance with 49 CFR 195.106 design pressure.

INTERROGATORY NO. 12. Please provide additional information about the increase of pumps from three pumps at seven pump stations but which has now increased to either three to five pumps at the seven pumping stations to meet the maximum design flow rate of 830,000 bpd.

- A. Please provide design, construction and safety plans to accommodate this increased number of pumps and nominal pumping capacity.

[Applicable Finding or Condition No.: Amended Condition 20]

ANSWER: The pump stations are designed to accommodate five pumps to achieve the maximum design flow rate.

INTERROGATORY NO. 13. Please provide additional information on the increased number of mainline valves which originally had 16 mainline valves planned but which is now increased with four additional mainlines valves for a total of twenty mainline valves.

- A. Please provide construction design plans and safety plans of where the additional valves will be located and what information determined that additional valves were needed.
- B. Please provide information about the remote control monitoring location of the 20 valves, their procedures for handling leaks and information on the local on the ground infrastructure that will be added to assist in emergencies at the four additional mainline valve locations.

[Applicable Finding or Condition No.: Amended Condition 20]

ANSWER: The pipeline design was updated to include a maximum mainline valve spacing of twenty (20) miles and remote operability for all mainline isolation valves to comply with PHMSA special condition 32 issued February 10, 2011 as part of the Department of State Supplemental Draft FEIS. Specifically for South Dakota, this design revision was applied to add four (4) additional intermediate mainline valves and remotely

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acutate (2) manual valves included within the swing check valve assembly located downstream in proximity to the Little Missouri and Cheyenne Rivers. All mainline isolation valves will be controlled from the Keystone Oil Control Center in Calgary, Alberta Canada. All mainline valve and pump station sites will be equipped with back-up power per requirements in PHMSA special condition 32.

INTERROGATORY NO. 14. Please provide additional information on the construction requirements “as modified by the Special Permit requested for the Project from PHMSA (see Finding 71)” and provide additional information about whether Finding #71, “To minimize the risk of mechanical damage to the pipeline, it will be buried with a minimum of four feet of cover, one foot deeper than the industry standard, reducing the likelihood of mechanical damage. The steel specified for the pipeline is high-strength steel with engineered puncture resistance of approximately 51 tons of force. Ex TC-8, 1128” will still be a construction standard for building the pipeline.

- A. Please provide information on how deep the pipeline will be buried and what strength of pipeline will be used and the circumstances which altered the original provisions.

[Applicable Finding or Condition No.: Amended Condition 22]

ANSWER: Yes, Finding 71 will be followed. API 5L X70 materials will be used in the pipeline. The depth of cover will be as addressed in Table 2.1-15 of the FSEIS.

INTERROGATORY NO. 15. Please provide additional information on the increased costs of the pipeline from \$921.4 million to \$1.974 billion.

- A. Please provide a detailed budget of the original costs and the new anticipated costs showing where the \$1 billion increased costs are attributed to.
- B. Please provide an explanation of how the more than one billion dollars in increased costs will be recouped and how its investors are now calculating the Keystone XL pipeline return on investment.
- C. Please provide an analysis on anticipated return on investment based on current price per barrel of crude oil of \$50.
- D. Please provide detailed information on the cost of getting the oil to the pipeline for transportation.

[Applicable Finding or Condition No.: Amended Condition 23]

OBJECTION: This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). In addition, Keystone does not maintain a detailed budget of the original costs and the new

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anticipated costs as requested. Requiring such a breakdown of costs would require the disclosure of information that has substantial commercial and proprietary value, and is subject to substantial efforts by Keystone to protect it from actual and potential competitors. Information related to how the costs will be recouped and Keystone's return on investment is confidential, proprietary, irrelevant, and not likely to lead to the discovery of admissible evidence.

INTERROGATORY NO. 16. Please provide additional information on the following statement that, "As demonstrated below, however market demand for the Project remains strong today. The transport of additional crude oil production from the WCSB continues to be necessary to meet demand by refineries and markets in the U.S. The need for the project is driven by a number of factors, including increasing domestic U.S. and Canadian, crude oil production combined with insufficient pipeline capacity; an energy efficient and safe method to transport this growing production; the opportunity to reduce U.S dependence on foreign offshore crude oil through increased access to North American supplies; and binding shipper commitments to utilize the Keystone Pipeline System."

- A. Please provide documentation to back up this statement regarding increased market demand including documentation of binding shipper commitments and agreements with refineries.

[Applicable Finding or Condition No.: Amended Condition #25]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 17. Please provide additional information on TransCanada Keystone's statement that U.S. demand for petroleum products has increased by over 11 percent or 2,000,000 bpd over the past 10 years and is expected to increase further. The EIA estimates that total U.S. petroleum consumption will increase by approximately 10 million bpd over the next 10 years, representing average demand

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growth of about 100,000 bpd per year. Please provide documentation to back up this statement regarding increased market demand and documentation of increased petroleum consumption. *[Applicable Finding or Condition No.: Amended Condition #25]*

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 18. Please provide additional information regarding the market demand for the Keystone XL pipeline tar sands oil. The changed condition states that the rise in U.S. crude oil production, predominantly light crude, has replaced

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most foreign imports of light crude. However the demand persists for imported heavy crude oil by U.S. refineries that are optimally configured to process heavy crude slates. The U.S. Gulf Coast continues to import approximately 3.5 million bpd of heavy and medium sour crude oil. Please provide documentation of the demand in light of the decreased consumption and falling prices of oil per barrel. *[Applicable Finding or Condition No.: Amended Condition #26]*

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast; Markets and Transportation June 2014 Forecast; and the Energy Information Agency Annual Energy Outlook 2014. Keystone will produce these documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>.

INTERROGATORY NO. 19. Please provide additional information on the changed condition in Finding #27 which states that, "The North Dakota Pipeline Authority estimates that rail export volumes from the U.S. Williston Basin have increased from approximately 40,000 bpd in 2010 to over 700,000 bpd in early 2014. Over 60% of crude oil transported from the Williston Basin is delivered by rail.

The industry has also been making significant investments in increasing rail transport capacity for crude oil out of the Western Canadian Sedimentary Basin (WCSB). In recent years, rail transport of crude oil in Canada has grown from approximately 10,000 bpd in 2010 to approximately 270,000 bpd by the end of 2013. The DOS Final SEIS indicates that transportation of crude oil by pipeline is safer and less greenhouse gas intensive than crude oil transportation by rail." Please provide additional information on the amount of greenhouse gases (GHG) that will be emitted by the pipeline versus GHG emitted by rail transportation and the methodology used by Keystone to gather and calculate this data.

[Applicable Finding or Condition No.: Amended Condition #27]

ANSWER: This issue is addressed in the FSEIS. Keystone has no additional information.

INTERROGATORY NO. 20. Please provide additional information on the decrease of six billion barrels of tar sands oil available from WCSB and also the recalculation of largest producers which now includes Venezuela (previously omitted) as

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the second largest producer, moving Alberta to third place. Please provide the new data that accounts for these two changes. *[Applicable Finding or Condition No.: Amended Condition #28]*

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 21. Please provide information and a map of the areas designated for topsoil segregation as outlined in the CMR amended changes. *[Applicable Finding or Condition No.: Amended Condition #32]*

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ANSWER: Section 4.3, Topsoil removal and Storage of the CMR Plan Rev4 text was amended to mandate that all topsoil along the Project route in South Dakota must be segregated. A map is not provided because all topsoil along the Project route in South Dakota will be segregated.

INTERROGATORY NO. 22. Please provide additional information about the change in the 2012 CMR regarding the handling of cultural resources—what is “required” as opposed to “necessary”? Please provide a list of emergency contacts when cultural remains, including human remains, are discovered. Please provide a copy of the programmatic agreement with the SHPO and a list of known historical sites in the pathway of the pipeline. *[Applicable Finding or Condition No.: Amended Condition 32]*

ANSWER: The locations that will be “required” for monitoring during construction will be decided during the course of Section 106 consultation.

An emergency contact list will be prepared once the construction process is outlined and all staff are identified. The Unanticipated Discovery Plan can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014). Potential impacts to cultural resources are discussed in Section 4.11.5 of the Department of State FSEIS (2014). A list of sites that are within the construction corridor are outlined in Table 4.11-2.

INTERROGATORY NO. 23: On page 24 of the CMR a new requirement has been added that states, "All seed that is used as a temporary cover crop will be approved and/or provided by Keystone." Please provide copies of any communication with landowners that show they were consulted and agree to this new requirement.

[Applicable Finding or Condition No.: Amended Condition 32]

ANSWER: No, there has been no communications with stakeholders or landowners regarding this new agreement in the amended CMR Plan (Rev4).

INTERROGATORY NO. 24: Do you agree that tar sands shale oil spill can be more harmful to the environment and people than a conventional oil spill? Please explain your answer and list any scientific study(ies) providing the basis for your answer.

[Applicable Finding or Condition No.: Amended Condition 31-42]

ANSWER: The volatility of crude oils is dependent upon the concentrations of light constituents (e.g., alkanes, BTEX) within the oil. The contractions of these constituents within diluted bitumen are similar to those of heavy conventional crude oils. Thus, the volatility of diluted bitumen is not significantly different than other heavy crude oils. See Crude Monitor. 2015. Crudemonitor.ca. Website accessed 22 Jan 2015. Website <http://www.crudemonitor.ca/home.php>.

INTERROGATORY NO. 25 Do you agree that tar sands oil is a lot stickier

than conventional crude? Please explain your answer and identify any known scientific study(ies) providing the basis for your answer. [*Applicable Finding or Condition No.: Amended Condition 31-42/*]

ANSWER: Keystone does not agree with this statement. The physiochemical properties and environmental fate of diluted bitumen are the equivalent as that of heavy conventional crude oils. Thus, leaks and spills of disputed bitumen would not be expected to result in greater harm to the environment and public. A number of scientific studies have been conducted on the composition, environmental fate, and effects of diluted bitumen, including:

Been, J. 2011. Comparison of the Corrosivity of Dilbit and Conventional Crude. Alberta Innovates – Technology Futures.

Environment Canada. 2013. Properties, Composition and Marine Spill Behaviour, Fate and Transport of Two Diluted Bitumen Products from the Canadian Oil Sands. Federal Government Technical Report.

SL Ross. 2012. Meso-scale Weathering of Cold Lake Bitumen/Condensate Blend. SL Ross Environmental Research Limited. Ottawa, Ontario

INTERROGATORY NO. 26. Do you agree that tar sands oil, once leaked or spilled onto or into the ground, that everything it touches, even rocks, cannot be cleaned

and need to be removed and disposed of? Please explain your answer and list any scientific study(ies) providing the basis for your answer.

- A. If so, do you agree that it has not been shown during your reclamation efforts that 100% of tar sands oil spilled/leaked have been recovered?
- B. Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.

[Applicable Finding or Condition No.: Amended Condition 32-38]

ANSWER:

A. Due to the volatility of many crude oil constituents (e.g., BTEX), a significant portion of crude oil will evaporate soon after being released to the environment. Fate modeling of diluted bitumen indicates that approximately 20% of released crude oil would evaporate within six hours of a spill (NOAA 2015). Additional processes such as photodegradation and biodegradation also naturally decrease the volume of crude oil in the environment. Thus, a significant fraction of the discharge volume of a crude oil spill would not be available for recovery due to these natural weathering processes.

If there is an accidental release from the proposed Project, Keystone would implement the remedial measures necessary to meet the federal, state, and local standards that are designed to help ensure protection of human health and environmental quality.

Cleanup standards for the state of South Dakota are available in the South Dakota Department of Environment and Natural Resources' Petroleum Assessment and Cleanup Handbook (http://denr.sd.gov/des/gw/spills/handbook/hand_book.aspx). Additional information on remediation is presented in Section 4.13 of the FSEIS, Potential Releases.

B. NOAA. 2015. ADIOS2. Oil Spill response tool – documentation.

<http://response.restoration.noaa.gov/adios>.

INTERROGATORY NO. 27. For each incident since January 1, 2010 in which any pipeline transporting tar sands oil constructed by TransCanada and its Affiliates leaked or spilled pipeline contents, please provide the:

- E. Date;
- F. Location;
- G. Amount of materials leaked or spilled before being 100% contained;
- H. Duration of leak or spill before being 100% contained;
- I. Duration of reclamation of affected soil and/or water resources;
- J. Established and documented cause of leak/spill;
- K. Material composition, dimensions, and seals of incident-pipeline which leaked/spilled; additionally, describe how the respective materials, dimensions,

and seals of the leaking/spilling pipeline compare with those proposed to be used through South Dakota if the KXL pipeline is constructed;

- L. Actions taken to prevent re-occurrence which did not involve design or construction procedure changes in pipeline material composition or dimensions, or construction procedures for use:
 - i. In the pipeline that suffered the incident;
 - ii. In proposed construction of the KXL pipeline;
- M. Actions taken to prevent re-occurrence which involved design or construction procedure changes in pipeline material composition or dimensions, or construction procedures for use:
 - i. In the pipeline that suffered the incident;
 - ii. In proposed construction of the KXL pipeline;
- N. Identify the IMP, leak detection, and emergency processes and procedures in place at the time of the leak/spill;
- O. Identify the documents that support your answers, above.

[Applicable Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103; Amended Condition 32-38]

ANSWER: Responsive documents are attached as Keystone 0774-0784.

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INTERROGATORY NO. 28. With regard to the 2010 tar sands oil pipeline leak/spill near the Kalamazoo River:

- B. Do you concede that the leak/spill contaminated the Kalamazoo River?
- C. How many miles of river and shoreline were contaminated by this leak/spill?
- 1) List the organic and inorganic materials which leaked/spilled from pipeline into the surrounding land and water resources.
 - 2) How long did it take for the pipeline leak/spill to be stopped from the time of discovery?
 - 3) Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.
- D. What percentage of organic and/or inorganic materials which leaked/spilled from the pipeline was recovered?
- 1) Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.
- E. List the respective level for each mineral and chemical identified remaining in the contaminated part of the river water, related alluvial waters and soil, after reclamation was considered complete.

- 1) Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.
- F. List the respective level of each mineral and chemical identified in Interrogatory 8D for the affected water and soil area prior to the spill/leak.
- 1) Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.
- G. List the respective level change for each mineral and chemical identified in response to Interrogatory No. 8D, from prior to the spill/leak to post-reclamation.
- 1) Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.
- H. What was the cost of reclamation of the Kalamazoo River?
- 1) When was reclamation considered completed by federal, state, and local authorities?
- I. Identify any violations of law that were cited against you by any federal, state, or local agency or authority in the United States and Canada as a result of this leak/spill.

[Applicable Finding or Condition No.: Amended Condition 32-38]

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The spill on the Kalamazoo River was from an Enbridge pipeline.

INTERROGATORY NO. 29. What percentage of oil from the Western Canadian Sedimentary Basin (WCSB) proposed to be transported by the KXL Pipeline currently has purchase contracts destined for retail consumers in the United States?

- E. Identify each company for which there are such current contracts.
- F. What was the percentage in 2009?
- G. Identify the percentage of crude oil produced in North Dakota that is proposed to be transported by the KXL Pipeline that currently has purchase contracts destined for retail consumers in the United States.
- H. Identify the documents upon which this answer is based.

[Applicable Finding or Condition No.: Findings 14, 24-29; Amended Condition 32-38]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within

Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 30. What percentage of the tar sands oil and N.D. crude oil proposed to be transported by the KXL pipeline is expected to be exported to markets outside the United States?

- B. Identify each company and country for which there are such current contracts.
- C. What was the percentage in 2009?
- D. Identify the documents upon which this answer is based.

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 31. What companies, if any, were partners or investors with TransCanada in the construction and operation of the KXL pipeline in 2009 that are no longer participating in the proposed project? [*Applicable Finding or Condition No.: Findings 24-29*]

ANSWER: Conoco Phillips is no longer participating in the Project as of August 14, 2009.

INTERROGATORY NO. 32. Identify the companies that have binding contractual commitments with TransCanada or its Affiliates to ship crude and/or tar sands oil that would travel through the KXL Pipeline that would not otherwise be transported through the XL or other existing pipelines. For each:

- A. Provide the termination dates, opt-out dates, or other material dates in the contractual commitments of shippers with the contractual commitments that underpin the viability and need for the project;
- B. Provide the development schedule for the project;
- C. Describe how the future developments schedule for the pipeline is consistent with the contractual commitments made by TransCanada;
- D. Identify all documents and sources for your answers.

[Applicable Finding or Condition No.: Findings 17, 24, 29]

OBJECTION: The identity of Keystone's shippers and the terms of their contracts have substantial commercial and proprietary value and are subject to substantial efforts by Keystone to protect them from actual and potential competitors, and must be

maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers.

INTERROGATORY NO. 33. Is there currently a growing demand by refineries and markets in the United States?

- A. Please explain your answer;
- B. Identify all sources for your answer;
- C. How and why has this changed since 2009?

[Applicable Finding or Condition No.: Findings 14, 17]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and

Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 34. Identify the forecasts of “additional crude oil production from the WCSB” and the Williston Basin.

- A. As per such forecasts, state the potential impact of current low oil prices.
- B. Identify the basis for your answers to these Interrogatories.

[Applicable Finding or Condition No.: Finding 24]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix

C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 35. Does TransCanada agree that domestic U.S. crude oil supplies are increasing, and are not continuing to decline?

- A. Please explain your answer;
- B. Identify documents that support your answer to this Interrogatory.

[Applicable Finding or Condition No.: Finding 26]

ANSWER: According to the Department of State FSEIS 1.4.2.3, U.S. production of crude oil has increased significantly, from approximately 5.5 million bpd in 2010 to 6.5 million bpd in 2012 and 7.5 million bpd by mid-2013. Even with the domestic production growth the U.S. is expected to remain a net importer of crude oil well into the future.

INTERROGATORY NO. 36. Provide a list of U.S. refineries that TransCanada expects to increase demand for WCSB and Williston Basin oil.

- A. For each refinery, state the basis for TransCanada's claim that the refinery will increase such demand for crude oil;
- B. Identify the refineries in PADD 3:
 - i. That could be served by the proposed KXL Project that are currently expanding refining capacity or have announced plans to expand their refining capacity;
 - ii. That TransCanada expects to import less offshore crude oil and replace it with crude oil that would be transported by the Project;
 - iii. That are "optimally configured to process heavy crude slates";
- C. Identify the new refineries that are currently proposed to be constructed in PADD 3;
- D. Itemize the annual import of heavy crude oil imports into PADD 3 by offshore sources since 2010. For each:
 - i. Identify the country of origin;
 - ii. State whether the costs of crude oil production in the source country are greater, the same, or less than the cost of heavy crude oil production in the WCSB;
- E. State whether pipeline expansions from the WCSB and the Williston Basin to the U.S. Gulf Coast operated by Enbridge (or companies affiliated with

Enbridge) provide the service to the refineries that TransCanada claims would be served by the KXL Project. Please provide a detailed explanation for your answer.

- F. Identify and describe the proposed delivery locations of the Keystone System in PADD 3.
- G. Identify all pipelines in PADD 3 to which the Keystone System is connected;
- H. State the year in which Trans-Canada expects the Project to be fully utilized;
- I. Describe the impact of growing crude oil production in PADD 3 on the demand for crude oil imported from WCSP and Williston Basin;
- J. Describe the potential market for Williston Basin light sweet crude oil in PADD 3;
- K. Identify the basis for your answers to these Interrogatories and identify all documents relied upon by you in answering this Interrogatory.

[Applicable Finding or Condition No.: Findings 24, 26 and 27]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to
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determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone is a provider of transportation service. It does not own the oil that is transported, is not a refiner, and does not make decisions about potential exports of crude oil or refined products. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finaiseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 37. Identify each existing pipeline that comprises the “insufficient pipeline capacity” identified by TransCanada as a factor driving the need for the KXL Project. For each of these pipelines:

- A. Provide current usage as a percentage of each respective pipeline's total capacity;
- B. Identify the basis for your answers to these Interrogatories.

[Applicable Finding or Condition No.: Finding 24]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Without waiving the objection, the demand evidenced by Keystone's binding shipper commitments demonstrates insufficient pipeline capacity.

INTERROGATORY NO. 38. Under the circumstances of today's markets and supply, does TransCanada still contend its KXL pipeline is necessary and will replace U.S. reliance on unstable sources of offshore crude oil?

- A. Please explain your answer;
- B. Identify all documents and sources for your answer;
- C. How and why has this changed since 2009?

[Applicable Finding or Condition No.: Findings 14, 17]

ANSWER: Shippers have committed to long-term binding contracts, which support construction of the pipeline once all regulatory, environmental, and other

approvals are received. These long-term binding shipper commitments demonstrate a material endorsement of support for the Project, its economics, proposed route, and target market, as well as the need for additional pipeline capacity to access North Dakota and Canadian crude supplies.

INTERROGATORY NO. 39. Provide the total current capacity of existing pipelines to transport crude oil from the WCSB and the Williston Basin to the U.S. Gulf Coast and identify the source(s) for your answer. [*Applicable Finding or Condition No.: Finding 24*]

OBJECTION: Specifics to operating capacity of third-party pipelines are under the responsibility of the pipeline owners and are beyond Keystone's control.

INTERROGATORY NO. 40. Identify all other pipeline operations of TransCanada and its Affiliates, which since 2009 are utilizing the same pipeline materials, dimensions, and seals as proposed for the KXL pipeline through South Dakota, and described in Findings 18 and 28. [*Applicable Finding or Condition No.: Findings 18, 28*]

OBJECTION AND RESPONSE: To the extent that it seeks information for pipelines other than crude oil pipelines, this request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. Without waiving the

objection, the Keystone I, Cushing Extension and Gulf Coast segments of the Keystone system are using similar materials to that of the proposed KXL pipeline.

INTERROGATORY NO. 41. Identify each pipeline operated by TransCanada and its Affiliates which have operated at 900,000 bpd, giving the pipeline name, location, dates of such operation, together with:

- A. Identification of each such pipeline which subsequently developed a leak or spill, regardless of whether the pipeline was at that time operating at 900,000 bpd, giving date, location, amount spilled/leaked, damage caused;
- B. Identify the documents upon which your answer(s) to these Interrogatories were based;

[Applicable Finding or Condition No.: Findings 15, 18, 28]

ANSWER: There are currently no pipelines operating at 900,000 bpd.

INTERROGATORY NO. 42. State whether a failure by TransCanada to design, construct, test, or operate the proposed KXL Project in accordance with the special conditions developed by the Pipeline Hazardous Materials and Safety Administration (PHMSA), and set forth in Appendix Z to the Department of State, January 2014 Final Supplemental Environmental Impact Statement (FSEIS), would be a violation of federal law. If so:

- A. Identify the law(s) under which enforcement of these special conditions would be brought;
- B. Identify the enforcing agency;
- C. Identify all correspondence between TransCanada and the PHMSA prior to and regarding any exemption(s) from compliance.
- D. Identify the documents upon which your answer(s) to these Interrogatories were based;

[Applicable Finding or Condition No.: Conditions 1-3; Findings 22, 28]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. In addition, this request depends on a hypothetical condition and is therefore speculative and improper as to form. It is also overlybroad and burdensome to the extent that it seeks all correspondence between TransCanada and PHMSA, and asks for information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b).

INTERROGATORY NO. 43: Identify all other pipeline operations of TransCanada and its Affiliates which, since 2009, have or are operating at a maximum

operating pressure (MOP) of equal to or greater than 1,440 psig generally and/or 1,600 psig MOP for specific low elevation segments of pipeline with the same design factor and pipe wall thickness as described in Finding 19, close to the discharge of pump stations:

- A. For each such pipeline which subsequently developed a leak or spill, regardless of the psig MOP the pipeline was operating at the time, giving date, location, amount spilled/leaked, psig MOP at which pipeline was operating at the time, and describe the amount and nature of damage caused by such a leak or spill;
- B. Identify any documents upon which your answers to these Interrogatories were based;

[Applicable Finding or Condition No.: Findings 19, 28]

ANSWER: There are currently no crude oil pipelines operating equal to or greater than 1,440 psig generally and/or 1,600 psig MOP.

INTERROGATORY NO. 44: For each spill/leak incident which has occurred from a pipeline transporting tar sands crude oil operated by TransCanada and its Affiliates since 2009, state the time during which transportation of the tar sands crude through that pipeline was disrupted. Identify any documents upon which your answers to this Interrogatory were based. *[Applicable Finding or Condition No.: Finding 28]*

ANSWER: See the spreadsheet attached as Keystone 0774-0784.

INTERROGATORY NO. 45: Explain why TransCanada has reduced the maximum operating pressure of the KXL pipeline at most locations to 1,307 psig;

- A. State whether TransCanada has any plans to subsequently increase this general operating pressure;
- B. If your answer to subpart A of this interrogatory is yes, what is the subsequent maximum operating pressure being contemplated for general use during pipeline operations?
- C. Explain why TransCanada wants to construct the KXL pipeline pump stations with pumps of sufficient capacity to meet the maximum design flow rate of 830,000 bpd.

[Applicable Finding or Condition No.: Conditions 31-38; Findings 19, 20]

ANSWER:

A. and B. On August 5 2010, TransCanada withdrew its application to the Pipeline Hazardous Materials and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a 0.8 design factor and adopted the 57 additional safety measures that would have been required under the PHMSA special permit. The operating pressure reduction from 1,440 psig to 1,307 psig is a result of the use of the

standard design factor (0.72) in accordance with 49 CFR 195.106 design pressure. TransCanada would be required to re-apply to PHMSA for a special permit in order to operate the pipeline at an increased design factor of 0.8 corresponding to an operating pressure of 1,440 psig. The decision to withdraw the special permit application is explained in the Media Advisory dated August 5, 2010, marked as Keystone 0647-0649.

C. See previous response.

INTERROGATORY NO. 46: With regard to the plan for mainline valves to be remotely controlled, what guarantee can you give the PUC that TransCanada can prevent a cyber-security attack on the control system?

- A. Describe the worst-case scenario that could occur in the event of a computer systems security breach on the control system for the KXL Pipeline.
- B. Describe the data security systems to be put in place to prevent any such system breach, identify any third-party vendor(s) providing system security software, hardware or monitoring, and identify the particular components or scopes of services such vendors will provide.
- C. Identify any documents used to support your answer to this Interrogatory.

[Applicable Finding or Condition No.: Conditions 31-38; Finding 20]

ANSWER:

A. Once constructed, the Keystone XL pipeline will form part of North America's critical national energy infrastructure. Over time, actors such as terrorist organizations and hostile nation states can be expected to pursue their objectives by attempting to disrupt this critical infrastructure. Therefore, it is not prudent for TransCanada to publicly provide an opinion on how the adverse consequences of a cyber attack could be maximized.

B. and C. Consistent with industry practice, TransCanada does not publicly disclose the details of the security systems it has in place. We believe that it is not prudent to make this information public because of the likelihood that it will assist, and, potentially encourage, attackers.

INTERROGATORY NO. 47. What is the current capacity contracted for WCSB tar sands oil from Canada? Identify any documents upon which you based your answer or which you are aware would be a basis for your answer. *[Applicable Finding or Condition No.: Findings 14, 24-29]*

OBJECTION: This request seeks information that is not within Keystone's custody and control. Keystone does not know the contractual details of other pipeline companies' commitments.

INTERROGATORY NO. 48. State whether there is a significant discount on the price currently of WCSB crude oil.

- A. Please explain your answer;
- B. Identify all documents which support your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION AND ANSWER: The scope of the question is too broad given the large number of crude oil grades available from the WCSB. Without waiving the objection, the Canadian heavy benchmark discounts in 2014 range from \$13 to \$30.

- A.
 - Western Canadian crudes are priced against West Texas Intermediate (WTI).
 - Canadian crudes are traded on Net Energy and TMX (NGX) trading exchanges.
 - Canadian crude monthly blended indices are calculated using calendar month volume weighted average between the two platforms.
 - As an example, WCS blended indices for 2014 range from \$13 to \$30 discount to WTI monthly.
- B. Responsive documents are attached as Keystone 1116-1118.

INTERROGATORY NO. 49: What is the current capacity contracted for Williston Basin oil? Identify any documents that would support your answer. *[Applicable Finding or Condition No.: Findings 14, 24-29]*

ANSWER: Shippers have committed about 65,000 barrels per day of capacity for transportation services on Bakken Marketlink.

INTERROGATORY NO. 50: Describe the changes in contracted capacity amounts and duration since 2009 from Canada and the Williston Basin and identify any documents that would support your answer. [*Applicable Finding or Condition No.: Findings 14, 24-29*]

ANSWER: Shippers have committed about 65,000 barrels per day of capacity for transportation services on Bakken Marketlink. Keystone also received additional commitments on Keystone XL Pipeline that would support an expansion of its total capacity from 700,000 barrels per day to 830,000 barrels per day. The contracted capacity amounts, delivery locations and duration of each of the commitments are confidential.

INTERROGATORY NO. 51. Regarding the "U.S. demand for petroleum products," i.e., produced for U.S. consumers and not for export to other countries:

- A. What is the percent change since 2010?
- B. What is the forecast for "U.S. demand for petroleum products" over the next 20 years?
- C. What has been the annual import of crude oil for each year since 2010?

- D. What is the forecast for offshore crude oil imports into the U.S. over the next 20 years?
- E. Of the 15 million bpd of crude oil demand identified in revised Finding of Fact 25, state whether some of this demand is used to produce petroleum products for export from the U.S. If so provide the quantity of crude oil:
- i. Needed for domestic demand for petroleum products;
 - ii. Needed to produce petroleum products for export;
- F. Identify any documents which would support your answer;

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also may seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook (01815268.1)

2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 52. What is the status of pipeline and rail capacity to move oil from oil fields in the Williston Basin to the Baker, Montana on-ramp? Identify any documents that would support your answer. [*Applicable Finding or Condition No.: Findings 14, 24-29*]

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Without waiving the objection, information regarding the Bakken on-ramp pipeline can be found in the Montana Department of Environmental Quality Certificate issued under the Montana Major Facility Siting Act available at <http://www.deq.mt.gov/mfs/keystonexl/keystonecertificate.aspx>.

INTERROGATORY NO. 53: Why would the existing XL pipeline be capable of shipping enough tar sands from the Western Canadian Sedimentary Basin (WCSB) oil to offset the need for unstable foreign oil supplies? Identify any documents that would support your answer. [*Applicable Finding or Condition No.: Finding 14*]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finaiseis/index.htm>, are marked as Keystone 0001-0467. Moreover, the Keystone Pipeline does not have sufficient additional capacity to meet current demand.

INTERROGATORY NO. 54: What is the currently projected forecast of production in the Western Canadian Sedimentary Basin (WCSB) and the Williston Basin over each of the next ten years? Identify any documents that would support your answer.

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL §
{01815268.1}

49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finaiseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 55: Describe the impact of low oil prices on crude oil production in the WCSB and Williston Basin.

- A. What is the forecast of demand for transportation services of such low oil prices?
- B. In light of low oil prices, what will be the impact of the Enbridge pipelines from the WCSB and Williston Basin to the US Gulf Coast on the need for transportation services of the KXL pipeline?
- C. Identify any documents which would support your answers;

{01815268.1}

[Applicable Finding or Condition No.: Findings 14, 24-29]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 56: Describe in detail, route changes in the proposed KXL pipeline since 2010, on a county-by-county basis, identifying specific land parcels to be affected by such changes. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Finding 16]

ANSWER: In addition to the maps filed with Keystone's permit application in {01815268.1}

HP09-001, maps showing the changes in the route since then are attached as Keystone 0470-0583.

INTERROGATORY NO. 57: Provide the dates on which pipe segments to be used in South Dakota were delivered to storage location in South Dakota or adjacent states.

- A. For each such delivery of pipe segments, if applied, state the date on which an external fusion bonded epoxy (FBE) was applied;
- B. Where FBE was applied, describe the materials comprising and dimensions of any covering placed over each shipment of delivered pipe segments;
 - i. Provide the date of each covering of the respective pipe shipment after delivery;
- C. As per the respective deliveries, state the longest time that any pipe segments were stored without protective covering;
- D. Provide the FBE manufacturer's recommendations for protection of the FBE applied to pipe segments to protect them against the effects of outside storage;
- E. Provide the pipeline manufacturer's recommendations for protection of pipe segments against the effects of outside storage;

- F. Provide the manufacturer's suggested maximum amount of time of sunlight exposure recommended after FBE application for pipe segments without protective covering;
- G. Describe the impact of UV radiation on FBE coating over time;
- H. Provide the manufacturer's warranties and guarantees for the FBE coating to be applied to the pipe segments;
- I. Provide the manufacturer's warranties and guarantees for the pipe segments;
- J. Explain the elimination from use in the proposed Project of API 5L X80 high strength steel;
 - i. Describe how substituted material(s) would better perform than the API 5L X80 steel;
- K. Identify any documents which would support your answers;

[Applicable Finding or Condition No.: Finding 18]

ANSWER:

- A. January 2011- November 2011
- B. Covering application commenced in October 2012 and was completed July 2013
- C. Approximately 18 months

D. The manufacturer did not provide recommendation or direction for storage.

Direction for storage is per TransCanada specification.

E. The manufacturer did not provide recommendation or direction for storage.

Direction for storage is per TransCanada specification.

F. Per manufacture, pipe coated with FBE coatings can be stored for 730 days under most climatic weather conditions without commencement of deterioration of the coating. TransCanada specification provides criteria for minimum coating thickness requirements which would supersede any exposure time period. Applicable manufacturer warranties are related to application and workmanship to the specification

G. Sunlight exposure over a significantly extended period of time could cause a reduction in coating thickness and coating flexibility due to degradation by UV radiation

H. WARRANTY

Unless otherwise specified in the Order for Pipe, the Supplier hereby warrants that the Pipe, including, if applicable, the Work done thereto, shall meet and conform to the Specifications and the Technical Agreements, and such other product characteristics agreed to by the Parties in writing, for a period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of all Pipe to the Delivery Point, whichever is earlier. If during the aforesaid warranty period, the Company discovers any Pipe which fails to conform, the Company shall forthwith notify in writing the Supplier of such non-conformance. The Company and the Supplier shall jointly investigate any such non-conformance in an effort, in good faith, to determine the cause thereof, provided that such investigation shall not unreasonably delay any repair or replacement of the Pipe. If the Parties are unable to

{01815268.1}

agree upon the cause of the non-conformance with this Agreement within ten (10) days of the date of the discovery of such non-conformance, either Party shall have the right to request that the matter be arbitrated pursuant to single party arbitration conducted in accordance with the then current International Chamber of Commerce's Rules of Arbitration.

If such non-conformance is discovered after title to the Pipe passes to the Company, the Company may, after notification to the Supplier, to the extent the Company, acting reasonably, deems practical under the circumstances, repair the same at the Supplier's risk and expense. If repair is not practical in the Company's opinion, acting reasonably, the Company agrees that the Supplier may replace the non-conforming Pipe in the event that the Supplier can secure such replacement at delivery dates at least as favorable as those available to the Company from other sources.

Any Pipe that is repaired or replaced pursuant to the warranties specified herein shall be warranted for a further period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of the Pipe to the Delivery Point, whichever is earlier.

If the non-conforming Pipe cannot be repaired and the Company elects not to replace such Pipe, the Company shall have the right to return, at the Supplier's expense and risk, any or all of the non-conforming Pipe delivered by the Supplier to the Company whereupon the Supplier shall immediately repay the Company, without Interest, all monies previously paid by the Company to the Supplier on account of the non-conforming Pipe so returned, together with all costs and expenses incurred by the Company in returning such Pipe.

The express warranties of the Supplier in this Agreement are the only warranties as to the Pipe and are in lieu of all other warranties in respect thereof, whether written, statutory, oral, express or implied including, without limitation, any warranty of merchantability or fitness for purpose. The rights and remedies contained in this Agreement are the Company's exclusive rights and remedies against the Supplier whatsoever in relation to, or arising out of, or in connection with the performance or conformance of the Supplier's obligations under these warranties.

I. WARRANTY

Unless otherwise specified in the Order for Pipe, the Supplier hereby warrants that the Pipe, including, if applicable, the Work done thereto, shall meet and conform to the Specifications and the Technical Agreements, and such other product characteristics agreed to by the Parties in writing, for a period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of all Pipe to the Delivery Point, whichever is earlier. If during the aforesaid warranty period, the Company discovers any Pipe which fails to conform, the Company shall forthwith notify in writing the Supplier of such non-conformance. The Company and the Supplier shall jointly investigate any such non-conformance in an effort, in good faith, to determine the cause thereof, provided that such investigation shall not unreasonably delay any repair or replacement of the Pipe. If the Parties are unable to agree upon the cause of the non-conformance with this Agreement within ten (10) days of the date of the discovery of such non-conformance, either Party shall have the right to request that the matter be arbitrated pursuant to single party arbitration conducted in accordance with the then current International Chamber of Commerce's Rules of Arbitration.

If such non-conformance is discovered after title to the Pipe passes to the Company, the Company may, after notification to the Supplier, to the extent the Company, acting reasonably, deems practical under the circumstances, repair the same at the Supplier's risk and expense. If repair is not practical in the Company's opinion, acting reasonably, the Company agrees that the Supplier may replace the non-conforming Pipe in the event that the Supplier can secure such replacement at delivery dates at least as favourable as those available to the Company from other sources.

Any Pipe that is repaired or replaced pursuant to the warranties specified herein shall be warranted for a further period of twelve (12) calendar months from the day the Pipe is incorporated into the Company's pipeline and the Company's pipeline is commissioned for regular service or eighteen (18) calendar months from the date of delivery of the Pipe to the Delivery Point, whichever is earlier.

If the non-conforming Pipe cannot be repaired and the Company elects not to replace such Pipe, the Company shall have the right to return, at the Supplier's expense and risk, any or all of the non-conforming Pipe delivered by the Supplier to the Company whereupon the Supplier shall immediately repay the Company, without Interest, all monies previously paid by the Company to the Supplier on account of the non-conforming Pipe so returned, together with all costs and expenses incurred by the Company in returning such Pipe.

The express warranties of the Supplier in this Agreement are the only warranties as to the Pipe and are in lieu of all other warranties in respect thereof, whether written, statutory, oral, express or implied including, without limitation, any warranty of merchantability or fitness for purpose. The rights and remedies contained in this Agreement are the Company's exclusive rights and remedies against the Supplier whatsoever in relation to, or arising out of, or in connection with the performance or conformance of the Supplier's obligations under these warranties.

J. API 5L X80 high strength steel was contemplated as an option during the early stages of the Project. Material evaluation and selection was finalized during the detail design phase of the Project at which time Keystone selected grade X70 materials for use in the pipeline.

INTERROGATORY NO. 58: State whether any power lines have been permitted and constructed to provide power to pump stations by local power providers;

- A. Identify each such power line;
- B. State the cost of construction of the power line and identify the source(s) of the funds construction of each power line;
- C. If any State or Tribal permit or other authorization is required for any planned construction of power lines to pump stations:
 - i. Identify the permits which have been obtained, together with date permit granted;
 - ii. Identify permits which have not yet been obtained;

iii. Identify which permits have been applied for and are pending.

D. Identify any documents that would support your answers to this interrogatory.

[Applicable Finding or Condition No.: Finding 20]

ANSWER: No power lines have been constructed to pump stations for KXL in South Dakota. All required permits pertaining to power lines are completed by the individual power providers.

INTERROGATORY NO. 59. Describe each increased estimated cost of the KXL pipeline due to each of the following:

- A. New technical requirements;
- B. Inflation;
- C. Project management;
- D. New regulatory requirements;
- E. Material storage issues;
- F. Preservation;
- G. Identify documents upon which you base your answers;

[Applicable Finding or Condition No.: Finding 23]

OBJECTION: This request seeks information that is not relevant and not

likely to lead to the discovery of admissible evidence under SDCL § 15-6-26(b). In addition, Keystone does not maintain a breakdown of the estimated project cost in the way requested, and requiring such a breakdown of costs would require the disclosure of information that has substantial commercial and proprietary value, and is subject to substantial efforts by keystone to protect it from actual and potential competitors.

INTERROGATORY NO. 60. Identify companies currently interested in using the KXL pipeline to “further” diversify supply away from offshore foreign crude supply.” For each company identified,

- A. State whether they are interested in “Canadian crude;”
- B. Identify documents upon which you base your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION: The identity of Keystone’s shippers and the terms of their contracts have substantial commercial and proprietary value, are subject to substantial efforts by Keystone to protect this information from actual and potential competitors, and are required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. To the extent the question relates to other potential shippers, Keystone does not have information that would answer the question. This request also seeks information that is beyond the scope of the PUC’s jurisdiction and

Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the U.S. Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order.

INTERROGATORY NO. 61: Describe the potential for pipeline transportation to replace rail transportation for shipments to PADDs 1 and 5.

- A. Provide the quantity of oil exported from the WCSB to PADDs 1 through 5 by rail from 2010 to the present;
- B. Identify any documents which would support your answers;

[Applicable Finding or Condition No.: Finding 27]

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. The oil forecast information that Keystone relied on in Appendix C to its Certification was derived from the following sources: The Final Supplemental Environmental Impact Statement; the CAPP Crude Oil Forecast, Markets and

Transportation June 2014; and the Energy Information Agency Annual Energy Outlook 2014. These documents, except for the FSEIS, which is available at <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, are marked as Keystone 0001-0467.

INTERROGATORY NO. 62: List the changes in the KXL Project route since 2010 and identify any documents that would support your answers. [*Applicable Finding or Condition No.: Finding 33*]

ANSWER: In addition to the maps filed with Keystone's permit application in HP09-001, maps showing the changes in the route since then are attached as Keystone 0470-0583.

INTERROGATORY NO. 63: Identify paleontological studies within the Upper Cretaceous or Tertiary strata of which you have knowledge were conducted after 2009 in the proximate location of the currently proposed KXL pipeline route and identify any documents that would support your answers. [*Applicable Finding or Condition No.: Findings 34, 36; Conditions 43, 44*]

ANSWER: A list of all paleontological survey efforts is outlined, by date, in Table 3.1-4 of the Department of State FSEIS (2014). Survey methodology and

geological formations investigated are detailed in Section 3.1.2.3 of the Department of State FSEIS (2014).

INTERROGATORY NO. 64: Identify Section 106 type “cultural resource” studies of which you have knowledge that were conducted after 2009 in the proximate location of the currently proposed KXL pipeline route and identify any documents which would support your answers. *[Applicable Finding or Condition No.: Conditions 43, 44]*

ANSWER: Cultural resources survey reports are listed in Section 3.11 of the Department of State FSEIS (2014), with results of the SD surveys detailed in Table 3.11-3.

INTERROGATORY NO. 65: TransCanada is to identify the exact locations of active, shut-in, and abandoned wells and any associated underground pipelines in the construction ROW, what is the status of such identification procedures? As to the wells and pipelines to be identified:

- A. How long does TransCanada expect such an identification process will take before the Company would be willing to assure the PUC that all such wells and pipelines have been identified;

- B. If "appropriate precautions" prove inadequate, describe in detail a worst case scenario, especially involving a river, tributary, or other water resources, involving:
- i. An unidentified well;
 - ii. An unidentified pipeline;
 - iii. An identified well where the precautions fail;
 - iv. An identified pipeline where the precautions fail;
- C. What circumstance(s) or event(s) could potentially cause the "appropriate precautions" to fail?
- i. How is it determined what the specific appropriate precautions to be undertaken are for each kind of scenario?
 - ii. Who determines whether each specific precaution is "appropriate" to prevent environmental and/or human damage;
 - iii. As to appropriate precautions to be undertaken for each possible scenario, how is the PUC assured TransCanada actually implements or undertakes the precaution(s) necessary.
- D. What specific precautions have been or are planned to be taken to protect the soils in the Sand Hills from contamination;

- E. What specific precautions have been or are planned to be taken to protect the underground water resources of the Oglala Aquifer and other potentially affected aquifers from contamination;
- F. What specific precautions have been or are planned to protect the surface and alluvial waters of the State and respective Tribes from contamination;
- G. What type of gas or oil or related solutions or gases pumped or injected by a well within a mile or more along the general route of the KXL pipeline, could be involved in such a "worst case scenario"?
- H. What type of gas or oil or related solutions or gases being transported by a pipeline within a mile or more along the general route of the KXL pipeline, could be involved in such a "worst case scenario"?
- I. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Conditions 15, 16, 21, 22, 42]

ANSWER: TransCanada has not yet identified the locations of the wells and pipelines as stated. TransCanada does not differentiate between active and abandoned but does identify wells and pipeline within the construction right of way utilizing public data, survey data and One Calls at the time of construction.

INTERROGATORY NO. 66: What kinds of "significant problems" are

anticipated by the weathering of shale underlying almost all of Haakon, Jones and portions of Tripp Counties:

- A. To roads;
- B. To structural foundations (in answering, identify the type of foundations are of concern);
- C. To the proposed KXL pipeline or part thereof;
- D. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Conditions 15, 16, 18, 21, 22, 23, 42]

ANSWER: There are no "significant problems" anticipated concerning the weathering of shale in South Dakota.

INTERROGATORY NO. 67: Describe a leak, the existence of which "may suggest a threat to the integrity of the pipeline."

- A. Other than aerial patrols, ground patrols, and public awareness, what steps have been taken to prevent a leak of this nature and magnitude or prevent or minimize its effect on the pipeline's integrity?
- B. Identify documents that support and/or were used to provide your answers.

[Applicable Finding or Condition No.: Finding 95; Conditions 31-38]

ANSWER: A confirmed leak is in fact a loss of integrity, however a direct observation reported leak may not be a result of a pipeline release (e.g. an apparent sheen on standing water near the ROW) or the release may be from another line in a multi-pipeline corridor or at a foreign pipeline crossing. In this context, a leak which "may suggest a threat to the integrity of the pipeline" is a reported potential leak that has yet to be confirmed as originating from a Keystone line.

Prevention of leaks of this magnitude are addressed in the sections of the FSEIS discussing pipeline integrity, Sections 3.13 and 4.13. In addition to these answer, in regard to remote sensing technologies, several initiatives have been undertaken by Keystone. A pilot implementation of a fixed thermal imaging system at a pump station will be tested this year, in addition to three industry projects that Keystone is participating in:

- C-FER Technologies' ELDER joint industry project (JIP) that is evaluating the performance of four different cable based leak detection systems.
- A second C-FER Technologies JIP that is quantifying the physical phenomenon that occur at the ground surface that could be detected by various technologies.

- PHMSA's project entitled "INO Technologies Assessment as Leak Detection Systems for Hazardous Liquid Pipelines".

INTERROGATORY NO. 68: Describe the status of the written manual for normal operations, maintenance activities, and handling abnormal operating and emergencies.

- A. Identify the latest draft of the written manual and all prior drafts;
- B. Identify all documents that support or were used to provide your answers.

[Applicable Finding or Condition No.: Finding 96; Conditions 31-38]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the operations manual is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the operations manual would commercially disadvantage Keystone.

INTERROGATORY NO. 69: Describe in detail the worst case scenario affects which could impact any part or aspect of the KXL pipeline infrastructure by the "high

swelling potential” of the Cretaceous and Tertiary rocks in the Missouri River Plateau due to its susceptibility to instability in the form of slumps and earth-flows, including landslides.

- A. Provide the locations where such ground swelling can be anticipated;
- B. Identify any documents which would support your answer;

[Applicable Finding or Condition No.: Finding 40, 77; Conditions 31-42]

OBJECTION: This request seeks information that is confidential.

The volume and location of a worst case scenario spill are kept confidential for homeland security reasons. Without waiving the objection:

- A. Locations of ground swelling are identified in the FSEIS, Section 3.1 Geology. In Section 3.1 of the FSEIS, Table 3.1-6 and Figure 3.1.2-3 identify the high risk category Landslide Hazard Area (LSHR) areas for swelling soils and landslides.

Table 3.1-6 Locations within LSHR High-Risk Category along the Proposed Project Corridor

State	Start (MP)	End (MP)	Length
Montana	0.2	25.5	25.3
Montana	25.5	89.2	63.7
Montana	89.2	102.0	12.8
South Dakota	308.3	313.5	5.2
South Dakota	355.6	358.1	2.5
South Dakota	358.1	370.9	12.8
South Dakota	389.5	425.9	36.4
South Dakota	425.9	426.3	0.4
South Dakota	426.3	485.1	58.8
South Dakota	485.1	525.2	40.1
South Dakota	525.2	537.1	11.9
South Dakota	537.1	571.5	34.4
Nebraska	601.5	605.3	3.8

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Nebraska	606.8	637.5	30.7
Total			338.8
<hr/> Sources: USGS 2009a; PHMSA-NPMS 2007b			

B. 49 CFR 194.105

U.S. Department of State (USDOS). 2014. Final Supplemental Environmental Impact Statement for the Keystone XL Project. Washington D.C. Includes all appendices of the FSEIS.

INTERROGATORY NO. 70: What lessons have been learned from previous pipeline construction, current right-of-way conditions and project requirements that have been incorporated into the Construction Mitigation and Reclamation (CMR) Plan? Identify any documents that would support your answers, including but not limited to the latest version of the CMR plan. [*Applicable Finding or Condition No.: Finding 32, 37, 73; Conditions 13-30*]

ANSWER: Overall changes to the CMR Plan between the 2008 Rev1 version and the 2012 Rev4 version were made to clarify language, provide additional detail related to construction procedures, address agency comments, and incorporate lessons learned from previous pipeline construction, current right-of-way conditions and project requirements. The redline version of the CMR Plan Rev4 showing changes since the version considered in 2010 was provided in Appendix C as a component of Keystone's September 2014 Recertification Petition to the Commission.

INTERROGATORY NO. 71: Provide a list of changes in the proposed KXL pipeline route since 2010.

- A. For each change in the route:
 - i. State why the route was changed;
 - ii. State how the new route improves this Project when compared with the previously submitted route;
- B. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Finding 33]

ANSWER: In addition to the maps filed with Keystone's permit application in HP09-001, maps showing the changes in the route since then are attached as Keystone 0470-0583.

INTERROGATORY NO. 72: Describe the status of the development of procedures for handling and disposal of unanticipated contaminated soil discovered during construction, and consultation with relevant agencies thereon.

- A. Identify any draft or final procures developed to date;
- B. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Conditions 13-30]

ANSWER: Keystone has not yet drafted the Unanticipated Contaminated Soils Plan.

INTERROGATORY NO. 73: Although the USGS has so far determined that ground motion hazard in the Project area is "low", describe the worst case scenario impact on the integrity of the proposed KXL pipeline, power stations, pump stations, or any other aspect of the project should there be unpredicted seismic activity. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Conditions 31-38]

ANSWER: Please refer to the FEIS section 3.1.4 Geologic Hazards.

INTERROGATORY NO. 74: Describe the status of TransCanada's efforts to obtain a permit process for water body crossings.

- A. List the agency(ies) to whom TransCanada has submitted a permit application;
- B. Identify all permit applications submitted;
- C. List any permits that TransCanada needs to obtain prior to its proposed KXL pipeline construction for each of the water body crossings desired to be crossed.

- D. Explain why horizontal directional drilling will not be used on water body crossing of perennial streams and intermittent water bodies;
- E. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Finding 41; Conditions 1, 2, 13-30]

ANSWER: The following is the requested information addressing the permitting of the water body crossings:

- A. To date, Keystone has not submitted any permit applications to any agencies for water body crossings in South Dakota. All permits for waterbody crossings, as required, will be filed closer to the time period of construction.
- B. To date, Keystone has not submitted any permit applications for water body crossings in South Dakota. All permits for waterbody crossings, as required, will be filed closer to the time period of construction.
- C. Keystone will permit all of the water body crossings in South Dakota under the US Army Corps of Engineers Nationwide General Permit (NWP) 12. Additionally, the South Dakota Department of Environment and Natural Resources is responsible for Clean Water Act permit certification under Section 401 and would review proposed stream and river crossings where necessary and may issue project-specific conditions.

D. The decision to use the horizontal directional drilling (HDD) crossing method was based on an evaluation of engineering and environmental factors and use of an HDD does not always provide the most suitable methodology for a waterbody crossing. During the Project design, TransCanada has complied with all regulations and permit stipulations in determining the proposed crossing method for each waterbody in South Dakota.

E. The Department of State FEIS (2014) Sections 4.3, Water Resources; 4.7 Fisheries; 4.8 Threatened and Endangered Species; and Appendix H.

INTERROGATORY NO. 75: Describe the worst case scenario which could occur from expected loss of in-stream habitat through direct disturbance, loss of bank cover, disruption of fish movement, direct disturbance to spawning, water quality effects, and sedimentation effects by open-cut trenching of water crossings other than the Little Missouri, Cheyenne and White River crossings. Identify any documents that would support your answers. [*Applicable Finding or Condition No.: Finding 41; Conditions 34, 41*]

ANSWER: The Department of State FSEIS (2014) evaluates the impacts to in-stream habitat as a result of the construction and operation of the Project in the following locations:

a. Section 4.3.2.2, Surface Water

- b. Section 4.3.3.2, Surface Water
- c. Section 4.7.3.2, Construction impacts

Section 4.7.3.3 Proposed Project Operational Impacts

INTERROGATORY NO. 76: Describe the worst-case scenario that could occur during or as a result of horizontal directional drilling to cross the Little Missouri, Cheyenne, and White River crossings. Identify any documents that would support your answers. [*Applicable Finding or Condition No.: Finding 41, 82-83; Condition 22*]

ANSWER: This issue is addressed several times in the FSEIS, as follows:

At page 4.3-21:

In some instances, pressurized fluids and drilling lubricants used in the HDD process have the potential to escape the active HDD bore, migrate through the soils, and come to the surface at or near the crossing construction site, an event commonly known as a frac-out. Measures identified in a required HDD contingency plan would be implemented, including monitoring of the directional drill bore, monitoring downstream for evidence of drilling fluids, and mitigation measures to address a frac-out should one occur.

At page 4.8-20 :

The HDD method avoids direct disturbance to the river, channel bed, or banks. While the HDD method poses a small risk of frac-out (i.e., release of bentonite-based drilling fluids), potential releases would be contained by best management practices that would be described within the HDD Contingency Plans required for drilled crossings. Most leaks of HDD fluids occur near the entry, exit locations for the drill, and are quickly contained and cleaned up. Frac-outs that may release drilling fluids into aquatic environments are difficult to contain primarily because bentonite readily disperses in flowing water and quickly settles in standing water. Should this type of release occur, bentonite is non-toxic but in sufficient concentration may physically inhibit respiration of adult fish and eggs.

At page 4.7-11,12:

The HDD method for crossing waterbodies would be used to minimize disturbance to aquatic habitat, stream banks, and recreational or commercial fisheries. Impacts could occur if there is an unintended release of drilling fluids (i.e., a frac out) during the HDD operation. A frac out could release bentonitic drilling mud into the aquatic environment. The released drilling mud would readily disperse in flowing water or eventually settle in standing water.

Although bentonite is non-toxic, suspended bentonite may produce short-term impacts to the respiration of fish and aquatic invertebrates due to fouled gills. Longer-term effects could result if larval fish are covered and suffocate due to fouled gills and/or lack of oxygen. If the frac out occurred during a spawning period, egg masses of fish could be covered, thus inhibiting the flow of dissolved oxygen to the egg masses. Benthic invertebrates and the larval stages of pelagic organisms could also be covered and suffocate.

INTERROGATORY NO. 77: Describe the worst case scenario of a leak/spill which could occur at the site of the water body crossing, of at least the magnitude of the spill/leak into the Kalamazoo River in 2010, if such were to occur into the Little Missouri, Cheyenne, and White River water body crossings.

- A. Was the pipeline involved in the Kalamazoo River spill/leak installed with FBE coating and a cathodic protection system? Explain why or why not;
- B. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Findings 41-52, 68-69, 82-83; Conditions 31-42]

OBJECTION: This request seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Keystone was not involved in the pipeline leak involving the Kalamazoo River in 2010.

INTERROGATORY NO. 78: Describe the worst-case scenario of a leak/spill that could occur from the pipeline as it passes under channels, adjacent flood plains and flood protection levees. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Findings 41-49; Conditions 31-42]

OBJECTION AND RESPONSE: This request seeks information that is confidential. The location and volume of a worst case scenario spill are kept confidential for homeland security reasons. Without waiving the objection, when the pipe crosses channels and flood plains, scenarios would be dictated by stream flow rate (discharge) and are discussed in Section 4.2.3.4 of 2009 Keystone XL Risk Assessment. Impacts are described in Section 4.2.3.4 for channels. Floodplain crossings are covered in FEIS Section 4.3.3.3 and Section 4.3.3.4 discusses impacts to floodplains. Worst case would be spill into low flow stream (Table 4-2 in 2009 Keystone XL Risk Assessment). Spills at individual river crossings are rare with occurrence interval of 1/22,000 years to 1/830,000 years based on representative crossing distances (2009 Keystone XL Risk Assessment). Most spills are less than 3 barrels.

River crossings by pipelines are very common, number of incidents are low, and safety is not affected by material transported. Predicted Project-specific incident frequencies are provided in Section 3.0 of the 2009 Keystone XL Risk Assessment. Spills at individual river crossings are rare with occurrence interval of 1/22,000 years to

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1/830,000 years based on representative crossing distances (2009 Keystone XL Risk Assessment).

INTERROGATORY NO. 79: In light of the leak/spill risk assessment conducted as to impacts to the environment, the 1 in 7,400 years likelihood of a spill/mile of pipeline, the claim that any spill would "likely" release no more than 3 barrels of oil, comparing these studies/assessments to the real world:

- A. Explain the number of leaks along the XL pipeline since 2008;
 - i. Explain the number of leaks from the other oil pipelines constructed and/or operated by TransCanada or its Affiliates;
 - ii. Explain the number of leaks from the other pipelines constructed and/or operated by transportation companies other than TransCanada;
- B. Explain the massive leak and contamination of the Kalamazoo River in 2010;
- C. Explain the leaks of more than 3 barrels and amounts leaks as documented on the XL pipeline since 2008;
 - i. Explain the amount leaked/spilled from other oil pipelines constructed and/or operated by Trans-Canada or its subsidiaries;
 - ii. Explain the number of leaks along each of the other pipelines constructed and/or operated by transportation companies other than Trans-Canada.

- D. What would be a worst-case scenario amount that could leak/spill from the KXL pipeline? Please explain your answer;
- E. Identify any documents that would support your respective answers.

[Applicable Finding or Condition No.: Findings 41-49, 51-52; Conditions 31-38]

OBJECTION AND RESPONSE: Subpart(b) requests information that is not within Keystone's custody or control. Subpart(c) requests information that is confidential by statute. The location and volume of a worst case scenario spill are confidential for homeland security reasons. Subpart (e) is overlybroad and unduly burdensome. There are thousands of pages of documents supporting Keystone's spill risk assessment. In addition, many of the documents contain information that is confidential and proprietary.

A. Keystone has delivered more than 760 million barrels of oil from Canada to the United States markets since it began operation in July 2010. The small number of leaks that have occurred on the pipeline have had nothing to do with the integrity of the pipe itself. They have all occurred at our pump stations and other above-ground facilities and have been related to leakage from small-diameter fittings and seals. They have all been cleaned up with no environmental impact. We designed the pipeline to ensure that all small diameter fittings, valves and seals are located above ground where they can be

easily accessed for maintenance and repairs. All of our pump stations are designed to capture and contain oil on our property. In total, less than 450 barrels of oil, out of more than 760 million barrels transported, have come out of the pipeline since it began operations five years ago TransCanada is constantly striving to improve our performance and working towards our goal of having zero leaks or safety incidents. All pipeline leaks are thoroughly investigated regardless of their size in order to understand the cause and prevent future such incidents.

i. Keystone has delivered more than 760 million barrels of oil from Canada to the United States markets since it began operation in July 2010. The small number of leaks that have occurred on the pipeline have had nothing to do with the integrity of the pipe itself. They have all occurred at our pump stations and other above-ground facilities and have been related to leakage from small-diameter fittings and seals. They have all been cleaned up with no environmental impact. We designed the pipeline to ensure that all small diameter fittings, valves and seals are located above ground where they can be easily accessed for maintenance and repairs. All of our pump stations are designed to capture and contain oil on our property. In total, less than 450 barrels of oil, out of more than 760million barrels transported, have come out of the pipeline since it began operations three years ago TransCanada is constantly striving to improve our performance and working towards our goal of having zero leaks or safety incidents. All pipeline leaks

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are thoroughly investigated regardless of their size in order to understand the cause and prevent future such incidents. Other than those releases on the Keystone Pipeline, other liquid pipelines operated by TransCanada have not experienced any reportable leaks from their liquid pipeline systems during operations in the US and Canada TransCanada has successfully transported more than 760 million barrels of crude oil since initiating operations of the Keystone Pipeline.

ii. All reportable spills are documented in the Pipeline and Hazardous Materials Safety Administration (PHMSA) national incident database, and ad Keystone has documented the analysis of the PHMSA database in the 2009 Keystone XL Risk Assessment. Publically available reports from PHMSA and the National Transportation Safety Board provide information on spills, and these agencies issue industry advisories that allow the industry to learn from other pipeline accidents. These can be found on PHMSA's website.

B. This request seeks information that is not within Keystone's custody or control.

C. The Keystone XL Pipeline has not yet been built. Thus, there have not been any spills from the pipeline.

i. Keystone has delivered more than 760 million barrels of oil from Canada to the United States markets since it began operation in July 2010. The small number of leaks that have occurred on the pipeline have had nothing to do with the integrity of the pipe itself. They have all occurred at our pump stations and other above-ground facilities and have been related to leakage from small-diameter fittings and seals. They have all been cleaned up with no environmental impact. We designed the pipeline to ensure that all small diameter fittings, valves and seals are located above ground where they can be easily accessed for maintenance and repairs. All of our pump stations are designed to capture and contain oil on our property. In total, less than 450 barrels of oil, out of more than 760 million barrels transported, have come out of the pipeline since it began operations three years ago TransCanada is constantly striving to improve our performance and working towards our goal of having zero leaks or safety incidents. All pipeline leaks are thoroughly investigated regardless of their size in order to understand the cause and prevent future such incidents. Other than those releases on the Keystone Pipeline in the US, other liquid pipelines operated by TransCanada have not experienced any reportable leaks from their liquid pipeline systems during operations. TransCanada has successfully transported more than 760 million barrels of crude oil since initiating operations of the Keystone.

ii. All reportable spills are documented in the Pipeline and Hazardous Materials Safety Administration (PHMSA) national incident database, and ad Keystone has documented the analysis of the PHMSA database in the 2009 Keystone XL Risk Assessment. Publically available reports from PHMSA and the National Transportation Safety Board provide information on spills, and these agencies issue industry advisories that allow the industry to learn from other pipeline accidents. These can be found on PHMSA's website.

INTERROGATORY NO. 80: Describe in detail the impact of a worst-case scenario spill/leak from the proposed KXL pipeline through each portion of the Sand Hills. Identify any documents that would support your respective answers. [*Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35*]

OBJECTION: This request seeks information related to the Keystone XL Pipeline outside South Dakota, and is therefore beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL 49-41B-27. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). There are no Sand Hills in South Dakota.

INTERROGATORY NO. 81: Describe in detail the impact of a worst-case scenario spill/leak into the shallow and surficial aquifers in Tripp County from the

proposed KXL pipeline. Identify any documents that would support your answers.

[Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

OBJECTION AND RESPONSE: This request seeks information that is confidential by statute. The location and volume of a worst case scenario spill are confidential for homeland security reasons. Without waiving the objection, the 2009 Keystone XL Risk Assessment (FSEIS, Appendix P) described the movement of crude oil and its constituents in soils and groundwater. Field investigations of more than 600 historical petroleum hydrocarbon release sites indicate the migration of dissolved constituents typically stabilizes within several hundred feet of the crude oil source area (Newell and Conner 1998; USGS 1998). Over a longer period, the area of the contaminant plume may begin to reduce due to natural biodegradation. Removal of crude oil contamination will eliminate the source of dissolved constituents impacting the groundwater.

Spills are also discussed in the FSEIS in Section 4.1.3.4, including those in shallow and surficial aquifers. The fate and transport of benzene and other crude oil constituents is discussed in numerous studies and articles, including those referenced in the 2009 Keystone XL Risk Assessment, such as:

Freeze, R. A. and J. A. Cherry. 1979. Groundwater. Prentice Hall, Inc. Englewood Cliffs, New Jersey. 604 pp.

- Minnesota Pollution Control Agency. 2005. Assessment of Natural Attenuation at Petroleum Release Sites. Guidance Document c-prp4-03, Petroleum Remediation Program, Minnesota Pollution Control Agency. April 2005. 11 pp.
- Neff, J. M. 1979. Polycyclic aromatic hydrocarbons in the aquatic environment. Applied Science publ. Ltd., London. 262 pp.
- Newell, C. J. and J. A. Connor. 1998. Characteristics of Dissolved Petroleum Hydrocarbon Plumes: Results from Four Studies. American Petroleum Institute Soil / Groundwater Technical Task Force. December 1998.
- Spence, L. R., K. T. O'Reilly, R. I. Maagaw, and W. G. Rixey. 2001. Chapter 6 – Predicting the fate and transport of hydrocarbons in soil and groundwater. in: risk-based decision-making or assessing petroleum impacts at exploration and production sites. Edited by S. McMillen, R. Magaw, R. Carovillano, Petroleum Environmental Research Forum and US Department of Energy.
- United States Geological Service (USGS). 1998. Groundwater Contamination by Crude Oil near Bemidji, Minnesota. US Geological Survey Fact Sheet 084-98, September 1998.
- Additional references on this subject from the FSEIS include:
- American Petroleum Institute (API). 1992. Review of Natural Resource Damage

Assessments in Freshwater Environments: Effects of Oil Release into Freshwater Habitats. API Publ. No. 4514.

API. 1997. Petroleum in the Freshwater Environment: An annotated Bibliography 1946-1993. API Publ. No. 4640.

Grimaz, S., S. Allen, J. Steward, and G. Dolcetti. 2007. Predictive evaluation of the extent of the surface spreading for the case of accidental spillage of oil on ground. Selected Paper IcheaP8, AIDIC Conference series, Vol. 8, 2007, pp. 151-160.

Hult, M.F. 1984. Groundwater Contamination by Crude Oil at the Bemidji, Minnesota, Research Site: U.S. Geological Survey Toxic Waste—Ground-Water Contamination Study. Papers presented at the Toxic-Waste Technical Meeting, Tucson, Arizona, March 20-22. USGS Water Investigations Report 84-4188.

Weaver, J.W., R.J. Charbeneau, J.D. Tauxe, B.K. Lien, and J.B. Provost. 1994. The hydrocarbon spill screening model (HSSM) Volume 1: User's guide. USEPA/600/R-94/039a. U.S. Environmental Protection Agency, Office of Research and Development, Robert S. Kerr, Environmental Research Laboratory, Ada, OK.

INTERROGATORY NO. 82: Identify the USGS or other geological, hydrological, geo-hydrological studies conducted in the areas including what is now the proposed KXL pipeline route through South Dakota, which:

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- A. The thickness of the purportedly low permeability confining materials which would underlie the entirety of the proposed route either through the Sand Hills and over any shallow High Plains Aquifer;
- B. The thickness of the confining materials underlying the balance of the proposed pipeline route;
- C. The permeability of the sediment or bedrock underlying the proposed pipeline route for each part of the KXL pipeline;
- D. Describe the composition of the sediments and/or bedrock underlying each part of the proposed route;
- E. Describe the absence of any fractures (including micro-fractures), faults, karsts, sinkholes within a mile of the entirety of the proposed route and which might lengthen the "unlikely" travel of crude oil more than 300 feet from a spill site;
- F. Describe the absence of channels in the underlying strata along each part of the proposed route the which might lengthen the "unlikely" travel of crude oil more than 300 feet from a spill site;
- G. Describe other factors which could lengthen the travel of crude oil beyond 300 feet from a spill site;
- H. The location(s) of shallow aquifers along each part of the route;

- I. The location(s) of surficial aquifers along each part of the route;
- J. The location of domestic and livestock wells, public and private, within a mile of each part of the proposed route;
- K. Describe the "appropriate" measures that TransCanada will take to prevent groundwater contamination;
- L. Describe the "steps" to be taken to manage the flow of any ground water encountered;
- M. Identify any documents that would support your respective answers.

[Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

OBJECTION AND ANSWER: This request is overlybroad and unduly burdensome. This request may also seek information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

A. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

B. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

C. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

D. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

E. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

In addition, consider the following:

Whitehead et al (1996): USGS Hydrologic Atlas HA 730-I

Hammond (1994): South Dakota Geol. Survey open file report UR-68

Lobmeyer (1985): USGS Prof. Paper 1402-D

Luckey et al (1986): USGS Prof. Paper 1400-D.

F. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

G. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

Lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide the thickness data. In addition, consider the following:

Davis and Putnam (2013): USGS Scientific Inv. Report SIR 2013-5069

Downey (1986): USGS Prof. Paper 1402-E

Gutentag (1984): USGS Prof. Paper 1400-A and 1400-B.

H. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

In addition, consider the following:

Downey (1986): USGS Prof. Paper 1402-E

Gutentag et al (1984): USGS Prof. Paper 1400-B.

I. Geological references and hydrogeological references are listed in chapters 3 and 4 in the FSEIS. Some pertinent additional references are:

Gutentag (1984): USGS Prof. Paper 1400-B

Downey (1986): USGS Prof. Paper 1402-E

Thamke et al (2014): USGS Scientific Inv. Report SIR 2014-5047.

In addition, lithologic logs available from the South Dakota Dept. Natural Resources at <http://denr.sd.gov/des/wr/dblog.search.aspx> and <http://denr.sd.gov/data.aspx> provide aquifer thickness data.

J. Keystone has not yet identified the location of wells, but will do so before construction.

K. "In order to reduce the risk of spills, if permitted Keystone has agreed to incorporate additional mitigation measures in the design, construction, and operation of the proposed Keystone XL Project, in some instances above what is normally required, including:

- 59 Special Conditions recommended by PHMSA;
- 25 mitigation measures recommended in the Battelle and Exponent risk reports; and

- 11 additional mitigation measures.

Many of these mitigation measures relate to reductions in the likelihood of a release occurring. Other measures provide mitigation that reduces the consequences and impact of a spill should such an event occur. Mitigation measures are compiled I Appendix Z, Compiled Mitigation Measures, of this Supplemental EIS. Mitigation measures are actions that, if the proposed Project is determined to be in the national interest, Keystone would comply with as conditions of a Presidential Permit.” (FSEIS Executive Summary, pg. ES-19”).

In the FSEIS Appendix Z, Section 14.1, Potential Releases, Table 4, are listed the 59 Special Conditions recommended by the PHMSA. TransCanada has committed to complying with the PHMSA 59 Special Conditions as listed in Appendix Z of the FSEIS.

“These regulations are intended to ensure adequate protection for the public and to prevent crude oil pipeline accidents. Among other design standards, 49 CFR 195 and the proposed Project-specific special conditions specify pipeline material and qualification, minimum design requirements, and protection from internal, external, and atmospheric corrosion” (FSEIS Appendix H1-H2, pg. 2.0-32”).

L. Keystone would coordinate with the South Dakota Department of Environment and Natural Resources regarding specific steps to be taken in the event that potential

contamination of groundwater was suspected. These steps may include, but may not be limited to, soil and groundwater sampling, installation of monitoring wells, and use of groundwater remediation technologies.

INTERROGATORY NO. 83: Describe the direct and indirect effects to people, other animals, plants and trees, fish, when exposed individually and or in combination to components of petroleum including crude oil: benzene, toluene, ethyl benzene and xylene. Identify any documents that would support your respective answers. [*Applicable Finding or Condition No.: Findings 43-49; Conditions 31-37*]

ANSWER: Effects to these receptors are discussed in the 2009 Keystone XL Risk Assessment and in the FSEIS (Chapter 4). Additional information, including effects of individual compounds, can be found in the Agency for Toxic Substances and Disease Registry (ATSDR) or the Hazardous Substances Data Bank (HSDB). Benzene is often used for screening for effects in petroleum products due its combined high water solubility and ability to cause toxicity at very low concentrations.

U.S. Department of Health and Human Services. 2015. Agency for Toxic

Substances and Disease Registry (ATSDR). Internet website:

<http://www.atsdr.cdc.gov>. Accessed January 21, 2015.

U.S. National Library of Medicine, Toxicology Data Network (TOXNET). 2015.

Hazardous Substances Data Bank (HSDB). Internet website:

<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB>. Accessed January 21, 2015.

INTERROGATORY NO. 84: Provide an explanation of why the occurrence of a spill or leak that could affect the High Consequence Area (HCA) is one every 250 years over the 34.4 miles of HCA (Finding 50), while such a spill would purportedly occur once in 7,400 years per mile of pipeline (Finding 44). Identify any documents that would support your respective answer and provide maps of the identified HCA. *[Applicable Finding or Condition No.: Findings 44, 50; Conditions 15-16, 35]*

ANSWER: Finding of Fact 44 in the South Dakota Public Utilities Commission Amended Order states that, "Keystone's expert estimated the chance of a leak from the Project to be not more than one spill in 7,400 years for any given mile of pipe." This is calculated based on historical incident data from Pipeline and Hazardous Materials Safety Administration (PHMSA), as discussed in Section 3.0. The occurrence interval of 7,400 years is calculated by taking the inverse of the incident frequency (0.000135 incidents per mile per year). The result is an estimate, in years, of the time between spills. This is similar to the concept of flood recurrence intervals (i.e., 100-year floods).

Page 4-21 of the 2009 Keystone XL Risk Assessment shows that a spill affecting a High Consequence Area (HCA) in any state crossed by the Keystone XL Pipeline Project

has an occurrence interval of 53 years. This is calculated by taking the inverse of the incident frequency (measured as incidents per mile per year) multiplied by the miles of HCAs crossed (141.2 miles).

INTERROGATORY NO. 85: Describe the contents of the “information concerning activities of concern” to be made available to landowners and others. Identify any documents that would support your respective answer. *[Applicable Finding or Condition No.: Finding 57; Condition 16]*

ANSWER: Condition 16 does not address “information concerning activities of concern.” With respect to Finding 57, it is landowners who are permitted to contact Keystone regarding “activities of concern.” Accordingly, Keystone does not know specifically what activities may be of concern to individual landowners. In the context of the Finding, it is likely that such activities can be expected to involve farming operations above the pipeline.

INTERROGATORY NO. 86: Describe the worst-case scenario for landowners of a spill or leak from the proposed pipeline as well as other risks deemed “low” by the PUC. Identify any documents that would support your respective answer. *[Applicable Finding or Condition No.: Findings 57; Conditions 16, 31-38]*

ANSWER: Keystone cannot speak to risks deemed “low” by the PUC.

INTERROGATORY NO. 87: Provide a list of claims or complaints (of any kind) made by landowners along the XL pipeline corridor since 2008. Identify any documents that would support your respective answer. [*Applicable Finding or Condition No.: Finding 57; Conditions 49-50*]

OBJECTION AND ANSWER: Assuming that the request is for a list of claims or complaints made by landowners along the Keystone Pipeline corridor in eastern South Dakota to the PUC since 2008, this information is publicly available on the PUC website. To the extent that the request is not limited to complaints made to the PUC, it is overlybroad and unduly burdensome. To the extent that the request is for complaints made by landowners along the Keystone XL Pipeline corridor since 2008, the request is vague, overlybroad, unduly burdensome, and seeks discovery of information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). All complaints reported to the liaison by the SDPUC are documented by the liaison and reported quarterly. These reports are available at:

<https://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx>.

Attached as Keystone 0785-1115 are documents related to landowner complaints or concerns regarding damages resulting from Keystone XL's use of the easement, which is within the scope of Amended Permit Condition 49.

INTERROGATORY NO. 88: Identify the latest version of the Unanticipated Discovery Plan, including any prior drafts. [*Applicable Finding or Condition No.: Finding 58; Condition 43*]

- A. Provide a list of the historic properties identified by the SHPO
- B. Provide documentation of consultation with the Tribes over their historic properties and sacred sites.

ANSWER: The Unanticipated Discovery Plan can be found within the Programmatic Agreement in Appendix E of the Department of State FSEIS (2014).

- A. A list of all cultural resources identified in South Dakota is outlined in Table 3.11-3 of the Department of State FSEIS (2014).
- B. A summary of government-to-government consultation with Indian Tribes is included as Attachment I of Appendix E of the Department of State FSEIS (2014).

INTERROGATORY NO. 89. Explain why TransCanada had sought a special permit from the PHMSA for authorization “to design, construct, and operate the Project up to 80% of the steel pipe specified minimum yield strength at most locations.”

- A. Identify and describe all spills/leaks from TransCanada pipeline operations since 2009 in Canada that have involved a “0.8 design factor” and therefore involving steel pipe with 80% of the specified minimum yield strength.
- B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Findings 60-61]

ANSWER: Keystone is no longer seeking a special permit for PHMSA.

- A. There are currently no TransCanada crude oil pipelines operating at 0.8 design factor in Canada.
- B. Keystone's decision to withdraw its special permit request is explained in a Media Advisory dated August 2, 2010, attached as Keystone 0647-0649.

INTERROGATORY NO. 90: Explain why it is expected that any special permit issued by PHMSA would exclude pipeline segments in High Consequence Areas (HCAs).

- A. Describe the potential risks of using pipeline segments with 80%, rather than 100% of the specified minimum yield strength.
- B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Findings 60-62]

ANSWER: Keystone has withdrawn its request for a Special Permit.

Hypothetically, if Keystone were to reapply for a Special Permit, it is reasonable to anticipate that such a Permit would exclude pipeline segments in HCAs since the Special Permit for the original Keystone Pipeline excluded such areas.

INTERROGATORY NO. 91: Explain how application of the "0.8 design factor and API 5L PSL2 X70 high-strength steel pipe" with thinner walls would "provide a level
{01815268.1}

of safety equal to or greater than that which would be provided if the pipeline were operated under the otherwise applicable regulations.”

- A. What are the “otherwise applicable regulations” from which TransCanada is seeking an exemption?

[Applicable Finding or Condition No.: Finding 63]

OBJECTION AND ANSWER: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL 49-41B-27. The issue is within the exclusive jurisdiction of PHMSA. Keystone has withdrawn its application for a special permit. Without waiving the objection, on August 5 2010, TransCanada withdrew its application to the Pipeline Hazardous Materials and Safety Administration (PHMSA) for a special permit to design, construct and operate the pipeline at a 0.8 design factor and adopted the 57 additional safety measures that would have been required under the PHMSA special permit. There are no regulations TransCanada is seeking an exemption from.

INTERROGATORY NO. 92: Describe the safeguards developed to address pipeline threats. Identify documents upon which your answers are based. *[Applicable Finding or Condition No.: Finding 64; Conditions 31-38]*

ANSWER: Please refer to Department of State SFEIS Volume 3 Section 4

clause 4.13.6 Additional Mitigation, Appendix B Pipeline Safety and Appendix Z section 4.0 Water Resources and 59 PHMSA special conditions.

INTERROGATORY NO. 93: What would result if there were hydraulic damage caused by over-pressurization of the pipeline?

- A. What are the potential causes of over-pressurization?
- B. Describe a worst case scenario if there was a failure of the SCADA monitoring system and describe what could cause such failure;
- C. Describe plans in place to prevent failure of the SCADA system;
- D. Describe the ability of the SCADA system to detect leaks in the XL pipeline from 2008 through today;
- E. Describe improvements in SCADA technology since 2010;
- F. Describe actions TransCanada has taken to prevent a cyber-attack on the SCADA monitoring system;
- G. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 72, 92-94; Conditions 31-38]

ANSWER:

- A. There are two main causes of over-pressurization in pipelines: static pressure, and dynamic pressure. Static pressure excursions can occur during steady-state operation due

to differences in elevation along the pipeline. In a static pressure excursion situation, it is possible to see pressures in excess of the pipeline's MOP at points of low elevation along the line. Dynamic pressure excursions result from a disturbance which causes a change in fluid velocity. Disturbances can result from events such as valve closure and pump shutdowns. Automated and independent pressure control and overpressure protection systems are designed to protect against static and dynamic overpressure.

B. Potential threats contributing to releases from small to large volumes are described within section 3.13.3.10 of the FSEIS. Equipment malfunctions including those of SCADA components are addressed within this section. Associated threats have been addressed through the following:

- Design practices including system fail safe functionality, key component and power supply redundancy (including key pressure and level sensors).
- Functional validation of systems including factory and site acceptance testing as well as comprehensive point to point verification between SCADA and associated field devices.

C. TransCanada has a dedicated team to provide operational support for its SCADA systems. The team provides 7x24 on-call SCADA support, primarily to the Oil Control Center. Additionally, automated monitoring systems alert the SCADA team in the event

that a SCADA system requires maintenance. The support team ensures that routine maintenance is performed on the SCADA systems, as required. Non-routine maintenance is managed through a risk-based integrity management process. The design of the Keystone XL SCADA system includes, at a minimum, dual redundant components at both the primary and backup Oil Control Centers.

D. TransCanada utilizes a state of the art Computational Pipeline Monitoring (CPM) leak detection system capable of identifying leaks down to the size of 1.5 to 2.0% of pipeline flow rate within a 2-hour window.

TransCanada has maintained the CPM to meet or exceed this level of leak detection sensitivity since the beginning of operations. The Keystone pipeline is monitored 24/7 by a dedicated Leak Detection controller within the Oil Control Center who is trained to identify and to respond to emerging events.

E. TransCanada actively funds and participates with Industry in the evaluation and development of leak detection technologies to augment our current systems. Examples of this effort include:

1. New Generation of Rarefaction Wave Leak Detection

This technology utilizes negative pressure waves generated to detect the onset of a leak. These waves travel from the origination point down both directions of the pipeline through the pipeline fluid at the speed of sound of the fluid medium and attenuate over distance as they travel. Dynamic pressure sensors installed at facilities with power and communication accesses (pump stations, mainline valves, etc.) can then measure these pulsations and detect the start of a leak and locate the leak by calculating the difference of arrival time of the pulsations at the two ends of the pipeline section.

2. In Line Inspection Leak Detection

An acoustic In Line Inspection (ILI) tool that is launched and received on a periodic basis like any other In Line Inspection (ILI) tool and is propelled by the commodity in the line. This technology claims to be able to detect leaks smaller than the current threshold of CPM systems; however, detection only occurs as the tool passes the leak location and is therefore not a continuous real time monitoring system.

3. Infrared thermal camera for facilities

The camera based leak detection technology functions by employing Infrared and color video cameras to detect temperature differences between objects of interest and the surrounding environment. Software analytics then attempt to determine whether the detection constitutes a leak or an environmental transient such as a wild animal, weather or other event (snow, rain, etc.). In the event of a detected leak, confirmation can be obtained through color cameras and real time notifications would be sent the Control Center and/or control room as pre-specified. This technology is still its infancy.

4. Aerial or Ground Patrol Leak Detection

This is a transportable leak detection technology designed for aerial or ground. This technology takes advantage of the difference of light absorption rates between the atmosphere and hydrocarbon vapors to detect hydrocarbon leak. Performance depends on the selected spectrum band, visible or non-visible, and the analysis algorithm vendors choose.

5. Cable Based External Leak Detection Systems

Cable based leak detection systems are buried along the pipeline to provide external means of leak detection. Different cable based technologies apply different physical principles to detect phenomena accompanying a leak as temperature change (DTS), leakage caused sound and vibration (DAS), and existence of hydrocarbon liquid (HSC) or hydrocarbon vapor molecules (VST) outside the pipe. These can be used as independent means of detection outside of the mass balance CPM systems. Despite its long history of use for leak detection at oil and gas facilities and pipeline security, application for leak detection on long-haul transmission pipelines is a recent emerging development.

Some of the above technologies are in a state of development, while others are commercially available today yet their practical application to long haul transmission pipelines such as Keystone XL has not been established. As part of our commitment to safety, TransCanada continues to evaluate these new and evolving leak detection technologies to potentially augment the best in class leak detection capabilities of our current system and for potential implementation on new pipelines including Keystone XL.

F. Consistent with industry practice, TransCanada does not publicly disclose the details of the security systems it has in place. We believe that it is not prudent to make this information public because of the likelihood that it will assist, and, potentially encourage, attackers.

INTERROGATORY NO. 94: Besides saying it will, how will TransCanada ensure the Commission and the people of South Dakota that it will thoroughly implement procedures in the CMR to minimize impacts on cultivated lands, grasslands, wetlands, streams, and waterways? Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 73]

ANSWER: Condition 13 of the Commission June 2010 Amended Final Order requires Keystone to comply with the CMR Plan. As noted in Conclusion of Law 9 of the Amended Final Order, the Commission has authority to revoke or suspend a permit for failure to comply with its terms and conditions. See SDCL § 49-41B-33.

INTERROGATORY NO. 95: Describe the status of TransCanada training of each of the groups of local first responders along the proposed route.

- A. Describe the training each of the groups of local first responders received for the XL pipeline;
- B. State if and how different than on-going and/or proposed training of such first responders near and for the pipeline corridor;
- C. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 100; Conditions 10, 15]

ANSWER: Prior to in service of Keystone XL it is regulated that there is Emergency Response Training. After the pipeline is operational, TransCanada reaches out to first responders at least annually via our public awareness program which includes as a baseline our contact info, where our pipeline is, and how to respond. Additionally, we conduct exercises and training sessions annually to which first responders are invited to attend and participate. Training and exercises include ICS, table top, deployment and full scale exercises. Our exercise planners are required to invite first responders to full scale exercises which includes the development of an incident management team and the simultaneous deployment of equipment resources to proximate a real event. These exercises are conducted in various locations along the pipeline system.

INTERROGATORY NO. 96: Do you admit that ground movement can cause abnormal movement of the proposed KXL pipeline?

- A. Describe incidents where ground movement has resulted in abnormal movement of the XL or other pipeline similar to the proposed KXL Pipeline;
- B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 101; Conditions 31-38]

ANSWER: Because there are no areas of high ground movement potential along the Keystone XL route in South Dakota, Keystone does not expect any incidents of ground movement. There have been no incidents of ground movement resulting in abnormal movement of the Keystone I pipeline.

INTERROGATORY NO. 97: Since 49 CFR Part 195 would require TransCanada Keystone to conduct an "internal inspection" of any pipe section(s) potentially moved by abnormal ground movement, how long does "quickly" mean that such an inspection would reveal any damage:

- A. From their staging area to the furthest part of the KXL pipeline to which he/she/they would first respond, how long would it reasonably take for inspectors to be notified, respond to, internally inspect pipeline for damage, and for spills to be "averted or minimized"?
- B. Does "averted" mean 100% of the spill contained?
 - i. If not, what percent contained does it mean?
- C. What percent containment of such a spill would be considered "minimized"?
 - i. After a spill has been contained to the point of being so "minimized", describe the plans for full containment.
- D. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 101; Conditions 31-38]

ANSWER: It would take between one and two weeks to mobilize and conduct an internal inspection.

INTERROGATORY NO. 98: Identify the location(s) where slope instability poses a potential threat of ground movement along the Project route.

- A. Identify TransCanada's most current Integrity Management Plan (IMP) showing incorporation of locations where slope instability poses a potential threat to the pipeline;
- B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 79; Conditions 8, 15, 20-21]

OBJECTION AND RESPONSE: To the extent that it seeks information outside South Dakota, this request is overlybroad and unduly burdensome and seeks the discovery of information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b). In addition, the request for the Integrity Management Plan is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of the PHMSA. The PUC's jurisdiction over the Integrity Management Plan is preempted by federal law. See 49 C.F.R. Part

194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the Integrity Management Plan would commercially disadvantage Keystone. Without waiving the objection, please refer to FSEIS Chapter 3 Affected Environment, Section 3.1.2 Environmental Setting, Section 3.1.2.5 Landslide. Also, see Chapter 4 Environmental Consequences, Section 4.1.3.4 Geologic Hazards Landslides.

INTERROGATORY NO. 99: What is the status of preparation and publication of the “public awareness programs” required to be prepared by 49 CFR Part 195? Identify the documents upon which your answers are based. *[Applicable Finding or Condition No.: Finding 102; Conditions 1-3, 6-7]*

ANSWER: Keystone's existing public awareness program will be updated prior to KXL pipeline commencing service to incorporate any updated materials.

INTERROGATORY NO. 100: Describe the status of preparation of different construction and reclamation techniques for the variety of geological for differing soils conditions, slopes, vegetation and land use along the pipeline route, in consultation with the National Resource Conservation Service, construction/reclamation unit. Identify documents upon which your answers are based. *[Applicable Finding or Condition No.: Finding 80; Conditions 15-16]*

ANSWER: The preparation of different construction and reclamation techniques for the variety of geological for differing soils conditions, slopes, vegetation and land use along the pipeline route, in consultation with the National Resource Conservation Service, construction/reclamation unit has been completed. The 2013 Construction/Reclamation Unit Specifications contains this information and are found in Appendix R of the Department of State FSEIS (2014).

INTERROGATORY NO. 101: With regard to the inspectors that TransCanada will have "on a construction spread" during construction:

- A. What is the number of inspectors to be onsite;
- B. What is the number of such inspectors who will be "environmental inspectors;"
- C. Describe the minimum qualifications for such environmental inspectors;
- D. What is the distance of each construction spread that an individual environmental inspector will be responsible for monitoring on any given day of construction;
- E. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 85; Condition 14]

ANSWER: In its amended Application to the South Dakota Public Utilities Commission dated October 2009 Keystone indicated there would be a total of 65 Construction management, surveyors, inspectors, etc. personnel working on a pipeline construction spread (South Dakota PUC Application, October 2009, Section 6.1.1.1 Construction Labor, Table 18 - Pipeline Construction Labor Need Estimate, page 85). Based on Keystone's experience with the actual construction of other phases of the Keystone Pipeline system this number of personnel is understated; the total number of inspectors, only, on the Row (including environmental, welding, coating and utility inspectors) will be in the order of 65 at peak activity levels, and will vary depending on contractor execution plans on each spread. This does not include inspectors at pump station sites.

The final Project construction schedule has not been determined.

- A. The number of inspectors including Environmental Inspectors (EIs) and the configuration of the EIs along the Project route in South Dakota will not be determined until the final Project schedule is determined.
- B. There will be a minimum of one environmental inspector per spread.
- C. The minimum requirements for an environmental inspector will be specified by Keystone during the hiring process.

D. Environmental inspectors are not stationary. They review procedures and activities along a spread based upon what work may be occurring on that spread on a given day. They then review and report on compliance by moving between the different spread activities that are occurring on a given day.

E. The Department of State FSEIS (2014), The Amended Permit Conditions issued by the Commission

INTERROGATORY NO. 102: What is the current bond amount under SDCL §49-41B-38 for damage to highways, roads, bridges and other related facilities during and after construction. *[Applicable Finding or Condition No.: Finding 88; Condition 23]*

OBJECTION AND ANSWER: This request is not relevant or likely to lead to the discovery of admissible evidence to the extent that it seeks information outside South Dakota. Without waiving the objection, the bond requirements for Keystone XL are stated in the June 2010 Amended Final Order at Condition 23(f). The amount of the bond was proposed by Keystone and recommended by staff witness Binder in Docket HP 09-001.

INTERROGATORY NO. 103: What is the current bond amount for damages to rivers, streams, shallow or surface or deeper aquifers during construction? *[Applicable Finding or Condition No.: Finding 88; Conditions 23, 49]*

ANSWER: The bond requirement referenced in the response to No. 80 above is the only bond requirement in South Dakota.

INTERROGATORY NO. 104: Describe each location of emergency equipment designed to stop leaks in the pipeline.

- A. In relation to each such location, what is the furthest distance from each proposed emergency equipment storage site from the area of pipeline outside his or her responsibility;
- B. What kinds of leaks can be expected in this pipeline which would warrant an ERP;
- C. For each location, the distance from personnel trained to assess and stop leaks or spills from this kind of pipeline, to the emergency equipment site as well as to the furthest point that site would first respond with such equipment for;
- D. Identify the documents upon which you relied to answer these questions;

[Applicable Finding or Condition No.: Finding 98; Conditions 31-38]

ANSWER: Oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan, which was filed confidentially with the PUC in HP 07-001.

A. At this time it is undetermined. However this will be calculated in the future using risk assessment.

COMPANY OWNED RESPONSE EQUIPMENT

The Company owns and operates oil spill response equipment contained within response trailers staged throughout the pipeline system. This equipment is maintained according to manufacturer's recommendations by Company and/or contracted personnel. An equipment summary detailing locations, type and amount stored in the response trailers is listed in Figure A.1. The Company also has contracts in place with Oil Spill Removal Organizations and other clean-up contractors that are capable of responding to all discharges along the Pipeline. Figure A.2 lists the contracted Oil Spill Removal Organizations.

Equipment trailers are located at strategic points along the pipeline. The locations of each trailer are listed in the response zone annex. The equipment inventory for each trailer is listed in the Keystone XL ERP (Figure A.1.).

The Qualified Individual has the authority to activate other private contractors, experts, and consultants as the situation demands.

All Pipeline personnel who might be involved in an oil spill have been informed that detergents or other surfactants are prohibited from being used on an oil spill in the water

and that dispersants can only be used with the approval of the Canadian Regional Environmental Emergency Team (REET) or US Regional Response Team, the interagency group composed of Federal and State agency representatives that coordinates oil spill response.

OTHER COMPANY RESOURCES

Additional Company spill response equipment and manpower resources are not available to supplement the response operation; however, third party contractors will be activated on an as needed basis.

CONTRACT RESOURCES

The resources will be secured from a Company approved contractor. Management will typically handle notification/implementation of these resources. Figure A.2 provides a quick reference to the Oil Spill Removal Organizations and details their response capability and estimated response times. Telephone reference is provided in Figure 2.5.

(Note: The Company will ensure that each OSRO has a comprehensive maintenance program and applicable training / drills programs in place at contract renewal.)

COOPERATIVE/MUTUAL AID RESOURCES

B. A variety of potential emergencies or incidents including 'types of leaks' are outlined in the Keystone ERP. Initial response actions are those taken by local personnel

immediately upon becoming aware of a discharge or emergency incident, before the Initial Response Team (described in Section 4.0) is formed and functioning. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

C. Oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan, which was filed as a confidential document with the PUC in HP 07-001. The Keystone ERP will be amended to accommodate Keystone XL. PHMSA requires response times as outlined in the table below. TransCanada locates equipment and people that are transported by air, land and water to ensure that regulatory guidelines are meant.

INITIAL RESPONSE ACTIONS - SUMMARY			
PERSONNEL AND PUBLIC SAFETY IS FIRST PRIORITY			
RESPONSE TIMES*			
High Volume Area	6 HR	30 HR	54 HR
All Other Areas	12 HR	36 HR	60 HR
CONTROL			
<ul style="list-style-type: none"> • Eliminate sources of ignition • Isolate the source of the discharge, minimize further flow 			
NOTIFY			
<ul style="list-style-type: none"> • Make internal and external notifications • Activate local Company personnel as necessary • Activate response contractors and other external resources as necessary 			
CONTAIN			

- Begin spill mitigation and response activities
- Monitor and control the containment and clean-up effort
- Protect the public and environmental sensitive areas

* Response resources and personnel available to respond within time specified after discovery of a worst case discharge per US DOT 49 CFR Part 194.115 (Keystone ERP, Sec 3.1).

D. The supporting documentation is the Keystone ERP Emergency Response Plan (ERP). The Keystone ERP will be amended to accommodate Keystone XL.

INTERROGATORY NO. 105: Identify the most recent IMP submitted to the Commission and other appropriate agencies, including but not limited to HCAs.

[Applicable Finding or Condition No.: Finding 102; Conditions 1-2]

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the exclusive province of PHMSA. The PUC's jurisdiction over the integrity management plan is preempted by federal law. *See* 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. *See* Amended Final Order, HP 09-001, Condition ¶ 36. Public disclosure of the Integrity Management Plan would commercially disadvantage Keystone.

INTERROGATORY NO. 106: Itemize the property tax payments to South Dakota towns, cities, and counties each year since 2010:

- A. Along the proposed KXL pipeline corridor, pump stations, or other properties related to the pipeline;
- B. Along the existing XL pipeline corridor, pump stations, or other properties related thereto;
- C. If less than a million dollars annually to any given public entity for any given year, please explain why "millions" were not paid to that entity that year;
- D. Identify the documents upon which you relied to answer these questions;

[Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions]

ANSWER:

- A. Keystone has paid Butte County \$1,403, Haakon County \$77, Harding County \$375, Jones County \$98, Meade County \$881, and Tripp County \$2,439 for ad valorem real property taxes levied in the years 2010 through and including 2013.
- B. Keystone has paid taxing entities in Beadle County \$1,796,731; Brookings County \$5,734; Clark County \$1,602,403; Day County \$2,294,732; Hanson County \$627,561; Hutchinson County \$2,015,399; Kingsbury County \$855,201; Marshall County

\$1,533,418; McCook County \$568,591; Miner County \$1,782,412; and Yankton County \$1,040,782; for a total of \$14,128,224 for ad valorem real property taxes levied with respect to the Keystone base pipeline for the years 2009 through 2013. 2014 real property taxes are paid a year in arrears in 2015.

C. Ad valorem real property taxes are calculated by applying local governmental tax levies to the assessed valuation of Keystone property interests as determined by the South Dakota Department of Revenue. Levies are determined and calculated by local taxing entities in a statutorily prescribed manner. The amount of ad valorem real property taxes payable in each county depends on the assessed valuation of Keystone property in the county's tax districts and the levy adopted each year by the local taxing entities.

D. The tax bills and a compilation thereof prepared, marked as Keystone 0768-0773, in preparation for answering this interrogatory.

INTERROGATORY NO. 107: With respect to the jobs TransCanada Keystone alleges will be brought to South Dakota by the KXL pipeline project:

A. State the number, job title, and expected duration of the temporary construction related jobs expected;

- i. State what percentage of current South Dakota citizens are expected to be hired for each job title.
 - ii. Is there any preference for South Dakota citizens to obtain any or all of these temporary jobs?
 - iii. State the number and percentage of the total construction jobs expected to be filled by out-of-state workers who have worked on other parts of the KXL or other TransCanada pipelines.
- B. State the number, type, and expected duration of the permanent jobs expected;
- i. State the number of permanent jobs expected to be held by current South Dakota citizens, as opposed to someone who moves from out of state to South Dakota to take the job.
 - ii. Will there any preference for South Dakota citizens to obtain any or all of the permanent jobs in South Dakota?
- C. Identify the documents upon which you relied to answer these questions;

[Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions 1-2]

ANSWER:

A. Assuming this question refers to "average annual jobs," it is estimated that Project construction in South Dakota will support 3,500 jobs across all sectors, of which between 1,038 and 1,500 jobs will be directly construction-related. The 3,500 jobs supported by construction of the Project are considered 'average annual jobs', defined as one position that is filled for one year, while the 2,700 to 3,900 temporary construction personnel are expected to be employed for the four- to eight-month seasonal construction period over one to two years.

i. It is estimated that between 270 and 390 temporary construction positions created in South Dakota will be filled by residents of the State.

ii. Jobs are filled based on the availability of qualified personnel.

iii. It is estimated that between 2,430 and 3,510 temporary construction positions created in South Dakota will be filled by non-South Dakota residents.

B. Approximately 25 permanent employees and 15 temporary contractors will be distributed along the proposed pipeline route, including the route in South Dakota. Job duration is commensurate with operations of the pipeline and titles will vary.

i. Jobs are filled based on the availability of qualified personnel.

ii. Jobs are filled based on the availability of qualified personnel.

C. Section 4.10 of the Final SEIS.

INTERROGATORY NO. 108: Should there be a worst case scenario or even serious contamination of farmland and/or water resources and/or explosion of the pipeline near homes or towns with people, explain how TransCanada can still show the Project will have a “minimal” effect on the health, safety, or welfare of its inhabitants. Identify the documents upon which you relied to answer these questions. Please provide a copy of the draft safety plan that will be used in the event of an emergency. *[Applicable Finding or Condition No.: Finding 23, 102, 108; Conditions 1,2, 31-36]*

OBJECTION AND ANSWER: This request is argumentative and improper as to form. The PUC found that Keystone met its burden of proof as to this standard in the Amended Final Decision and Order. Without waiving the objection, the ERP is designed to ensure that TransCanada can respond to any incident that may cause safety or environmental impacts.

INTERROGATORY NO. 109: In addition to the increased tax revenues that are anticipated as a socio-economic impact, has TransCanada researched any other impacts from the three “man-camps” that are anticipated to be built relied to answer these questions. *[Applicable Finding or Condition No.: Finding 107]*

ANSWER: Construction impacts are addressed in Section 4.10.3.1 of the FSEIS. The construction camps are discussed at pages 4.10-12 to 4.10-13.

INTERROGATORY NO. 110: Please provide information about TransCanada
Keystone's understanding of the Public Trust Doctrine under
the laws of any of jurisdiction in which it has, or currently operates?

- A. If so, please provide your understanding of the Public Trust Doctrine
insofar as it would apply to any past or current TransCanada projects.
- B. Please provide a statement whether TransCanada acknowledges, admit
and/or concedes that TransCanada has an obligation to honor and observe the
Public Trust Doctrine under the laws of the state of South Dakota with regard
to this project.
- C. Please provide information as to how TransCanada proposes to observe or
incorporate the Public Trust Doctrine in its proposed plans protecting the air,
water, and other natural resources and the public trust therein from pollution,
impairment, or destruction;
- D. Further, please provide information as to TransCanada's understanding of
the federal trust responsibility and what obligations TransCanada may have
with regard to recognizing and protecting tribal trust resources while acting
under the authority of any and all federal permits;
- E. Please explain your answer and list and provide any documents that would
show the basis for your answer.

[Applicable Finding or Condition No.: Amended Condition 32-38]

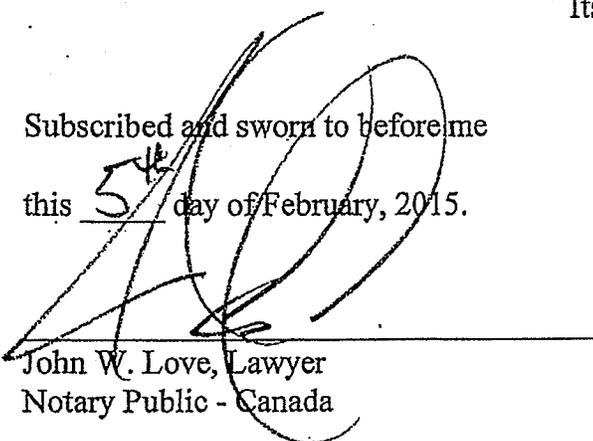
OBJECTION: This request seeks legal opinions and legal conclusions, and therefore seeks information that is not relevant and not likely to lead to the discovery of admissible evidence under SDCL 15-6-26(b).

Dated this 5th day of February, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 5th day of February, 2015.



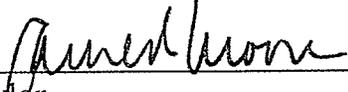
John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Indigenous Environmental Network's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

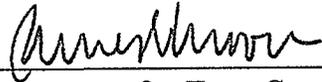
WOODS, FULLER, SHULTZ & SMITH P.C.

By 
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission,
a true and correct copy of Keystone's Responses to Indigenous Environmental
Network's First Interrogatories, to the following:

Kimberly Craven
3560 Catalpa Way
Boulder, CO 80304
kimecraven@gmail.com



One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable in attempting to respond to over 800 discovery requests within the time allowed.

1(a). Provide proof that TransCanada has obtained consent from the Rosebud Sioux or Great Sioux Nation to pass through the 1868 boundaries of the Great Sioux Nation in accordance with the un-abrogated treaty stipulation in Article 16 of TREATY WITH THE SIOUX-BRULÉ, OGLALA, MINICONJOU, YANKTONAI, HUNKPAPA, BLACKFEET, CUTHEAD, TWO KETTLE, SANS ARCS, AND SANTEE-AND ARAPAHO, 1868, contained in 15 Stats., 635.

ANSWER: The currently permitted route for the KXL pipeline in South Dakota does not pass across any lands owned by the federal government or any South Dakota resident tribe nor does it pass across Indian Country as that term is defined by the laws of the United States. Keystone does not believe that it is required to obtain consent from the Rosebud Sioux Tribe to construct the pipeline project on lands that are within the currently permitted route.

1(b). Provide explanation for how TransCanada is consulting, separate of other applicable Federal laws, with the Rosebud Sioux Tribe about protecting usufructuary and reserved resource rights as contained in the un-abrogated treaty stipulation in Article 11 (...the right to hunt on any lands north of North Platte, and on the Republican Fork of the Smoky Hill River") of the TREATY WITH THE SIOUX-BRULÉ, OGLALA, MINICONJOU, YANKTONAI, HUNKPAPA, BLACKFEET, CUTHEAD, TWO KETTLE, SANS ARCS, AND SANTEE-AND ARAPAHO, 1868, otherwise known as 15 Stats., 635.

ANSWER: The currently permitted route for the pipeline in South Dakota does not pass across any lands owned by the federal government or any South Dakota resident tribe nor does it pass across Indian Country as that term is defined by the laws of the United States. Keystone does not agree that the Treaties of Fort Laramie of 1851 and 1868 create usufructuary rights in lands that are within the KXL pipeline's currently permitted route.

41. Please provide explanation for why TransCanada is consulting with South Dakota and the USFWS but not consulting, separate of other applicable Federal laws, with the Rosebud Sioux Tribal Government despite the fact that the Rosebud Sioux Tribe has a Game, Fish, and Parks Department and a Land Use Code (Rosebud Sioux Tribe Title 18) about protecting usufructuary and reserved resource rights as contained in the

un-abrogated treaty stipulation in Article 11 (...the right to hunt on any lands north of North Platte, and on the Republican Fork of the Smoky Hill River") of the TREATY WITH THE SIOUX-BRULÉ, OGLALA, MINICONJOU, YANKTONAI, HUNKPAPA, BLACKFEET, CUTHEAD, TWO KETTLE, SANS ARCS, AND SANTEE-AND ARAPAHO, 1868, contained in 15 Stats., 635.

ANSWER: Keystone has had numerous consultations with the Rosebud Sioux tribal government and its political subdivisions regarding matters related to the construction of the KXL pipeline. Keystone does not agree that the Treaties of Fort Laramie of 1851 and 1868 create usufructuary rights in lands that are within the KXL pipeline's currently permitted route.

43. Please provide explanation for why TransCanada's unanticipated discoveries plan does not plan to notify the Federally-recognized Rosebud Sioux Tribal Historic Preservation Office (THPO) which also has the right to consultation under Section 106 of the National Historic Preservation Act as the "appropriate" tribe due to the fact that the pipeline passes between several Rosebud Tribal Housing communities, near tribal allotment land, and across established political precincts of the Rosebud Sioux Tribe, and the traditional homelands of those same people in those housing areas, on those allotments, and in those precincts.

ANSWER: Keystone does not believe that any part of its route as currently permitted passes through Indian Country or across tribally owned lands. Keystone recognizes the possibility that undiscovered cultural and/or historic sites may be found in the course of construction. Keystone believes Condition 43 and the provisions provided for therein suitably accommodate cultural and paleontological resource discoveries. Tribal monitors will be hired by Keystone to monitor designated areas during ground disturbing activities relating to construction to assist in managing previously undiscovered cultural and/or historic sites that are found in the course of construction and in complying with the unanticipated discoveries plan.

36(a). Identify all emergency medical response planning being provided to the Rosebud Sioux Tribal Government as contained within the emergency response plan.

OBJECTION AND RESPONSE: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C.

60101(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan could commercially disadvantage Keystone. Without waiving the objection, the local health authority will have medical

jurisdiction in the event of an incident. The Rosebud Sioux Tribal Government will be invited to participate in Emergency Response Exercises.

36(b). Provide explanation for why the Rosebud Sioux Tribal Government is being excluded from having the emergency management plan filed with them.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL 49-41B-27. This request also seeks information addressing an issue that is governed by federal law and is within the province of PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. 60101(c). This request further seeks information that is confidential and proprietary. Public disclosure of the emergency response plan could commercially disadvantage Keystone.

36(c). Identify what affect emergencies will have for every tribal housing community, tribal allotments, and political precincts that the pipeline passes through or nearby?

ANSWER: TransCanada will cover costs associated with temporary relocation of tribal residences that are affected by a spill or incident.

36(d). Identify how will rural Tribal housing areas, tribal allotments, and political precincts of the Rosebud Sioux Tribe in and near to the project area be notified of spills or other emergencies?

ANSWER: If it is appropriate under the circumstances to notify political subdivisions of the Rosebud Sioux Tribe, it will be done in the manner provided in the emergency response plan, through contacts with law enforcement agencies and other official representatives of the body politic of the Rosebud Sioux Tribe.

34. Explain why the Rosebud Sioux Tribal Government, which has treaty-reserved and usufructuary rights which have never been abrogated from the Fort Laramie Treaty of 1868, is being excluded from consultation, separate from other applicable federal and state laws, regarding High Consequence Areas?

ANSWER: The currently permitted route for the KXL pipeline in South Dakota does not pass across any lands owned by the federal government or any South Dakota resident tribe nor does it pass across Indian Country as that term is defined by the laws of the United States. Keystone has had numerous consultations with the Rosebud Sioux tribal government and its political subdivisions regarding matters related to the construction of the KXL pipeline. Keystone does not agree that the Treaties of Fort Laramie of 1851 and 1868 create usufructuary rights in lands that are within the KXL pipeline's currently permitted route.

43(a). Provide proof that a proper cultural resources survey was completed, in accordance with accepted methodologies and procedures, and acceptable to federal guidelines as the pipeline crosses boundaries contained in the 1868 Treaty of Fort

Laramie which contains unabrogated treaty-reserved rights of the Rosebud Sioux Tribe among other tribes.

ANSWER: Section 3.11 of the Department of State FSEIS (2014) details the cultural resources work conducted for the Project route in South Dakota, and lists all findings.

43(b). Provide information on who was contracted to conduct the cultural resources survey.

ANSWER: SWCA Environmental Consultants performed the cultural resources surveys.

43(c). Provide proof that the Rosebud Sioux Tribe was consulted about the results of the survey.

ANSWER: Yes, the Rosebud Sioux Tribe was consulted on numerous occasions. A summary of government-to-government consultation with Indian tribes is included as Attachment I of Appendix E and in Section 3.11.4.3 of the Department of State FSEIS (2014). Appendix E2 of the Department of State FSEIS (2014) provides the most thorough list of consultation dates.

43(d). Please provide proof that any maps used for the survey and compiled from the survey contain recognition that the Rosebud Sioux Tribe is the appropriate tribe of consultation.

ANSWER: The SD SHPO and DOS reviewed and approved the survey methodologies used in the course of the surveys noted in Sections 3.11 and 4.11 of the Department of State SFEIS (2014).

43(e). Provide proof that the Rosebud Sioux Tribe which has political precincts, housing areas and tribal allotment land in Tripp and Gregory counties, and is the "appropriate tribe" to consult with under the rules of Section 106 of the National Historic Preservation Act, will be meaningfully consulted regarding unanticipated discoveries.

ANSWER: The Rosebud Sioux Tribe would continue to be consulted by DOS through the course of the Project.

24(a). Provide current documentation that the Keystone XL is necessary to meet demand by refineries and markets in the U.S.

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business. Without waiving the objection, Shippers have committed to long-term binding contracts, which support construction of the pipeline once all regulatory, environmental, and other

approvals are received. These long-term binding shipper commitments demonstrate a material endorsement of support for the Project, its economics, proposed route, and target market, as well as the need for additional pipeline capacity to access North Dakota and Canadian crude supplies.

24(b). Provide information by percentage how much U.S. domestic oil production has increased since 2010.

ANSWER: According to the Department of State FSEIS 1.4.2.3, U.S. production of crude oil has increased significantly, from approximately 5.5 million bpd in 2010 to 6.5 million bpd in 2012 and 7.5 million bpd by mid-2013. Even with the domestic production growth the U.S. is expected to remain a net importer of crude oil well into the future.

24(c). When Keystone says market demand for the Project is strong, which market is being referred to?

ANSWER: The market being referred to is the demand for transportation of crude oil. Demand for the Project is reflected in the commitment by shippers to long-term binding contracts for delivery through the Keystone XL pipeline.

24(d). How much of the oil produced from the Keystone-pumped oil will be put into the United States' domestic oil supply market and not the open market?

OBJECTION: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden of proof under SDCL § 49-41B-27. It is

within the purview of the United States Department of State to determine whether the proposed project is in the national interest, under the applicable Presidential Executive Order. This request also seeks information that is not within Keystone's custody or control and is not maintained by Keystone in the ordinary course of business.

Dated this 5th day of February, 2015.

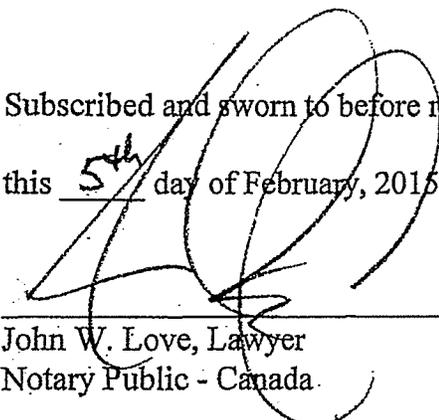
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015.



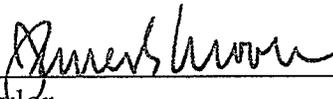
John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Gary Dorr's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

By  _____

William Taylor

James E. Moore

Post Office Box 5027

300 South Phillips Avenue, Suite 300

Sioux Falls, SD 57117-5027

Phone: (605) 336-3890

Fax: (605) 339-3357

Email: Bill.Taylor@woodsfuller.com

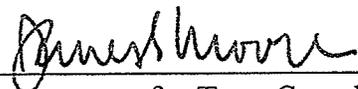
James.Moore@woodsfuller.com

Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Gary F. Dorr's First Interrogatories and Request for Production of Documents, to the following:

Gary F. Dorr
27853 292nd Street
Winner, SD 57580



One of the attorneys for TransCanada

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

0-0

IN THE MATTER OF THE APPLICATION	:	HP 14-001
BY TRANSCANADA KEYSTONE		
PIPELINE, LP FOR A PERMIT UNDER	:	KEYSTONE'S RESPONSES TO
THE SOUTH DAKOTA ENERGY		INDIGENOUS
CONVERSION AND TRANSMISSION	:	ENVIRONMENTAL NETWORK'S
FACILITIES ACT TO CONSTRUCT THE		SECOND SET OF
KEYSTONE XL PROJECT	:	INTERROGATORIES
	:	

0-0

Applicant TransCanada makes the following responses to interrogatories pursuant to SDCL § 15-6-33, and responses to requests for production of documents pursuant to SDCL § 15-6-34(a). These responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Indigenous Environmental Network's Second Set of Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6.

{01844304.1}

See ARSD 20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 1. Please provide a list of all the witnesses for the TransCanada hearing including those filing prefiled testimony?

ANSWER: Keystone expects to offer testimony and prefiled testimony from the persons identified in its answer to Interrogatory No. 1 of IEN's first set of interrogatories. In addition, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these witnesses are marked as Keystone 1930-1934.

INTERROGATORY NO. 2: Please provide a copy of the construction and reclamation maps for the pipeline pathway.

ANSWER: The con/rec units are shown in Appendix R to the Final Supplemental Environmental Impact Statement (FSEIS), available online at <https://keystonepipeline-xl.state.gov/documents/organization/221244.pdf>. The con/rec units are shown in Appendix R to the Federal Supplemental Environmental Impact Statement, available online at <https://keystonepipeline-xl.state.gov/documents/organization/221244.pdf>.

{01844304.1}

INTERROGATORY NO. 3: Please provide a copy of

A) Project's Spill Prevention Control and Countermeasures plan.

B) Oil spill response plan for Keystone XL pipeline.

C) Emergency Response Plan for the Keystone XL pipeline.

D) TransCanada Adverse Weather Plan for the Keystone XL pipeline.

OBJECTION AND ANSWER: This request seeks information that is beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27. This request also seeks information addressing issues that are governed by federal law and within the exclusive province of PHMSA. The PUC's jurisdiction over the emergency response plan is preempted by federal law. See 49 C.F.R. Part 194; 49 U.S.C. § 60104(c). This request further seeks information that is confidential and proprietary. See Amended Final Order, HP09-001, Condition para. 36. Without waiving the objection: (a) Keystone's Spill Prevention Control and Countermeasures Plan is addressed in Appendix I to the FSEIS; (b) Keystone has not yet submitted an oil spill response plan to the South Dakota Department of Environment and Natural Resources; (c) Keystone's Emergency Response Plan is addressed in Appendix I to the FSEIS; and (d) Keystone has not yet prepared an adverse weather plan for the Keystone XL Pipeline.

INTERROGATORY NO. 4 Please provide TransCanada's rules or regulations for fuel storage.

ANSWER: TransCanada's rules or regulations for fuel storage for the Project route in South Dakota are found in the following documents:

- Appendix Z of the 2014 FSEIS in Section 5.0 (Wetlands)
- The following sections of the 2014 FSEIS: Section 2.1.5.3 (Fuel Transfer Stations), Section 4.4.3 (Potential Wetland Impacts), Section 4.8.3.1 (Endangered Species Act Federally Protected, Proposed, and Candidate Species), Section 4.13 Potential Releases
- The May 2013 USFWS Biological Opinion
- The following sections of the Project's CMR Plan Rev4 (Appendix G of the 2014 FSEIS): Section 3.0 (Spill Prevention and Containment), Section 6.5 (Wetland Crossing Procedures), Section 7.1 (General [Waterbodies and Riparian Areas]).

INTERROGATORY NO. 5. This is the second request for information on this topic: Please provide the TransCanada Keystone internal communication and documentation on why each section of the route was changed?

OBJECTION AND ANSWER: This request is overlybroad, unduly burdensome, not relevant, and not likely to lead to the discovery of admissible evidence.

Without waiving the objection, Keystone has previously provided maps showing the route variations. None of the route variations involve new landowners since the permit was granted. All of the route variations are the result of landowner requests or engineering changes. The route variations are also addressed in Table 2.1-2 of Section 2.1.1 of the FSEIS.

INTERROGATORY NO. 6. Given the changed routes, please provide documentation that the paleontological resources have been surveyed in the new areas shown on the maps?

ANSWER: Survey status of these areas is noted in the attached table marked as Keystone 1630-1632. Inventory of un-surveyed areas that are still part of the Project will be completed when fieldwork resumes and reports provided and approved prior to the start of construction at those locations. The results of the surveys can be found in the paleontological survey reports provide to the DOS and referenced in Sections 3.1 and 4.1 of the FSEIS.

INTERROGATORY NO. 7. Given the changed routes, please provide documentation, maps or communication with the State of South Dakota Office of Historic Preservation that shows the new route has been surveyed for cultural and historical resources?

ANSWER: Survey status of these areas is noted in the attached table marked as Keystone 1630-1632. Inventory of un-surveyed areas that are still part of the Project will
{01844304.1}

be completed when fieldwork resumes. The results of the surveys can be found in the cultural survey reports which have been submitted by the DOS and provided to the DOS and referenced in Sections 3.11 and 4.11 of FSEIS.

INTERROGATORY NO. 8. Given the changed route, please provide updated documents and maps including any communication with the State of South Dakota Dept. of Game, Fish and Parks that show or discusses endangered species and nesting areas?

ANSWER: No new state-listed threatened or endangered species that had not already been identified during previous surveys or the 2014 FSEIS would be impacted by the new minor route changes. In addition, all previously identified mitigation measures and time restrictions regarding endangered species and nesting areas would still apply to the new minor route changes.

INTERROGATORY NO. 9. Please provide any additional information including plans and internal communication on wetlands mitigation from construction, chemical and oil spill.

ANSWER: The following plans discuss wetland mitigation from construction, chemical, and oil spills for the Project route in South Dakota:

- CMR Plan Rev4 (Appendix G of the 2014 FSEIS)

- Spill Prevention, Control and Countermeasure Plan (Appendix I of the 2014 FSEIS)
- Emergency Response Plan (Appendix I of the 2014 FSEIS)

Any wetland mitigation for the Project route in South Dakota that will be required by the U.S. Army Corps of Engineers (USACE), S.D. Regulatory Office will be identified by the USACE following their review of Keystone's PCN submittal under the Nationwide 12 Permit Program. Keystone has not submitted the PCN or permit application to the USACE, but will file the required applications prior to the initiation of construction.

INTERROGATORY NO. 10. Please provide any additional plans and internal communication on how TransCanada will prevent waterways from being contaminated with construction debris.

ANSWER: The Project's CMR Plan Rev4 (Appendix G of the 2014 FSEIS) discusses how TransCanada will prevent waterways from being contaminated with construction debris for the Project route in South Dakota.

INTERROGATORY NO. 11. What will be the source, estimated to be 79 gallons, for the water that will be used in dust mitigation?

ANSWER: The actual estimated quantity of dust control water that may be required for dust control for the Project is approximately 79,200,000 gallons.

The proposed sources for the dust control water are:

Water Source	County	TRS Location
Dipping Vat Creek	Harding	NW¼ T022N, R002E, Sec 31
Little Missouri River (North Bank)	Harding	NW¼ T021N, R002E, Sec 04
Lake Gardner	Harding	SE¼ T019N, R004E, Sec 15
South Fork Grand River	Harding	SE¼ T019N, R005E, Sec 28
Clarks Fork Creek	Harding	NE¼ T018N, R005E, Sec 13
South Fork Moreau River	Perkins	NE¼ T013N, R010E, Sec 11
Sulphur Creek (Northeast)	Meade	NW¼ T009N, R014E, Sec 12
Sulphur Creek (Southwest)	Meade	NW¼ T009N, R014E, Sec 12
Bridger Creek	Haakon	NW¼ T006N, R018E, Sec 16
Bad River	Haakon	NW¼ T001N, R025E, Sec 03
Dry Creek	Jones	NW¼ T001N, R027E, Sec 33
White River	Tripp	SE¼ T103N, R078W, Sec 21

The final approval of water sources and allotted quantities of water per source that may be used for dust control in SD will be identified by the SD Department of Environment and Natural Resources in their issued permit under the South Dakota Notice of Intent and Certificate of Applicant Form to Receive Coverage Under the General Permit for Temporary Discharge and a Temporary Water Use Permit that will be issued prior to construction.

INTERROGATORY NO. 12. Please provide any written plans and internal communication on TransCanada's crop monitor program?

Please provide any updated socio-economic plans that were conducted on the impact the man camps will have on surrounding communities.

ANSWER: Crop monitoring is discussed in the CMR Plan, a copy of which is attached to Keystone's Certification Petition as Attachment A to Appendix C. Keystone

has not updated any socio-economic analysis beyond the information that is contained in Section 3.10 of the FSEIS.

INTERROGATORY NO. 13. Please provide TransCanada's written plans and internal communication calculating compensating landowners for loss of cattle and other wildlife like pheasants?

ANSWER: There are not any written plans or internal communication relative to compensating landowners for loss of cattle and/or wildlife. These situations are isolated and are handled on a case-by-case basis.

INTERROGATORY NO. 14. Please provide documentation including internal communications that landowners have been consulted about how soil disturbances will be handled including plans for soil restoration.

OBJECTION AND ANSWER: This request is overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, project representatives work with landowners to complete a construction binding agreement, which covers soil types, topsoil stripping, and restoration methods.

INTERROGATORY NO. 15. Please provide information about when and how the plan to deal with contaminated soil will be prepared including where the contaminated soils will be disposed of. Will South Dakota landowners be consulted on disposal?

ANSWER: Please refer to the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan: Emergency Response Plan Appendix E.

INTERROGATORY NO. 16. With regards to seed mitigation, will GMO seeds be used to reseed? Please provide additional information and any internal communication on why South Dakota landowners will be consulted with regards to the seeds they want used for reseeding disturbed areas? How will these seeds be acquired and from whom?

ANSWER: The required non-cultivated seed mixes identified in the Project's Construction/Reclamation Units (Appendix R of the 2014 FSEIS) will be acquired from available commercial sources which have not been identified at this time. Keystone will identify the sources prior to the initiation of reclamation efforts. There is the potential for reclamation grasses to be selectively bred to be more vigorous than wild-collected species, but they are not considered genetically modified per a GMO definition.

For cultivated lands, landowners typically reseed their own cultivated ground with seeds of their choice, which could include GMO.

Keystone is required to consult with landowner regarding the species used to reseed their property as per Amended Permit Condition 16m issued by SDPUC as part of the Amended final Decision and Order.

INTERROGATORY NO. 17. According to response #49, shippers have committed to 65,000 barrels per day but TransCanada Keystone has not yet provided any information or internal documentation on how the Bakken Marketlink pipeline will impact Keystone XL. Please provide all internal documentation regarding the Bakken pipeline connecting to the Keystone XL pipeline.

OBJECTION: This request is vague, overlybroad, and unduly burdensome. "All internal communication" regarding the Bakken Marketlink is not relevant or calculated to lead to the discovery of admissible evidence. In addition, this request seeks information that has substantial commercial and proprietary value to Keystone and is confidential.

INTERROGATORY NO. 18. Please provide information regarding the specifics of the remote spill sensor monitoring system that will be used for safety. Given South Dakota's harsh and inclement weather, what is the backup plan for when the power goes out?

ANSWER: All mainline isolation valves are controlled from the Keystone Oil Control Center in Calgary, Alberta Canada. In case of a spill during a power outage, valve {01844304.1}

and pump station sites are equipped with backup power to ensure actuation and communication is maintained.

INTERROGATORY NO. 19. Please provide additional information including any written plans on how hydrostatic waters will be monitored for oil and chemical spills.

ANSWER: Keystone will incorporate the mitigation measures and requirements identified in the following plans and permits to monitor hydrostatic waters for oils and chemical spills for the Project route in South Dakota:

- CMR Plan Rev4 (Appendix G of the 2014 FSEIS)
- Permit conditions contained within the Project's General Permit for

Temporary Discharge Activities that was granted to Keystone on April 11, 2013.

INTERROGATORY NO. 20. Please provide any written plans discussing preventing groundwater contamination from oil spills and chemicals contained in the tar sands slurry.

ANSWER: During operations, the Emergency Response Plan (ERP) provides the framework for how to respond to a spill, including spills that have the potential to affect groundwater. While Keystone's ERP is confidential due to the inclusion of both sensitive information and private individual's contact information, the ERP is reviewed and must be approved by the Pipeline and Hazardous Materials Safety Administration (PHMSA) prior to line fill and commencing pipeline operations. The ERP will identify procedures to

contain and remove crude oil from the environment to protect sensitive environmental resources, including groundwater. These procedures reflect best practices and incorporate Project-specific information, such as the location of Source Water Protection Areas provided by the State of South Dakota.

In the event of a release, emergency response procedures and notification processes will be initiated. If the size or location warrants or if the spill may affect water resources, an Incident Command team will be created. This team will include state and federal regulators who will advise Keystone on appropriate cleanup methods. Keystone will not be released from its legal responsibilities for cleanup until the regulatory agencies determine that the site is sufficiently cleaned up and remediated so that it does not pose a threat to human health or the environment.

INTERROGATORY NO. 21. Please provide any written plans and all internal communication regarding sourcing and cost alternate sources of drinking water in case of stream or aquifer contamination from oil or chemicals.

OBJECTION AND ANSWER: The request for “all internal communication” is overlybroad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, please refer to Appendix Z to the FSEIS, page 108, ¶ 7, which provides:

In the event that a spill contaminates potable water supplies, be responsible for cleanup and restoration. Keystone would be responsible for providing an appropriate alternative potable water supply of comparable volume and quality to those impacted or provide compensation, if this option is agreed upon by the affected parties and Keystone. For groundwater used for industrial or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities impacted, as may be agreed upon among the affected parties and Keystone. If the permit were approved, Keystone would memorialize that agreement through an appropriate written agreement with the Environmental Protection Agency.

Keystone cannot be more specific without more details about the hypothetical contamination.

INTERROGATORY NO. 22. Please provide all plans and internal communication regarding waterway crossing including prevention of sediment contamination. Please provide any and all communication with the South Dakota Dept. of Game, Fish and Parks on sensitive water bodies.

ANSWER: Keystone will incorporate the mitigation measures and requirements identified in the following plans regarding waterway crossing including prevention of sediment contamination for the Project route in South Dakota:

- CMR Plan Rev4 (Appendix G of the 2014 FSEIS)
- Permit conditions contained within the US Army Corps of Engineers Nationwide General Permit (NWP) 12

- The Project route in South Dakota does not cross any sensitive water as documented by the FSEIS in Sections 3.3.3.2 (South Dakota Surface Water) and 4.3.3.2 (Surface Water Impacts) Therefore there are no communications between South Dakota Dept. of Game, Fish and Parks and Keystone specifically regarding the crossing of sensitive waterbodies

INTERROGATORY NO. 23. Please provide the South Dakota specific frac-out plans that have been generated for areas where horizontal drilling is planned.

ANSWER: Keystone currently has no contractors retained to undertake construction. When Keystone employs a pipeline contractor, that contractor will develop the plan, subject to Keystone's approval as required by Condition 21. This issue is addressed in Section 7.4.5 of the CMR Plan.

INTERROGATORY NO. 24. Does TransCanada consider federally recognized Indian Tribes units of local government for purposes of SDCL 49-41B.

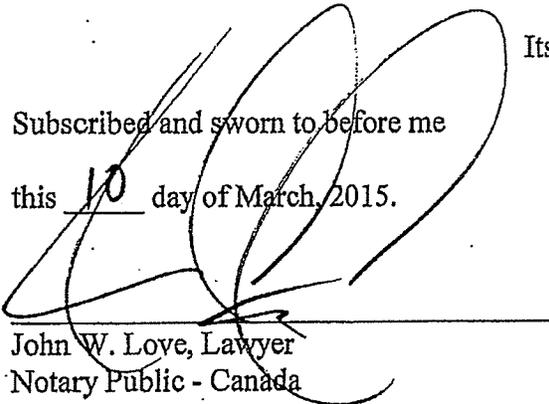
ANSWER: No. Keystone considers Tribes to be sovereign nations, and not units of local government.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc:

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.

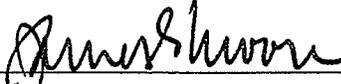

John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Indigenous Environmental Network's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

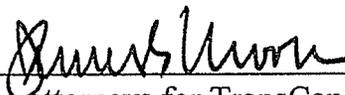
WOODS, FULLER, SHULTZ & SMITH P.C.

By  _____
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Indigenous Environmental Network's Second Interrogatories, to the following:

Kimberly Craven
3560 Catalpa Way
Boulder, CO 80304
kimecraven@gmail.com



One of the attorneys for TransCanada

REQUEST FOR PRODUCTION OF DOCUMENTS

16. All documents relating to waiver requests from TransCanada to any regulatory body for the Keystone XL Pipeline or Keystone Pipeline.

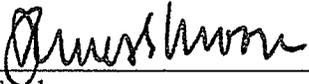
RESPONSE: Keystone objects to this request as it relates to the Keystone Pipeline on relevance grounds. Notwithstanding its objection, Keystone notes that the Special Permit (previously referred to as a “waiver”) issued by the Pipeline Hazardous Materials Safety Administration (PHMSA) for the Keystone Pipeline was admitted as Exhibit WEB 7-c in Docket HP09-001 and is available on the Commission’s docket page. TransCanada has no waiver requests pending for the Keystone XL Pipeline. TransCanada submitted a Special Permit request for the Keystone XL Pipeline to PHMSA, but has withdrawn that request.

OBJECTIONS

The objections stated to Standing Rock Sioux Tribe's Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

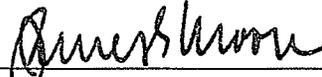
By  _____
William Taylor
James E. Moore
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300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Standing Rock Sioux Tribe's Second Request for Production of Documents, to the following:

Peter Capossela, P.C.
PO Box 10643
Eugene, OR 97440
pcapossela@nu-world.com

Chase Iron Eyes
Iron Eyes Law Office, PLLC
PO Box 888
Fort Yates, ND 58538
chaseironeyes@gmail.com



One of the attorneys for TransCanada

route. If answered in the affirmative, please provide documentation of the notices required in Condition 6 and describe whether or not the Commission has had the opportunity to review and approve of the reroutes. (Response to Staff Interrogatory 1-10).

ANSWER: TransCanada does not consider any route variations since the approved route in HP09-001 to be a "material deviation". No new landowners were affected by route variations.

2-2. Should TransCanada seek a special permit from PHMSA to increase operating pressure in the future, what regulatory mechanisms are in place to ensure the pipeline will be as safe as the pipeline currently proposed? (Response to Staff Interrogatory 1-11).

ANSWER: TransCanada would be required to re-apply to PHMSA for a special permit in order to operate the pipeline at an increased design factor of 0.8 corresponding to an operating pressure of 1,440 psig. PHMSA's oversight of compliance with its regulations is the mechanism to ensure pipeline safety. Before granting a Special Permit request, PHMSA must determine that the operation of the pipeline would not be inconsistent with pipeline safety. Conditions may be imposed on the grant if PHMSA concludes they are necessary to assure safety, environmental protection, or are otherwise in the public interest. See 49 CFR 190.341.

REQUESTS FOR PRODUCTION OF DOCUMENTS

2-1. Please provide copies of responses of other parties to Keystone's interrogatories and requests for production of documents, as well as any related follow-up contacts or demands.

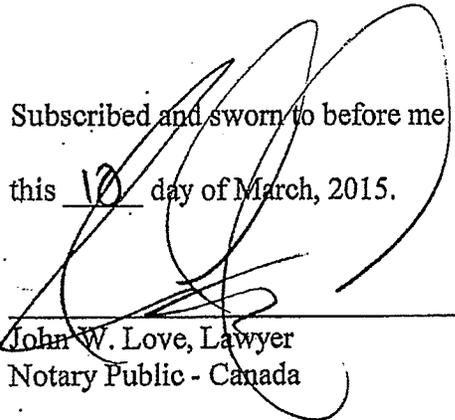
RESPONSE: Access to the responses of all other parties to Keystone's written discovery addressed to them will be separately provided.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

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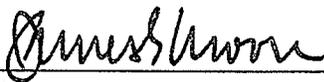
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OBJECTIONS

The objections stated to Commission Staff's Second Set of Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

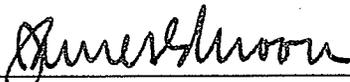
WOODS, FULLER, SHULTZ & SMITH P.C.

By 
William Taylor
James E. Moore
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Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Commission Staff's Second Set of Interrogatories and Request for Production of Documents, to the following:

Kristen N. Edwards
Staff Attorney
South Dakota Public Utilities Commission
500 East Capitol Avenue
Pierre, SD 57501



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 45: For each person who you expect to call as a fact witness in Docket HP14-001, provide a description of the witness's educational background, specialized training, and employment history relevant to the witness's expected testimony and a description of all exhibits that the witness will attach to his or her testimony.

ANSWER: Resumes for the witnesses previously identified by Keystone are attached as Keystone 1341-1374.

INTERROGATORY NO. 46: Describe the information furnished by Keystone to each fact witness for the purposes of his or her testimony.

ANSWER: Other than a copy of the discovery requests, Keystone has not furnished any information to its fact witnesses for purposes of providing testimony in this proceeding. The witnesses have provided information used in answering discovery based on their work on the Keystone XL project.

INTERROGATORY NO. 47: Pursuant to Condition One, describe any other permits that Keystone will file closer to the time period of construction referenced in Keystone's Responses to Yankton Sioux Tribe's First Interrogatories and Request for
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Production of Documents, Answer to Interrogatory No. 8 and list the agencies that Keystone will submit each permit to.

ANSWER: Keystone will comply with Clean Water Act 404 by permitting the crossing of all jurisdictional waterbodies in South Dakota under the US Army Corps of Engineers Nationwide General Permit (NWP) 12. As part of the permitting process of the Project route in South Dakota, Keystone will submit a NOI to the US Army Corps of Engineers, South Dakota Regulatory Office and will consult as required with the South Dakota Regulatory Office.

INTERROGATORY NO. 48: Pursuant to Conditions 43, 44, and 6, provide the job title, scope of work, and dates of employment for Keystone employee Calvin Harlan.

ANSWER: Calvin Harlan is employed by TransCanada's Tribal Relations Department. He is responsible for assisting in implementing the company Native American Relations Policy. He has been employed by TransCanada since 2013.

INTERROGATORY NO. 49: Pursuant to Conditions 6, 43, and 44, describe the contacts Calvin Harlan has had with the Yankton Sioux Tribe or any of its employees, agents, or representatives.

ANSWER: Mr. Harlan has not had any contacts with the Yankton Sioux Tribe.

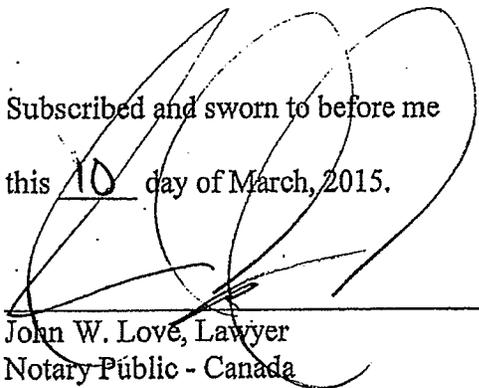
Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

REQUESTS FOR PRODUCTION OF DOCUMENTS

REQUEST FOR PRODUCTION NO. 8: Provide a copy of each document that supports the proposed changes to the Findings of Fact identified in Appendix C to Keystone's application filed on September 14, 2014 with the PUC.

OBJECTION: This request is overlybroad and unduly burdensome.

REQUEST FOR PRODUCTION NO. 9: Provide a copy of each document furnished by Keystone to each fact witness for the purposes of his or her testimony.

RESPONSE: See Keystone's response to Interrogatory No. 46. Keystone has no responsive documents.

REQUEST FOR PRODUCTION NO. 10: Provide a copy of each document that each of Keystone's fact witness will attach to his or her testimony.

OBJECTION: Keystone has not yet identified its hearing exhibits. Keystone will disclose its exhibits as required by order of the Commission.

REQUEST FOR PRODUCTION NO. 11: Pursuant to Condition One, provide a copy of the Notice and Intent and Certificate of Application Form to Receive Coverage Under the General Permit for Temporary Discharges and a Temporary Water Use Permit referenced in Keystone's Responses to Yankton Sioux Tribe's First Interrogatories and Request for Production of Documents, Answer to Interrogatory No. 8.

RESPONSE: Responsive documents are attached as Keystone 1589-1629.

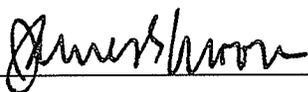
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OBJECTIONS

The objections stated to Yankton Sioux Tribe's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

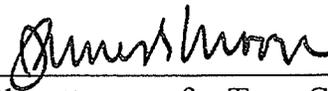
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Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Yankton Sioux Tribe's Second Interrogatories and Request for Production of Documents, to the following:

Thomasina Real Bird
Fredericks Peebles & Morgan LLP
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Louisville, CO 80027
trealbird@ndnlaw.com



One of the attorneys for TransCanada

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

INTERROGATORY #1 This question relates at least to Permit Condition 3. This condition says Keystone will comply with recommendations in the State Department's FEIS. How does TransCanada believe this condition applies to compliance with SEIS, and if not, how is complying with SEIS insured by PUC, if at all?

ANSWER: Keystone will abide by the recommendations in the Final Supplemental Environmental Impact Statement, and would not object if the Commission included the FSEIS in Amended Permit Condition No. 3.

INTERROGATORY # 2 This question relates at least to Permit Condition 13, 14 How does the CMR Plan and inspectors relate to or apply to removal of pipe at closure of and decommissioning of pipeline? If buried pipe is left in the ground, post closure, is there an end point in the far future, when the CMR Plan no longer applies to mitigations of problems from buried pipe, such as leaking or old pipe collapsing or other problems, if the CMR ever even applied to such?

ANSWER: The CMR Plan does not specifically address abandonment of the pipeline. If the pipeline were abandoned at some future date, it would either be removed from the ground with full reclamation of the easement area, or it would be abandoned in place in accordance with applicable regulations and law at the time. Because abandonment could happen far in the future, it is difficult if not impossible to say today what best construction methods or practices would be followed. Decommissioning of the project is addressed in Section 2.1.13.2 of the FSEIS.

INTERROGATORY # 3 This question relates at least to Permit Condition 16 Do the mitigations offered to landowners in this section apply to any actions happening during

closure & post closure management, such a removal of defunct buried pipeline, or fixing holes created by collapsed buried & rusted pipe, or post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition No. 16 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 4 This question relates at least to Permit Condition 20 Do the mitigations offered for sediment control in this section apply to any actions happening during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or management of post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition No. 20 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 5 This question relates at least to Permit Condition 22 Do the mitigations offered for construction in wetlands in this section, apply to any construction actions happening during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or other management of post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition No. 22 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 6 This question relates at least to Permit Condition 23 and 27 and 28 Do the mitigations offered for road use in these sections, apply to any construction actions happening during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or other management of post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition Nos. 23, 27, and 28 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 7 This question relates at least to Permit Condition 24 Do the mitigations offered for Residential units in this section, apply to any construction actions happening during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or other management of post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition No. 24 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 8 This question relates at least to Permit Condition 25 and 29 Do the mitigations offered for weather in this section, apply to any construction actions happening during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or other management of post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition Nos. 25 and 29 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 9 This question relates at least to Permit Condition 26 Do the mitigations offered for reclamation and clean up in this section, apply to any construction actions happening during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or other management of post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition No. 26 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 10 This question relates at least to Permit Condition 33

Does this condition by obligating Keystone to actions during life of the pipeline, exempt it from similar actions closure & post closure, as post closure time frame is not referenced?

ANSWER: Keystone does not understand Amended Permit Condition No. 33 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 11 This question relates at least to Permit Condition 34

Does compliance with 49 CFR 195 provide any protections to the environment from problems happening at closure & post closure?

OBJECTION AND ANSWER: This request calls for a legal conclusion. Without waiving the objection, Keystone does not understand that 49 CFR Part 195 applies to abandonment or post-abandonment activities.

INTERROGATORY # 12 This question relates at least to Permit Condition 41

The SEIS occurred after the FEIS, how does TransCanada think this Permit Condition relates to the differences in the SEIS and FEIS.

ANSWER: Sage Grouse conservation measures, including additional measures finalized after issuance of the FEIS, are listed at section 4.8 of the Final Supplemental EIS. The Final Supplemental EIS does not modify any conservation measures applicable to the greater prairie chicken.

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INTERROGATORY # 13 This question relates at least to Permit Condition 42

How do the mitigations with respect to drain tile monitoring, apply to any construction actions happening during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or other management of post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition No. 42 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 14 This question relates at least to Permit Condition 43, 44

How do the mitigations with respect to culture and paleontology apply to any construction actions that disturb previously undisturbed lands, disturbal that may happen during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or other management of post closure leaks?

ANSWER: Keystone does not understand Amended Permit Condition Nos. 43 and 44 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 15 This question relates at least to Permit Condition 45,

46, 47, 49 How do the mitigations with respect to land owner property or natural resources apply to any construction actions that may happen during closure & post closure management, such a removal of defunct buried pipeline, or fixing collapsed buried pipe holes, or other management of post closure leaks? If damage occurs post closure, will Keystone still have financial assets to reimburse landowners? At what point post closure will Keystone cease to exist and cease to have financial assets?

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ANSWER: Keystone does not understand Amended Permit Condition Nos. 45, 46, 47, and 49 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 16 This question relates at least to Permit Condition 21
If you wish to remove pipe at closure or post closure using horizontal drilling, will this condition still apply?

ANSWER: Keystone does not understand Amended Permit Condition No. 21 to apply to removal of the pipe from the ground if the pipeline were abandoned at some future date. See Keystone's response to Interrogatory No. 2.

INTERROGATORY # 17 This question relates at least to Finding # 73 - the Revised CRM Plan Which of the mitigations (if any) in the CRM also apply to construction, mitigation & reclamation actions that occur at closure or post closure of the pipeline?

ANSWER: See Keystone's response to Interrogatory No. 2.

REQUESTS FOR PRODUCTION OF DOCUMENTS

When you answer such questions it is OK to send web links to documents, or if a document is readably available in the public domain, indicate where to find it.

This document request relates to Condition # 49 & Finding # 73 Are there any documents that predict how long post closure TransCanada will exist to meet promise in Condition # 49? Please disclose documents that predict TransCanada's financial resources post closure of the pipeline, documents that predict post closure costs, documents that predict timeline of post closure problems & documents to show predicted longevity of the Company relative to time of post closure financial obligations.

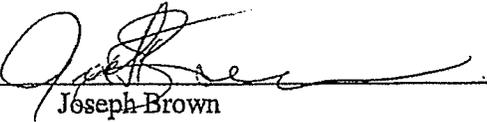
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RESPONSE: No documents exist predicting the existence or longevity of the Company or its costs 50-plus years into the future, which is the expected useful life of the pipeline. TransCanada has been in business for over 60 years and currently has assets valued at almost \$60 billion. TransCanada is well positioned for the future thanks to our prudent approach and long-term perspective. This includes ensuring all our assets meet fundamental energy needs that transcend short-term price volatility, along with the additional stability of securing the majority of our existing assets and growth projects under long-term contracts with strong investment-grade counterparties or regulated business models.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By

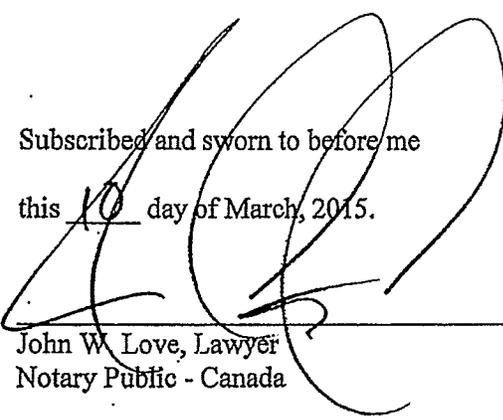


Joseph Brown

Its Director, Authorized Signatory

Subscribed and sworn to before me

this 10 day of March, 2015.

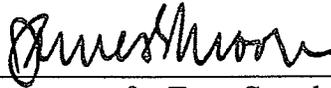


John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Nancy Hilding's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.



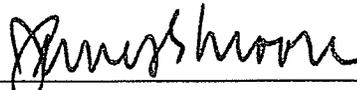
One of the attorneys for TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Nancy Hilding's Final Interrogatories and Request for Production of Documents, to the following:

Nancy Hilding
6300 West Elm
Black Hawk, SD 57718
nhilshat@rapidnet.com

WOODS, FULLER, SHULTZ & SMITH P.C.

By  _____
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Attorneys for Applicant TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

1. In your February 6, 2015 Answer to the Tribe's First Set of Interrogatories and Request for Production of Documents, you state that the witnesses listed at number three will offer opinions. Please state specifically what information was furnished to these witnesses by you and what information was gathered by the witnesses themselves. As to any books or publications upon which the witnesses opinions are based, state the title, author, publisher and edition of each such publication, together with the page and paragraph utilized by the witness in the formation of any opinion or conclusion.

ANSWER: Other than a copy of the discovery requests, Keystone has not furnished any information to its fact witnesses for purposes of providing testimony in this proceeding. The witnesses have provided information used in answering discovery based on their work on the Keystone XL project.

2. Identify all exhibits you or any of the witnesses listed in your February 6, 2015 Answer intend to introduce in the evidentiary hearing scheduled for May 5-8, 2015.

ANSWER: Keystone has not yet identified its hearing exhibits, but will disclose them as required by order of the Commission.

3. Pursuant to Fact Paragraph Seventeen, detail the current construction

schedule for the South Dakota portion of the Keystone Pipeline.

ANSWER: Keystone has not determined a construction schedule in South Dakota and will not do so before it has been granted a Presidential Permit.

4. Pursuant to Fact Paragraph Fourteen and Twenty-Four, what is the current projected date of completion for the South Dakota portion of the Keystone Pipeline?

ANSWER: Keystone has not determined a construction schedule in South Dakota.

5. Pursuant to Fact Paragraph Fourteen, Twenty-Four, and Forty-One, what is the projected date for initiation of construction in and around the Cheyenne River and Bridger Creek areas?

ANSWER: Keystone has not determined a construction schedule in South Dakota.

6. Pursuant to Fact Paragraph Fourteen, Twenty-Four, and Forty-One, what is the projected date for completion of construction in and around the Cheyenne River and Bridger Creek areas?

ANSWER: Keystone has not determined a construction schedule in South Dakota.

7. Condition Six of the Commission's Amended Final Decision and Order requires Keystone to notify affected utilities and local governmental as soon as

practicable if material deviations are proposed to the Project's route. The table of changes contained in Appendix C of Keystone's Petition of Certification reports such a material change to Finding of Fact Forty-One; namely, that the Project's route has been diverted to run beneath Bridger Creek via a Horizontal Directional Drilling (HDD). As such, has Keystone:

A. Made any attempt to notify the Mni Waste Water Company, or its predecessors, or any of its officers, attorneys, or agents of Keystone's route diversion through Bridger Creek?

B. Made any attempt to notify the Cheyenne River Sioux tribe, including any of its agencies, or any of its officers, attorneys, or agents of Keystone's route diversion through Bridger Creek?

C. If Keystone did not make such required notification please provide the following:

- i. Name(s) of the person(s) notified;
- ii. Title of the person(s) notified;
- iii. The physical address of the person(s) notified;
- iv. The telephone number(s) of the person(s) notified; and
- v. The means by which Keystone made notification, i.e. written,

oral, electronic, etc.

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ANSWER:

7a). Keystone does not believe that the Mni Waste Water Company is affected by a “material deviation” in the project route.

7b). Keystone does not believe that the planned horizontal directional drill beneath Bridger Creek is a material deviation to the route and accordingly has not notified local governments and agencies.

7c). Not applicable.

8. Pursuant to Condition Six, is Keystone aware that the Mni Waste Water Company is a tribally chartered entity of the Cheyenne River Sioux Tribe?

ANSWER: Keystone is aware that the Mni Waste Water Company was created in response to federal legislation authorizing the construction of the Mni Waste Rural Water System.

9. Pursuant to Condition Six, is Keystone aware that all persons, tribal members and non-tribal members, residing within the exterior boundaries of the Cheyenne River Sioux Reservation obtain their potable water from the Mni Waste Water Company?

ANSWER: Keystone is aware that a portion of the population of the area encompassed by the Cheyenne River Sioux Reservation is served by the Mni Waste Water Company.

10. Pursuant to Condition Six of the Commission's Amended Final Decision and Order and Changed Finding of Fact Forty-One, is Keystone aware that the Mni Waste Water Company's raw water intake for all potable water is located along the Cheyenne River downstream from the proposed Bridger Creek HDD confluence with the Cheyenne River?

ANSWER: Keystone is aware that the Mni Waste Water Company's rural water intake is located on the Oahe Reservoir downstream from the confluence of the Cheyenne River and the Oahe Reservoir, and correspondingly downstream from the confluence of Bridger Creek and the Cheyenne River.

11. Pursuant to Condition Six of the Commission's Amended Final Decision and Order and Changed Finding of Fact Forty-One, does Keystone admit that a spill at or near the Cheyenne River or the proposed Bridger Creek crossing could potentially contaminate the area's hydrologically connected bodies of water, including those located downstream from the Cheyenne River or the proposed Bridger Creek HDD crossing?

ANSWER: The probability of a spill event affecting either the Cheyenne River HDD crossing or the Bridger Creek HDD crossing is extremely low. While future events cannot be known with absolute certainty, historic incident frequencies can be used to estimate the number of events that might occur over a period of time. Based on available PHMSA data, the spill frequency analysis determines the occurrence interval by spill

volume for each of the HDD crossings. The typical spill volumes and spill probabilities for each of the HDD crossings are presented in the following table. The occurrence interval estimates that the probability of a spill occurring for a certain volume will occur in the number of years indicated (e.g., for the Cheyenne River, a 3 barrel spill has the probably of occurring once every 2,395 years).

Occurrence Interval (years) by Spill Size

	3 barrels	50 barrels	1,000 barrels	10,000 barrels
Cheyenne River	2,395	5,988	23,951	239,505
Bridger Creek	1,332	3,330	13,318	133,181

Based on the occurrence intervals, a spill occurring at or near either of the two HDD crossings is very low. Despite the low probability, if a spill did occur, the characteristics of the HDD, including the depth of the HDD, setback distances, and soil layers are important features that reduce the possibility of the spill reaching either waterbody. The Cheyenne River HDD crossing is designed to be approximately 133 feet below the river bottom, while the Bridger Creek HDD crossing is designed to be approximately 50 feet below the river. In addition, the HDD for both crossings would be located in a layer of claystone which serves as a natural barrier to water movement. By using the HDD method, most (if not all) spills would be prevented from reaching the river since the burial depth often can prevent a release from reaching the waterbody. Both crossings will also have thicker pipe wall for the length of the HDD crossing.

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The HDD exit and entry points, respectively, for the Cheyenne River are approximately 1,895 feet and 3,099 feet from the river; and for Bridger Creek is approximately 3,844 feet and 5,183 feet from the river. Most surface spills would not be expected to reach either waterbody, as the entry and exit points for the HDD are located over 1,000 feet away from the surface water at each crossing.

The assessment then evaluated what would occur if the entire volume of the release were to reach the waterbody despite expectations to the contrary. In the 2009 Keystone XL Risk Assessment, Table 4-1 from the 2009 Keystone XL Risk Assessment describes stream categories based on stream flows. Based on USGS stream flow data, the Cheyenne River is classified according to the 2009 Keystone XL Risk Assessment stream categories as high flow stream. Flow data is unavailable for Bridger Creek; however as a tributary to the Cheyenne River, it would most likely fall into the low or moderate flow stream category. Based on those stream flow categories, impacts to water quality and aquatic biota can be identified in 2009 Keystone XL Risk Assessment text in Section 4.2.3.4 and Tables 4.2, and 4.3 and 4.7 to 4.10. As discussed in the 2009 Keystone XL Risk Assessment, there is a very small probability of a spill reaching the Cheyenne River and Bridger Creek HDD crossings.

Despite the factors limiting the possibility of a spill reaching the river, if a spill were to reach either waterbody, leak detection and emergency response procedures would

help reduce the potential for impacts to surface water sources, human health, and the environment.

“In order to reduce the risk of spills, if permitted Keystone has agreed to incorporate additional mitigation measures in the design, construction, and operation of the proposed Keystone XL Project, in some instances above what is normally required, including:

- 59 Special Conditions recommended by PHMSA;
- 25 mitigation measures recommended in the Battelle and Exponent risk reports; and
- 11 additional mitigation measures.

Many of these mitigation measures relate to reductions in the likelihood of a release occurring. Other measures provide mitigation that reduces the consequences and impact of a spill should such an event occur. Mitigation measures are compiled in Appendix Z, Compiled Mitigation Measures, of this Supplemental EIS. Mitigation measures are actions that, if the proposed Project is determined to be in the national interest, Keystone would comply with as conditions of a Presidential Permit.” (FSEIS Executive Summary, pg. ES-19)

12. Pursuant to Condition Six of the Commission's Amended Final Decision and Order and Changed Finding of Fact Forty-One, does Keystone admit that a public drinking water utility with an intake located downstream from any pipeline might be

"affected" (as defined by the PUC's Final Decision and Order) if a spill were to occur?

ANSWER: "Any pipeline" includes all products that can be transported by a pipeline including natural gas, crude oil, water, and other gas and liquid products. The effect of spills from any pipelines cannot be categorized as the same on public drinking water intakes. For the Keystone XL pipeline, potential impacts to downstream public drinking water utilities are discussed in the 2009 Keystone XL Risk Assessment, and the FSEIS, Section 4.3 Water Resources, and Section 4.13 Potential Release.

River crossings by pipelines are very common, the number of incidents is low, and safety is not affected by material transported. When the Keystone XL pipeline crosses channels and flood plains, any spill scenarios would be dictated by stream flow rate (discharge), which are discussed in Section 4.2.3.4 of 2009 Keystone XL Risk Assessment. Impacts are described in Section 4.2.3.4 of the 2009 Keystone XL Risk Assessment for channels. The worst case scenario would be spill into low flow stream (Table 4-2 in 2009 Keystone XL Risk Assessment).

Predicted Project-specific incident frequencies are provided in Section 3.0 of the 2009 Keystone XL Risk Assessment. Most spills are less than 3 barrels. Spills at individual river crossings are rare with occurrence interval of 1/22,000 years to 1/830,000 years based on representative crossing distances (2009 Keystone XL Risk Assessment).

Floodplain crossings are covered in the FEIS Section 4.3.3.3. The FSEIS also

specifically evaluated “surface water intakes, diversions, or Wellhead Protection Areas for municipal water supplies within 1 mile of the proposed pipeline centerline.”

“The Missouri River in Montana and South Dakota is a source for two rural/tribal water systems: the Fort Peck Assiniboine & Sioux Rural Water Supply System (ASRWSS) and the Mni Wiconi Rural Water Supply System (MWRWSS).”

“The possibility of a spill reaching either the ASRWSS intake near Poplar, Montana, or the MWRWSS intake in Pierre, South Dakota, is exceptionally remote due to the following factors: Based on the risk assessment in Appendix P of the FEIS and the consequence analysis by Exponent 2013, a distance of at least 10 miles downstream from the proposed pipeline was recommended for the identification of sensitive resources that could be affected by a release from the proposed pipeline. A buffer distance of 10 miles downstream has been selected for impact evaluation in the FEIS and Final Supplemental EIS process. Residual crude oil spill materials such as tar balls could travel farther than 10 miles but would not have a widespread effect on surface water resources. The distance from the pipeline crossing to the ASRWSS intake is over 70 miles, and the MWRWSS intake is over 100 miles, both of which are significantly beyond the proposed Project impact assessment buffer. Additionally, depending upon the width of the individual stream crossing and including an additional 500-foot buffer distance from each stream bank, a release event probability is estimated to be one in 18,000 years to one in 47,500

years.

Conditions specific to the MWRWSS are:

- The Lake Oahe reservoir and dam are upstream of the intake and provide a significant barrier to a spill plume or residual material reaching the MWRWSS intake.
- The distance from the pipeline crossing to the Bad River confluence with the Missouri River is 44 miles. The MWRWSS intake is on the Missouri River and more than 3 miles upstream from the confluence with the Bad River.”

FSEIS 4.13 Water Resources pg. 4.3-19

In the unlikely event of a leak, petroleum hydrocarbons generally do not move more than 300 feet through the subsurface and substantive movement takes months to years offering ample time for emergency response and containment. Therefore, impacts to private and public wells are not anticipated. Further, in the unlikely event of a spill occurring, Keystone will comply with the South Dakota Public Utilities Commission order (Condition of Permit #46):

"In the event that a person's well is contaminated as a result of construction or pipeline operation, Keystone shall pay all costs associated with finding and providing a permanent water supply that is at least of similar quality and quantity; and any other related damages, including but not limited to any consequences, medical or otherwise,

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related to water contamination.”

13. Pursuant to Conditions Eight, Thirty-Four, Thirty-Five, and Thirty-Nine, describe Keystone's spill plan with regard to crude oil in and around the proposed Cheyenne River and Bridger Creek HDD crossings.

ANSWER: Please refer to the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan; Emergency Response Plan. Site specific Emergency Response Plan has not been updated to include KXL.

14. Pursuant to Conditions Eight, Thirty-Four, Thirty-Five, and Thirty-Nine, describe Keystone's spill plan with regard to Benzine in and around the proposed Cheyenne River and Bridger Creek HDD crossings.

ANSWER: Please refer to the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan; Emergency Response Plan. Site specific Emergency Response Plan has not been updated to include KXL.

15. Pursuant to Conditions Eight, Thirty-Four, Thirty-Five, and Thirty Nine, has Keystone consulted with or notified the Mini Waste Water Company or the Cheyenne River Sioux Tribe's Environmental Protection Department regarding an emergency spill response?

ANSWER: Condition 8, condition 34, condition 35, and condition 39 of the Amended Final Decision and Order do not contemplate consultation with or notice to the

Mni Waste Water Company or the Cheyenne River Sioux Tribe.

16. Pursuant to Condition Eight, Thirty-Four, Thirty-Five, and Thirty-Nine, identify all local emergency spill response agencies or assets in or around the proposed Cheyenne River and Bridger Creek HDD crossing areas.

ANSWER: Please refer to the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan; Emergency Response Plan. Site specific Emergency Response Plan has not been updated to include KXL.

17. Pursuant to Conditions Eight, Thirty-Four, Thirty-Five, and Thirty-Nine, what would be the approximate detection time for a spill in or around the proposed Cheyenne River and Bridger Creek HDD crossing areas? From the time a spill is detected, how long before the pipeline would be shut down?

ANSWER: The Real Time Transient model is capable of detecting a leak down to 25% to 30% of pipeline flow rate in less than 2 minutes. The SCADA system, in conjunction with Computational Pipeline Monitoring or model-based leak detection systems, would detect leaks to a level of approximately 1.5 to 2 percent of the pipeline flow rate within 102 minutes. [DOS FEIS Chapter 4 section 4.13.2]. If pressure, flow, and temperature sensors, in combination with software, detected a deviation exceeding a threshold, an alarm would sound and the control room would enter a 10-minute evaluation window. No later than 10 minutes, if the evaluation is indeterminate at the

end of the window or a potential leak is confirmed, the control room would shut down the pipeline. [DOS FEIS Chapter 4 section 4.13.2].

18. Pursuant to Conditions Eight, Thirty-Four, Thirty-Five, and Thirty-Nine, what non-local emergency spill response agencies or assets might be required should there be a spill in or around the proposed Cheyenne River and Bridger Creek HDD crossing areas? If there are any required non-local emergency spill response agencies or assets, what would be the approximate on-site response time to a spill in or around the proposed Cheyenne River and Bridger Creek HDD crossing areas, from the time the leak is first detected?

ANSWER: Please refer to the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan; Emergency Response Plan. Site specific Emergency Response Plan has not been updated to include KXL.

19. Pursuant to Condition Ten, describe Keystone's plans to train local emergency responders.

ANSWER: Keystone will conduct Emergency Response Training prior to commencing operations. After the pipeline is operational, TransCanada reaches out to first responders at least annually via our public awareness program which includes as a baseline our contact info, where our pipeline is, and how to respond. Additionally, we conduct exercises and training sessions annually to which first responders are invited to

attend and participate. Training and exercises include ICS, table top, deployment and full scale exercises. Our exercise planners are required to invite first responders to full scale exercises, which includes the development of an incident management team and the simultaneous deployment of equipment resources to proximate a real event. These exercises are conducted in various locations along the pipeline system.

20. Pursuant to Condition Ten, does Keystone include the Cheyenne River Sioux Tribe and/or the Mni Waste Water Company on its list of first notification of each spill from the Base Keystone Pipeline?

ANSWER: Parties that are affected by a spill will be notified.

21. Pursuant to Conditions One and Two and Keystone's Answer to number thirty-four of the Tribe's First Set of Interrogatories, does Keystone admit that a spill in or around the proposed Bridger Creek HDD crossing area might interfere with the Tribe's federal water rights, guaranteed by *Winters v. The United States*, 207 U.S. 564 (1908) and its progeny?

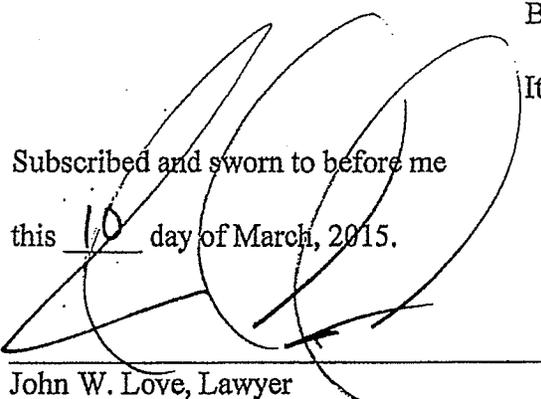
ANSWER: The question cannot be answered in the manner posed. *Winters v. The United States*, 207 U.S. 564 (1908) and its progeny establish the principle that the United States impliedly reserved, for the benefit of the Cheyenne River Sioux Tribe, rights to waters within and riparian to the boundaries of the reservation, without regard to state law. The Winters Doctrine assures the tribe of the beneficial use of those waters.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public – Canada

REQUESTS FOR PRODUCTION OF DOCUMENTS

1. All documents relied upon by the witnesses listed in Keystone's Answer in forming their opinions.

OBJECTION AND RESPONSE: This request is overlybroad and unduly burdensome. Keystone identified responsive documents in its earlier answers, many of which are available online. Keystone produced other responsive documents. This request does not ask for any specific documents other than documents identified as part of these responses.

2. All non-privileged documents regarding emergency spill response plans, assets, agencies, or training regarding the proposed Bridger Creek HDD crossing area. Conditions Eight, Thirty-Four, Thirty-Five, and Thirty-Nine.

OBJECTION AND RESPONSE: This request is overlybroad, unduly burdensome, and seeks information that is confidential and proprietary. Without waiving the objection, please refer to the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan; Emergency Response Plan. Site specific Emergency Response Plan has not been updated to include KXL.

3. All non-privileged documents relating to communication(s) between Keystone and the Mni Waste Water Company. Condition Six.

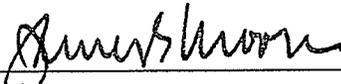
RESPONSE: Keystone has not been able to locate any documents responsive to this request.

OBJECTIONS

The objections stated to Cheyenne River Sioux Tribe's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

By 

William Taylor
James E. Moore
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Cheyenne River Sioux Tribe's Second Interrogatories and Request for Production of Documents, to the following:

Tracey A. Zephier
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tzephier@ndnlaw.com



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

INTERROGATORY NO. 91. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

[Applicable Finding or Condition No.: all]

ANSWER: Jon Schmidt, whose identity was disclosed in the responses to COUP's initial interrogatories, provided information in response to Interrogatory No. 101. Keystone answered the other interrogatories based on information it previously provided.

INTERROGATORY NO. 92. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

[Applicable Finding or Condition No.: all]

ANSWER: Yes, to the extent reasonably practicable given the scheduling order.

INTERROGATORY NO. 93. Given that over 4 years have elapsed since initial permitting in this matter, does TransCanada deny that, in the United States alone, the oil and gas pipeline Industry has witnessed over 150 documented and reported incidents of major faults, failures, ruptures, spills, and fatal explosions in the operation of oil and gas

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pipelines and their associated facilities/technologies? [Applicable Finding or Condition No.: all]

OBJECTION: This request is argumentative and assumes facts not in evidence.

INTERROGATORY NO. 94. Please explain what lessons TransCanada has learned and what changes and/or improvements TransCanada has made with regard to pipeline technologies, design and operations to its proposed project since its original permit was issued.

[Applicable Finding or Condition No.: All, but particularly, Finding 64; Conditions 31-38]

ANSWER: Lessons learned are incorporated through changes to Keystone's CMR Plan, the current draft of which is attached to Exhibit C to Keystone's certification petition as Attachment A.

INTERROGATORY NO. 95. Does TransCanada deny that any industry-level lessons or improvement have been identified or developed since the Keystone XL pipeline permit was originally issued? If not, please identify and describe, any industry-level lessons or improvements which have come to light over the past 4 year that TransCanada has considered, but decided not to incorporate, apply or implement to the proposed Keystone project, and explain why such a determination was made.

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[Applicable Finding or Condition No.: All, but particularly, Finding 64; Conditions 31-38]

ANSWER: No. See answer to Interrogatory No. 95. Keystone is not aware of any “improvements” in the industry that it has affirmatively decided not to incorporate or apply to the Keystone XL project.

INTERROGATORY NO. 96. Does TransCanada deny that any safeguards have been developed against pipeline threats? If not, please describe any safeguards developed and proposed to be deployed to address pipeline threats and identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 64; Conditions 31-38]

ANSWER: No. TransCanada actively funds and participates with Industry in the evaluation and development of leak detection technologies to augment our current systems. Examples of this effort include:

1. New Generation of Rarefaction Wave Leak Detection

This technology utilizes negative pressure waves generated to detect the onset of a leak. These waves travel from the origination point down both directions of the pipeline through the pipeline fluid at the speed of sound of the fluid medium and attenuate over distance as they travel. Dynamic pressure sensors installed at facilities with power and communication accesses (pump stations, mainline valves, etc.) can then measure these pulsations and detect the start of a leak and locate the leak by calculating the difference of arrival time of the pulsations at the two ends of the pipeline section.

2. In Line Inspection Leak Detection

An acoustic In Line Inspection (ILI) tool that is launched and received on a periodic basis like any other In Line Inspection (ILI) tool and is propelled by the commodity in the line. This technology claims to be able to detect leaks smaller than the current threshold of CPM systems; however, detection only occurs as the tool passes the leak location and is therefore not a continuous real time monitoring system.

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3. Infrared thermal camera for facilities

The camera based leak detection technology functions by employing Infrared and color video cameras to detect temperature differences between objects of interest and the surrounding environment. Software analytics then attempt to determine whether the detection constitutes a leak or an environmental transient such as a wild animal, weather or other event (snow, rain, etc.). In the event of a detected leak, confirmation can be obtained through color cameras and real time notifications would be sent the Control Center and/or control room as pre-specified. This technology is still its infancy.

4. Aerial or Ground Patrol Leak Detection

This is a transportable leak detection technology designed for aerial or ground. This technology takes advantage of the difference of light absorption rates between the atmosphere and hydrocarbon vapors to detect hydrocarbon leak. Performance depends on the selected spectrum band, visible or non-visible, and the analysis algorithm vendors choose.

5. Cable Based External Leak Detection Systems

Cable based leak detection systems are buried along the pipeline to provide external means of leak detection. Different cable based technologies apply different physical principles to detect phenomena accompanying a leak as temperature change (DTS), leakage caused sound and vibration (DAS), and existence of hydrocarbon liquid (HSC) or hydrocarbon vapor molecules (VST) outside the pipe. These can be used as independent means of detection outside of the mass balance CPM systems. Despite its long history of use for leak detection at oil and gas facilities and pipeline security, application for leak detection on long-haul transmission pipelines is a recent emerging development.

Some of the above technologies are in a state of development, while others are commercially available today yet their practical application to long haul transmission pipelines such as Keystone XL has not been established. As part of our commitment to safety, TransCanada continues to evaluate these new and evolving leak detection technologies to potentially augment the best in class leak detection capabilities of our current system and for potential implementation on new pipelines including Keystone XL.

INTERROGATORY NO. 97. Does TransCanada deny that a tar sands shale oil spill can be more harmful to the environment and people than a conventional oil spill?

Please explain your answer and list any scientific study(ies) providing the basis for your
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answer.

[Applicable Finding or Condition No.: Amended Condition 31-42]

ANSWER: See answer to COUP Interrogatory No. 4, which poses the same questions.

INTERROGATORY NO. 98. Does TransCanada deny that tar sands oil differs significantly from conventional crude?

- A. If not, do you agree that tar sands oil is a lot stickier than conventional crude?
- B. If not, do you agree that tar sands oil is a lot more volatile than conventional crude?
- C. If not, do you agree that tar sands oil is a lot more caustic than conventional crude?

Please explain your answer and identify any known scientific study(ies) providing the basis for your answer.

[Applicable Finding or Condition No.: Amended Condition 31-42/]

ANSWER: Physical characteristics of diluted bitumen are comparable to heavy conventional crude oil and consequently remediation costs would be anticipated to be equivalent. Diluted bitumen (API gravity of approximately 20-22) is heavier than light conventional crude oils (API gravity of approximately 35 to 40), but is consistent with

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heavy conventional crude oils (API gravity of approximately 19-22). All have API gravities greater than 10, indicating that the oils will float if released into water. The physicochemical properties and environmental fate of diluted bitumen are the same as that of heavy conventional crude oils. Thus, leaks and spills of diluted bitumen would not be expected to result in greater remediation expenses. A number of scientific studies have been conducted on the environmental fate and effects of diluted bitumen and other heavy crude oils, including:

Environment Canada. 2013. Properties, Composition and Marine Spill Behaviour, Fate and Transport of Two Diluted Bitumen Products from the Canadian Oil Sands. Federal Government Technical Report.

Rymell, Matthew. 2009. RP595 Sunken and submerged oils – behavior and response. February 2009. BMT Cordah. Available from: http://www.dft.gov.uk/mca/s_mca_019_sunken_and_submerged_oils_final_report_270209_pub_1.pdf

SL Ross. 2012. Meso-scale Weathering of Cold Lake Bitumen/Condensate Blend. SL Ross Environmental Research Limited. Ottawa, Ontario.

A. Keystone does not agree with this statement. The physicochemical properties and environmental fate of diluted bitumen are the equivalent of heavy conventional crude oils. Thus, leaks and spills of diluted bitumen would not be expected to result in greater harm to the environment and public. A number of scientific studies have been conducted on the composition, environmental fate, and effects of diluted bitumen, including:

Been, J. 2011. Comparison of the Corrosivity of Dilbit and Conventional Crude.

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Alberta Innovates – Technology Futures.

Environment Canada. 2013. Properties, Composition and Marine Spill Behaviour, Fate and Transport of Two Diluted Bitumen Products from the Canadian Oil Sands. Federal Government Technical Report.

SL Ross. 2012. Meso-scale Weathering of Cold Lake Bitumen/Condensate Blend. SL Ross Environmental Research Limited. Ottawa, Ontario.

B. The volatility of crude oils is dependent upon the concentrations of light constituents (e.g., alkanes, BTEX) within the oil. The concentrations of these constituents within diluted bitumen are similar to those of heavy conventional crude oils. Thus, the volatility of diluted bitumen is not significantly different than other heavy crude oils.

Crude Monitor. 2015. Crudemonitor.ca. Website accessed 22 Jan 2015. Website: <http://www.crudemonitor.ca/home.php>.

C. Keystone does not agree with this statement. The physicochemical properties and environmental fate of diluted bitumen are the equivalent as that of heavy conventional crude oils. A number of scientific studies that have investigated the corrosivity of diluted bitumen and have concluded that diluted bitumen is not more corrosive to pipelines transportation than other crudes, include:

Been, J. 2011. Comparison of the Corrosivity of Dilbit and Conventional Crude. Alberta Innovates – Technology Futures.

Transportation Research Board. 2013. Effects of Diluted Bitumen on Crude Oil Transmission Pipelines. National Academy of Sciences.

INTERROGATORY NO. 99. Does TransCanada deny that for tar sands oil, once leaked or spilled onto or into the ground, that everything it touches, even rocks, cannot be

cleaned and need to be removed and disposed of? Please explain your answer and list any scientific study(ies) providing the basis for your answer for tar sands oil spilled/leaked have been successful?

A. Identify the Documents created by or on your behalf that would show the basis for your answer to this Interrogatory.

[Applicable Finding or Condition No.: Amended Condition 32-38]

ANSWER: Due to the volatility of many crude oil constituents (e.g., BTEX), a significant portion of crude oil will evaporate soon after being released to the environment. Fate modeling of diluted bitumen indicates that approximately 20% of released crude oil would evaporate within 6 hours of a spill (NOAA 2015). Additional processes such as photodegradation and biodegradation also naturally decrease the volume of crude oil in the environment. Thus, a significant fraction of the discharge volume of a crude oil spill would not be available for recovery due to these natural weathering processes.

If there is an accidental release from the proposed Project, Keystone would implement the remedial measures necessary to meet the federal, state, and local standards that are designed to help ensure protection of human health and environmental quality.

Cleanup standards for the state of South Dakota are available in the South Dakota Department of Environment and Natural Resources' Petroleum Assessment and Cleanup

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Handbook (http://denr.sd.gov/des/gw/spills/handbook/hand_book.aspx). Additional information on remediation is presented in Section 4.13 of the FSEIS, Potential Releases.

NOAA. 2015. ADIOS2. Oil Spill response tool – documentation.
<http://response.restoration.noaa.gov/adios>

INTERROGATORY NO. 100. Does TransCanada deny that there exists a Public Trust Doctrine under the laws of South Dakota?

A. If not, please provide your understanding of the Public Trust Doctrine insofar as it would be relevant to any past or current TransCanada projects?

B. Does TransCanada deny that it has an obligation to honor and observe the Public Trust Doctrine under the laws of the state of South Dakota with regard to this project?

C. If not, please provide information as to how TransCanada proposes to observe or incorporate the Public Trust Doctrine in its proposed plans protecting the air, water, and other natural resources and the public trust therein from pollution, impairment, or destruction;

D. Further, please provide information as to TransCanada's understanding of the federal trust responsibility and what obligations TransCanada may have with regard to recognizing and protecting tribal trust resources while acting under the authority of any and all federal permits;

E. Please explain your answer and list and provide any documents that would show the basis for your answer. [Applicable Finding or Condition No.: Amended Condition 32-38]

ANSWER:

100a): Keystone acknowledges that the Public Trust Doctrine is recognized in the law of South Dakota. *See Filsrand v. Madson*, 35 S.D. 457, 152 N.W. 796 (1915) and its progeny. The Public Trust Doctrine as embodied in South Dakota law addresses the state's responsibility for lands, waters, and resources it holds in trust for the public.

100b). Keystone acknowledges that it must "honor and observe" the laws of the State of South Dakota with regard to the project.

100c). Keystone is obligated to comport with the requirements of all state issued permits and all laws and regulations from which the permits derive.

100d). Keystone recognizes that the United States holds lands and other assets in trust for the sovereign but dependent tribal nations. Keystone is obligated to comport with the requirements of all federally issued permits and all laws and regulations from which the permits derive.

100e). See answers to 100 (a) through (d), above. State and federal laws and regulations governing the project are readily accessible to all parties. Keystone is not obligated to provide copies of governing statutes, rules, and regulations.

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INTERROGATORY NO. 101. Recognizing the TransCanada, in its response to previous Interrogatories, has repeatedly relied upon information published in the FSEIS, which is available at: <http://keystonepipeline-xl.state.gov/finalseis/index.htm>, please provide any information developed since the completion of the FSEIS with regard to:

A. With regard to geology, please provide full details on the stratigraphy, lithology, structure and soil matrix along the proposed pipeline route, and especially for any changes proposed changes in the route.

B. With regard to ground water hydrology — please provide the details on all the aquifers and their flow characteristics (permeability, porosity, etc.), depths, water quality, wells, users of wells, types of use for any route changes, pumping and shut-off points along the proposed route.

C. With regard to surface water hydrology, please provide the location of all waterways, water quality, stage throughout year, impoundments, lakes along the proposed route.

D. With regard to the overall ecosystem, please provide any additional information you may have for migratory pathways, wetlands, migration routes, water features, rare, endangered, sensitive habitats and species along the proposed pipeline route.

E. With regard to water use, during construction, operation and reclamation,

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for industrial, agricultural, domestic, commercial, government - uses of water of all types in the areas — please identify and describe the location for sources and discharge, use type, water quantity and quality along the proposed pipeline route.

F. With regard to meteorological data, please provide any and all changes in the nature, amounts and trends in precipitation, evapotranspiration, recharge, discharge areas and rates along the proposed pipeline route since the issuance of the original permit [Applicable Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103; Amended Condition 32-38]

ANSWER:

A. No additional information has been developed since the 2014 FSEIS in regard to geology since the FSEIS covers a wide swath along the route that includes the reroutes.

B. No additional information has been developed since the 2014 FSEIS in regard ground water hydrology. However, the analysis provided for the FSEIS covers specific conditions along the proposed pipeline route, as well as the regional large scale groundwater conditions and therefore covers the proposed reroutes.

C. The Project route in South Dakota with the inclusion of the minor route variation would still cross the same waterbodies identified in the 2014 SFEIS. Therefore the assessment of surface waters in Sections 3.3.3.2 (South Dakota Surface Water) and
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4.3.3.2 (Surface Water Impacts) in the 2014 FSEIS still apply.

D. Since the issuance of the 2014 FSEIS, the DOS has initiated an Informal Conference proceeding with the USFWS to discuss the recent federal listing under the Endangered Species Act of the Red Knot (federally-listed threatened) and for the northern long-eared bat which is currently proposed for listing under the Endangered Species Act. The Informal Conference proceedings are still ongoing and USFWS has not issued any type of evaluation or concurrence of a Conference Document which would be submitted by the DOS.

E. The final approval of water sources and allotted quantities of water per source that may be used by the Keystone for the Project Route in South Dakota will be identified by the SD Department of Environment and Natural Resources in their issued permit under the *South Dakota Notice of Intent and Certificate of Applicant Form to Receive Coverage Under the General Permit for Temporary Discharge and a Temporary Water Use Permit* that will be issued prior to construction.

The discharge locations for hydrostatic test water as permitted by the SD Department of Environment and Natural Resources:

Water Source	County	TRS Location
Little Missouri River	Harding	NW¼ T021N R002E Sec 04
Lake Gardner (Northeast)	Harding	SW¼ T019N R004E Sec 11
Lake Gardner (Southwest)	Harding	SE¼ T019N R004E Sec 15
North Fork Moreau River (North)	Butte	SW¼ T014N R009E Sec 12
North Fork Moreau River (South)	Butte	NW¼ T014N R009E Sec 13

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Cheyenne River (South Bank)	Pennington	NE¼ T006N R017E Sec 12
Cheyenne River (North Bank)	Pennington	NW¼ T006N R017E Sec 01
Bad River (South Bank)	Haakon	SW¼ T001N R025E Sec 03
Bad River (West)	Haakon	SE¼ T001N R025E Sec 04
Bad River (North Bank)	Haakon	NW¼ T001N R025E Sec 03
White River (South Bank)	Tripp	NW¼ T103N R078W Sec 28
White River (North Bank)	Lyman	SW¼ T103N R078W Sec 21

F. None of the Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103;

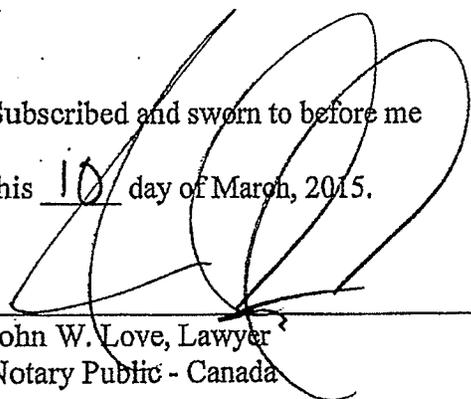
Amended Condition 32-38 address meteorological conditions.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.

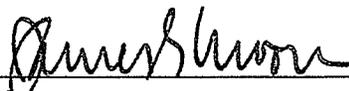

John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Intertribal COUP's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

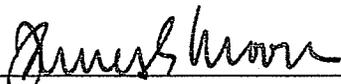
WOODS, FULLER, SHULTZ & SMITH P.C.

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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Intertribal COUP's Second Set of Interrogatories and Request for Production of Documents, to the following:

Robert P. Gough
Intertribal COUP
PO Box 25
Rosebud, SD 57570
BobGough@IntertribalCOUP.org



One of the attorneys for TransCanada

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

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IN THE MATTER OF THE APPLICATION	:	HP 14-001
BY TRANSCANADA KEYSTONE		
PIPELINE, LP FOR A PERMIT UNDER	:	KEYSTONE'S RESPONSES TO
THE SOUTH DAKOTA ENERGY		BOLD NEBRASKA'S SECOND
CONVERSION AND TRANSMISSION	:	INTERROGATORIES AND
FACILITIES ACT TO CONSTRUCT THE		REQUESTS FOR PRODUCTION
KEYSTONE XL PROJECT	:	OF DOCUMENTS
	:	

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Applicant TransCanada makes the following responses to interrogatories pursuant to SDCL § 15-6-33, and responses to requests for production of documents pursuant to SDCL § 15-6-34(a). These responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Bold Nebraska's Second Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. See ARSD 20:10:01:01.02.

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Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 67: For each person who you expect to call as a fact witness in Docket HP14-001, provide a description of the witness's educational background, specialized training, and employment history relevant to the witness's expected testimony and a description of all exhibits that the witness will attach to his or her testimony.

ANSWER: Resumes for Keystone's witnesses were previously produced as Keystone 1341-1374. Keystone has not yet identified its hearing exhibits, but will disclose them as required by order of the Commission.

INTERROGATORY NO. 68: Describe the information furnished by TransCanada to each fact witness for the purposes of his or her testimony.

ANSWER: Other than a copy of the discovery requests, TransCanada has not furnished any information to its fact witnesses for purposes of providing testimony in this proceeding. The witnesses have provided information used in answering discovery based on their work on the Keystone XL project.

INTERROGATORY NO. 69: With regard to Fact Paragraphs 14, 24, and 27, identify each person that has communicated an intention to TransCanada to construct infrastructure that would physically connect to and deliver crude oil into the Keystone XL

Pipeline in Montana, and provide a description of all communications and documents exchanged between TransCanada and such person or persons.

OBJECTION: The identity of Keystone's shippers has substantial commercial and proprietary value, is subject to substantial efforts by Keystone to protect it from actual and potential competitors, and is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. Moreover, the request is irrelevant and not likely to lead to the discovery of admissible evidence.

INTERROGATORY NO. 70: With regard to Fact Paragraphs 24, 26, and 27, identify the persons that own or control infrastructure that is physically attached to the Keystone XL Pipeline and capable of receiving crude oil delivered by the Keystone XL Pipeline, and the capacity of such attached infrastructure to accept delivery of crude oil from the Keystone XL Pipeline.

OBJECTION: The identity of Keystone's shippers has substantial commercial and proprietary value, is subject to substantial efforts by Keystone to protect it from actual and potential competitors, and is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. Moreover, the request is irrelevant and not likely to lead to the discovery of admissible evidence.

INTERROGATORY NO. 71: With regard to Condition Paragraphs 8, 34, 35, and 39, for the Keystone XL Pipeline provide an approximate elevation profile (elevation versus pipeline milepost) of the proposed pipeline capturing the segments from the nearest upstream pump

station west of the South Dakota state border to the nearest pump station south of the South Dakota state border.

OBJECTION: This request seeks information that is confidential for security reasons. The elevation profile for the pipeline is also not relevant or likely to lead to the discovery of admissible evidence.

INTERROGATORY NO. 72: With regard to Condition Paragraphs 8, 34, 35, and 39, on the elevation profile provided in response to Interrogatory No. 71, indicate the milepost locations for each pump station and each mainline valve that TransCanada proposes to include in the Keystone XL Pipeline, and for each mainline valve location state the type of mainline valve actuation (i.e. manual, automatic, or remotely operated).

OBJECTION AND ANSWER: This request seeks information that is confidential for security reasons. The milepost locations for each pump station and mainline valve are not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, each mainline valve located in South Dakota will be remotely operated.

INTERROGATORY NO. 73: With regard to Condition Paragraphs 8, 34, 35, and 39, for the Keystone XL Pipeline provide the maximum design flow rate and indicate the suction and discharge pressures at each pump station indicated on the elevation profile provided in response to Interrogatory No. 71.

OBJECTION AND ANSWER: The request for an elevation profile seeks information that is confidential for security reasons. Without waiving the objection, the

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maximum capacity of the pipeline is 830,000 bpd with a minimum suction pressure at the pump stations of 50 psig and a maximum discharge pressure of 1,307 psig.

INTERROGATORY NO. 74: With regard to Condition Paragraphs 8, 34, 35, and 39, on the elevation profile provided in response to Interrogatory No. 71 indicate the maximum operating pressure ("MOP") for the pipeline segments.

OBJECTION AND ANSWER: The request for an elevation profile seeks information that is confidential for security reasons. Without waiving the objection, in accordance with 49 CFR 195, Design Pressure, the mainline MOP will be 1,307 psig and at select locations downstream of pump stations, the MOP is 1,600 psig.

INTERROGATORY NO. 75: With regard to Condition Paragraphs 8, 34, 35, and 39, for the pipeline segments shown on the elevation profile provided in response to Interrogatory No. 71, describe the main equipment that comprises the Keystone XL Pipeline in these segments and the location of such equipment.

ANSWER: Please refer to the FSEIS 2.1 Overview of the Proposed Project, section 2.1.4, Aboveground Facilities.

INTERROGATORY NO. 76: With regard to Condition Paragraphs 8, 34, 35, and 39, for the pipeline segments shown on the elevation profile provided in response to Interrogatory No. 71, describe TransCanada's approach to remote determination of possible pipeline releases.

OBJECTION AND ANSWER: The request for an elevation profile seeks information that is confidential for security reasons. Without waiving the objection,

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TransCanada will utilize a state of the art Computational Pipeline Monitoring (CPM) leak detection system capable of identifying leaks down to the size of 1.5 to 2.0% of pipeline flow rate within a 2-hour window.

The Keystone pipeline will be monitored 24/7 by a dedicated Leak Detection controller within the Oil Control Center who is trained to identify and to respond to emerging events.

INTERROGATORY NO. 77: With regard to Fact Paragraph 50 and Condition Paragraphs 8, 34, 35, and 39, on the pipeline elevation profile provided in response to Interrogatory No. 71, indicate the approximate location of high consequence areas.

OBJECTION: The identity and location of High Consequence Areas is confidential and Keystone is required by PHMSA to keep this information confidential.

INTERROGATORY NO. 78: With regard to Condition Paragraphs 8, 34, 35, and 39, state whether or not TransCanada intends to operate the Keystone XL Pipeline in slack line (not liquid full) condition. If TransCanada does not intend to operate the Keystone XL Pipeline in slack line condition, provide a description of how TransCanada will design and control the pipeline to maintain non slack line condition.

ANSWER: TransCanada will not operate the line in slack conditions. Automated controls are in place to maintain minimum line pressures during operation.

INTERROGATORY NO. 79: With regard to Condition Paragraphs 8, 34, 35, and 39, provide an estimated range of the peak number of spill response workers that would be required to respond to a worst case discharge in South Dakota.

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ANSWER: Please refer to the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan; Emergency Response Plan Section 4. The number of positions/personnel required would depend on the size and complexity of the incident.

INTERROGATORY NO. 80: With regard to Fact Paragraph 18, describe the chemical composition and specifications for the fusion bonded epoxy ("FBE") coating applied to pipe segments to be used to construct the Keystone XL Pipeline in South Dakota.

ANSWER: The following is the chemical composition for the fusion bond epoxy: BISPHENOL A DIGLYCIDYL ETHER-BISPHENOL A COPOLYMER, CALCIUM SILICATE, 4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER, EPOXY RESIN-AMINE CONDENSATE, PIGMENT ADDITIVE, DICYANDIAMIDE, TITANIUM DIOXIDE, 4,4'-ISOPROPYLIDENEDIPHENOL, QUARTZ SILICA.

The specifications for fusion bond epoxy follow the manufacturer recommendations and industry standards.

INTERROGATORY NO. 81: With regard to Condition Paragraph 10, identify all persons, other than TransCanada or its employees or contractors, who provided notice to TransCanada of a spill from Base Keystone Pipeline.

ANSWER: The source of notification for each of the spills from the Base Keystone Pipeline is the Operations Control Center (OCC) or field based TransCanada operations personnel.

INTERROGATORY NO. 82: With regard to Fact Paragraphs 107 and 108, provide the amount of each annual tax payment made by TransCanada from 2009 to 2013 separately for each county crossed by the Base Keystone Pipeline that together total the \$14,122,951 figure provided in response to Bold Nebraska Interrogatory 59.

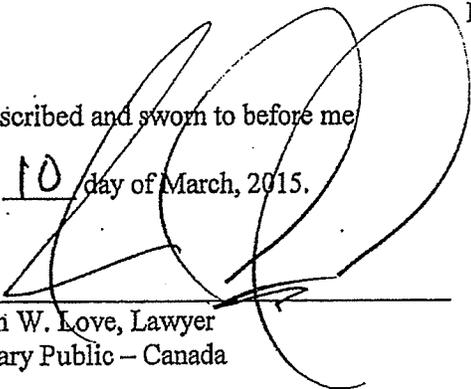
ANSWER: *See* documents attached as Keystone 0768-0773.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public – Canada

REQUESTS FOR PRODUCTION OF DOCUMENTS

REQUEST NO. 19: Provide a copy of each document furnished by TransCanada to each fact witness for the purposes of his or her testimony.

RESPONSE: TransCanada has not provided any documents to its fact witnesses for the purpose of providing testimony in this case. Keystone will identify its hearing exhibits as required by order of the Commission.

REQUEST NO. 20: With regard to Fact Paragraphs 14, 24, and 27, produce all documents exchanged between TransCanada and each person that has communicated an intention to TransCanada to construct infrastructure that would physically connect to and deliver crude oil into the Keystone XL Pipeline in Montana.

OBJECTION: The identity of Keystone's shippers has substantial commercial and proprietary value, is subject to substantial efforts by Keystone to protect it from actual and potential competitors, and is required to be maintained on a confidential basis pursuant to the terms of the contracts between Keystone and its shippers. Moreover, the request is irrelevant and not likely to lead to the discovery of admissible evidence.

REQUEST NO. 21: With regard to Fact Paragraphs 14, 24, 26, and 27, produce the Canadian Association of Petroleum Producers ("CAPP") 2015 supply forecast update released on or about January 21, 2015, all documents from CAPP describing such update, and all TransCanada documents that discuss such update.

OBJECTION AND RESPONSE: This request for all TransCanada documents discussing the forecast update is overlybroad and unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Without waiving the objection, the January 2015 Capital Investment & Drilling Forecast Update and the Short-term 2015/2016 Western Canadian Crude Oil Forecast Update are attached as Keystone 1637-1645.

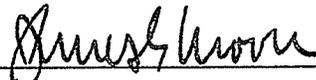
OBJECTIONS

The objections stated to Bold Nebraska's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

By _____



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James E. Moore

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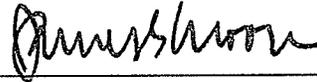
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Bold Nebraska's Second Interrogatories and Request for Production of Documents, to the following:

Paul C. Blackburn
PO Box 17234
Minneapolis, MN 55407
paul@paulblackburn.net



One of the attorneys for TransCanada

ANSWER: Sarah Metcalf provided correspondence in response to Interrogatory No. 7. Denisha Cummings, Land Manager, provided additional information about contact with Mike and Sue Sibson in response to Interrogatory No. 16 and 50.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable based on the scheduling order.

7. Provide all/full correspondence, filed against/or with the public liaison officer to the landowners, Mike and Sue Sibson, 23782 426th Ave; Howard SD 57349, from 2009 to present date. The information that was provided earlier was duplicated and pages were missing.

ANSWER: Attached as Keystone 1646 through 1728 are e-mails with Mike and Sue Sibson maintained by Sarah Metcalf. Keystone does not know what pages are believed to be missing from its earlier production.

16(h). Rock – Provide any/and full correspondence/complaints with landowners, Mike and Sue Sibson about rock issues, from 2009 to present date. The information that was provided earlier was duplicated and pages were missing.

ANSWER: See Keystone's previous response to this Interrogatory. Keystone does not know what pages are believed to be missing from its earlier production.

(m) Provide list of original native grasses of landowner, Mike and Sue Sibson and what was used to reseed ROW for landowners, Mike and Sue Sibson from 2009 to present date.

ANSWER:

Native Grass Seed Mix 12/2/2010

Northern Mixed Grass Prairie (NMG)

Scientific Name	Common Name	Variety
<i>Bouteloua curtipendula</i>	Sidoats grama	Killdeer, Pierre, Butte
<i>Bouteloua gracilis</i>	Blue grama	Bad River
<i>Andropogon gerardii</i>	Big bluestem	Sunnyview, Bison, Bonilla
<i>Schizachyrium scoparium</i>	Little bluestem	Badlands, Itasca, Taylor
<i>Stipa comata</i>	Needle-and-thread	Common
<i>Stipa viridula</i>	Green needlegrass	Lodorm, AC Mallard

(n) Provide all/full correspondence with landowners, Mike and Sue Sibson regarding their concerns on protecting their livestock, from 2009 to present date.

ANSWER: See Keystone's previous response to this Interrogatory. Keystone has no other responsive documents.

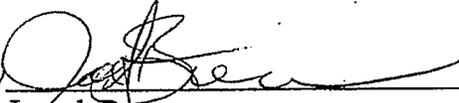
50. Provide all/full complaints filed by landowners, Mike and Sue Sibson against TransCanada, from 2009 to present date. The information that was provided earlier was duplicated and pages were missing.

{01840491.1}

ANSWER: *See* Keystone's previous response to this Interrogatory. Keystone does not know what pages are believed to be missing from its earlier production.

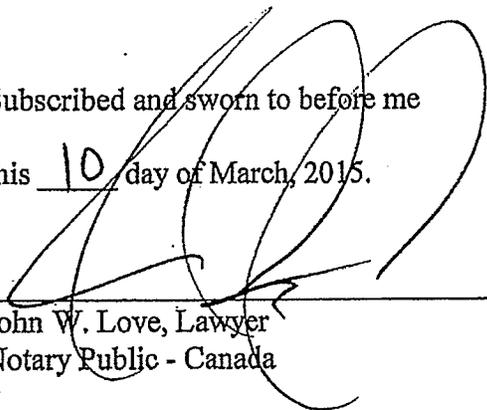
Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 10 day of March, 2015.

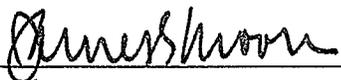

John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Byron Steskal and Diana Steskal's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

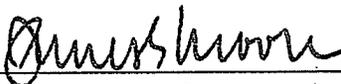
WOODS, FULLER, SHULTZ & SMITH P.C.

By  _____
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission,
a true and correct copy of Keystone's Responses to Byron Steskal and Diana Steskal's
Second Interrogatories and Request for Production of Documents, to the following:

Byron and Diana Steskal
707 E. 2nd Street
Stuart, NE 68780
prairierose@nntc.net



One of the attorneys for TransCanada

ANSWER: A number of different people assisted in providing answers to these interrogatories. Keystone previously disclosed the identity of the persons whose prefiled testimony will be provided before the hearing.

2. Re. Condition #36---Does TransCanada have a documented emergency medical response plan for this project?

ANSWER: Not at this time. The current Keystone Pipeline Emergency Response Plan (ERP) will be amended to include Keystone XL Project.

3. Re. Condition #36---Do your drills for cleaning up spills include scouring beds of water bodies for submerged oil?

ANSWER: No, scouring beds of water bodies for submerged oil is a specialized technique performed by an experienced contractor. Based on the assessment of an actual incident this could be one of many techniques implemented. Training and exercises include ICS, table top, deployment and full scale exercises. Our exercise planners are required to invite first responders to full scale exercises which include the development of an incident management team and the simultaneous deployment of equipment resources to proximate a real event. These exercises are conducted in various locations along the pipeline system.

4. Re. Condition #36---What communication has there been from TransCanada to Indian Health Services and South Dakota health care facilities regarding

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tar sands oil information, KXL spill scenarios, and staff training for treating victims exposed to tar sands spills?

ANSWER: TransCanada has provided educational information to possible affected public, elected officials, excavators and first responders. This educational material comes in the form of a pamphlet and is titled Oil Pipeline for Emergency Responders. A copy is marked as Keystone 1523-1538.

5. Re. Condition #36---How has TransCanada prepared the South Dakota medical community for spills from this project?

ANSWER: TransCanada has provided educational information to possible affected public, elected officials, excavators and first responders. This educational material comes in the form of a pamphlet and is titled Oil Pipeline for Emergency Responders. A copy is marked as Keystone 1523-1538.

6. Re. Fact #107d---Please further explain and clarify your reply in my first set of interrogatories: "Keystone has not asserted that the project would have 'no impact' on the health, safety and welfare of South Dakota." Does this mean there are potential impacts on the health, safety and welfare of South Dakota residents? What are these potential impacts on the health, safety and welfare of South Dakota residents?

ANSWER: The potential impacts of the Keystone XL project on the health, safety, and welfare of South Dakota residents are addressed in Keystone's permit

application filed in Docket HP09-001, and were addressed by the Commission in the Amended Final Decision and Order dated June 29, 2010.

7. Re. Condition #35---Please explain how the reroute across the High Plains Aquifer in Tripp Co. improved the safety for those depending on that water? Does the reroute still cross the aquifer? Specifically, describe the reroute.

ANSWER: Yes, the route crosses the High Plains Aquifer. Route variations in Tripp County were not due to the aquifer but pertained to landowner and constructability issues. Route variation maps were previously provided.

8. Re. Fact #107e---You try to avoid areas of dense population. Is the reason for this because less number of people at risk? What specifically is your reason for avoiding areas of dense population?

ANSWER: Pipeline routing is an iterative process and takes into consideration numerous aspects: pipeline route length and overall project footprint, public safety, environmental constraints, population density, land-use compatibility, optimization with other industrial infrastructure, constructability limitations and regulatory constraints. Areas of urbanization are avoided to the extent practicable as these locations pose a challenge during construction and operational activities due to work space constraints, congestion and disruption to the public. Avoidance of urbanized and densely populated

areas is also a primary mitigation to the risk of damage to the pipeline due to excavation activities by others.

9. Re. Condition #36---Has TransCanada considered that benzene plumes in flowing water could cause contamination of public water plants?

ANSWER: TransCanada has considered downstream receptors in its analysis per Special Condition 14. Please refer to Department of State SFEIS Appendix P Risk Assessment Section 4.0 Consequences of a Spill.

10. Re. Condition #34---What information has TransCanada provided to residents who live in a high consequence area about the increased risks associated with that designation?

ANSWER: TransCanada's Public Awareness Program is designed to increase awareness of pipeline safety to protect the public, environment and TransCanada facilities. The PA Program reaches out to affected public, excavators/contractors, emergency officials and local and the local public to ensure they are engaged and educated about living and working safely near TransCanada facilities. This includes awareness of areas that have been defined as high consequence areas.

11. Re. Condition #36b---Is the pamphlet titled "Oil Pipeline for Emergency Responders", marked as Keystone the only medical information provided by TransCanada?

ANSWER: TransCanada is not a medical provider and does not provide medical information. The local medical authority has jurisdiction during an incident or emergency.

12. Re. Condition #35---Will TransCanada provide routine analyses of the aquifer water in Tripp County to assure the residents will not be poisoned from those expected/undetected leaks?

ANSWER: In the event of a release, TransCanada will work with the appropriate agencies to complete any required analysis.

13. Re. Condition #36---What education, training, information and/or preparation has TransCanada provided for water treatment plants using water from the Missouri River? What communication has taken place between TransCanada and water treatment systems which use water from the Missouri River?

ANSWER: TransCanada's Public Awareness Program is designed to increase awareness of pipeline safety to protect the public, environment and TransCanada facilities. The PA Program reaches out to affected public, excavators/contractors, emergency officials and local and the local public to ensure they are engaged and educated about living and working safely near TransCanada facilities.

14. Re. Finding of Fact #41---I had previously requested distances between tributaries and their confluence with the Missouri River. You provided a list, but failed

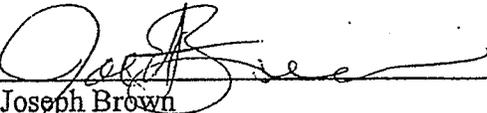
to include the Little Missouri River, Cheyenne River and the White River. I request this information again.

ANSWER: Listed in the table below are the distances from the KXL pipeline crossing of the three waterways requested to the Missouri River.

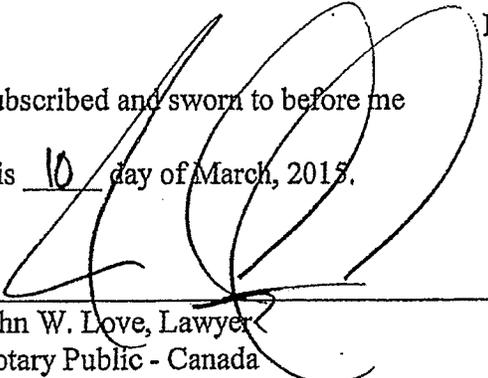
<u>Stream Name</u>	<u>Miles downstream to Missouri River</u>
Little Missouri River	384.2
Cheyenne River	89.5
White River	82.4

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Cindy Myers' Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

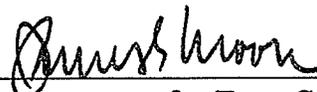
WOODS, FULLER, SHULTZ & SMITH P.C.

By 
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Cindy Myers' Second Interrogatories and Request for Production of Documents, to the following:

Cindy Myers, R.N.
PO Box 104
Stuart, NE 68780
csmyers77@hotmail.com



One of the attorneys for TransCanada

answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

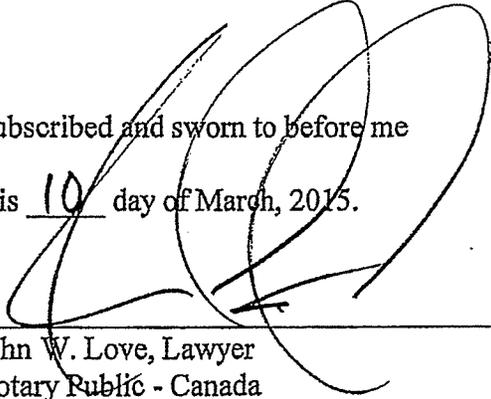
Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me

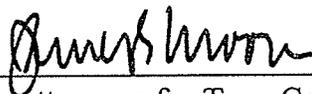
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Commission Staff's First Set of Interrogatories and Request for Production of Documents, to the following:

Kristen N. Edwards
Staff Attorney
South Dakota Public Utilities Commission
500 East Capitol Avenue
Pierre, SD 57501



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

1. Please identify the person or persons providing each answer to an Interrogatory and request for production of documents, or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation. Identify the names of each person, other than legal counsel, who assisted with providing the answers and request for production of documents, or portion thereof giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street

S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

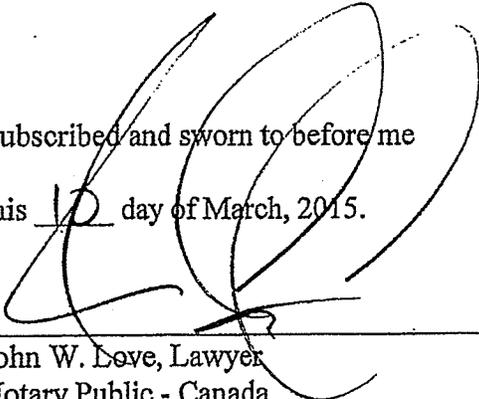
In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.

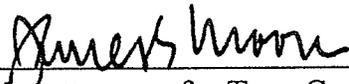


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Rosebud Sioux Tribe's First Interrogatories and Request for Production of Documents, to the following:

Matthew L. Rappold
PO Box 873
Rapid City, SD 57709
Matt.rappold01@gmail.com



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

1. State the name, current address, and telephone number of the person answering these interrogatories.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

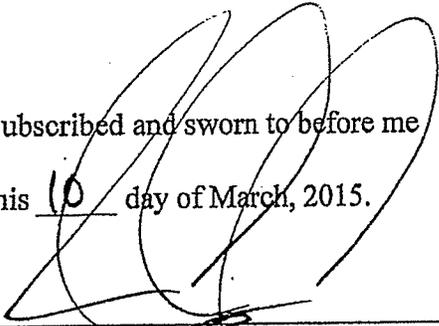
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Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

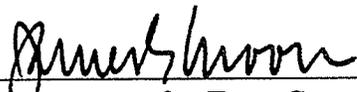
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this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Yankton Sioux Tribe's First Interrogatories and Request for Production of Documents, to the following:

Thomasina Real Bird
Fredericks Peebles & Morgan LLP
1900 Plaza Drive
Louisville, CO 80027
trealbird@ndnlaw.com



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

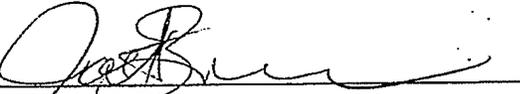
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Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

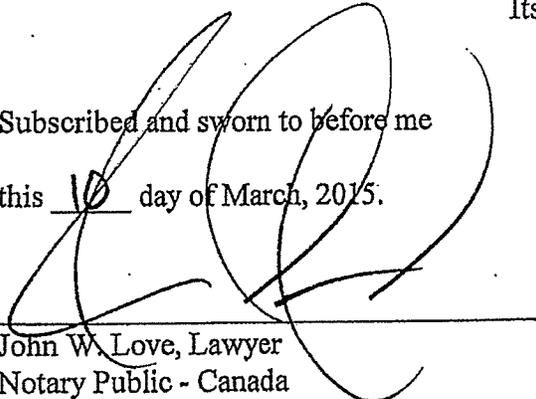
In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

Dated this 10 day of March, 2015:

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

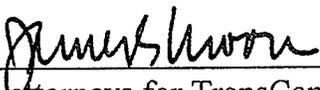
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John W. Love, Lawyer
Notary Public - Canada

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Byron and Diana Steskal
707 E. 2nd Street
Stuart, NE 68780
prairierose@nntc.net



One of the attorneys for TransCanada

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Cheyenne River Sioux Tribe's First Set of Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. *See* ARSD 20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

3. State the name, current address, and telephone number of every fact witness that Keystone intends to call to offer testimony at the Commission's evidentiary hearing, currently scheduled for May 2015.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; same; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility
- (5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441;

{01855170.1}

Environmental Issues; CMR Plan, Con/Rec Units, HDD's
(6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd.,
Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill
Calculations

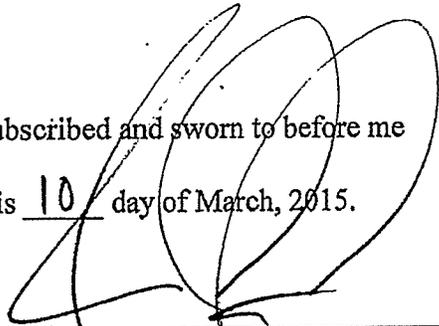
In addition to the witnesses previously identified, Keystone may offer rebuttal
testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding
tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding
SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as
Keystone 1930-1934.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.

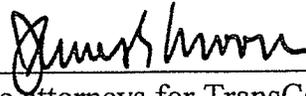


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Cheyenne River Sioux Tribe's First Interrogatories and Request for Production of Documents, to the following:

Tracey A. Zephier
Fredericks Peebles & Morgan LLP
910 5th Street, Suite 104
Rapid City, SD 57701
tzephier@ndnlaw.com



One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950
E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

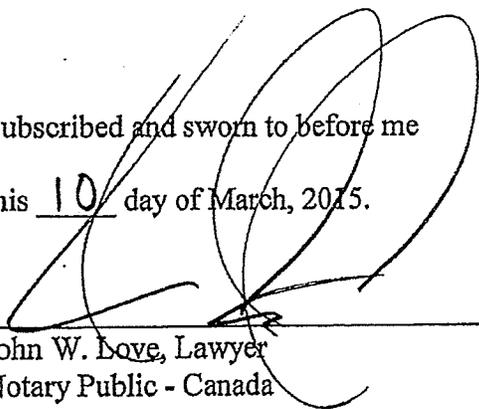
In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Dove, Lawyer
Notary Public - Canada

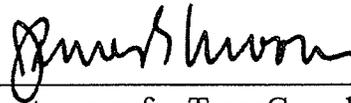
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CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Gary F. Dorr's First Interrogatories and Request for Production of Documents, to the following:

Gary F. Dorr
27853 292nd Street
Winner, SD 57580



One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. TransCanada has publicly stated through its Tribal Liaison with the United States, Calvin Harlan, that it has a process of reaching out to a tribe "as a priority." Calvin Harlan further said "First, TransCanada researches the tribal historical jurisdictions of each tribe along a proposed project. Next, meetings are set up with the tribe, providing TransCanada the opportunity to introduce themselves and explain their reason for meeting. Tribes are then advised of all project details, ensuring they understand that the project's goal is to have little effect on their traditional lands." This was reported in the online edition of The Vindicator at http://www.thevindicator.com/news/article_5c63b1ee-e643-11e2-ad3a-001a4bcf887a.htm.

Provide any and all documentation that TransCanada or Keystone complied with its publicly stated policy of consultation with Tribes and met with the Rosebud Sioux Tribal Council. The Tribe has a distinct National Government represented by an elected Tribal Council.

ANSWER: See Keystone Documents numbered 1122, 1129-30, 1135-1140, 1145-1146, 1148-1150, 1170-1181.

2. Provide any and all documentation that TransCanada or Keystone met with Rosebud Sioux tribal communities other than the Rosebud Sioux Tribal Council.

ANSWER: See Keystone Documents disclosed in answer to Interrogatory No. 1 above.

3. Provide any all documentation of any benefit or gift that was offered to Rosebud Sioux tribal communities as part of meetings with TransCanada or Keystone.

ANSWER: : See Keystone Documents disclosed in answer to Interrogatory No. 1 above, in particular Documents numbered 1135-1138 and 1170-72.

4. Provide proof of TransCanada's or Keystone's compliance with the United States Easement Agreements held in South Dakota County Recorders' Offices between the United States and South Dakota Landowners whose land the Oglala Sioux Rural Water Supply System crosses, whereby permission must be granted by the United States to cross the Oglala Sioux Rural Water Supply System, otherwise known as the "Mni Wiconi" water line.

OBJECTION AND ANSWER: Keystone objects to interrogatory number 4 on the grounds that it is argumentative, is an incorrect expression of law, and assumes facts not in evidence. Notwithstanding the objection and without waiving, the United States Department of Interior, acting through the Bureau of Reclamation, secured easements for the construction of the Oglala Sioux Rural Water Supply System core pipeline. Keystone's proposed route crosses the Oglala Sioux Rural Water Supply System core line in Haakon County and in Jones County. Discussions have been held between Keystone and the Bureau of Reclamation with respect to construction of the crossings and criteria governing the same.

5. Provide all easement agreements made by TransCanada or Keystone between TransCanada or Keystone and landowners on land where the Keystone XL pipeline will cross the Oglala Sioux Rural Water Supply System, otherwise known as the Mni Wiconi Waterline.

ANSWER: Responsive documents are attached as Keystone 1539-1564.

6. In TransCanada or Keystone's required criteria for crossing Reclamation facilities, TransCanada said "TransCanada shall receive OSRWSS and Reclamation's review and approval of crossing specifications and drawings prior to starting work, including on the cathodic protection design to assure it does not impact the OSRWSS Core System or its cathodic protection system." Provide proof that TransCanada or Keystone gained approval of crossing specifications from the Oglala Sioux Rural Water Supply System and the Bureau of Reclamation in accordance with TransCanada's or Keystone's own reclamation plan.

ANSWER: Keystone and the Bureau of Reclamation have agreed on crossing criteria. The Bureau of Reclamation has discussed the crossing criteria with both the executive and engineering staff of the Oglala Sioux Rural Water Supply System.

7. In the same Criteria for Crossing Reclamation facilities TransCanada said "OSRWSS has a buried fiber optic cable installed with its pipeline that was placed by plow; its precise location is unknown. The burial depth information provided on the drawings is for information purposes only. TransCanada shall undertake exploratory excavations (potholing) to determine the exact burial depth for both the OSRWSS core pipeline and fiber optic line prior to starting crossing designs and construction of their pipeline." Provide proof that TransCanada or Keystone has received permission from the United States to "undertake exploratory excavations (potholing)" inside the Oglala Sioux Rural Water Supply System Right of Way, whereby permission must be gained from both the United States and the Oglala Sioux Rural Water Supply System to disturb the ground, as stipulated in the Oglala Sioux Rural Water Supply System

Easement Agreement which was signed by the United States, and is held in a South Dakota County Recorder's Office.

ANSWER: The construction of the pipeline has not yet begun. Accordingly, Keystone has not yet asked to undertake exploratory investigations within the easements held by the Bureau of Reclamation. Keystone disagrees with the contention that permission must be gained from "both the United States and the Oglala Sioux Rural Water Supply System to disturb the ground."

8. Provide maps showing for every single place where the Keystone XL pipeline will cross a Core Line of the Oglala Sioux Rural Water Supply System, providing Latitude and longitude or Public Land Survey System information to identify those locations.

OBJECTION AND ANSWER: The request for latitude and longitude seeks information that is confidential for security reasons. Without waiving the objection, see the map marked as Keystone 1633.

9. Provide a map showing every single place where the Keystone XL Pipeline will cross a Branch of the Core Lines of the Oglala Sioux Rural Water Supply System, providing Latitude and longitude or Public Land Survey System information to identify those locations.

OBJECTION AND ANSWER: The request for latitude and longitude seeks information that is confidential for security reasons. Without waiving the objection, see the map marked as Keystone 1633.

10. Provide a map showing every single place where the Keystone XL Pipeline will cross the Core Lines of the Lyman-Jones Rural Water Supply System, providing Latitude and longitude or Public Land Survey System information to identify those locations.

OBJECTION AND ANSWER: The request for latitude and longitude seeks information that is confidential for security reasons. Without waiving the objection, see the maps marked as Keystone 1633.

11. Provide all easement agreements between TransCanada or Keystone and those landowners who have both the Oglala Sioux Rural Water System and will have the proposed Keystone XL Pipeline situated on their land and also have a previous easement agreement with the Oglala Sioux Rural Water Supply System.

ANSWER: Responsive documents are attached as Keystone 1565-1588.

12. Provide copies of all communication TransCanada has had with the Bureau of Reclamation regarding the Keystone XL pipeline crossing South Dakota.

OBJECTION AND ANSWER: To the extent that the responsive documents include a site-specific draft Emergency Response Plan for the Oglala Tribal Water Supply Pipelines, the request seeks information that is confidential and proprietary. Without waiving the objection, responsive documents are attached as Keystone 1729-1921.

13. Provide a map of all specific areas of frac-out along the Oglala Sioux Rural Water System Core and Branch Lines providing Latitude and longitude or Public Land Survey System information to identify those locations.

OBJECTION AND ANSWER: This interrogatory does not make sense. A frac-out is an unplanned event that may occur during horizontal directional drilling. Without waiving the objection, Keystone previously provided its HDD frac-out contingency plan to the Commission in Docket HP09-001 as part of Exhibit TC-17. Keystone does not plan to use HDD in connection with any crossing of Oglala Sioux Water System lines.

14. Provide a map showing where all areas of horizontal drilling will take place in South Dakota, providing Latitude and longitude or Public Land Survey System information to identify those locations.

OBJECTION AND ANSWER: The request for latitude and longitude seeks information that is confidential for security reasons. Without waiving the objection, see the maps marked as Keystone 1634.

15. Provide documentation showing proof that the Colome City Water Wells are upgradient from the Keystone XL Pipeline.

ANSWER: As discussed in the March 2009 Keystone XL Project Application to South Dakota Public Utilities Commission: "The Mellette County Reroute crossed directly through a groundwater Zone A SWPA near Colome, South Dakota. A reroute to the northeast will avoid, and by hydrologically down gradient from, the SWPA. As a result of the realignment, risk to the SWPA will be reduced to negligible levels." (TransCanada Keystone, LP 2009).

16. Provide copies of any lease, or easement agreement that been executed for the construction or use of a new substation or powerline on or through the Lower Brule Sioux Reservation.

ANSWER: Keystone has no responsive documents. It is up to the power provider to obtain necessary easements to provide power to pump stations or valve sites on the Keystone XL Pipeline.

17. Is construction of a new substation or powerline through the Lower Brule Sioux Reservation necessary for operation of the Keystone XL pipeline based on current plan or updates to the final decision and order HP09-001?

ANSWER: Unknown. It is up to the power provider to obtain necessary easements to provide power to pump stations or valve sites on the Keystone XL Pipeline.

18. Provide documentation of all spills or leaks on the southern leg of the Keystone XL pipeline.

ANSWER: Attached as Keystone 774-784 is a spreadsheet showing spills associated with the Keystone Pipeline. The following spills occurred on the Gulf Coast Project: December 20, 2013, Winnsboro; January 7, 2014, Bryan PS; January 24, 2014, Cromwell PS; March 19, 2014, Nederland; March 26, 2014, Nederland; March 27, 2014, Nederland; April 12, 2014, Cushing 01A valve; April 15, 2014, Nederland; June 3, 2014, Cushing; June 23, 2014, Cushing; July 7, 2014, Nederland; July 9, 2014, Bryan PS; July 9, 2014, Nederland; July 24, 2014, Nederland; July 29, 2014, Bryan PS; August 10, 2014, Nederland; August 12, 2014, Lufkin; August 27, 2014, Cushing; September 15, 2014, Cushing; October 2, 2014, Lucas Terminal; October 29, 2014, Lufkin PS; November 10, 2014, Nederland; January 13, 2015, Cushing; January 16, 2015, Cushing.

19. Describe the nature, circumstances, cause, and magnitude, and impact of each spill or leak and identify with specificity substances that were spilled or leaked from the Southern leg of the Keystone XL pipeline.

ANSWER: Please see the spreadsheet marked as Keystone 1635-1636.

20. Did Keystone or its contractors experience difficulty or problems with the welding of seams on the Southern Leg of the Keystone XL pipeline?

ANSWER: During 2013 construction a portion of the Gulf Coast Pipeline Project experienced a high weld reject rate upon start-up (first 3 weeks) of mainline manual welding of pipe joints.

21. If so, describe the nature and cause of the problems, how they were discovered, and describe what steps were taken to resolve the problems.

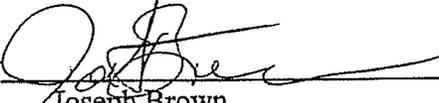
ANSWER: The nature of the issue was thoroughly investigated and found to occur when the weld bead did not fuse with the base metal. Key contributing factors that causes this type of weld defect were weld preparation and welding technique. The weld defects were discovered through the use of non-destructive examination performed on completed welds per Project specifications and Federal Code requirements. Any welds exhibiting defects as defined by API 1104 were removed and new welds made and examined. Final examination of welds was performed through the use of hydrostatic testing with no defects found. The Project implemented various changes during start-up such as use of mechanical end facing over manual facing to improve cleanliness of the pipe bevel, requiring line up clamps to remain on the pipe joints through completion of the first weld pass, adjustment of the weld gap, refinement (within the

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qualified ranges) of welding parameters (amps, volts and travel speed) and additional training of crews.

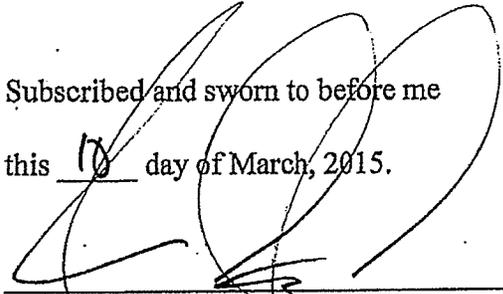
Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 10 day of March, 2015.

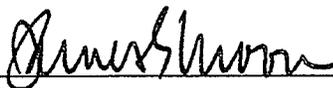

John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Gary Dorr's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

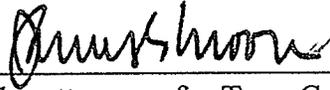
WOODS, FULLER, SHULTZ & SMITH P.C.

By 
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Gary F. Dorr's Final Interrogatories and Request for Production of Documents, to the following:

Gary F. Dorr
27853 292nd Street
Winner, SD 57580
gfdorr@gmail.com



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 1: References:

- (i) Findings 1, 19, 20, 33 in Appendix C - Tracking Table of Changes ("Appendix C")
- (ii) Amended Permit Condition 6 and 35
- (iii) Response 17 to Rosebud Sioux Tribe - Tribal Utility Commission ("RST") Information Request No. 1 ("IR No. 1"); RST Documents, Keystone 0470-0583.
- (iv) Response 39 to Bold Nebraska IR No. 1
- (v) Response 35 (g) to Cindy Myers IR No. 1.

Requests:

- a) For the most recent and accurate Project route (as described in ref (iii)) and facility locations, provide an approximate elevation profile of the proposed pipeline (elevation vs. pipeline milepost), capturing the segments from the nearest upstream pump station north of the state border to the nearest pump station just south of the state border.
- b) On the elevation profile provided above, indicate (1) the location of the pump stations, (2) the location of all mainline valves, including check valves, by milepost; (3) the type of mainline valve actuation (i.e. manual, automatic, or remotely operated); and (4) the location of all valves in reference to water crossings.
- c) According to Finding 20 and ref (iv), Keystone is proposing a number of changes to both the type of valves and their location since the PUC decision of June 29, 2010. Please list these changes and indicate them on the elevation profile requested above.
- d) For the maximum design flow rate (i.e. the updated maximum design flow rate of 830,000 bpd as per Finding 20), indicate the suction and discharge pressures at each pump station identified on the above elevation profile.
- e) On the provided elevation profile, indicate the maximum operating pressure ("MOP") for the pipeline segments.

- f) Superimpose a hydraulic profile on the provided elevation profile for the stated design capacity/operation.
- g) On the above pipeline elevation profile, indicate the approximate location of HCAs by milepost.
- h) If the information in (g) is confidential as indicated on IR no. 1 responses to other parties, please indicate (on the above pipeline elevation profile) the approximate location by milepost of (i) water crossings; (ii) the High Plains aquifer (Ogallala Formation) in Tripp County; (iii) other areas of unconfined aquifers including alluvial aquifers associated with streams, and occasional unconfined stretches in the Hell Creek, Fox Hills, and Pierre Shale aquifers (as per ref (v)); and (iv) any Karst Aquifers, which are crossed by the Project.
- i) If the information requested in (a) - (h) is not fully updated to incorporate all recent changes to the Project route (and to facilities and valves), please provide the information requested with an explanation of what pipeline routing it is based on (e.g. proposed route in Ex. TC-14 or another intermediate rerouting), when it was updated, and what rerouting was included.

ANSWER:

- 1a). OBJECTION. This request seeks information that is confidential for security reasons. It is also not relevant or likely to lead to the discovery of admissible evidence.
- 1b). OBJECTION AND ANSWER. This request seeks information that is confidential for security reasons. The milepost locations for each pump station and mainline valve are not relevant or likely to lead to the discovery of admissible evidence. Without waiving the objection, each mainline valve located in South Dakota will be remotely operated. Mainline valves and pump stations are discussed in Section 2.1.4.4 of the FSEIS.

- 1c). OBJECTION AND ANSWER: The request for an elevation profile seeks
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information that is confidential for security reasons. Without waiving the objection, all valve locations are in compliance with 49 CFR 195.260 and PHMSA Special Condition 32. Changes include remote control and actuation of any valves which were manually operated; the addition of backup power; and the addition/adjustment of intermediate mainline valve locations to ensure no more than a 20 mile spacing.

1d). OBJECTION AND ANSWER: The request for an elevation profile seeks information that is confidential for security reasons. Without waiving the objection, the minimum suction pressure at the pump station is 50 psig and a maximum discharge pressure of 1,307 psig.

1e). OBJECTION AND ANSWER: The request for an elevation profile seeks information that is confidential for security reasons. Without waiving the objection, in accordance with 49 CFR 195.106 Design Pressure the mainline MOP will be 1,307 psig and at select locations downstream of pump stations, the MOP is 1,600 psig.

1f). OBJECTION. This request seeks information that is confidential for security reasons. It is also not relevant or likely to lead to the discovery of admissible evidence.

1g). OBJECTION. The location of High Consequence Areas is confidential and Keystone is required by PHMSA to keep this information confidential.

1h). The Department of State FSEIS discusses the High Plains Aquifer and other aquifers in Chapter 3, Water Resources, Section 3.3.2. The mile posts of the aquifers

beneath the right of way are listed in Table 3.3-2.

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li). The responsive information provided is based on the current project route, including the route deviations previously provided.

INTERROGATORY NO. 2: References:

- (i) Finding 20 in Appendix C
- (ii) Response 39 to Bold Nebraska IR No. 1
- (iii) Draft Supplemental EIS, pp. 2.1-19-2.1-23
- (iv) Final Supplemental EIS, pp. 2.1-24-2.1-27.

Preamble:

In Finding 20, Keystone has confirmed that there will now be 20 mainline valves located in SD and that all of these valves will be remotely controlled. Valve placement for critical safety involves the placement of remotely controlled shut-off valves on either side of a critical water crossing, as well as a check valve for additional safety depending on downstream elevation profile.

Requests:

- a) Please list each of the 20 remotely controlled valves (and any additional check valves) and their location by milepost. Please indicate which of these locations are proximate to water crossings and identify the water crossing.
- b) For each critical water crossing, please confirm the placement of remotely controlled shut-off valves on either side of critical water crossings. If not, please explain why not.
- c) For each critical water crossing, please confirm the placement of a check valve. If not, explain why not.
- d) Given that all 20 mainline valves will be remotely controlled, does this imply that there are no more check valves planned? If yes, please explain the absence of check valves for additional safety on critical water crossings. If not, please confirm if there are check valves located at critical water crossings; and provide the location of the check valves.

e) According to refs (i)-(iv), Keystone is proposing a number of changes to both the {01844455.1}

type of valves and their location since the PUC decision of June 29, 2010. Please list these changes.

ANSWER:

- 2a). OBJECTION AND ANSWER. This request seeks information that is confidential for security reasons. The milepost location of valve sites is not relevant and not likely to lead to the discovery of admissible evidence. Without waiving the objection, please refer to the FSEIS 2.1 Overview of the Proposed Project, Section 2.1.4.4 Mainline Valves. All valve locations are in compliance with PHMSA Special Condition 32 and 49 CFR 195.260. Per 49 CFR 195.260 (e) valves are placed on each side of a water crossing that is more than 100 feet from high-water mark to high-water mark.
- 2b). All valve locations are in compliance with PHMSA Special Condition 32 and 49 CFR 195.260. Per 49 CFR 195.260 (e) valves are placed on each side of a water crossing that is more than 100 feet from high-water mark to high-water mark.
- 2c) All valve locations are in compliance with PHMSA Special Condition 32 and 49 CFR 195.260. Per 49 CFR 195.260 (e) valves are placed on each side of a water crossing that is more than 100 feet from high-water mark to high-water mark.
- 2d) No. Select valve site locations contain remotely operable mainline isolation valve and a check valve. These valve assemblies are placed in proximity downstream to major waterbodies.
- 2e) All valve locations are in compliance with 49 CFR 195.260 and PHMSA Special

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Condition 32. Changes include remote control and actuation of any valves which were manually operated; the addition of backup power; and the addition/adjustment of intermediate mainline valve locations to ensure no more than a 20 mile spacing.

INTERROGATORY NO. 3: Reference:

- (i) Findings 14 and 15, Appendix C.

Preamble:

According to Finding 14, the purpose of the Project has now been updated to include the transportation of domestic production from the Williston Basin. Moreover, according the Finding 15, the maximum capacity has changed from 700,000/900,000 bpd to 830,000 bpd.

Requests:

- a) Please provide a breakdown of the annual capacity of Keystone XL to move: (1) light crude; (2) medium crude; (3) heavy crude.
- b) Is the projected 830,000 bpd annual capacity of Keystone XL based on moving light crude, medium crude and heavy crude? If not, please explain and provide a breakdown of the types of crude on which the 830,000 bpd annual capacity figure is based.
- c) To the extent to which the annual capacity to move crude varies by type of crude (i.e. light, medium and heavy) as per Question b), please comment on the change in annual capacity for each type of crude from (i) the Project as originally permitted by the SD PUC on June 29, 2010 (which would have a nominal capacity of 700,000 bpd expandable to 900,000 bpd with additional pumping capacity) to (ii) the Project as currently proposed with a maximum capacity of 830,000 bpd.

ANSWER:

- (a) Keystone XL is designed to transport different grades of crude oil. Its annual average capacity is approximately 830,000 bpd.

(b) Yes. Keystone XL is designed to transport different grades of crude oil. Its annual average capacity is approximately 830,000 bpd.

(c) Keystone received additional commitments on Keystone XL Pipeline that would support an expansion of its total capacity from 700,000 barrels per day to 830,000 barrels per day.

INTERROGATORY NO. 4: References:

- (i) Findings 22, 60, 90, Appendix C
- (ii) Final Supplemental EIS, Appendix Z.

Preamble:

According to Finding 22, "The Project will be designed, constructed, tested, and operated in accordance with all applicable requirements, including the U.S. Department of Transportation, Pipeline Hazardous Materials and Safety Administration (PHMSA) regulations set forth at 49 CFR Part 195, and the special conditions developed by PHMSA and set forth in Appendix Z to the Department of State ("DOS") January 2014 Final Supplemental Environmental Impact Statement ("FSEIS"). These federal regulations and additional conditions are intended to ensure adequate protection for the public and the environment and to prevent crude oil pipeline accidents and failures."

According to Finding 60, "Keystone will implement 59 additional safety measures as set forth in the DOS Final SETS, Appendix Z. These measures provide an enhanced level of safety equivalent to or greater than those that would have applied under the previously requested Special Permit."

According to Finding 90, "The Keystone pipeline will be designed, constructed, tested and operated in accordance with all applicable requirements, including the PHMSA regulations set forth at 49 CFR Parts 194 and 195, and the 59 PHMSA Special Conditions as set forth in DOS Final SEIS, Appendix Z. These federal regulations and additional conditions are intended to ensure adequate protection for the public and the environment and to prevent crude oil pipeline accidents and failures."

Requests:

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- a) Will the pipeline operate in slack line (not liquid full) operation?
- b) If the pipeline will not be operated in slack line condition, how is the pipeline designed and controlled to maintain non-slack-line condition?
- c) How do the additional safety measures mentioned in ref (i) improve leak detection regardless of operating condition (non-slack-line or slack-line, if applicable)?
- d) Findings 22, 60, 90 refer to Keystone implementation of 59 PHMSA Special Conditions as set forth in ref (ii). According to ref (ii), pp. 95-107, Keystone has also committed to implement mitigation recommendations from the Battelle and Exponent risk assessment reports, including specifically addressing several issues in its Emergency Response Plan and Oil Spill Response Plan (and its risk analysis that is used in the development of those plans). Please explain what (if anything) Keystone has committed to in regard to implementation of mitigation recommendations from the Battelle and Exponent risk assessment reports, and how this affects Findings 22, 60, 90, and any other Findings.
- e) Findings 22, 60, 90 refer to Keystone implementation of 59 PHMSA Special Conditions as set forth in ref (ii). According to ref (ii), pp. 107-108, Keystone has also committed to a number of measures beyond the spill cleanup measures described above in ref (ii), including specifically addressing several issues in its Emergency Response Plan and Oil Spill Response Plan (and the detailed risk analysis used in developing those plans). Please explain what (if anything) Keystone has committed to in regard to additional spill cleanup measures, and how this affects Findings 22, 60, 90, and any other Findings.

ANSWER:

- 4a). TransCanada will not operate the line in slack conditions.
- 4b). Automated controls are in place to maintain minimum line pressures during operation.
- 4c). The Real Time Transient Model (RTTM) based Leak Detection System, installed and operated in line with the safety measures mentioned, helps to ensure state-of-the-art

monitoring and control of the pipeline. This system compensates for different operating conditions by accounting for changes in several factors including pressures, temperatures and flows.

The additional safety measures encompass the leading industry practices and recommended measures based on pipeline incident root cause analysis conducted by agencies such as the National Transportation Safety Board (NTSB) and standards committees such as the American Petroleum Institute (API). The incorporation of such safety measures enhances all facets of OCC, SCADA and Leak Detection Systems inclusive but not limited to: system displays, audit of alarms, training, human factors (fatigue, work schedules, shift change), system testing and redundancy for hardware and software.

4d). Keystone will implement the additional mitigation measures included in Appendix Z.

4e) Keystone will implement the additional mitigation measures included in Appendix Z.

INTERROGATORY NO. 5: References:

- (i) Finding 50, Appendix C
- (ii) Response 50 (b) to Paul Seamans' IR No. 1
- (iii) Final Supplemental EIS, Appendix P, Pipeline Risk Assessment and Environmental Consequence Analysis by Keystone, p. 4-20, Table 4-12, July 6, 2009.2

Preamble:

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According to ref (i), "[t]he total length of Project pipe with the potential to affect a High Consequence Area ("HCA") is 19.9 miles." This distance has changed since the Final Decision and Order in June 2010 when "[t]he total length of Project pipe with the potential to affect a High Consequence Area ("HCA")" was evaluated at 34.3 miles.

According to ref (ii), the decrease from 34.3 miles to 19.9 miles is due to the adjustment of the pipeline route, in which the route was deviated away from HCA areas.

According to ref (iii), in the July 2009 evaluation, miles of pipeline in HCAs in SD were 14.9 miles (Total). All of these miles (14.9 miles) were in Ecologically Sensitive Areas, and none of these miles (0 miles) were in Populated Areas or Drinking Water Areas.

Requests:

- a) Please explain the increase in HCA mileage from the 2009 evaluation (14.9 miles of HCAs (ref (iii)) to the 2010 evaluation (34.3 miles of HCAs (ref (i))).
- b) For the 2010 evaluation (34.3 miles of HCAs (ref (i))), how many miles were in Ecologically Sensitive Areas, Populated Areas, and Drinking Water Areas?
- c) For the 2014 evaluation (19.9 miles of HCAs (ref (i))), how many miles were in Ecologically Sensitive Areas, Populated Areas, and Drinking Water Areas?

ANSWER:

5a). Keystone has determined that the 34.3 miles referenced in question 5 a) included overlaps between HCAs. The 19.9 miles shown in the certification table was a typographical error. Since the time the 14.9 mile calculation was completed, the Cheyenne River crossing was adjusted because of HDD access issues and for construction and engineering reasons, resulting in a slight increase in total HCA mileage. The current HCA calculation is 15.8 miles. The 15.8 miles are ecologically sensitive areas and do not encompass populated areas or drinking water areas.

5b). Please refer to FSEIS Appendix P Risk Assessment table 4-12.

5c). Ecologically Sensitive Areas were the only HCA types crossed.

INTERROGATORY NO. 6: Reference:

(i) Finding 107, Appendix C and Finding 108 in Amended Final Decision and Order;
HP09-001

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- (ii) Response 59 to BOLD Nebraska IR No. 1
- (iii) Responses 107(a) and (b) to Paul Seamans' IR No. 1
- (iv) Responses 107 and 108 to Byron and Diana Steskal's IR No. 1
- (v) Steskal Documents, Keystone 0768-0773

Preamble:

According to ref (ii), "Keystone has not prepared a current estimate of real property taxes that will be paid on Keystone XL, once constructed."

According to refs (ii) and (v), in HP07-01, TransCanada had estimated that the first full year of operations of the base Keystone project would produce state-wide taxes of approximately \$6.5 million.

According to ref (iii), 107 (b), "Keystone paid \$653,194 in ad valorem property taxes for 2009; \$2,954,846 for 2010; \$3,145,207 for 2011; \$3,435,037 for 2012; and \$3,934,669 for 2013 in the counties transited by the Keystone base pipeline." A breakdown by county is available at ref (v); however the totals for 2011, 2012 and 2013 are not consistent between the two IR responses.

In ref (iii), 107(a), Paul Seamans asked to "explain TransCanada's methodology in arriving at a figure of combined new tax revenues of \$20 million a year for South Dakota counties along the Keystone XL route." Keystone's answer appears to focus only on the base Keystone property taxes and not the Keystone XL property taxes.

Requests:

- a) Please confirm that the slight differences in the total property taxes amounts in ref (iii) with the total tax amounts in ref (v) for 2011, 2012 and 2013 relate to the inclusion of tax payments for Keystone XL pump station sites for these years in ref (v). If not, please explain the differences in the amounts in ref (iii) and ref (v).
- b) Please explain the methodology for the original Keystone estimate of SD property taxes for Keystone XL (in HP09-001).
- c) Please explain if Keystone used a similar methodology to calculate the original Keystone property tax estimates for Keystone XL (in HP09-001) compared to the methodology used to calculate the base Keystone property tax estimates (in HP07-001). If not, why not and please explain the different approaches.

d) Please explain in detail if and how Keystone's methodology for estimating the revised Keystone XL property taxes will take into account the actual experience with property taxes for the base Keystone in order to improve the accuracy of the Keystone XL property tax estimates.

e) When will the revised estimates of the property taxes paid on the Keystone XL pipeline be available?

ANSWER:

6a). The difference between the amounts computed for 2011, 2012 and 2013 in the Seamans responses as compared to the Steskal document production represents the amounts paid in real property taxes on real estate owned by Keystone that will be employed in the Keystone XL project.

6b). The estimate of South Dakota ad valorem property taxes prepared for the Keystone XL proceedings in 2009 employed the then-estimated construction cost of the pipeline and pump stations in South Dakota. The per mile cost of construction multiplied by the mileage in each county was employed as the value of the pipeline for purposes of calculating assessed valuation. The estimated cost of the pipeline was added to the assessed value of all real property in the county. Hypothetical mill levies were calculated, employing the prior year's cost of government. The pipeline's contribution to resulting tax revenues was estimated. A more simplistic approach was employed in calculating the estimated property taxes before the 2007 proceedings. An estimate of the ratio of ad valorem real property taxes to fair market value was calculated. That percentage was applied to the then estimated cost of construction of the Keystone I
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project in South Dakota. Later a rough estimate of the impact of the Keystone I project on tax revenue was prepared, employing construction costs and prior year assessed valuations and mill levies.

6c) See answer to 6b).

6d) The South Dakota Department of Revenue has chosen to employ the economic//functional obsolescence approach in determining the value of the Keystone I pipeline in South Dakota for assessment purposes. Presumably, the Department of Revenue will continue using that approach with respect to the Keystone XL pipeline, but it is expected the assessed valuation will be computed recognizing that the Keystone I and Keystone XL pipeline will be operated as a single economic unit.

6e). There are no present plans to prepare new estimates of the ad valorem property taxes that will be levied against the Keystone XL pipeline.

INTERROGATORY NO. 7: References:

- (i) Amended Permit Conditions 35 and 36
- (ii) Response 48, 49 to Bold Nebraska IR No. 1.

Preamble:

According to ref (ii), oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan in the FSEIS Appendix I. Page 2 of Appendix A indicates "The Company owns and operates oil spill response equipment contained within response trailers staged throughout the pipeline system. This equipment is maintained according to manufacturer's recommendations by Company and/or contracted personnel. An equipment summary detailing locations, type and amount stored in the response trailers is listed in Figure A.1. The Company also has contracts in place with Oil Spill Removal Organizations and other

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clean-up contractors that are capable of responding to all discharges along the Pipeline. Figure A.2 lists the contracted Oil Spill Removal Organizations.

Equipment trailers are located at the Hardisty Pump Station (Alberta), Regina Pump Station (Saskatchewan), in Valley City (North Dakota) at an external contractor site, in Brookings (South Dakota), Yankton (South Dakota), Cushing (Oklahoma) and St. Joseph (Missouri) at a TransCanada office location."

Figure A.2 (p. 8 of the same Appendix) indicates that the OSRO responsible for SD is National Response Corporation.

Requests:

- a) Indicate the general sites of critical oil spill response equipment storage (both pipeline company and contractor-owned).
- b) If this information (requested in (a) above) is confidential as indicated in IR no. 1 responses to other parties, please confirm (as per ref (ii) and the Preamble) that critical oil spill equipment owned by TransCanada relevant to spill response in SD is located in Valley City (North Dakota) at an external contractor site, in Brookings (South Dakota), Yankton (South Dakota) as per ref (ii). If not, please explain.
- c) Similarly, please confirm (as per ref (ii) and the Preamble) that National Response Corporation is the designated OSRO for SD and also can respond to discharges along the pipeline in SD. If not, please explain.
- d) Please provide the general sites of critical oil spill response equipment storage owned by National Response Corporation or any other OSRO in SD that would respond to spills along the pipeline route.

ANSWER:

7a). Oil spill response equipment (amounts, types and locations) that is owned by

TransCanada is listed in the FSEIS Appendix I Spill Prevention Control and

Countermeasure Plan and Emergency Response Plan Appendix A Response

Equipment/Resources.

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7b). As specified in Interrogatory 7a oil spill response equipment owned by TransCanada is listed in the FSEIS Appendix I.

7c). The National Response Corporation is the designated OSRO for Keystone in South Dakota as specified in the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan Appendix A Response Equipment/Resources.

7d). All emergency response equipment owned by NRC is tracked and strategically placed. The emergency response equipment cache sites are listed in the original Keystone Emergency Response Plan which has been submitted to PHMSA and will be amended to include Keystone XL.

INTERROGATORY NO. 8: References:

- (i) Amended Permit Conditions 35 and 36
- (ii) Response 34 (c) to Cindy Myers IR No. 1 (p. 42 regarding the lessons learned from Marshall)
- (iii) Response 35 (d) to Cindy Myers IR No. 1
- (iv) Response 35 (g) to Cindy Myers IR No. 1.

Preamble:

According to ref (ii), in order to improve the remediation of a crude spill, Keystone has committed to strategically store equipment and employ personnel and contractors along length of the pipeline to ensure a maximum 6-hour response time.

According to ref (iii), HCAs and HSAs (Hydrologically Sensitive Areas) are subject to high levels of inspection and repair criteria.

Requests:

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- a) Does the maximum response time of 6 hours apply to HCAs and HSAs? If not, please provide the maximum response time for HCAs and HSAs.
- b) Does the maximum response time of 6 hours apply to (i) critical water crossings; (ii) the High Plains aquifer (Ogallala Formation) in Tripp County; (iii) other areas of unconfined aquifers including alluvial aquifers associated with streams, and occasional unconfined stretches in the Hell Creek, Fox Hills, and Pierre Shale aquifers (as per ref (iv)); and (iv) any Karst Aquifers, which are crossed by the Project. If not, please provide the maximum response time for these locations.
- c) Does the maximum response time of 6 hours take into account various worst-case conditions (road/traffic/weather/other)?
- d) Given a scenario involving poor (road/traffic/weather/other) conditions, has Keystone developed contingency plans to speed the emergency response (i.e. police escort, alternate routing or other). Please explain.

ANSWER:

- 8a). Maximum response times are identified in the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan; Emergency Response Plan Section 3.1 Initial Response Actions.
- 8b). Maximum response times are identified in the FSEIS Appendix I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan; Emergency Response Plan Section 3.1 Initial Response Actions.
- 8c). TransCanada locates equipment and people that are transported by air, land and water to ensure that regulatory guidelines are met.
- 8d). TransCanada locates equipment and people that are transported by air, land and water to ensure that regulatory guidelines are met.

INTERROGATORY NO. 9: References:

- (i) Amended Permit Conditions 45 - 49
- (ii) Response 7 to Bold Nebraska IR No. 1.

Preamble:

Amended Permit Conditions 45 - 49 concern Enforcement and Liability for damages, In order to evaluate changes since the PUC decision of June 29, 2010 and whether Keystone can and will comply with Amended Permit Conditions 45 - 49, particularly in the event of a costly spill, the following IRs (9-12) examine Keystone's financial assurances including spill liability coverage and ability to self-insure.

Requests:

Please provide:

- a) a corporate structure chart that shows TransCanada, the parent corporation (as per ref (ii)) and each affiliate entity;
- b) a description summarizing each entity's ownership and the operating relationships with each other. This description and the chart in (a) must show, but not be restricted to:
 - a. the ownership of each entity and the jurisdiction in which each entity is registered;
 - b. the general and limited partners in TransCanada Keystone Pipeline LP; and
 - c. the respective roles and responsibilities of TransCanada Keystone Pipeline LP and TransCanada in managing the limited partnership (TransCanada Keystone Pipeline LP) and operating the pipeline;
- c) confirmation as to whether the limited partners of TransCanada Keystone Pipeline LP and/or its parent or other affiliates would or would not provide financial backstopping to the limited partnership should it be unable to pay its creditors. If confirmation is not possible at this time, please indicate whether this backstopping would be an option these parties would consider when the Project is placed in service;
- d) the name of the legislation governing TransCanada Keystone Pipeline LP, as well as a reproduction of the parts of the legislation specifying a limited partner's liability and the conditions that apply to the sharing of a limited partnership's profits with partners; and

{01844455.1}

e) a summary of TransCanada Keystone Pipeline LP's distribution policy that would determine how cash in the limited partnership would be distributed to the limited partners.

ANSWER:

9a). **Objection and Response:** This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. The request also seeks information that is confidential and proprietary. Without waiving the objection, TransCanada PipeLines Limited wholly owns TransCanada PipeLine USA Ltd. which in turn wholly owns TransCanada Oil Pipelines Inc. ("TC Oil Pipelines"). TC Oil Pipelines holds 100% of TransCanada Keystone Pipeline GP, LLC and TransCanada Keystone Pipeline, LLC, which are the GP and the LP, respectively, of the TransCanada Keystone Pipeline, LP.

9b). **Objection:** This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. The request also seeks information that is confidential and proprietary.

9c). **Objection.** This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. The request also seeks information that is confidential and proprietary. In addition, this request calls for speculation about hypothetical events that Keystone cannot answer.

9d). TransCanada Keystone Pipeline, LP is organized under Delaware law, specifically Title 6, Chapter 17 of the Delaware Code.

9e). **Objection:** This request seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. The request also seeks information that is confidential and proprietary.

INTERROGATORY NO. 10: References:

(i) Amended Permit Conditions 45 - 49.

Requests:

a) Please describe the type and amount of insurance that would be held by and/or for TransCanada Keystone Pipeline LP3 during the Project's construction phase. Please include details of the risk analysis performed, assumptions made, and supporting data {01844455.1}

considered in evaluating the coverage limits proposed.

b) Please describe the type and amount of spill liability insurance that would be held by and/or for TransCanada Keystone Pipeline LP4 during the Project's operation phase. Please include details of the risk analysis performed, assumptions made, and supporting data considered in evaluating the coverage limits proposed.

c) Please confirm that the spill liability insurance applies exclusively to TransCanada Keystone Pipeline LP's pipeline system and cannot be used for any other pipeline or any other TransCanada business unit. If this cannot be confirmed, please identify the TransCanada corporate entities covered by this insurance.

d) Please provide an overview of the key elements in the spill liability insurance including the facilities and business functions and related activity risks that are covered by the spill liability insurance program, the name of the insurance provider and the provider's credit rating.

e) Please describe the conditions, circumstances, or exclusions, if any, under which the spill liability insurance would not cover the losses of TransCanada Keystone Pipeline LP and/or third parties in the event of a large oil spill. For clarity include a list of the standard risks and non-standard risks that are excluded from this insurance program.

f) If the response to d) confirms that the spill liability insurance may not cover all losses and liabilities, please:

a. describe how TransCanada Keystone Pipeline LP would financially cover any losses and claims for spills, malfunctions, or other potential liabilities in excess of its insurance coverage during the life of the pipeline system; and

b. describe and quantify, to the extent possible, the role of cash from operations, tariff provisions, indemnities, bonds, letters of credit, parental guarantees, cash reserves, or other instruments that would be available to cover these potential liabilities. Regarding cash from operations and cash reserves, illustrate the financial capacity that these cash items could provide.

g) Please explain whether TransCanada Keystone Pipeline LP's spill liability coverage amount has changed (or will change) as a result of the increased capacity proposed for the pipeline system if the Project is approved and would operate in addition to Base Keystone. Include any risk analysis performed and assumptions made to determine this

(01844455.1)

level of coverage for the period after the Project goes into service.

h) Regarding the spill liability insurance, please describe:

a. the priority of payments for the components of insurance claims for spill events, such as clean-up costs, remediation costs, and third party liability claims;

b. how first party (TransCanada Keystone Pipeline LP) and third party claims are managed, including the priorities and the allocation of coverage for each of these parties; and

c. whether the coverage is per event or for more than one event in an insurance year.

i) Please provide the total insurance coverage amount for spill liability for TransCanada Keystone Pipeline LP, and confirm that any cash recovery for spill claims would be in addition to and separate from any recovery from the General Liability insurance program for claims not involving spills. If this cannot be confirmed, please explain the methodology for allocating the total insurance coverage among competing claims if the total claims exceed the spill liability coverage limit.

ANSWER:

10a). During construction TransCanada Keystone Pipeline would look to secure a dedicated general liability insurance policy including sudden and accidental pollution coverage with a limit not less than US\$200 million.

10b). During operations TransCanada Keystone Pipeline would look to secure a dedicated general liability insurance policy including sudden and accidental pollution coverage with a limit not less than US\$100 million.

In addition to the dedicated policy, TransCanada's corporate general liability policy would provide excess coverage. This policy covers all of TransCanada's controlled companies and subsidiaries and would include TransCanada Keystone Pipeline operations. Should a specific claim or claims within a policy year result in significant decrease of these limits, TransCanada would seek to reinstate the limits.

10c). As described in b), the dedicated policy is just for TransCanada Keystone Pipeline, while the TransCanada corporate policy includes all TransCanada companies and

{01844455.1}

subsidiaries.

10d). The policy would respond to the legal liability for third party liability claims, clean-up costs and remediation costs. There are a variety of insurance companies that participate in TransCanada insurance policies, but each must have a minimum Standard & Poor's rating of A-.

10e). General liability insurance policies have standard exclusions typical for a company in the liquid pipeline industry including but not limited to i) liabilities arising from gradual seepage, ii) fines and penalties, iii) and other exclusions not relevant to spills. TransCanada Keystone Pipeline is unable to confirm that the exclusions in place today will remain in effect for the life of the project or if new exclusions will be added at a later date.

10f).

a. We can't confirm how the insurance policy will or will not respond to losses and claims in the future, as every spill incident is unique.

b. Keystone is still preparing an answer to this interrogatory, and will provide a supplemental answer as soon as possible.

10g). Our approach has not changed.

10h).

a. There is no priority of payments for the components of an insurance claim for spill events.

b. TransCanada Keystone Pipelines has a separate property insurance policy to respond to damage to its property from an incident. The general liability policy would respond to third party claims, cost to clean-up and remediation.

c. The policy is per occurrence, with an aggregate for the policy year.

10i). This can't be confirmed. Insurance claims are made to the policy on a first occurring basis.

INTERROGATORY NO. 11: References:

(i) Amended Permit Conditions 45 - 49.

Requests:

a) Please provide the following for TransCanada Keystone Pipeline LP for the first full year and the fifth full year following Project commissioning:

a. operating cash flow projections that identify net income and other components of cash flow; and

b. the estimated total asset and liability values and their main components.

b) Please describe the following aspects of TransCanada Keystone Pipeline LP's cash management as anticipated at this time:

a. the estimated per cent of total cash flow from TransCanada Keystone Pipeline LP's operations that would be distributed to the partners of the limited partnership over the first five years of operation following Project commissioning; and

b. the estimated cash or near cash that TransCanada Keystone Pipeline LP plans to retain on its balance sheet by the end of the fifth full year of operation after Project commissioning.

c) With respect to the potential for self-insurance (should the spill liability coverage be exceeded), please explain how TransCanada Keystone Pipeline LP would ensure that it has unfettered access to these funds at all times, and indicate if TransCanada Keystone Pipeline LP will segregate the self-insurance funds from its general funds.

d) In the case of a spill incident, please explain the amount of cash that TransCanada Keystone Pipeline LP could access within 10 business days to pay some or all of the clean-up and remediation costs and to compensate third parties for some losses and damages while any insurance claims are being processed. Please describe the financial instruments that TransCanada Keystone Pipeline LP will use to ensure this unfettered access to funds.

ANSWER:

11a). OBJECTION. This request seeks information that is confidential and proprietary and the disclosure of which would be damaging to Keystone. This request also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence.

11b). OBJECTION. This request seeks information that is confidential and proprietary and the disclosure of which would be damaging to Keystone. This request also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence.

11c). OBJECTION. This request seeks information that is confidential and proprietary and the disclosure of which would be damaging to Keystone. This request also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence.

11d) OBJECTION. This request seeks information that is confidential and proprietary and the disclosure of which would be damaging to Keystone. This request also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence. In addition, this request calls for speculation about a hypothetical future event at an unspecified date and cannot be answered.

INTERROGATORY NO. 12: References:

- (i) Amended Permit Conditions 45 - 49
- (ii) Final Supplemental EIS, p. 4.13-1185
- (iii) Final Supplemental EIS, Appendix Z, Compiled Mitigation Measures, p. 108, July 6, 2009.

Preamble

According to ref (ii), financial assurance requirements seem to have been established in Nebraska and Montana, and "Keystone is willing to adopt a similar requirement in South Dakota."

Keystone would commit to file annually with the Nebraska DEQ by May 1 of each year:

(a) A certificate of insurance as evidence that it is carrying a minimum of \$200 million in third-party liability insurance as adjusted by calculating the gross domestic product implicit price deflator from the date a Presidential permit is issued for the Project and adjusting the amount of the third-party liability insurance policy by this percentage. The third-party liability insurance shall cover sudden and accidental pollution incidents from Keystone XL Pipeline in Nebraska.

(b) A copy of Keystone's Securities and Exchange Commission Form 10-K and
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Annual Report. Keystone's Major Facilities Siting Act (MFSA) Certificate contains a similar requirement.

Keystone is willing to adopt a similar requirement in South Dakota.

According to ref (iii), financial assurance requirements seem to have been established by both Nebraska and Montana. Keystone has committed to:

8. File the following documents with Nebraska Department of Environmental Quality (NDEQ) by May 1 of each year:

a. Certificate of insurance as evidence that it is carrying a minimum of \$200 million in third-party liability insurance, with the NDEQ, as specified in the NDEQ's December 2012 Final Evaluation Report, and with the Montana Department of Environmental Quality (MDEQ), as required by Keystone's Certificate issued by MDEQ under the Montana Major Facility Siting Act (MFSA).

b. Copy of Keystone's Securities and Exchange Commission (SEC) Form 10-K and Annual Report. (Keystone's MFSA Certificate contains a similar requirement.)

9. On request, file the documents listed in item 8 above with other appropriate state agencies.

Requests:

a) Please confirm that Keystone has committed to \$200 million in third-party liability insurance in both Nebraska and Montana. If not, please explain.

b) Does this imply that there is \$200 million in third-party liability insurance available specifically to cover a spill in Nebraska; and another \$200 million in third-party liability insurance available specifically to cover a spill in Montana? If not, please explain.

c) Does Keystone plan to offer third-party liability insurance available specifically to cover a spill in South Dakota? If not, please explain.

d) Has Keystone considered what level of third-party liability insurance should be available specifically to cover a spill in South Dakota? Please explain.

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ANSWER:

12a). Keystone is still preparing an answer to this interrogatory, and will provide a supplemental answer as soon as possible.

12b). Keystone is still preparing an answer to this interrogatory, and will provide a supplemental answer as soon as possible.

12c). Keystone is still preparing an answer to this interrogatory, and will provide a supplemental answer as soon as possible.

12d). Keystone is still preparing an answer to this interrogatory, and will provide a supplemental answer as soon as possible.

INTERROGATORY 13: What was the last date of any communication with any tribal government official with the Rosebud Sioux Tribe? Amended Permit Condition 7.

ANSWER: July 13, 2014.

INTERROGATORY 14: Did TransCanada attempt to secure the services of the Rosebud Sioux Tribe's Tribal Historic Preservation Office to perform cultural surveys of land in the vicinity of the proposed route at any time between January 1, 2009 and October 31, 2014? Amended Permit Condition 7, 43 and 44.

ANSWER: Yes.

INTERROGATORY 15: Describe the process that TransCanada used to identify appropriate tribal cultural monitors and or surveyors along the pipeline route in South Dakota. Amended Permit Condition 7, 43 and 44.

ANSWER: Keystone identified interested tribes early in the project planning.

Funding for Traditional Cultural Property studies was offered to every interested tribe. Four tribes have completed Traditional Cultural Property studies. Keystone will provide interested tribes the opportunity to participate as tribal monitors during ground disturbing construction activities to help identify previously unidentified historic and culturally important properties as part of the implementation of the Unanticipated Discovery plan.

INTERROGATORY 16: The document at page "KEYSTONE 1179" located in the file TransCanada sent in response to the First Set of Interrogatories and Request for Production of Documents titled "Rosebud Tribe Documents 01829983x9FB59" states that representatives from TransCanada, a land's representative and a few Utilities Commission members would visit the land located near the community of Ideal to determine if the pipeline route crossed Indian land. Did these people ever visit the land in Ideal community for the stated purpose? Amended Permit Condition 7, 43 and 44.

ANSWER: No.

INTERROGATORY 17: In a letter dated May 11, 2013 to the Cheyenne River Sioux Tribal Chairman, TransCanada states that "Keystone XL does not cross any Tribal (fee or allotted) lands but we respect your traditional territories." This letter is located at page "KEYSTONE 1179" in the file TransCanada sent in response to the First Set of Interrogatories and Request for Production of Documents titled "Rosebud Tribe Documents 01829983x9FB59." What does TransCanada mean when they state that they

"respect your traditional territories"? Amended Permit Condition 7, 43 and 44.
{01844455.1}

ANSWER: Keystone Document 1179 does not correspond with the reference in your interrogatory. There is a letter dated May 11, 2013 to Kevin Keckler, dated May 11, 2013, Keystone Document 1182. Presumably that is the letter to which you refer. Keystone respects the special relationship that tribal members have with their traditional territories and aspires to protect cultural and archaeological resources in collaboration with tribes whose traditional territories are impacted.

INTERROGATORY 18: Does TransCanada respect the traditional territories of the Rosebud Sioux Tribe as it respects the traditional territories of the Cheyenne River Sioux Tribe? Amended Permit Condition 7.

ANSWER: See answer to interrogatory 17, above.

INTERROGATORY 19: By what manner has TransCanada defined what the traditional territories of the Rosebud Sioux Tribe are? Amended Permit Condition 7, 43 and 44.

ANSWER: See answers to interrogatories 15, 17 and 18, above. Cultural studies were performed along the proposed pipeline route. Tribal relations personnel have had contact with the Rosebud Sioux Tribe and if allowed, will continue to have contact with the Rosebud Sioux Tribe. Tribal members have been invited on and have attended company sponsored trips and events related to the construction and operation of the pipeline.

INTERROGATORY 20: References:
{01844455.1}

- (i) Amended Permit Condition 1 and 7
- (ii) Response 7 to RST Request for Production of Documents (in IR No. 1)
- (iii) Response 40 to RST Request for Production of Documents (in IR No. 1)
- (iv) Response 17 to RST IR No. 1

Preamble:

In ref (i), Keystone claims "the project does not cross Rosebud Sioux Tribe lands." In ref (ii), Keystone indicates that there are no copies of communications with the Bureau of Indian Affairs regarding the construction, operation or maintenance of the Keystone Pipeline.

Requests:

- a) Given the references and Preamble, please confirm that the proposed Project does not cross Indian Country (and therefore does not cross any reservations or off-reservation trust land).
- b) If the proposed Project does not cross Indian Country, how has Keystone ascertained this?
- c) If the proposed Project does cross Indian Country, please indicate the names of the communities (and associated tribe) where the Project crosses Indian Country.
- d) If the proposed Project does cross Indian Country, please indicate any Indian lands crossed by the Project using the aerial maps provided in Keystone 0470-0583 (provided in Response 17 to RST IR No. 1). In identifying Indian Country, in the case of a reservation, provide the name of the reservation (and associated tribe); or in the case of off-reservation trust lands, provide the name of the nearest community and the tribe associated with the off-reservation trust land.
- e) Please indicate the sections of the proposed Project by milepost that are located within:
 - a. less than 0.5 miles from Indian Country
 - b. 0.5 to 1 mile from Indian Country
 - c. 1 to 3 miles from Indian Country

- d. 3 to 5 miles from Indian Country
- e. 5 to 10 miles from Indian Country

f) For each of the sections of the Project identified as being in 0-10 miles of Indian Country in the previous answer, please provide:

a. in the case of a reservation, the name of the reservation (and associated tribe), or

b. in the case of off-reservation trust lands, the name of the nearest community and the tribe associated with the off-reservation trust land.

g) For each of the sections of the Project identified as being in 0-10 miles of Indian Country in d), please identify these sections of Project using the aerial maps provided in Keystone 0470-0583 (provided in Response 17 to RST IR No. 1). Again in identifying Indian Country, in the case of a reservation, provide the name of the reservation (and associated tribe); or in the case of off-reservation trust lands, provide the name of the nearest community and the tribe associated with the off-reservation trust land.

ANSWER:

20a). To Keystone's knowledge, the proposed pipeline route does not cross Indian Country as that term is defined by 18 U.S.C. § 1151.

20b). Keystone performed a title study of all properties transited by the proposed right-of-way. At the time of completion the title study demonstrated that the proposed right-of-way did not transit Indian Country as that term is defined by 18 U.S.C. § 1151, or any tribally owned land.

20c). Not applicable.

20d). Not applicable.

20e). Keystone does not have a study of distances to Indian Country as such. Keystone
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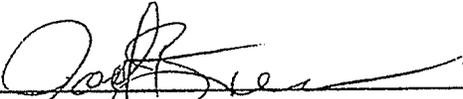
is aware of the following approximate distances from the proposed right of way to the tribally owned and/or properties held in trust for the Tribe in Tripp County: See responsive documents attached as Keystone 1926-1929. All properties are in proximity to the Rosebud Sioux Tribe's reservation.

20f). See the answer to interrogatory 20(e) above.

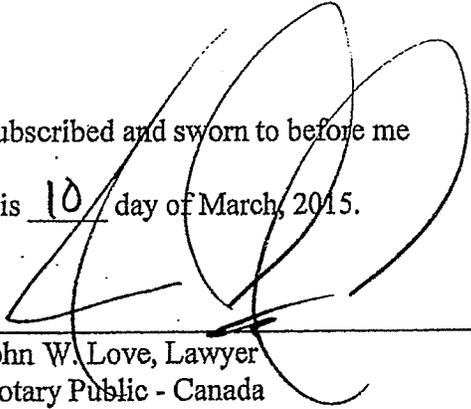
20g). Keystone objects to Interrogatory number 20(g) as burdensome. The known properties are identified by legal description in the exhibit supporting interrogatory answer 20(e) above.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

REQUEST FOR PRODUCTION OF DOCUMENTS

REQUEST FOR PRODUCTION 1: As per Bold Nebraska's Request for Production No. 18 in IR No. 1, and in order to make this proceeding more efficient and effective, provide electronic access to all parties in this proceeding to all responses by TransCanada in response to discovery requests (first and second rounds) submitted to TransCanada by all parties in this proceeding.

RESPONSE: A way to access copies of all responses to discovery requests submitted to Keystone will be separately provided.

REQUEST FOR PRODUCTION 2: Provide copies of all communications with any government official for the Rosebud Sioux Tribe from January 1, 2009 through October 31, 2014. Amended Permit Condition 7.

RESPONSE: See Keystone Documents 1121, 1122, 1124, 1129, 1135, 1136, 1138, 1140, 1145, 1150.

REQUEST FOR PRODUCTION 3: If the answer to interrogatory 14 is in the affirmative, provide copies of all communications that document TransCanada's attempts to secure the services of the Rosebud Sioux Tribe's Tribal Historic Preservation Office to perform cultural surveys of land in the vicinity of the proposed route between the dates of January 1, 2009 and October 31, 2014. Amended Permit Condition 7, 43 and 44.

RESPONSE: See responsive documents attached as 1922-1925.

REQUEST FOR PRODUCTION 4: Provide the final report from the Yankton Sioux
{01844455.1}

Tribe's Tribal Historic Preservation Office referenced in the email correspondence on page number "KEYSTONE 1311" located in the file TransCanada sent in response to the First Set of Interrogatories and Request for Production of Documents titled "Rosebud Tribe Documents 01829983x9FB59." Amended Permit Condition 7, 43 and 44.

RESPONSE: See Keystone Documents 1312-1332.

REQUEST FOR PRODUCTION 5: Provide the spread sheet referenced in email communication dated March 18, 2011 between Jon Schmidt and Kirk Ranzetta on page "KEYSTONE 1272" located in the file TransCanada sent in response to the First Set of Interrogatories and Request for Production of Documents titled "Rosebud Tribe Documents 01829983x9FB59." Amended Permit Condition 7, 43 and 44.

RESPONSE: Keystone is attempting to locate this document, but it is stored in an off-site server which has not yet been accessed.

REQUEST FOR PRODUCTION 6: Provide the results of all of the survey work referenced in the email communication dated December 3, 2009 between Mike Wamboldt and Arthur Cunningham as contained on page "KEYSTONE 1263" located in the file TransCanada sent in response to the First Set of Interrogatories and Request for Production of Documents titled "Rosebud Tribe Documents 01829983x9FB59." Amended Permit Condition 7, 43 and 44.

OBJECTION AND RESPONSE: The survey work referred to in the referenced email were Traditional Cultural Properties (TCP) Surveys. The results of TCP {01844455.1}

survey are confidential information and were submitted to the DOS. For the results of the TCP survey, a request would have to be made to the DOS.

REQUEST FOR PRODUCTION 7: If the answer to interrogatory 16 is in the affirmative provide all documents related to that interrogatory. Amended Permit Condition 7, 43 and 44.

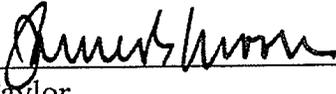
RESPONSE: None located.

OBJECTIONS

The objections stated to Rosebud Sioux Tribe's Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

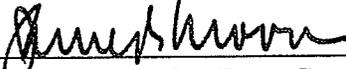
WOODS, FULLER, SHULTZ & SMITH P.C.

By  _____
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Rosebud Sioux Tribe's Second Interrogatories and Request for Production of Documents, to the following:

Matthew L. Rappold
PO Box 873
Rapid City, SD 57709
Matt.rappold01@gmail.com



One of the attorneys for TransCanada

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

IN THE MATTER OF THE APPLICATION)	HP14-001
BY TRANSCANADA KEYSTONE)	
PIPELINE, LP FOR A PERMIT UNDER THE)	KEYSTONE’S RESPONSES TO
SOUTH DAKOTA ENERGY CONVERSION)	STANDING ROCK SIOUX TRIBE’S
AND TRANSMISSION FACILITIES ACT TO)	SECOND SET OF
CONSTRUCT THE KEYSTONE XL)	INTERROGATORIES
PROJECT)	

Applicant TransCanada makes the following responses to interrogatories pursuant to SDCL § 15-6-33. These responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Standing Rock Sioux Tribe’s Second Set of Interrogatories to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. Keystone’s answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

51. Identify every document, data compilation or tangible thing in your possession, custody or control relating to the Keystone XL Pipeline, including the title of the document or a

brief description if it is untitled, its date, identify the author and describe his or her relationship to TransCanada, summarize its contents, and identify its location and custodian.

OBJECTION: This request is overlybroad and unduly burdensome. It also seeks information that is not relevant and not likely to lead to the discovery of admissible evidence.

52. Identify the “foreign utility” referred to in the answer to Interrogatory No. 30.

OBJECTION: This request is not relevant and not likely to lead to the discovery of admissible evidence. As indicated in the tracking table, the situation occurred in a shared pipeline corridor and no similar situation exists in South Dakota.

53. Explain the basis for the answer provided to Interrogatory No. 42, including any calculations that were performed to reach the estimate.

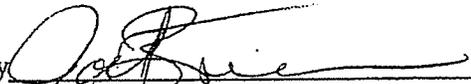
ANSWER: The estimated water requirements for hydrostatic testing were determined based on the maximum volume of the pipeline.

54. Explain the basis for the answer provided to Interrogatory No. 43, including any calculations that were performed to reach the estimate.

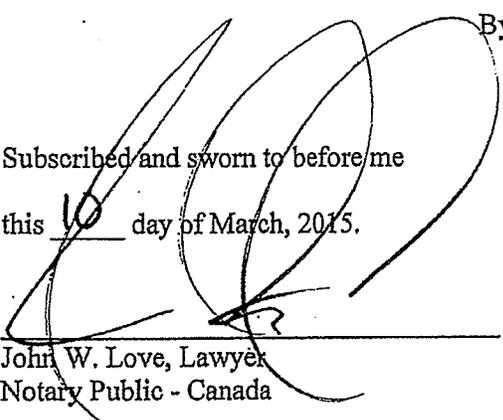
ANSWER: The estimated water requirements for dust suppression were determined based on the width and length of the construction right of way.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.

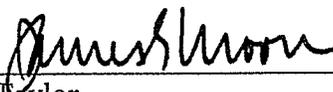

John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Standing Rock Sioux Tribe's Second Set of Interrogatories were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

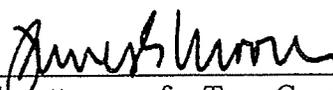
By  _____
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Standing Rock Sioux Tribe's Second Set of Interrogatories, to the following:

Peter Capossela, P.C.
PO Box 10643
Eugene, OR 97440
pcapossela@nu-world.com

Chase Iron Eyes
Iron Eyes Law Office, PLLC
PO Box 888
Fort Yates, ND 58538
chaseironeyes@gmail.com

 _____
One of the attorneys for TransCanada

based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Lou Thompson, whose identity as a potential rebuttal witness has been separately disclosed, provided information relied on in these answers.

2. Prior to answering these interrogatories, have you made due and diligent search of all books, records, and papers of the Applicant with the view of eliciting all information available in this action?

ANSWER: Yes, to the extent reasonably practicable under the Commission's scheduling order.

3. This Interrogatory is based on your response to the original interrogatory regarding Finding 54 and updated in Appendix C in which you were asked to describe the procedure utilized to insure that "No tribal or federal lands are crossed by the route." Please explain why in the areas which are adjacent to the exterior boundaries of the Rosebud and Cheyenne River Sioux Tribes and through which it is obvious the Keystone XL pipeline is routed you neglected to research tribally allotted lands and violated consultation clauses for both the US and International laws, treaties, resolutions, etc.; by

not only failing to engage the affected Tribes but by also failing to inform tribal landowners in those areas of the proposed pipeline; most especially Tripp County?

OBJECTION AND ANSWER: Keystone objects to interrogatory number 3 as argumentative and assuming facts not in evidence. Notwithstanding the objection, Keystone researched the title to each tract of land crossed by the pipeline right-of-way. To the best of Keystone's knowledge, no land held in trust for an Indian tribe or land owned in fee by an Indian tribe is crossed by the pipeline right-of-way. Public notice regarding the proposed permitting of the pipeline was published, beginning in 2009. Public meetings were hosted by the South Dakota Public Utilities Commission and the Department of State. Keystone's Native American Tribal Relations staff actively engaged Tribes with real property in the general area of the pipeline right of way.

4. This Interrogatory is based on your response to the original interrogatory regarding Finding 54 and updated in Appendix C in which you were asked to list all experts with appropriate contact information for said expert you consulted to insure that "No tribal or federal lands are crossed by the route." Your response was to repeat the answer to the previous interrogatory. Please explain why you neglected to consult with any expert especially since Tribal Sovereignty and Informed Consent are obviously areas in which TransCanada as a foreign corporation would have little to no knowledge regarding such laws and procedures in the United States?

OBJECTION AND ANSWER: Keystone objects to interrogatory number 4 on the grounds that it is argumentative and assumes facts not in evidence. Notwithstanding the objection and without waiving, Keystone is not a foreign corporation. Keystone retained real property title experts to research the ownership of all real property crossed by the pipeline right-of-way. Keystone's land agents contracted all landowners who owned real property crossed by the pipeline right-of-way. Keystone and TransCanada have a department addressed to Native American Tribal Relations that has been actively involved in matters pertaining to tribal lands.

5. This Interrogatory is based on your response to the original interrogatory regarding Finding 58 in relation to Condition 43 in which you were asked to describe the procedure utilized to insure that all "cultural resource, historical resource or gravesite " are or have been identified and all related federal legislation adhered to with respect. Your response was to refer to the plan on file. However, this plan does not acknowledge that the Keystone XL pipeline and the construction thereof will desecrate two known pilgrimage routes by disturbing the areas in which they intersect with the proposed pipeline route in both Haakon and Pennington Counties. Please explain how TransCanada plans to destroy two sacred sites in violation of Tribal and Federal laws.

OBJECTION AND ANSWER: Keystone objects to interrogatory number 5 on the grounds that it is argumentative and assumes facts not in evidence. Notwithstanding

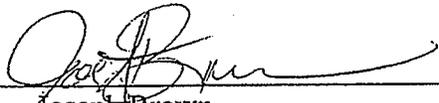
the objection and without waiving, cultural studies performed as part of the pipeline survey did not reveal the existence of the trails.

6. This Interrogatory is based on the original interrogatory regarding Finding 58 in relation to Condition 43 in which you were asked to list all experts with appropriate contact information for said expert you consulted to insure that all "cultural resource, historical resource or gravesite" are or have been identified and all related federal legislation adhered to with respect. Again you referred to the plan on file. Please explain why, with the knowledge that the proposed pipeline route crosses through Fort Laramie Treaties of 1851 and 1868 territory there are no recognized local Tribal experts, local Tribal governments nor any local Tribal Treaty experts consulted?

OBJECTION AND ANSWER: Keystone objects to interrogatory number 6 on the grounds that it is argumentative and assumes facts not in evidence. Notwithstanding the objection and without waiving, Keystone identified interested tribes and offered every interested tribe funding to assist in completing Traditional Cultural Property reports in coordination with Keystone. Four tribes completed Traditional Cultural Property reports. Keystone contacted tribal councils, tribal leaders and tribal historic preservation officers on numerous occasions to solicit information and to build tribal relations. Keystone will hire tribal monitors during ground disturbing activities related to construction as part of the implementation of the Unanticipated Discovery Plan.

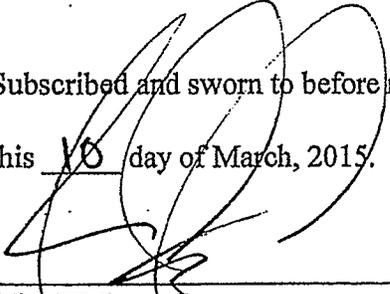
Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 10 day of March, 2015.



John W. Love, Lawyer
Notary Public - Canada

REQUEST FOR PRODUCTION OF DOCUMENTS

1. The original request was made for you to produce all updated and detailed GPS maps displaying the pipeline route in South Dakota which includes Harding, Butte, Meade, Pennington, Haakon, Jones, Lyman and Tripp counties. Please also include with these GPS maps all views at altitudes of 500, 800 and 1000 feet. This was adhered to, for the most part. However, key aerial views of the proposed route where the pipeline would cross the White River from southwest Lyman County into northwest Tripp County are missing. If this was an oversight the request is now made to correct it. If these views were purposely excluded please explain why.

RESPONSE: The White River crossing has not changed. It is shown in Map 47 of 58 filed with Keystone's permit application in Docket HP 09-001. Route variation 0216-01 is just north of the crossing, and route variation 216-02 is south of the crossing. These maps were previously produced.

2. Please produce all documentation you have and have developed related to Interrogatories 3, 4, 5 and 6.

RESPONSE: Keystone objects to this request for production of documents as unduly burdensome. As to Interrogatory 3, meeting minutes, and in some cases transcripts and recordings of Public Utilities Commission public meetings and Department of State public meetings are publically available and producing the same

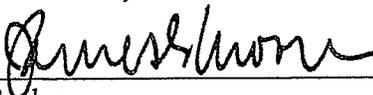
would be burdensome and serve no useful purpose in the matter here in issue. As to Interrogatories 3 and 4, Keystone possesses files that pertain to and contain documents demonstrating the ownership and title history of each tract of land crossed by the pipeline right-of-way in South Dakota. The files number in the hundreds and are voluminous. Their production would serve no useful purpose in the matter here in issue. As to inquiries regarding contacts with tribal governments, tribal members, tribal communities and cultural resource studies in Interrogatories 3, 4 and 6, see Keystone Documents numbered 1121-1340.

OBJECTIONS

The objections stated to Elizabeth Lone Eagle's Second Interrogatories and Request for Production of Documents were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 10th day of March, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

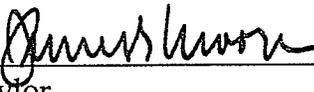
By 
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission and United States first-class mail, postage prepaid, a true and correct copy of Keystone's Responses to Elizabeth Lone Eagle's Second Interrogatories and Request for Production of Documents, to the following:

Elizabeth Lone Eagle
PO Box 160
Howes, SD 57748
bethcbest@gmail.com

WOODS, FULLER, SHULTZ & SMITH P.C.

By  _____
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

0-0

IN THE MATTER OF THE APPLICATION : HP 14-001
BY TRANSCANADA KEYSTONE
PIPELINE, LP FOR A PERMIT UNDER : TRANSCANADA KEYSTONE
THE SOUTH DAKOTA ENERGY : PIPELINE, LP'S SUPPLEMENTAL
CONVERSION AND TRANSMISSION : RESPONSES TO CINDY MYERS'
FACILITIES ACT TO CONSTRUCT THE : FIRST INTERROGATORIES AND
KEYSTONE XL PROJECT : REQUEST FOR PRODUCTION OF
DOCUMENTS
:

0-0

Applicant TransCanada makes the following supplemental responses to interrogatories pursuant to SDCL § 15-6-33, and responses to requests for production of documents pursuant to SDCL § 15-6-34(a). These supplemental responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Cindy Myers' First Set of Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. See ARSD 20:10:01:01.02. {01855195.1}

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

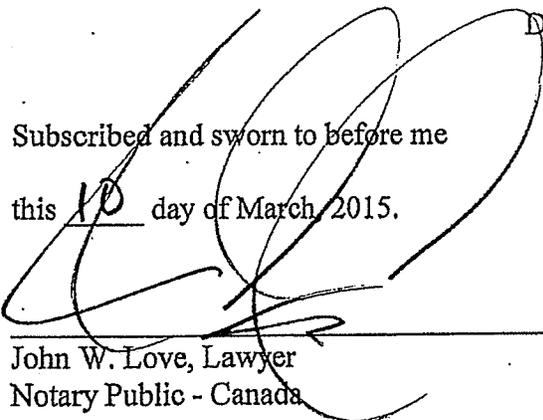
Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Director, Authorized Signatory

Subscribed and sworn to before me

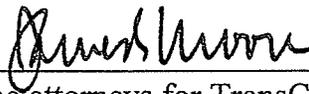
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Cindy Myers' First Interrogatories and Request for Production of Documents, to the following:

Cindy Myers, R.N.
PO Box 104
Stuart, NE 68780
csmyers77@hotmail.com



One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 3: State the full name, current address, telephone number, and present employment of each person who you expect to call as a witness in Docket HP14-001, the subject matter on which each such witness is expected to testify, the substance of the facts and opinions to which each witness is expected to testify, a summary of the grounds for each opinion expected to be expressed by such witness, and for each expert witness also state:

- a. the facts supporting each opinion to which the expert is expected to testify;
- b. the expert's profession or occupation, educational background, specialized training, and employment history relevant to the expert's proposed testimony;
- c. the expert's previous publications within the preceding 10 years; and
- d. all other cases in which the witness has testified as an expert at trial.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W.,

{01855189.1}01808649.1}{

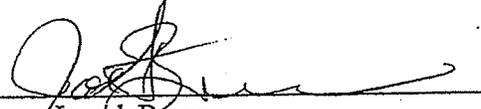
Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility
(5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc.,
1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441;
Environmental Issues; CMR Plan, Con/Rec Units, HDD's
(6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite
290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

None of these persons is a retained expert, so subparts (a) through (d) do not apply.

In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

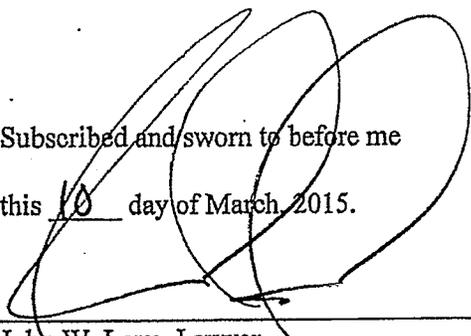
Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 10 day of March, 2015.

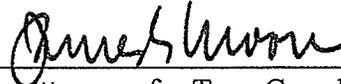


John W. Love, Lawyer
Notary Public – Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Bold Nebraska's First Interrogatories and Request for Production of Documents, to the following:

Paul C. Blackburn
PO Box 17234
Minneapolis, MN 55407
paul@paulblackburn.net



One of the attorneys for TransCanada

INTERROGATORIES

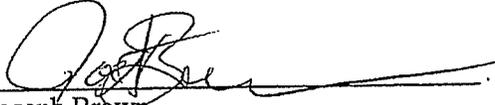
INTERROGATORY NO. 1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation. [Applicable Finding or Condition No.: all]

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

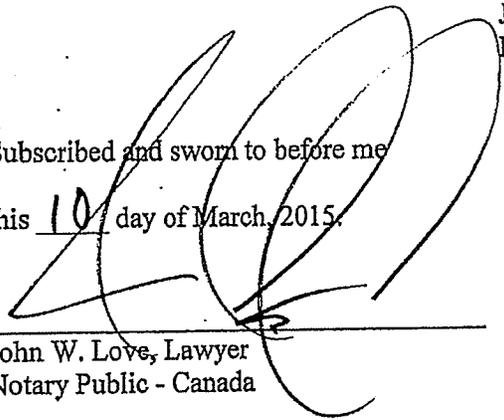
In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.



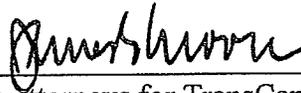
John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Dakota Rural Action's First Interrogatories, to the following:

Bruce Ellison
518 6th Street #6
Rapid City, SD 57701
belli4law@aol.com
Attorney for Dakota Rural Action

Robin S. Martinez
Martinez Madrigal & Machicao, LLC
616 West 26th Street
Kansas City, MO 64108
robin.martinez@martinezlawn.net
Attorney for Dakota Rural Action



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation. [Applicable Finding or Condition No.: all]

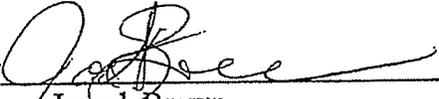
ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

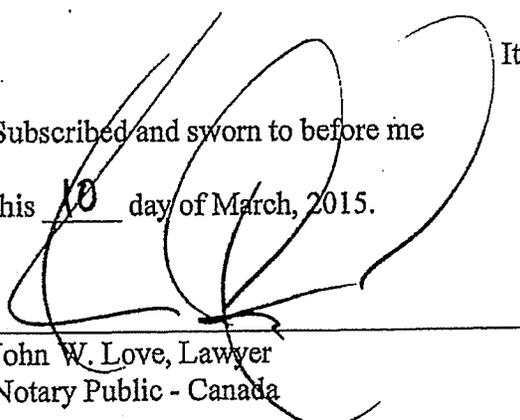
In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

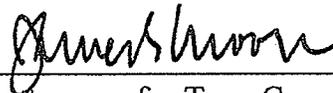
Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Intertribal COUP's Initial Interrogatories and Request for Production of Documents, to the following:

Robert P. Gough
Intertribal COUP
PO Box 25
Rosebud, SD 57570
BobGough@IntertribalCOUP.org



One of the attorneys for TransCanada

20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUESTS FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950

E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

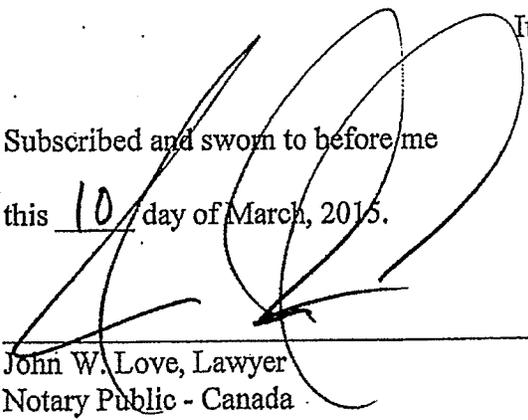
In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

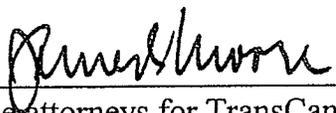
Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Wrexie Lainson Bardaglio's First Interrogatories and Request for Production of Documents, to the following:

Wrexie Lainson Bardaglio
9748 Arden Road
Trumansburg, NY 14886
wrexie.bardaglio@gmail.com



One of the attorneys for TransCanada

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

0-0

IN THE MATTER OF THE APPLICATION : HP 14-001
BY TRANSCANADA KEYSTONE
PIPELINE, LP FOR A PERMIT UNDER : KEYSTONE'S SUPPLEMENTAL
THE SOUTH DAKOTA ENERGY : RESPONSES TO ELIZABETH
CONVERSION AND TRANSMISSION : LONE EAGLE'S FIRST
FACILITIES ACT TO CONSTRUCT THE : INTERROGATORIES AND
KEYSTONE XL PROJECT : REQUEST FOR PRODUCTION OF
DOCUMENTS
:

0-0

Applicant TransCanada makes the following supplemental responses to interrogatories pursuant to SDCL § 15-6-33, and responses to requests for production of documents pursuant to SDCL § 15-6-34(a). These supplemental responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Elizabeth Lone Eagle's First Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.
{01855253.1}

INTERROGATORIES

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding

tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

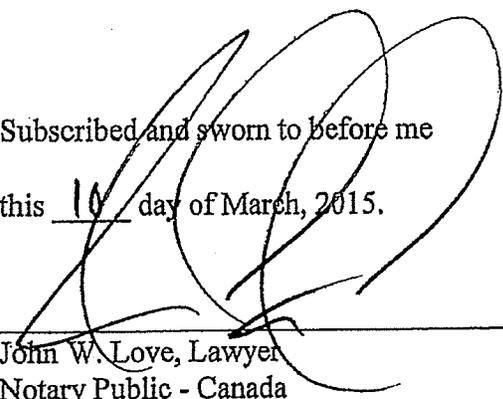
Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

(01855253.1)
01808045.1

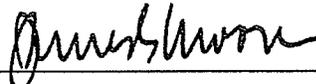
006244

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission and United States first-class mail, postage prepaid, a true and correct copy of Keystone's Supplemental Responses to Elizabeth Lone Eagle's First Interrogatories and Request for Production of Documents, to the following:

Elizabeth Lone Eagle
PO Box 160
Howes, SD 57748
bethcbest@gmail.com

WOODS, FULLER, SHULTZ & SMITH P.C.

By  _____
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

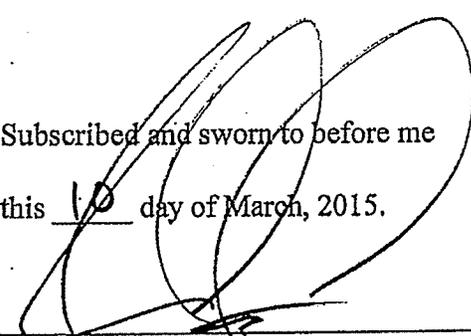
In addition to the witnesses previously identified, Keystone may offer rebuttal testimony from Danielle Dracy regarding emergency response; Lou Thompson regarding tribal engagement; Steve Klekar regarding tax issues; and Doug Robertson regarding SCADA and leak detection. Resumes for these possible rebuttal witnesses are marked as Keystone 1930-1934.

Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

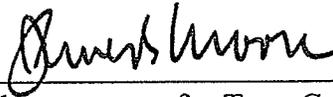
Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Paul Seamans' First Interrogatories and Request for Production of Documents, to the following:

Paul F. Seamans
27893 244th Street
Draper, SD 57531
jackknife@goldenwest.net



One of the attorneys for TransCanada

Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES AND REQUEST FOR PRODUCTION OF DOCUMENTS

1. Please identify the person or persons providing each answer to an Interrogatory or portion thereof, giving the full name, address of present residence, date of birth, business address and occupation.

ANSWER: Given the extremely broad scope volume of more than 800 discovery requests received by Keystone in this docket, a range of personnel were involved in answering the interrogatories. Keystone will designate the following witnesses with overall responsibility for the responsive information as related to the Conditions and proposed changes to the Findings of Fact, which are identified in Appendix C to Keystone's Certification Petition: Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; Meera Kothari, P. Eng., 450 1st Street, S.W., Calgary, AB Canada T2P 5H1; David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200,

Tallahassee, FL 32308; Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528.

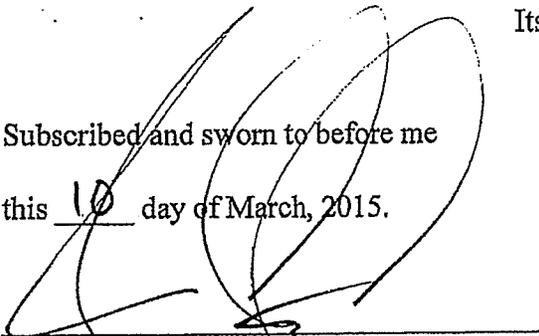
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Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

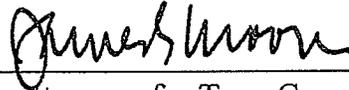
Subscribed and sworn to before me
this 10 day of March, 2015.


John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Bonny Kilmurry's First Interrogatories and Request for Production of Documents, to the following:

Bonny Kilmurry
47798 888 Road
Atkinson, NE 68713
bjkilmurry@gmail.com



One of the attorneys for TransCanada

INTERROGATORIES

INTERROGATORY NO. 4 Identify each person whom TransCanada

intends to be called as a witness, who was not included in the answer to Interrogatory No. 3, and include:

a. the name, job title, address, telephone number and email address of the witness; and

b. the subject matter on which the witness is expected to testify.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; same; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility
- (5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441; Environmental Issues; CMR Plan, Con/Rec Units, HDD's
- (6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

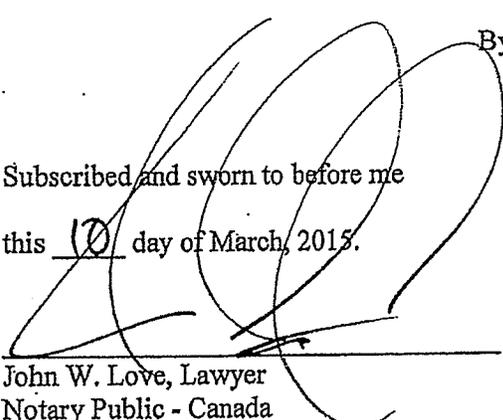
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Dated this 10 day of March, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP.
by its agent, TC Oil Pipeline Operations, Inc.

By 
Joseph Brown
Its Director, Authorized Signatory

Subscribed and sworn to before me
this 10 day of March, 2015.

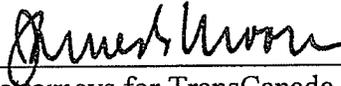

John W. Love, Lawyer
Notary Public - Canada

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of March, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Standing Rock Sioux Tribe's First Set of Interrogatories, to the following:

Peter Capossela, P.C.
PO Box 10643
Eugene, OR 97440
pcaossela@nu-world.com

Chase Iron Eyes
Iron Eyes Law Office, PLLC
PO Box 888
Fort Yates, ND 58538
chaseironeyes@gmail.com



One of the attorneys for TransCanada

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Standing Rock Sioux Tribe's First Set of Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. *See* ARSD 20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

REQUEST FOR PRODUCTION OF DOCUMENTS

3. All documents prepared for the purpose of demonstrating compliance by TransCanada with the Oil Pollution Act of 1990, codified at 33 U.S.C. §1321, and the PHMSA Facility Response Plan regulations, 49 CFR Part 194, in the construction and operation of the Keystone XL Pipeline.

RESPONSE: Keystone has no documents demonstrating compliance with the Oil Pollution Act because the Keystone XL Pipeline has not been constructed and is not in operation. A Facilities Response Plan has not yet been prepared for the Keystone XL Pipeline. The Facilities Response Plan will be prepared prior to in-service, when it will be submitted to PHMSA for review. Keystone has no documents responsive to this request.

4. Integrity Management Plan and all other documents prepared for the purpose of demonstrating compliance by TransCanada with the Pipeline Safety Act, 49

U.S.C. §60101 *et seq.* and the implementing regulations, in the construction and operation of the Keystone XL Pipeline.

RESPONSE: Keystone does not yet have an Integrity Management Plan for the Keystone XL Pipeline. Appendix C to the Presidential Permit Application contains design specifications that demonstrate compliance with the Pipeline Safety Act. A copy is produced in a non-confidential FTP site to which counsel will be provided access. Also produced in the non-confidential FTP site is a template that Keystone will use to demonstrate compliance with 49 CFR Part 195 and the Special Conditions to PHMSA. Keystone does not have other documents demonstrating compliance with the Pipeline Safety Act because it does not yet have a Presidential Permit and does not have construction contractors under contract.

5. All documents prepared or obtained for the purpose of demonstrating compliance by TransCanada with the Clean Water Act, 33 U.S.C. §§1251-1387, and the implementing regulations, and SDCL Chapter 34A-02, in the construction and operation of the Keystone XL Pipeline.

RESPONSE: Keystone has not yet submitted its application to the United States Army Corps of Engineers for permit authorization under Section 404 of the Clean Water Act. A draft preconstruction notification (PCN) is produced in the non-confidential FTP site. A copy of Section 4.3 of the FSEIS is produced in the non-confidential FTP site. Keystone's General Permit for Temporary Discharge Activities

from the South Dakota Department of Environment and Natural Resources dated April 11, 2013, is also produced in the non-confidential FTP site.

6. All documents prepared or obtained for the purpose of demonstrating compliance with the Endangered Species Act, 16 U.S.C. §§1531-1544, and the implementing regulations, and SDCL Chapters 34A-8 and 34A-8A, in the construction and operation of the Keystone XL Pipeline.

RESPONSE: A copy of the Biological Opinion prepared in connection with the Presidential Permit application is produced in the non-confidential FTP site. A copy of the Biological Assessment prepared in connection with the Presidential Permit application is produced in the non-confidential FTP site. A copy of Section 3.8 of the FSEIS is produced in the non-confidential FTP site. Copies of the biological survey reports are also produced in the confidential FTP site subject to the Commission's protective order.

7. All documents relating to the environmental review of the Keystone XL Pipeline by the Department of State under the National Environmental Policy Act, 42 U.S.C. §4231 *et seq.*

RESPONSE: Copies of all of Keystone's responses to data requests from the Department of State related to the Presidential Permit application are produced in the non-confidential FTP site subject to the Commission's protective order. Links to the Final Environmental Impact Statement, the Supplemental Environmental Impact

Statement, The Draft Environmental Impact Statement, the Draft Supplemental Environmental Impact Statement, and the Final Supplemental Environmental Impact Statement, and the Errata Sheet are included in the non-confidential FTP site.

8. All documents prepared or obtained for the purpose of demonstrating compliance with the National Historic Preservation Act of 1966, as amended, 16 U.S.C. §§470-470x-6.

RESPONSE: Cultural survey reports prepared in compliance with the National Historic Preservation Act are produced in the confidential FTP site. Section 3.11 of the FSEIS and the Programmatic Agreement, which is Appendix E to the FSEIS, are included in the non-confidential FTP site.

9. All documents prepared or obtained for the purpose of demonstrating compliance with the Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. §§3001-3013.

RESPONSE: The Programmatic Agreement, including the Unanticipated Discoveries Plan, marked as Appendix E to the FSEIS, is produced in the non-confidential FTP site.

11. Construction quality assurance plan or related documents for the Keystone XL Pipeline.

RESPONSE: Excerpts related to quality assurance from Keystone's application to PHMSA for a Special Permit are included in the non-confidential FTP site.

Also included in the non-confidential FTP site is the template that Keystone will use to demonstrate compliance to PHMSA with 49 CFR Part 195 and PHMSA Special Condition No. 20 related to construction quality.

12. Water sampling quality assurance plan or related documents for water samples taken in relation to construction of the Keystone XL Pipeline.

RESPONSE: As stated in its original answer, Keystone has no documents responsive to this request.

13. Operations manual or related documents for the Keystone XL Pipeline.

RESPONSE: Keystone has not yet prepared an operations manual for the Keystone XL Pipeline. It will be written at the same time as the Integrity Management Plan. Keystone has no documents responsive to this request.

Dated this 17th day of April, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

By /s/ William Taylor
William Taylor
James E. Moore
Post Office Box 5027
300 South Phillips Avenue, Suite 300
Sioux Falls, SD 57117-5027
Phone: (605) 336-3890
Fax: (605) 339-3357
Email: Bill.Taylor@woodsfuller.com
James.Moore@woodsfuller.com
Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 17th day of April, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Standing Rock Sioux Tribe's First Request for Production of Documents, to the following:

Peter Capossela, P.C.
PO Box 10643
Eugene, OR 97440
pcapossela@nu-world.com

Paul C. Blackburn
BOLD Nebraska
4145 20th Avenue South
Minneapolis, MN 55407
paul@paulblackburn.net

Matthew Rappold
Rappold Law Office
on behalf of Rosebud Sioux Tribe
PO Box 873
Rapid City, SD 57709
matt.rappold01@gmail.com

Chase Iron Eyes
Iron Eyes Law Office, PLLC
PO Box 888
Fort Yates, ND 58538
chaseironeyes@gmail.com

Kristen Edwards
Staff Attorney
South Dakota Public Utilities Commission
500 E. Capitol Avenue
Pierre, SD 57501
kristen.edwards@state.sd.us

/s/ William Taylor
One of the attorneys for TransCanada

INTERROGATORIES

INTERROGATORY NO. 7. For each incident since January 1, 2010 in which any pipeline transporting crude oil constructed by TransCanada and its Affiliates leaked or spilled pipeline contents, please provide the:

- A. Date;
 - B. Location;
 - C. Amount of materials leaked or spilled;
 - D. Duration of leak or spill before (i) the control center being notified, (ii) pump shut down, (iii) valve shutoff, (iv) national response center notified, and (v) arrival of responders on the scene;
 - E. Duration of reclamation of affected soil and/or water resources;
 - F. Established and documented cause of leak/spill;
 - G. For each such spill, provide a copy of the Integrity Management Plan, the operational manual for the pipeline, the specifications for the SCADA system, and the ERP for each spill in the US and Canada;
 - H. Identify the documents which support your answers, above.
- [Applicable Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103; Amended Condition 32-38]

ANSWER:

- a. Responsive information is contained in the spreadsheet previously produced as Keystone 0774-0784.
- b. Responsive information is contained in the spreadsheet previously produced as Keystone 0774-0784.
- c. Responsive information is contained in the spreadsheet previously produced as Keystone 0774-0784.
- d. Responsive information is contained in the spill incident reports, which are produced in a non-confidential FTP site, to which counsel will be provided access. In addition, the following incidents resulted in full shut downs of the pipeline:

Roswell Pump Station: 6/23/2010 full pipeline shut down 12:13 CST; 6/25/10 pipeline started up 07:30 CST.

Freeman Pump Station: 8/10/2010 full pipeline shut down 11:27 CST; 8/10/2010 pipeline started up 1:00 CST.

David City Pump Station: 2/02/2011 full pipeline shut down 19:30 CST; 2/4/2011 pipeline started up 06:09 CST.

Ludden Pump Station: 5/7/2011 full pipeline shutdown 05:30 CST; 05/14/2011 pipeline started up 16:53 CST.

Severance Pump Station: 05/28/2011 full pipeline shutdown 23:44 CST; 06/07/2011 pipeline started up 06/07/2011.

e. The only reclamation involved was at the Ludden Pump Station. Responsive information is contained in the incident report.

f. Responsive information is contained in the spreadsheet previously produced as Keystone 0774-0784.

g. The Integrity Management Plan for the Keystone Pipeline is included in the confidential FTP site subject to the Commission's protective order. The Operations Manual for the Keystone Pipeline is included in the confidential FTP site. The specification for Keystone's SCADA control system that is filed with PHMSA is included in the confidential FTP site. The Operations Manual and the SCADA specification are highly sensitive and proprietary documents that would substantially injure Keystone if disclosed to the public or its competitors. They should be confidential on the same basis as the IMP. The Keystone Pipeline ERP marked as Exhibit I to the FSEIS is included in the non-confidential FTP site.

h. The responsive documents identified above are included in the FTP sites.

INTERROGATORY NO. 23: For each spill/leak incident which has occurred from a pipeline transporting WCSB crude oil operated by TransCanada and its Affiliates since 2009, state the dates on which transportation of the crude oil through that pipeline was disrupted by planned maintenance, unplanned maintenance, power outages, spills, leaks, or any other causes. Identify any documents upon which your answers to this Interrogatory was based. [Applicable Finding or Condition No.: Finding 28]

ANSWER: See the spreadsheet attached as Keystone 0774-0784. The duration of full pipeline shutdowns is provided in response to Interrogatory No. 7(d). The incidents described in the spreadsheet were not associated with planned or unplanned maintenance or power outages.

INTERROGATORY NO. 25: With regard to the plan for mainline valves to be remotely controlled, what guarantee can you give the PUC that TransCanada can prevent a cyber-security attack on the control system?

A. Describe the worst case scenario which could occur in the event of a computer systems security breach on the control system for the KXL Pipeline.

B. Describe the data security systems to be put in place to prevent any such system breach, identify any third-party vendor(s) providing system security software, hardware or monitoring, and identify the particular components or scopes of services such vendors will provide.

C. Identify any documents used to support your answer to this Interrogatory.

[Applicable Finding or Condition No.: Conditions 31-38; Finding 20]

ANSWER:

a. The response to this entirely hypothetical question is that the worst case scenario would be an intentional, extremely sophisticated, elaborately-planned attack that coordinates multiple breaches. It would be a coordinated attack combined with other attacks against other non-TransCanada critical infrastructure designed to delay a response to the attack. The attacks would be an act of war, designed to cause a loss of physical integrity at a facility or along the pipeline. The consequences would depend on the location of the loss. A coordinated attack could also be intended for the purpose of shutting down the pipeline through cyber-attacks for the purpose of creating a commodity shortage and disrupting public markets.

b. Following a layered security approach, TransCanada secures its electronic information assets (infrastructure, application and data) as follows:

Protection from the internet is delivered through next-generation firewalls that are managed and monitored by an external Managed Security Services Provider (TELUS) 24x7x365, protection capabilities include network anti-virus scanning, network intrusion detection/prevention, denial of service protection, web content filtering.

Protection of assets within TransCanada's Data Centers is delivered through network segmentation, protected by internal firewalls and managed by our CIO teams – including network segmentation between TransCanada corporate networks and the KXL environment. At the local asset level, we deploy capabilities including malware protection, host intrusion detection/prevention, security patch management and vulnerability management – managed and monitored by our CIO teams.

From an access control perspective, we leverage two-factor authentication on our corporate assets, including our remote VPN service.

Security event logging, monitoring and analysis of all controls above are centrally handled through an internal SIEM (Security Incident Event Management) infrastructure – managed internally by our CIO teams.

Incident response is managed by our CIO teams leveraging TransCanada's Major Incident Process, forensics analysis is outsourced to 3rd party partners (IBM/TELUS). Threat Intelligence is managed by our CIO teams in collaboration with 3rd party partners (TELUS, Verisign, McAfee) and Government Agencies (FBI, DHS, US-CERT, CCIRC, CSIS).

ICS Protections (Please consider that to some degree these solutions are already in place)

- Isolation (logical segmentation) of industrial control system networks from corporate systems using multiple devices such as Firewalls, Routers, and Switches. This prevents unauthorized users from accessing the ICS. Relevance: Access to the ICS systems is required to achieve worst case scenario and these controls would need to be compromised (or Access Control instead).
- Access Control (Logical Access Management) – systems in place to limit and verify identities of users accessing the ICS systems from the corporate network. Relevance: Access to the ICS systems is required to achieve worst case scenario and these controls would need to be compromised (or Isolation instead).
- Control Logic – operational and safety systems in place to manage operation and anomalies on the pipeline. Relevance: These systems would mitigate actions of attackers trying to achieve the worst case scenario and would need to be compromised directly. This includes SCADA systems & Control Centre Operators, and shutdown logic.
- Physical Controls – systems in place to protect integrity (such as pressure relief valves) or mitigate loss of integrity (such as fire protection systems, fences). Relevance: These systems would mitigate any Cyber attempts to compromise integrity and the consequences if integrity is lost.
- Environmental Controls – systems in place to mitigate loss of integrity’s environmental impact (such as berms to contain leakage). Relevance: These systems reduce (mitigate) against impact of worst case situation in certain locations such as tank terminals.

Incident Management – internal TransCanada processes and procedures to respond quick to loss of integrity events. Relevance: These systems reduce (mitigate) against the breach’s Health, Safety, and Environment consequences.

c. TransCanada’s Information Security Policy is included in the non-confidential FTP site.

INTERROGATORY NO. 48: Calculate the worst case discharge and describe in detail the worst case scenario that would result from damage caused to the Keystone XL pipeline from the “high swelling potential” of the Cretaceous and Tertiary rocks located in the Missouri River Plateau due to this land form’s susceptibility to instability in the form of slumps and earth-flows, including landslides.

A. Provide the locations where such ground swelling can be anticipated;

B. Identify any documents which would support your answer;

[Applicable Finding or Condition No.: Finding 40, 77; Conditions 31-42]

ANSWER: By definition, a worst case discharge is a catastrophic breach of the pipeline, regardless of cause. The location of the discharge determines its volume. Keystone

has not calculated a worst case discharge specifically associated with soils with high-swelling potential. The volume of a worst case discharge does not directly correlate to the cause.

A. The locations where ground swelling can be expected are identified in Table 3.1-6 of the FSEIS. Keystone has calculated the worst case discharges for those locations: They are included in the confidential FTP site.

B. Section 3.1.2.5, Geologic Hazards, of the FSEIS (which includes Table 3.1-6) is included in the non-confidential FTP site.

INTERROGATORY NO. 56: Describe the worst case scenario of a worst case discharge into the Little Missouri, Cheyenne, and White River crossings. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Findings 41-52, 68-69, 82-83; Conditions 31-42.

ANSWER: The answer is included in the confidential FTP site.

INTERROGATORY NO. 57: Describe the worst case scenario which could occur from the Keystone XL pipeline as it passes under channels, adjacent flood plains and flood protection levees. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Findings 41-49; Conditions 31-42]

ANSWER: Keystone has not calculated worst case discharges for locations for the generic areas described in the interrogatory. Worst case discharges and potential consequences are discussed in the Risk Assessment for the Keystone XL Pipeline, which is Appendix P to the FSEIS. The Risk Assessment, including Appendix A, is included in the non-confidential FTP site.

INTERROGATORY NO. 58: In light of the spill risk assessment provided by TransCanada in the HP09-001 docket:

- A. Explain the number of leaks along the Keystone I pipeline since 2008;
- B. Explain the number of leaks from the other oil pipelines constructed and/or operated by TransCanada or its Affiliates;
- C. What would be a worst case scenario discharge from the KXL pipeline? Please explain your answer;

D. Identify any documents which would support your respective answers.
[Applicable Finding or Condition No.: Findings 41-49, 51-52; Conditions 31-38]

ANSWER:

A. Keystone has safely delivered more than 830 million barrels domestic and WCSB oil to United States markets since it began operation in July 2010. The small number of leaks that have occurred on the pipeline have had nothing to do with the integrity of the pipe itself. They have all occurred at pump stations and other above-ground facilities and have been related to leakage from small-diameter fittings and seals. They have all been cleaned up with no environmental impact. Keystone designed the pipeline to ensure that all small diameter fittings, valves and seals are located above ground where they can be easily accessed for maintenance and repairs. All of Keystone's pump stations are designed to capture and contain oil on company property. In total, less than 450 barrels of oil, out of more than 830 million barrels transported, have come out of the pipeline since it began operations five years ago. TransCanada is constantly striving to improve its performance and working towards its goal of having zero leaks or safety incidents. All pipeline leaks are thoroughly investigated regardless of their size in order to understand the cause and prevent future such incidents. The leaks are identified in the spreadsheet attached as Keystone 0774-0784.

B. None.

C. See the Risk Assessment included in the non-confidential FTP site.

D. See the Risk Assessment included in the non-confidential FTP site.

INTERROGATORY NO. 60: Describe in detail the impact of a worst case scenario spill into the shallow and surficial aquifers in Tripp County from the proposed KXL Pipeline. Identify any documents which would support your answers. [Applicable Finding or Condition No.: Findings 43-49, 53; Conditions 16, 35]

ANSWER: Section 4 of the 2009 Keystone XL Risk Assessment (FSEIS, Appendix P) describes the impacts of a worst case spill scenario. The Risk Assessment is in the non-confidential FTP Site. Field investigations of more than 600 historical petroleum hydrocarbon release sites indicate the migration of dissolved constituents typically stabilizes within several hundred feet of the crude oil source area (Newell and Conner 1998; USGS 1998). Over a longer period, the area of the contaminant plume may begin to reduce due to natural biodegradation. Removal of crude oil contamination will eliminate the source of dissolved constituents impacting the groundwater.

Spills are also discussed in the FSEIS in Section 4.1.3.4, including those in shallow and surficial aquifers. The fate and transport of benzene and other crude oil constituents is discussed in numerous studies and articles, including those referenced in the 2009 Keystone XL Risk Assessment, such as:

Freeze, R. A. and J. A. Cherry. 1979. Groundwater. Prentice Hall, Inc. Englewood Cliffs, New Jersey. 604 pp.

Minnesota Pollution Control Agency. 2005. Assessment of Natural Attenuation at Petroleum Release Sites. Guidance Document c-prp4-03, Petroleum Remediation Program, Minnesota Pollution Control Agency. April 2005. 11 pp.

Neff, J. M. 1979. Polycyclic aromatic hydrocarbons in the aquatic environment. Applied Science publ. Ltd., London. 262 pp.

Newell, C. J. and J. A. Connor. 1998. Characteristics of Dissolved Petroleum Hydrocarbon Plumes: Results from Four Studies. American Petroleum Institute Soil / Groundwater Technical Task Force. December 1998.

Spence, L. R., K. T. O'Reilly, R. I. Maagaw, and W. G. Rixey. 2001. Chapter 6 – Predicting the fate and transport of hydrocarbons in soil and groundwater. In :risk-based decision-making or assessing petroleum impacts at exploration and production sites. Edited by S.

McMillen, R. Magaw, R. Carovillano, Petroleum Environmental Research Forum and US Department of Energy.

United States Geological Service (USGS). 1998. Groundwater Contamination by Crude Oil near Bemidji, Minnesota. US Geological Survey Fact Sheet 084-98, September 1998.

Additional references on this subject from the FSEIS include:

American Petroleum Institute (API). 1992. Review of Natural Resource Damage Assessments in Freshwater Environments: Effects of Oil Release into Freshwater Habitats. API Publ. No. 4514.

API. 1997. Petroleum in the Freshwater Environment: An annotated Bibliography 1946-1993.

API Publ. No. 4640.

Grimaz, S., S. Allen, J. Steward, and G. Dolcetti. 2007. Predictive evaluation of the extent of the surface spreading for the case of accidental spillage of oil on ground. Selected Paper IcheaP8, AIDIC Conference series, Vol. 8, 2007, pp. 151-160.

Hult, M.F. 1984. Groundwater Contamination by Crude Oil at the Bemidji, Minnesota, Research Site: U.S. Geological Survey Toxic Waste—Ground-Water Contamination Study. Papers presented at the Toxic-Waste Technical Meeting, Tucson, Arizona, March 20-22. USGS Water Investigations Report 84-4188.

Weaver, J.W., R.J. Charbeneau, J.D. Tauxe, B.K. Lien, and J.B. Provost. 1994. The hydrocarbon spill screening model (HSSM) Volume 1: User's guide. USEPA/600/R-94/039a. U.S. Environmental Protection Agency, Office of Research and Development, Robert S. Kerr, Environmental Research Laboratory, Ada, OK

INTERROGATORY NO. 76: Identify the location(s) where slope instability poses a potential threat of ground movement along the Project route.

A. Identify TransCanada's most current Integrity Management Plan (IMP) showing incorporation of locations where slope instability poses a potential threat to the pipeline;

B. Identify documents upon which your answers are based.

[Applicable Finding or Condition No.: Finding 79; Conditions 8, 15, 20-21]

RESPONSE:

A. TransCanada's most-recent Integrity Management Plan is the Integrity Management Plan for the Keystone Pipeline that has been filed with the Commission in HP07-001. It is included in the confidential FTP site. The locations where slope instability poses a potential threat to the

pipeline are included in Table 3.1-6 of the FSEIS, which is included in the non-confidential FTP site.

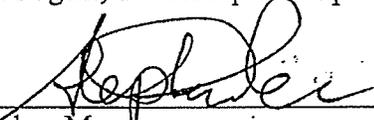
B. See Table 3.1-6 of the FSEIS, which is included in the non-confidential FTP site.

INTERROGATORY NO. 83: Identify the most recent IMP submitted to the Commission and other appropriate agencies, including but not limited to sections in it related to HCAs.
[Applicable Finding or Condition No.: Finding 102; Conditions 1-2]

RESPONSE: The Integrity Management Plan for the Keystone Pipeline that was filed with the Commission as a confidential document in HP07-001 is included in the confidential FTP site.

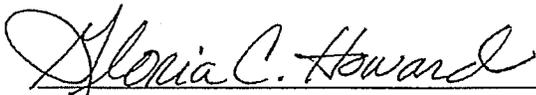
Dated this 17th day of April, 2015.

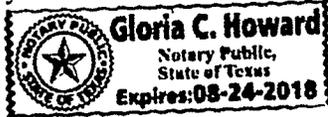
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Stephen Marr
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 17th day of April, 2015.


Notary Public - Texas



CERTIFICATE OF SERVICE

I hereby certify that on the 17th day of April, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Dakota Rural Action's First Interrogatories, to the following:

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INTERROGATORIES

INTERROGATORY NO. 15 Describe the notification procedures and identify the contact information for appropriate agencies for emergency response, for an emergency relating to the project in South Dakota.

SUPPLEMENTAL ANSWER: External Notifications - External notifications are those made to entities outside of the Company including Federal, Province/State and local regulatory agencies, as well as railroad and utility companies. These notifications include both verbal and written requirements. The Keystone ERP meets these notification regulatory requirements. The Keystone ERP will be amended to accommodate Keystone XL. (Keystone ERP Sec.2.2). The contact information for “appropriate agencies during an emergency response” is listed in the Keystone ERP. A redacted version thereof is located at Appendix I to the FSEIS. The notification procedures and the agencies to be notified in South Dakota will be updated when the Emergency Response Plan for Keystone XL is prepared. Keystone has not made any such notifications, and does not make such notifications two years before operations would begin.

INTERROGATORY NO. 16 For each county in which the project would be located, identify the locations of emergency responders, the routes to be used and the anticipated response deployment times.

SUPPLEMENTAL ANSWER: The Keystone Emergency Response Plan identifies and lists resources for use in an emergency. The ERP additionally lists possible Command Posts that may be utilized during an incident. The Keystone ERP will be amended to accommodate Keystone XL. (Keystone ERP, Sec.2.6). Keystone has not yet determined locations for emergency responders or the routes to be used. Keystone will comply with the response times identified in Appendix I to the Final Supplemental Environmental Impact Statement, as follows. The maximum response time to HCA’s and

HSA's is 12 hours. The maximum response time to critical water crossings and unconfined aquifers is 12 hours. The maximum response times are otherwise identified in the Supplemental Answer to Interrogatory No. 17.

INTERROGATORY NO. 17 For each county in which the project would be located, identify the equipment available to respond to a release of oil during the operation of the pipeline, the location of the equipment to be used in the clean-up, the routes to be used to transport equipment to each respective county, and the anticipated response deployment times.

SUPPLEMENTAL ANSWER: Oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan. The Keystone ERP will be amended to accommodate Keystone XL. PHMSA requires response times as outlined in the table below. TransCanada locates equipment and people that are transported by air, land and water to ensure that regulatory guidelines are meant. Keystone has not yet determined locations for response equipment or routes.

INITIAL RESPONSE ACTIONS - SUMMARY			
PERSONNEL AND PUBLIC SAFETY IS FIRST PRIORITY			
RESPONSE TIMES*			
High Volume Area	6 HR	30 HR	54 HR
All Other Areas	12 HR	36 HR	60 HR
CONTROL			
<ul style="list-style-type: none"> • Eliminate sources of ignition • Isolate the source of the discharge, minimize further flow 			
NOTIFY			
<ul style="list-style-type: none"> • Make internal and external notifications • Activate local Company personnel as necessary • Activate response contractors and other external resources as necessary 			
CONTAIN			
<ul style="list-style-type: none"> • Begin spill mitigation and response activities 			

- Monitor and control the containment and clean-up effort
- Protect the public and environmental sensitive areas

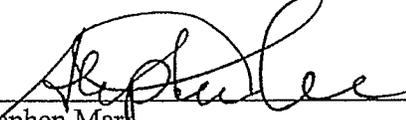
* Response resources and personnel available to respond within time specified after discovery of a worst case discharge per US DOT 49 CFR Part 194.115 (Keystone ERP Sec.3.1)

INTERROGATORY NO. 18 Identify the national response contractor with access to and the ability to provide large quantities of equipment to meet Oil Spill Response Organization (OSRO) requirements, the location of the equipment, the routes to be used to transport equipment as may be necessary to each respective county in which the project is located, and the anticipated response and deployment times for each county.

SUPPLEMENTAL ANSWER: The National Response Contractor for the Keystone XL Pipeline is National Response Corp. Keystone has not yet determined equipment locations or routes. The anticipated response and deployment times are as indicated in the Supplemental Answers to Interrogatories 16 and 17.

Dated this 17th day of April, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Stephen Mark
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 17th day of April, 2015.


Notary Public - Texas



CERTIFICATE OF SERVICE

I hereby certify that on the 17th day of April, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Standing Rock Sioux Tribe's First Set of Interrogatories, to the following:

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Attorneys for Applicant TransCanada

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Yankton Sioux Tribe's First Set of Interrogatories and Requests for Production of Documents to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. *See* ARSD 20:10:01:01.02. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

15. Pursuant to Conditions One and Two, have any contractors hired by Keystone to construct any pipeline owned or operated by Keystone or any of its affiliates received any communication from any agency or regulatory body having jurisdiction over each pipeline regarding alleged safety concerns or safety violations regarding the construction, maintenance or operation of any pipeline in the United States.

ANSWER: Given that the scope of the question is unlimited in time and includes all pipelines whether or not operated by TransCanada, it is quite likely that the answer is yes, but Keystone does not have personal knowledge.

21. Pursuant to Condition Forty-Four, please provide the name, address, phone number, and email of all persons involved in any cultural or historic survey conducted by Keystone. In addition, please provide a detailed description of all pertinent professional training that qualifies the surveyor as a professional who meets the standards of the

Secretary of the Interior's Historic Preservation Professional Qualification Standards (48 FR 44716, September 29, 1983).

ANSWER: The cultural survey reports are included in a confidential FTP site to which counsel has been provided access. The surveyors are identified in the reports.

Dated this 17th day of April, 2015.

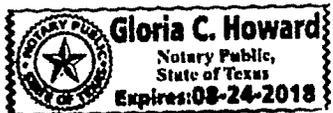
TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Stephen Marr
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 17th day of April, 2015.


Notary Public - Texas



REQUESTS FOR PRODUCTION OF DOCUMENTS

2. All documents relating to environmental and hydrological surveys. Changed Finding of Fact Number Forty-One.

RESPONSE: Biological survey reports are included in the confidential FTP site. Hydrological survey reports are included in the non-confidential FTP site.

3. All documents relating to cultural and historic surveys, training, and response plans. Condition Forty-Four.

RESPONSE: The cultural survey reports are included in the confidential FTP site. Keystone does not have documents related to training and response plans for cultural surveys.

4. All documents relating to required permits, both in South Dakota and outside South Dakota, including permit applications which were denied, revoked, or suspended.

RESPONSE: The Presidential Permit Application, the U.S. Army Corps of Engineers pre-construction notification, and all non-environmental permits obtained in South Dakota are included in the non-confidential FTP site.

7. All documents that support the proposed changes to the Findings of Fact identified in Appendix C to Keystone's application filed on September 14, 2014 with the PUC.

RESPONSE: Keystone has not identified any exhibits to use as part of its direct testimony. Keystone will supplement the response when it identifies hearing exhibits on April 21.

8: Provide a copy of each document that supports the proposed changes to the Findings of Fact identified in Appendix C to Keystone's application filed on September 14, 2014 with the PUC.

RESPONSE: Keystone has not identified any exhibits to use as part of its direct testimony. Keystone will supplement the response when it identifies hearing exhibits on April 21.

Dated this 17th day of April, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 17th day of April, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Yankton Sioux Tribe's First Interrogatories and Request for Production of Documents, to the following:

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Kristen Edwards Staff Attorney South Dakota Public Utilities Commission 500 E. Capitol Avenue Pierre, SD 57501 kristen.edwards@state.sd.us	Matthew Rappold Rappold Law Office on behalf of Rosebud Sioux Tribe PO Box 873 Rapid City, SD 57709 matt.rappold01@gmail.com

/s/ William Taylor
One of the attorneys for TransCanada

REQUEST FOR PRODUCTION OF DOCUMENTS

1. All documents identified or referred to in your Answers to DRA's First Interrogatories to you. *[Applicable Finding or Condition No.: all]*

ANSWER: See documents identified in the supplemental interrogatory responses.

9. All documents concerning the decision to use API 5L X70M high-strength steel for the Project in lieu of API 5L X80M high-strength steel. *[Applicable Finding or Condition No.: Finding 18]*

ANSWER: Pipeline design is addressed in Section 2.1.7.1 of the FSEIS. A copy is included in the non-confidential FTP site. TransCanada's Material Grade Selection Directive related to XM70 steel is also included in the confidential FTP site. TransCanada's engineering standards are proprietary, have substantial commercial value, and would place Keystone at a competitive disadvantage if publicly disclosed and made available to competitors.

10. All documents concerning the decision to use fusion-bonded epoxy (FBE) coating on the proposed pipeline, including but not limited to, contracts or other agreements with the manufacturer of the FBE product, and any communications between TransCanada and such manufacturer. *[Applicable Finding or Condition No.: Finding 18]*

ANSWER: Keystone has no communications with the manufacturer of the FBE coating because the FBE specification is given to the pipe mills. The pipe mill is responsible for coating application. A copy of TransCanada's Underground Coating Directive, which relates to selection of coating materials for new construction pipelines, is included in the confidential FTP site. TransCanada's directive is proprietary, has substantial commercial value, and would place Keystone at a competitive disadvantage if publicly disclosed and made available to competitors.

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12. All documents showing location of power lines for pumping stations proposed for the Project, the location of proposed pumping stations and mainline valves for the Project in South Dakota, and including, but not limited to all communications between TransCanada's or its Affiliates' staff, consultants, advisors, or other parties concerning location and operation of pumping stations, mainline valves, and the proposed conversion of valves to remote control operations. *[Applicable Finding or Condition No.: Finding 20]*

ANSWER: Powerline maps submitted to the Department of State in September 2012 are included in the non-confidential FTP site. The Management of Change documents for valve sites and pump stations are included in the non-confidential FTP site.

13. All documents concerning compliance by TransCanada with U.S. Department of Transportation, Pipeline Hazardous Materials and Safety Administration ("PHMSA") regulations set forth at 49 CFR Part 195, and the special conditions developed by PHMSA and set forth in Appendix Z to the Department of State ("DOS") January 2014 Final Supplemental Environmental Impact Statement ("Final SEIS"), including but not limited to any and all communications between TransCanada's or its Affiliates' staff, consultants, advisors, or other parties, and PHMSA, DOS, or other federal agencies concerning regulatory compliance, approvals, or waivers of applicable regulations with respect to the Project. *[Applicable Finding or Condition No.: Finding 22]*

ANSWER: The Design Basis Memorandum for the Project, dated October 2008, is included in the non-confidential FTP site. It is the initial design guidance for the project and mandates compliance with codes and standards in Section 4. The IFC (Issued For Construction) drawings which provide compliance direction on a site-specific basis are included in the

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confidential FTP site. The IFC drawings are the result of thousands of hours of engineering, surveys, and design, at a cost of millions of dollars, and would substantially injure Keystone if publicly disclosed and made available to competitors. Keystone's Special Permit Application is included in the non-confidential FTP site. Keystone has not submitted any other waiver applications. The correspondence and specific documents related to the Department of State, PHMSA and EPA Independent Engineering Design review are included in the non-confidential FTP site. The correspondence and specific documents related to compliance with the PHMSA special conditions are included in the non-confidential FTP site. Only select conditions were the subject of correspondence based on timing set forth in the conditions relative to work Keystone was undertaking at the time (special condition 1-9 (pipe), 14 (HCAs), 18 (welding procedure development), 58 (QC) and 59 (TPIC)). The correspondence and specific documents related to the development of the special conditions are included in the non-confidential FTP site.

26. All documents containing information concerning the failure of FBE coating referenced in the update to Finding 68. *[Applicable Finding or Condition No.: Finding 68]*

ANSWER: A root cause analysis of the incident is included in the non-confidential FTP site.

28. All documents containing information regarding TransCanada's (or its Affiliates') decision to use horizontal directional drilling to cross waterways, including but not limited to all documents discussing or describing the decision-making process engaged in to determine which waterways would be crossed using horizontal directional drilling. *[Applicable Finding or Condition No.: Finding 83]*

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ANSWER: Section 2.1.9.2 of the FSEIS addresses the criteria for the use of HDD. A copy is included in the non-confidential FTP site. Site-specific drawings for HDD locations are included in the non-confidential FTP site.

29. All documents, including but not limited to forecasts and projections of tax revenue accruing to the State of South Dakota should construction and operation of the Project commence. *[Applicable Finding or Condition No.: Finding 107]*

ANSWER: Keystone has confirmed that it has no responsive documents.

30. All documents evidencing TransCanada's or its Affiliates' compliance efforts with applicable laws and regulations related to construction and operation of the Project. *[Applicable Finding or Condition No.: Condition 1]*

ANSWER: Keystone has not started construction or operation of the Keystone XL Pipeline. The internal corporate compliance template to be completed for submission to PHMSA is included in the non-confidential FTP site. Additional corporate policies addressing TransCanada's Code of Business Ethics, Compliance Organization, Ethics and Compliance Organization, and Corporate Compliance Charter are included in the non-confidential FTP site.

31. All documents concerning TransCanada's or its Affiliates' efforts to obtain and comply with applicable permitting referenced in Condition 2, including but not limited to copies of any permits obtained. *[Applicable Finding or Condition No.: Condition 2]*

ANSWER: The Presidential Permit Application, the draft U.S. Army Corps of Engineers pre-construction notification, and all non-environmental permits obtained in South Dakota are included in the non-confidential FTP site.

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33. All documents concerning or discussing proposed adjustments or deviations in the route of the Project, including but not limited to copies of notices to affected land owners.

[Applicable Finding or Condition No.: Condition 6]

ANSWER: In addition to the route variation maps previously produced, Management of Change documentation and landowner contact reports related to the route changes are included in the non-confidential FTP site.

34. All documents concerning the appointment of a public liaison officer by TransCanada for the Project, and all documents containing information regarding communications between the public liaison officer and landowners affected by the Project.

[Applicable Finding or Condition No.: Condition 7]

ANSWER: Copies of the reports that Sarah Metcalf has submitted to the Commission are included in the non-confidential FTP site. Copies of e-mails between Metcalf and Keystone XL landowners are also included in the non-confidential FTP site.

37. All documents containing information regarding consultations, including but not limited to communications, with Natural Resources Conservation Services (“NRCS”) regarding development of construction/reclamation units (“Con/Rec Units”). *[Applicable Finding or Condition No.: Condition 15]*

ANSWER: In addition to the documents previously produced, included in the non-confidential FTP site are copies of contact reports and correspondence related to development of the Con/Rec Units.

38. All Con/Rec Units developed in connection with the Project, including but not limited to drafts and supporting studies or documents. *[Applicable Finding or Condition No.: Condition 15]*

ANSWER: The 2013 Construction/Reclamation Unit Specifications are found in Appendix R of the FSEIS. Copies are included in the non-confidential FTP site.

42. All documents containing information regarding consultations between TransCanada (or its Affiliates) and South Dakota Game, Fish and Parks. *[Applicable Finding or Condition No.: Condition 20(c)]*

ANSWER: The following is a summary of Keystone consultation history with SD Game, Fish, and Parks as documented in the USFWS issued May 2013 Biological Opinion (Appendix H of the of the Department of State FSEIS (2014)).

- June 10, 2008: Keystone met with staff from USFWS and South Dakota Department of Game, Fish, and Parks (SDGFP), at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to wildlife, special status species, and sensitive habitat that could potentially occur in the Project area. The goal of the meeting was to gather input on agency recommendations based on the information sent to them in April 2008 for species occurrence, habitat assessments, and future field surveys. Keystone incorporated comments from the meeting into survey protocols and BMPs for future agency verification.
- January/February 2009: Keystone initiated section 7 consultation with the USFWS. Keystone continued discussions with BLM, and state wildlife agency offices for South Dakota that included state-specific special status species survey protocols and BMPs for the species

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identified as potentially occurring during the 2008 meetings. A summary of the findings from the 2008 biological field surveys was included in the discussions.

- January 27, 2009: Keystone met with staff from the USFWS and SDGFP at the SDGFP office in Pierre, South Dakota, to discuss issues pertaining to special status species surveys. The goals of the meeting were to verify Keystone's survey approach, BMPs, discuss required field surveys, and review the information that was sent to the USFWS in the January/February 2009, informal consultation package. The USFWS and SDGFP provided additional recommendations to Keystone's sensitive species mitigation approach to be updated prior to final agency concurrence.
- October 23, 2012: A meeting was held between the USFWS, Department, SDGFP, BLM, and Keystone regarding the greater sage-grouse and a compensatory mitigation plan for the species in South Dakota. Discussions included a management plan and avoidance, minimization, and mitigation strategies.

Copies of contact reports and correspondence related to this process of consultation are included in the non-confidential FTP site.

44. All documents describing or containing information regarding TransCanada's or its Affiliates' efforts to comply with conditions regarding construction of the Project near wetlands, water bodies, and riparian areas, such documents including but not limited to compliance plans, construction plans, mitigation plans, and communications with any regulatory agency in such regard. *[Applicable Finding or Condition No.: Condition 22]*

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ANSWER: Copies of Keystone’s CMR Plan (Rev 4), Appendix R to the FSEIS, and the draft Preconstruction Notices to the U.S. Army Corps of Engineers are included in the non-confidential FTP site.

53. All documents containing information regarding TransCanada’s or its Affiliates’ efforts to comply with protection and mitigation requirements of the US Fish and Wildlife Service (“USFWS”) and SDGFP with respect to any endangered species. *[Applicable Finding or Condition No.: Condition 41]*

ANSWER: The Biological Assessment and Biological Opinion are included in the non-confidential FTP site. Contact reports with USFW regarding endangered species are also included in the non-confidential FTP site. The Biological Survey Reports are included in the confidential FTP site.

55. All documents referencing or containing information concerning cultural or paleontological resources along the Project route, including but not limited to all documents identifying cultural and paleontological resources, consultations and communications with the Bureau of Land Management and Museum of Geology at the South Dakota School of Mines and Technology. *[Applicable Finding or Condition No.: Condition 44]*

ANSWER: There were no consultations with BLM (there are no BLM lands along the route in South Dakota) or the Museum of Geology at the South Dakota School of Mines and Technology for the Project route in South Dakota. The cultural survey reports are included in the confidential FTP site, as are the Paleontological Monitoring Plan and its appendices. The Programmatic Agreement (Appendix E to the FSEIS) is included in the non-confidential FTP site.

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56. The incident reports for each and every spill or leak related to a pipeline operated by TransCanada and its Affiliates since January 1, 2010. *[Applicable Finding or Condition No.: Findings 12(2)-(3), 41-45, 47, 103; Conditions 32-38]*

ANSWER: The incident reports are included in the non-confidential FTP site.

Dated this 17th day of April, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

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CERTIFICATE OF SERVICE

I hereby certify that on the 17th day of April, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Supplemental Responses to Dakota Rural Action's First Request for Production of Documents, to the following:

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