

South Dakota Public Utilities Commission

HP14-001 In the Matter of the Petition of TransCanada Keystone Pipeline, LP for Order
 Accepting Certification of Permit Issued in Docket HP09-001 - Evidentiary Hearing
 July 31, 2015, 8:00 a.m.

Room 414, State Capitol, 500 E. Capitol Ave., Pierre, SD

Please Print Legibly

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THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

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IN THE MATTER OF THE PETITION HP14-001
OF TRANSCANADA KEYSTONE PIPELINE,
LP FOR ORDER ACCEPTING CERTIFICATION
OF PERMIT ISSUED IN DOCKET HP09-001
TO CONSTRUCT THE KEYSTONE XL
PIPELINE

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Transcript of Hearing
July 27, 2015 through August 5, 2015

Volume V
July 31, 2015
Pages 1042-1309

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BEFORE THE PUBLIC UTILITIES COMMISSION

CHRIS NELSON, CHAIRMAN
KRISTIE FIEGEN, VICE CHAIRMAN (not present)
GARY HANSON, COMMISSIONER

COMMISSION STAFF

John Smith
Kristen Edwards
Karen Cremer
Greg Rislov
Brian Rounds
Darren Kearney
Tina Douglas
Katlyn Gustafson

Reported By Cheri McComsey Wittler, RPR, CRR

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TRANSCRIPT OF PROCEEDINGS, held in the
above-entitled matter, at the South Dakota State Capitol
Building, Room 414, 500 East Capitol Avenue, Pierre,
South Dakota, on the 31st day of July, 2015.

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1 MR. SMITH: We'll call the hearing back to order
2 in Docket HP14-001, In the matter of the Petition of
3 TransCanada Keystone Pipeline, LP for Order Accepting
4 Certification of Permit Issued in Docket HP09-001 to
5 Construct the Keystone XL Pipeline.

6 We have one scheduling issue to advise everyone
7 of, and that is Commissioner Nelson has to chair a -- is
8 it a --

9 CHAIRMAN NELSON: Just a conference call that's
10 going to start at noon so we're going to need to break at
11 about 10 to noon.

12 MR. SMITH: Okay. Something like that. And
13 then we'll see how it goes. But we do have to take a
14 break before the crack of 12:00 so Chairman Nelson can be
15 down there and ready to go.

16 MR. ELLISON: Mr. Smith, I apologize. I was
17 engaged in a discussion with counsel, and I hope I didn't
18 miss something.

19 MR. SMITH: No. He has a telephonic committee
20 meeting at the crack of noon so we're going to break --
21 depending on how it goes but around -- by 10 to, 10 to
22 12:00.

23 MR. ELLISON: And is there any -- perhaps,
24 Chairman Nelson, do you have any idea how long that would
25 likely take?

1 CHAIRMAN NELSON: Hopefully 10 minutes. No. We
2 will definitely be back at our normal hour.

3 MR. ELLISON: All right. Thank you, sir.

4 MR. SMITH: Well, we have been taking an hour
5 and 15, and I think we will continue to do that.

6 Okay. Ms. Kothari, you're on the stand. And,
7 Mr. Blackburn, we were in the middle your cross. And
8 when she gets up here --

9 You're still sworn, Ms. Kothari.

10 MR. BLACKBURN: Mr. Smith, I believe we had one
11 minor housekeeping item. And that was we were wondering
12 if folks would appreciate and the Commission would allow
13 a casual Saturday?

14 MR. SMITH: I had the same thought.

15 MR. BLACKBURN: And I believe that Commissioner
16 Hanson suggested bathing suits.

17 MR. SMITH: What do you think? Where we could
18 do blue jeans if you want to or whatever or khakis and a
19 shirt? I think that would be nice.

20 MR. WHITE: We're going to object to bathing
21 suits.

22 MR. SMITH: Of course, it depends on who's
23 wearing it maybe.

24 CHAIRMAN NELSON: Okay. Move it along.

25 MR. SMITH: Yes. I like that caveat, casual

1 Saturday idea.

2 CROSS-EXAMINATION (Continued)

3 BY MR. BLACKBURN:

4 Q. Good morning.

5 A. Morning.

6 Q. Could you describe your role in the development of
7 the -- let's see if I can get the name right. Is it
8 Bakken link or Marketlink for the facility in Baker,
9 Montana?

10 A. The Bakken Marketlink Project.

11 Q. Bakken Marketlink.

12 A. I don't have any specific role with that project.

13 Q. Did you have any role with engineering or
14 development of that project?

15 A. No. That was a separate department that did the
16 engineering for that.

17 Q. Do you have any familiarity with it, and can you
18 testify about it today?

19 A. No, I cannot.

20 Q. Okay. How about the Cushing Marketlink Project?
21 Did you have any role in that project?

22 A. That project was a facility-based project for the
23 tank terminal.

24 Q. Uh-huh.

25 A. But my role during the same time that that project

1 was being constructed was more pipeline focused.

2 Q. What do you mean "pipeline focused"?

3 A. So during the construction of the Gulf Coast
4 Pipeline project we were also building a terminal at
5 Cushing, and the terminal portion of the project was not
6 within my scope.

7 Q. Did the development of the Bakken Marketlink Project
8 affect any of the other engineering for the pipeline in
9 which you were involved?

10 A. No, it did not.

11 Q. So you weren't involved in any of the modifications
12 required to the Keystone XL Pipeline, to do that, to
13 allow that facility to come into existence?

14 A. No. That project is in the very early stages of
15 development, and there are no changes associated with the
16 pipeline design to accommodate that, that I know of at
17 this time.

18 Q. Uh-huh. Are you generally familiar with the
19 properties of crude oil?

20 A. Generally familiar.

21 Q. Uh-huh. Do you have any significant chemistry
22 background with regard to crude oil?

23 A. No, I do not.

24 Q. Chemistry?

25 A. No.

1 Q. Are you familiar with, for example, the different
2 kinds of hydrocarbons that are in crude oil?

3 A. Not specifically.

4 Q. Uh-huh. Do you know the term pentanes plus?

5 A. I do not.

6 Q. Okay. Just to get a sense of what you did do,
7 because it's a little bit hard to define where those
8 boundaries are -- and you were involved specifically --
9 just to refresh myself what you said yesterday, rather
10 than asking the court reporter to go back, so if there's
11 a little indulgence here, with regard to Keystone XL you
12 were the lead engineer for TransCanada in development of
13 that project in the United States; is that correct?

14 A. Yes.

15 Q. So could you describe what you would do -- this may
16 be a bit broad, but in a typical day. Because I don't
17 think that everybody understands how TransCanada divides
18 up its responsibilities between its staff and its
19 contractors, its engineering contractors.

20 A. Sure. My primary responsibility was oversight of
21 the third-party engineering firm that was responsible for
22 the pipeline design.

23 So that firm on a day-to-day basis would work on
24 routing as well as materials selection for the pipeline,
25 working and interfacing with other disciplines within the

1 project team, whether it be the land team or the
2 environmental team, coordinating the various data
3 collections and specific routing along the length of the
4 pipeline, as well as supporting some of the Permit
5 applications with specific detail.

6 Q. So did you -- there's a significant amount of your
7 job-related to the communications between TransCanada's
8 contractors and the TransCanada engineering team and
9 TransCanada management to help facilitate the
10 relationship?

11 A. Correct.

12 Q. Are you aware of -- well, you said you're moving
13 into a new role, which is looking at future projects --
14 or future development, commercial development.

15 Are you aware of any proposals by other
16 transportation service providers to interconnect with the
17 Keystone XL Pipeline at Baker, Montana?

18 A. I'm not. That's outside of my specific knowledge to
19 my new role.

20 Q. Uh-huh. And how about with your old role? Did you
21 have any knowledge of proposals to interconnect pipeline
22 or other transportation facilities to the Baker, Montana
23 on-ramp?

24 A. No, I did not.

25 Q. Were you familiar with the -- and I know that you

1 had a limited role in -- you didn't have any formal role
2 within the base Keystone Pipeline operations, but you had
3 testified that when a problem arose on that pipeline that
4 the lessons learned were transmitted to you.

5 Are you familiar with the leaks that happened,
6 spills that happened, on the base Keystone Pipeline after
7 its start of operation?

8 A. I'm familiar generally that we had a number of leaks
9 at the pumping stations upon initial operations.

10 Q. And could you describe the cause of those leaks?

11 A. My understanding is that it had to do with a small
12 above-ground component, such as a fitting. That's my
13 understanding of what some of the issues were.

14 Q. For all the pump -- for all of those leaks were
15 caused by that?

16 A. I'm not 100 percent sure about all of them, but
17 that's my general understanding, that there were some
18 component -- some of the fitting component issues.

19 Q. And were there any integrity digs that you were
20 aware of for the base Keystone Pipeline?

21 Apart from the issue we discussed yesterday with the
22 utility electrical interference, were there other
23 integrity digs in the base Keystone Pipeline apart from
24 that?

25 A. My understanding is that there were additional

1 integrity digs as a result of PHMSA advisory that was
2 issued late in 2009 related to low yield materials that
3 potential pipeline operators would be susceptible to.

4 And so as we moved into operations with the handoff,
5 my understanding is that the integrity management folks
6 were developing plans, implementing plans, to meet that
7 advisory requirement.

8 So I do believe that there were digs involved
9 related to that specific advisory from PHMSA.

10 Q. How are the location of those digs identified?

11 A. The location of those digs were identified through
12 high resolution in-line inspection, as per the advisory
13 requirements.

14 Q. And what kind of inspection? Was it a geometry tool
15 only?

16 A. I'm not sure specifically what tool the integrity
17 department used, but my understanding is that geometry
18 was one of the requirements as part of that advisory.

19 Q. And what were the specific concerns that were --
20 that triggered the integrity digs?

21 A. Essentially the criteria within the PHMSA advisory
22 around potential for low yield materials to be installed
23 in the pipeline during that time frame in the industry.

24 And so the advisory requested operators to verify
25 the integrity of the pipeline based on the specific

1 criteria that was set forth in that document.

2 Q. And did the inspection tools find any -- inspection
3 tools found some locations that resulted in integrity
4 digs.

5 What were the potential or proven defects found --
6 that were found by those tools?

7 A. My understanding is that there were some materials
8 that were found to meet the criteria within those
9 advisories, but I don't know all the specific details,
10 you know, around dimensions and particularities of that
11 particular program.

12 Q. And could you describe in more general terms what
13 the problem with the pipe that was -- the potential
14 problem of the pipe that was found -- what was wrong with
15 the pipe?

16 A. I wouldn't say that there was anything specifically
17 wrong with the pipe. However, if you were to order a
18 material at a specific requirement and then that material
19 didn't necessarily meet your order specification and had
20 a lower strength than what was specified, those were some
21 of the issues with that particular issue.

22 Q. Was any low strength material identified through
23 those integrity digs?

24 A. I believe there were some lower strength materials
25 identified through those digs. Nothing that would ensure

1 the ongoing safe operations of the pipeline.

2 Q. Was any pipe replaced because of those integrity
3 digs?

4 A. Not to my knowledge.

5 Q. Was there any pattern or particular type of
6 location, class of location, that was -- that was related
7 to those digs? Or was it all just general main line
8 pipe? Or was it some other more specific kind of pipe,
9 those returns that were resulted -- that were the
10 problem, some of those integrity digs?

11 A. I don't know specifically, but I think my general
12 understanding is it was just main line type materials.

13 Q. Uh-huh. And the results of that, what's the testing
14 process to ensure that the material is not substandard
15 after the integrity dig?

16 A. I don't have any specific details on what measures
17 and verification and testing that were done during that
18 integrity program.

19 Q. Uh-huh. Do you know typically what kinds of things
20 might be done?

21 A. Generally my understanding is that they would verify
22 the strength of the material through some specific
23 hardness testing, to that effect.

24 Q. Uh-huh. But you're not aware of whether it was a
25 problem with chemistry or fabrication or any other

1 problem?

2 A. I'm not specifically aware of the -- the root cause,
3 whether it was the chemistry of the steel or whether it
4 was a specific rolling practice or manufacturing practice
5 of the steel.

6 Q. But no steel was replaced because of the inspection
7 process.

8 A. Not to my knowledge.

9 Q. With regard to the pump station leaks, you said it
10 was particular pieces of equipment leaking.

11 What pieces of equipment leaked?

12 A. My understanding is that it was threaded fitting,
13 like a component.

14 Q. Uh-huh. Was there a particular manufacturer
15 implicated in those threaded fitting problems?

16 A. I wouldn't know the specific manufacturer.

17 Q. Uh-huh. Was it a particular -- was it just all
18 sorts of threaded fittings? I imagine there was a fair
19 number of those at the pump stations. Or was it one
20 particular type of thread fitting at the pump station?

21 A. I'm not sure specifically the type or the specific
22 location of those components within the pump facilities.

23 Q. Uh-huh. Has TransCanada experienced any other
24 significant -- I don't want to say significant but any
25 other unexpected maintenance, unplanned maintenance

1 issues with base Keystone and the Keystone Extension in
2 the past two years?

3 A. Not to my knowledge. Not 100 percent involved in
4 the details of the operations. So, like I mentioned
5 previously, any specific types of issues whereby we would
6 need to do a design or a procedure change on the project
7 side, that's essentially when I would be engaged by the
8 operations group to, you know, discuss some of those
9 issues at a high level and then look to incorporate
10 specific changes.

11 Q. After TransCanada's decision to not proceed with the
12 Special Permit Application did TransCanada change any of
13 the engineering for the Keystone -- proposed Keystone XL
14 Pipeline in response -- or in response to withdrawing
15 that Permit Application?

16 A. No. We continued to move ahead with the Special
17 Conditions that were outlined that came out in the
18 August 2011 DFEIS.

19 There were at that time 57 Special Conditions, and
20 we had committed -- as mentioned in the advisory in 2010,
21 that we would voluntarily adopt those design,
22 construction, and operational requirements.

23 And so we didn't necessarily change anything. We
24 just continued to progress the designs as part of that
25 commitment.

1 Q. As part of your prior responsibilities, the ones
2 you're maybe segueing out of in your new role, did you
3 provide engineering support or advice to TransCanada's
4 development or marketing staff?

5 A. In terms of?

6 Q. Well, I imagine that the development and marketing
7 people are generally not engineers and that there might
8 be engineering questions that would come up with regard
9 to the development of the potential projects and
10 understanding what is a somewhat complex business of, you
11 know, pipeline transportation, that -- so I imagine that
12 they would sometimes need engineering vice.

13 And I wondered if you were the person that would
14 provide advice to other development and marketing
15 professionals within TransCanada.

16 A. No. That would have been a separate department. We
17 have another team of engineers that looks after
18 supporting development projects and the commercial and
19 marketing groups.

20 Q. Uh-huh. And how does -- what's the distinction of
21 your new role, since you are in some -- what's your title
22 again?

23 A. It's business development. So I'm transitioning to
24 a nontechnical role. So it wouldn't necessarily be in
25 that support role to the commercial and marketing team.

1 It's a new role within that commercial team.

2 Q. Are you familiar with a company called Genscape?

3 A. I'm generally familiar with that, now that I've
4 moved into my new role.

5 Q. And what does Genscape do?

6 A. They provide details on different pipeline flow
7 rates from different operators and pipelines within the
8 U.S.

9 Q. From other companies?

10 A. From other companies. That's right. They provide
11 generally what the capacities on a monthly or periodic
12 basis are for different companies.

13 Q. Are those reports that you -- you see Genscape
14 reports with some regularity in your work?

15 A. I don't specifically receive those reports.
16 They're -- they're issued to folks within our larger
17 team.

18 Q. Uh-huh. Do you see summaries of those reports on a
19 somewhat regular basis or on an as-needed basis?

20 A. Not specifically, unless there was something
21 specific that I was tasked to do that would require me to
22 look at those reports. So I wouldn't say on a frequent
23 basis.

24 Q. Have you ever looked at those reports with regard
25 to Enbridge Corporation's pipeline operations in

1 North America?

2 A. I have not.

3 Q. Okay. There have been some minor route changes in
4 South Dakota related to the Keystone XL Pipeline. Were
5 you involved in any of the engineering related to those
6 route changes?

7 A. I wasn't performing the engineering related to those
8 route changes, but I was involved in reviewing those
9 changes with my engineering team as well as with the --
10 the internal engineering team as well as our third-party
11 contract engineering team that was responsible for
12 completing the engineering for those route changes.

13 Q. So is it correct to characterize your role is that
14 there would be a desired route change prepared, for
15 example, by communications with landowners, and then was
16 your role to communicate -- and that would be agreed to
17 by TransCanada and the landowners or by TransCanada and
18 the government of South Dakota, and then was it your role
19 to help communicate those changes, those desired changes,
20 to your contracting engineers?

21 A. So the process typically would be if there was a
22 route change requested by a landowner or whether it was a
23 route change as a result of environmental surveys or
24 specific route change as a result of review
25 constructability of that particular location, those

1 informations would be prepared and reviewed by
2 multidisciplinary teams.

3 So it would be, you know, for example, the land
4 department on behalf of verifying and getting comments
5 and concerns from the landowner in our environmental team
6 to ensure that there were no specific environmental
7 impacts to that proposed change as well as review from
8 our construction and project management team.

9 So it's a multidisciplinary review of those specific
10 route changes. And so my role in that would be to review
11 the technical portion of it as prepared by the
12 third-party engineering firms and to communicate and
13 interface with the TransCanada discipline leads,
14 overseeing their particular departments and confer and
15 confirm with ensuring that that route change was
16 appropriate.

17 Q. Thank you.

18 But you are generally familiar with most of the
19 route changes. Those did pass through your hand at some
20 level?

21 A. Yes.

22 Q. Thank you.

23 MR. BLACKBURN: No further questions. Thanks.

24 MR. SMITH: Thank you. We'll move to Dakota
25 Rural Action.

1 MR. ELLISON: Mr. Smith, I am happy to start
2 now. I was just wondering perhaps since I expect my
3 examination to be somewhat lengthy if perhaps we could go
4 to Mr. Rappold who wanted to have until this morning to
5 do that. I believe his will be shorter.

6 MR. SMITH: Okay. Mr. Rappold, would you like
7 to proceed now?

8 MR. RAPPOLD: Certainly.

9 MR. SMITH: Thank you.

10 CROSS-EXAMINATION

11 BY MR. RAPPOLD:

12 Q. Good morning, Ms. Kothari. My name is Matt Rappold.
13 I represent the Rosebud Sioux Tribe.

14 A. Good morning.

15 Q. It's my understanding your testimony relates to
16 Conditions 2 and 31 of the Amended Permit.

17 Is that an accurate understanding of your
18 testimony?

19 A. Yes.

20 Q. And you also testified in the 2009 Docket; is that
21 correct?

22 A. I did.

23 Q. Have you reviewed any documents prior to preparing
24 for this hearing today?

25 A. I've reviewed the testimony that was prepared as

1 well as documents related to routing and familiarizing
2 myself with some of those particular aspects.

3 Q. So just the prepared testimony and documents related
4 to routing?

5 A. Routing and anything specific related to the Special
6 Permit Conditions as well, as that's part of Amended
7 Order Condition 2 and 31.

8 Q. When you say the Special Permit Conditions you're
9 referring to the Special Permit Application that was
10 withdrawn; is that correct?

11 A. Yes. Those Conditions were incorporated into the
12 FSEIS Appendix Z. And so those are the specific
13 Conditions that I was referencing.

14 Q. Were all of the Special Conditions that you were
15 asking for in the Special Permit waiver incorporated, or
16 just some of them?

17 A. So the -- the Conditions set forth by PHMSA in
18 reviewing our Special Permit Application were provided to
19 the Department of State, and all of those Conditions were
20 incorporated by the Department of State into the Final
21 Supplemental Environmental Impact Statement.

22 Q. So then is it your testimony is that there are no
23 new Conditions that were added?

24 A. There was a progression over 2011 through 2014 in
25 the earlier DOS documents. 57 Conditions were issued by

1 PHMSA to the DOS. In the 2014 FSEIS an additional two
2 Conditions were incorporated.

3 Q. So it's your testimony then that had you been
4 granted the Special Permit, 57 Conditions would have been
5 already part of what was considered, plus two that are
6 new?

7 A. I guess you could put it that way.

8 Q. And your understanding is that the original
9 Presidential Permit Application was denied; correct?

10 A. Yes.

11 Q. And do you know why that was denied?

12 A. I don't have specific recollection, specific details
13 on that.

14 Q. You don't have specific details as to why that was
15 denied?

16 A. No. I'd have to go back and look at that
17 information.

18 Q. I think it's pretty common knowledge why that Permit
19 was denied.

20 MR. WHITE: Objection. Argument.

21 MR. SMITH: Sustained. Rephrase, please.

22 Q. Your responsibility is to ensure compliance with
23 PHMSA requirements; is that correct?

24 A. Yes.

25 Q. And PHMSA requirements would have been a part of the

1 Presidential Permit had it been approved; is that
2 correct?

3 A. Yes.

4 Q. But you don't know why that was approved -- or
5 denied, rather?

6 A. Sorry. Which Permit are we talking about?

7 Q. Well, there's only one Presidential Permit that has
8 been denied. So I'm talking about the original
9 Presidential Permit Application for the project as it was
10 described at that time.

11 A. Okay. And so I don't know all the specific details
12 around the denial. I do know that we did have,
13 obviously, the issues in Nebraska as far as the routing.
14 So that was one specific item.

15 I'm not 100 percent aware if there were other
16 details in particular in the entire discussion of the
17 denial, but obviously within my capacity within the
18 engineering, the route in Nebraska was part of that
19 denial.

20 Q. Could you share for us what percentage of knowledge
21 you have as to why it was denied?

22 A. I just know specific details around the routing and
23 that we were required to modify the route through
24 Nebraska. I don't know if there were any other specific
25 details in that denial around the entire discussion of

1 the DOS's rulings.

2 Q. Did you inquire to find out why it was denied?

3 A. Not specifically. Within our project team we look
4 after various -- you know, various details and various
5 specific roles.

6 And so within my specific department the routing was
7 part of that request for change with the reapplication of
8 the Presidential Permit.

9 Q. And were you involved with the new Presidential
10 Permit Application?

11 A. Yes. I was involved.

12 Q. In preparing -- what was your level of involvement
13 in the new Application?

14 A. I oversaw the engineering firm that prepared the new
15 route for the Nebraska portion.

16 Q. And you didn't go back to look to the denial to see
17 if there's anything that you might want to make sure you
18 take into account when you file the new Presidential
19 Permit Application?

20 A. Yes. There were specific requirements on avoidance
21 of specific areas in Nebraska.

22 Q. And that's all you were able to determine?

23 A. That's all that was required specifically in terms
24 of making the modifications to the route were the
25 specific avoidance of several of areas in Nebraska so

1 then a new Permit was applied for.

2 Q. When did that happen?

3 A. I don't know the specific date.

4 Q. Do you know the year?

5 A. I believe it was 2012.

6 Q. And would it be your understanding that the 2012
7 Permit Application would be for a different project?

8 A. Not a different project. The start point and end
9 points were the same. We had modified the routing in
10 Nebraska as well as, as others have testified, added the
11 on-ramp in Baker, Montana.

12 Q. So the 2012 Application, the start and the end
13 points are the same as the Application that was denied.
14 Is that your testimony?

15 A. Yes. The entry point into the U.S. as well as the
16 end point at Steele City at our existing pump station
17 facility in Steele City is the same.

18 Q. I thought the original project description went --
19 was all the way to the Gulf Coast?

20 A. I guess that was a removal from that Permit. So it
21 was a smaller scope.

22 Q. Right. So the starting and the end points were not
23 the same; is that correct?

24 A. The starting and end points for the Keystone XL
25 portion have not changed.

1 Q. The project as originally described was the
2 Keystone XL; correct?

3 A. It was.

4 Q. And that was to be constructed in three phases;
5 correct? Three segments?

6 A. I believe it was two segments.

7 Q. Two segments?

8 A. The portion from the border to Steele City, and then
9 the portion originally from Cushing, Oklahoma down to
10 Nederland, Texas.

11 Q. And wasn't the extension to the Gulf part of that
12 project as well?

13 A. Yes. That would be the portion from Cushing,
14 Oklahoma to the Gulf Coast, to Texas.

15 Q. Okay. So there's three sections then; correct? And
16 now there's only one section?

17 A. My understanding from the way that I look at it, it
18 would be two sections. It would be the segment from the
19 Canadian border down to Steele City, and then from
20 Cushing, Oklahoma to the Gulf Coast as two sections.

21 Q. And so now the project as described in the new
22 Application, the 2012 Application, is one section;
23 correct?

24 A. Correct.

25 Q. With the addition of the Bakken Marketlink?

1 A. Correct.

2 Q. Now you would agree that that is a different
3 project; correct?

4 A. It's a smaller scope from the original project.

5 Q. You've testified that you have no knowledge of the
6 Bakken Marketlink Project; is that correct?

7 A. I don't have any specific details on that project.

8 Q. Are you generally familiar with it?

9 A. I'm generally familiar that, as Mr. Goulet described
10 earlier in the testimony --

11 Q. I missed his testimony. I'm sorry. I wasn't here.
12 So you're aware that TransCanada owns that project;
13 correct?

14 A. Yes.

15 Q. Okay. And are you aware, is that project permitted
16 yet?

17 A. I don't believe that any permitting has started for
18 that project.

19 Q. Is there anything that you've seen reviewing the --
20 and preparing for this hearing that would indicate that
21 project is owned by TransCanada?

22 MR. WHITE: Objection. Asked and answered.

23 MR. SMITH: Mr. Rappold, do you have a response?

24 MR. RAPPOLD: I haven't asked that question.

25 CHAIRMAN NELSON: Sustained.

1 MR. SMITH: Has it been?

2 MR. RAPPOLD: I asked her if she had
3 knowledge -- based on her review of the materials for
4 this hearing, if there was any information that would
5 indicate TransCanada owns that project.

6 And that question has not been asked, not by me
7 anyway.

8 COMMISSIONER HANSON: Sustained.

9 CHAIRMAN NELSON: Yeah.

10 MR. SMITH: The Commissioners think it should be
11 sustained, Mr. Rappold.

12 Q. You testified that there's only two new requirements
13 from the PHMSA 59 Conditions; is that correct?

14 A. There are two new -- two additional requirements
15 over the original requirements that were provided in the
16 2011 issuance of the SFEIS. And as that has progressed
17 over the last few years, additional requirements have
18 been added to that.

19 Q. So there's more than two new requirements?

20 A. Would be the two new requirements from PHMSA as part
21 of the -- the Special Conditions related to design,
22 construction, and operations.

23 But there were additional Conditions required, as
24 listed in Appendix Z, based on additional Department of
25 State review of the engineering designs for the project.

1 And collectively -- I don't know the total number of
2 Conditions that are listed, but those are contained
3 within Appendix Z of the FSEIS.

4 Q. Okay. So you don't know how many additional
5 requirements there are?

6 A. Specifically related to PHMSA there are 59. There
7 are additional requirements as a result of Department of
8 State's review of the project, which also affect some of
9 the design of the pipeline.

10 Q. Do some of the requirements address monitoring of
11 the pipeline?

12 A. From the PHMSA Conditions?

13 Q. Yeah.

14 A. Yes.

15 Q. And what are those requirements?

16 A. There are specific requirements as it relates to
17 SCADA and leak detection, as well as integrity management
18 monitoring related to various aspects of the pipeline's
19 operation, whether it be right of way monitoring or
20 monitoring for specific threats as part of the integrity
21 management plans.

22 Q. What type of -- are you aware of what type of
23 monitoring would be required under the new Conditions?

24 A. I'm not sure specifically what your question is.

25 Q. What type of monitoring requirements are there?

1 A. So specific monitoring requirements related to
2 pipeline patrolling. So that's a type of monitoring.
3 Requirements related to monitoring of temperatures on the
4 pipeline as it relates to coating performance.
5 Monitoring of the pipeline operations itself as it
6 relates to the control center and various operational
7 systems.

8 Q. When you say pipeline patrolling, can you describe
9 what is -- what do you mean by that?

10 A. As required by federal regulations, we are required
11 to monitor the right of way 26 times a year and not to
12 exceed three weeks. And so those are part of the
13 monitoring requirements for the pipeline. And that
14 monitoring can be done through aerial surveillance or
15 through ground patrol.

16 Q. And are you aware of TransCanada applying for any
17 waivers from those monitoring requirements for any other
18 pipeline they operate?

19 A. I'm not specifically aware.

20 Q. Is there another witness that would be aware of
21 that?

22 A. Mr. King could potentially answer those questions
23 for you.

24 Q. Do you have any knowledge of PHMSA accusing
25 TransCanada of failing to adequately monitor pipelines by

1 air patrols?

2 A. I'm not specifically aware.

3 Q. Would that be something that's concerning to you,
4 considering your role is to ensure PHMSA compliance and
5 that is a requirement?

6 A. My role is specifically related to design and
7 construction. The operations of the pipeline
8 responsibilities fall on the pipeline integrity and
9 engineering group during the operations.

10 Q. Were you in the room yesterday to listen to the
11 proceedings?

12 A. I was.

13 Q. And did you hear a statement made by one of the
14 TransCanada lawyers that there's no Conditions in the
15 Amended Permit that address SCADA requirements?

16 A. I am.

17 Q. So it would be your understanding that SCADA
18 requirements were not a part of the -- well, strike that.

19 Would you agree with the statement that was made?

20 A. I would agree that there are no Conditions in the
21 Amended Order related to that.

22 Q. Then would you agree that because there's no
23 information -- or no Condition, rather, that's related to
24 SCADA requirements, that there was nothing presented in
25 the underlying Permit Application regarding that topic?

1 A. The PUC Permit Application?

2 Q. Yes. Yes, ma'am.

3 A. I believe that there were discussions during the
4 original proceedings and that there were Findings of Fact
5 related to the type of pipeline monitoring that
6 TransCanada would be using for the pipeline, the KXL
7 project.

8 Q. But then there's no Condition that requires
9 compliance with the SCADA requirement; is that correct?

10 A. Based on my review and the discussions yesterday, I
11 don't believe that there's a specific Condition related
12 to SCADA.

13 Q. But now -- now there is today; correct?

14 A. There are Conditions within the Appendix Z of the
15 DOS documents related to SCADA monitoring.

16 MR. RAPPOLD: Thank you. I have no further
17 questions.

18 MR. SMITH: Thank you.

19 Did you want to go now, Mr. Ellison, then?

20 MR. ELLISON: You know, I really don't have a
21 preference, Mr. Smith. If there are some others that
22 might be shorter, if that would be easier for the
23 Commission to deal with procedurally, I just don't have
24 any objection.

25 MR. SMITH: I don't think it matters to us. You

1 know, if there's somebody that wants to get done and move
2 on -- but why don't we just go to Dakota Rural Action,
3 and we'll move along.

4 MR. ELLISON: It may take us a moment to set up.

5 MR. SMITH: Okay.

6 MR. MARTINEZ: And just to help speed things
7 along, I'm going to sit up here and help Mr. Ellison work
8 through the electronic exhibits. That way he's not
9 trying to flip back and forth through them. It will go
10 quicker.

11 MR. ELLISON: Hopefully.

12 CROSS-EXAMINATION

13 BY MR. ELLISON:

14 Q. Good morning, Ms. Kothari.

15 A. Good morning.

16 Q. My name is Bruce Ellison. I'm an attorney with
17 Dakota Rural Action, with Mr. Martinez.

18 I'd like to begin by asking a question, ma'am, about
19 your direct testimony, your written testimony.

20 Did you draft that document?

21 A. Yes.

22 Q. What did you understand the purpose was in providing
23 your direct testimony? What was it that you were -- you
24 felt you were to relate to the Public Utilities
25 Commission that was important for them to consider in

1 whether to recertify the construction Permit?

2 A. My understanding is that we were to demonstrate that
3 we could continue to meet the Conditions in the Amended
4 Order and that if there were any specific changes to the
5 Findings of Fact that would allow for a fulsome
6 submission, to provide information related to any details
7 that would have changed over the time since the Amended
8 Order was issued to the time that we were completing the
9 recertification.

10 Q. Could you explain to us then -- let me strike that.
11 Would you agree that there is no reference in your
12 direct written testimony to any Amended Condition?

13 A. No specific reference to a particular Condition
14 number, yes.

15 Q. So your Direct Testimony, in fact, did not include
16 any information directly related to a particular
17 Amended Condition to convince the Commission that, in
18 fact, TransCanada was willing, able, and capable of
19 complying with the Conditions; isn't that correct?

20 MR. WHITE: Objection. Argumentative.

21 MR. SMITH: Overruled.

22 A. I wasn't responsible for the specific questions
23 within the testimony. Just providing specific responses
24 related to the details around that.

25 Q. So your answer would be that's correct, there was

1 no -- nothing specifically addressed in your written
2 testimony --

3 MR. WHITE: Objection. Argumentative. He's
4 recharacterizing her testimony.

5 MR. ELLISON: I'm trying to understand her
6 testimony, counsel, and it's certainly something I'm
7 entitled to do during cross-examination. You know that.

8 MR. SMITH: Can you rephrase the question,
9 Bruce.

10 MR. ELLISON: Sure.

11 Q. It would be fair to say, ma'am, that there is
12 nothing in your Direct Testimony which provides this
13 Commission with any evidence that specifically relates to
14 the two Conditions you later orally told us your
15 testimony was about; isn't that correct?

16 A. I believe within my testimony we explain, and I
17 explain, that we are continuing to meet the special
18 Condition or the Special Conditions within the design,
19 construction, and operations of the pipeline as it
20 relates to the Special Permit, if obtained within the
21 Amended Order.

22 My understanding is that the Amended Order,
23 Condition 2 and 31 note that TransCanada is to follow the
24 Conditions within the Special Permit, if issued, and
25 within my testimony I explain that the Special Permit was

1 withdrawn and that TransCanada has voluntarily adopted to
2 apply those Permit Conditions, despite not continuing to
3 seek approval for a Special Permit.

4 Q. Other than a general promise that you're going to
5 comply with all of the Conditions, isn't it fair to say
6 that your written testimony, for example, did not say as
7 to Condition 2, Amended Condition 2, TransCanada presents
8 evidence A, B, C, D, E, F, G, H, I, J, K to show that we
9 can, will, and are capable of complying?

10 It doesn't say that, does it?

11 MR. WHITE: Objection. Continue to renew my
12 objection on argumentative. He asked the witness what
13 her understanding was of how she addressed the
14 Conditions. She provided an answer. Now he's trying to
15 get her to agree with his legal argument.

16 MR. SMITH: Sustained.

17 (Pause)

18 Q. Ma'am, according to your curriculum vitae, you
19 state, do you not, that you have assisted with the
20 development of key valuation assumptions and related
21 analyses regarding the Keystone Project?

22 A. Sorry. Could you repeat the question?

23 Q. Sure. According to your curriculum vitae, do you
24 not state on page 1 of 4 that one of your duties has been
25 to assist in the development of key valuation assumptions

1 and related analyses?

2 It's not a trick question. It's foundational.

3 A. Sorry. I'm just looking for the specific bullet
4 point on the -- and sorry. This is on page 1 of 4?

5 Q. Yes.

6 A. Okay. This is in the new -- the new job that I'm
7 transitioning to.

8 Q. I thought you were going into commercial marketing?

9 A. Yes. And one of the -- one of the specific tasks in
10 that department would be reviewing assumptions and
11 analysis related to potential new projects that would be
12 upcoming.

13 So this particular portion of my resume is not
14 related to the Keystone XL Project.

15 Q. Ma'am, didn't you state in your curriculum vitae
16 that this was under the title of being -- oh, I'm sorry.
17 It was. Business development. I see that. Thank you.

18 What about being a manager of technical services for
19 pipeline engineering for Keystone oil projects?

20 A. So this is the explanation that I provided
21 Mr. Blackburn regarding my role on the Keystone XL
22 Project in overseeing the third-party engineering firms
23 who are responsible for the pipeline design.

24 Q. I mean, you also stated in your curriculum vitae
25 that you have oversight responsibility for design

1 engineering for the Keystone XL Pipeline Project; is that
2 correct?

3 A. That's right.

4 Q. What does oversight mean to you? What was your job
5 doing oversight?

6 A. To provide guidance and direction regarding use of
7 specific engineering standards from TransCanada, as well
8 as to review, verify, and validate the designs that are
9 prepared by our third-party contractors in coordinating
10 those specific verification and validations through the
11 use of our extended engineering support within our
12 company.

13 Q. Now oversight, does that suggest that basically
14 you're the person who looks ultimately at anything that
15 is presented and decide whether it's real?

16 A. I would be part of a team that would be conducting
17 such a verification.

18 Q. Well, you didn't mention in your curriculum vitae
19 that you were part of the oversight team. You said you
20 were the person who has oversight responsibility, did you
21 not?

22 A. It's a summary in the document.

23 Q. I have oversight responsibility is a summary?

24 A. I believe it says oversight of, in general.

25 Q. Oversight responsibility for design and engineering

1 it says, does it not?

2 A. Correct.

3 Q. Okay. In response to questions from Mr. Blackburn
4 there were quite a few bits of skills, training,
5 experience that you acknowledged that you did not have;
6 is that correct?

7 A. Yes.

8 Q. And all of those things are important to know to
9 have a -- to be able to make a determination as to
10 whether what the people below you are telling you makes
11 sense from an engineering standpoint; correct?

12 A. I rely on my engineering specialty disciplines to
13 provide that additional review and oversight as it comes
14 up through to the management review of those particular
15 issues.

16 I don't have to know everything.

17 Q. You do have to know some things; right?

18 A. Yes.

19 Q. Well, so I guess I'm curious. In other words, you
20 have ultimate oversight responsibility, but you don't
21 know whether they're telling you things which comply with
22 the rules, which make sense from an engineering -- from a
23 safety standpoint.

24 You're telling us really we're not capable of doing
25 that; isn't that right?

1 MR. WHITE: Objection. Argument.

2 MR. ELLISON: This is a perfectly reasonable
3 question for this witness.

4 MR. SMITH: I'm going to overrule and let her
5 attempt to answer it.

6 Q. Ma'am.

7 A. We have systems and procedures and standards in
8 place at TransCanada whereby design and preparation of
9 engineering work is verified through a multidiscipline of
10 specific areas of expertise.

11 So I believe that that's covered as far as ensuring
12 the compliance to various regulations and ensuring that
13 the designs meet those particular requirements.

14 Q. So, in other words, if you did not exist in your
15 position, the same decisions would be made.

16 A. In my position I facilitate those particular
17 requirements to ensure that the designs are compliant and
18 meet the requirements of various particular codes and
19 standards or other permit requirements as required by the
20 project.

21 Q. That other people tell you is okay.

22 A. I'm not sure I understand.

23 Q. I'll move on.

24 You are the technical representative interfacing
25 with construction contractors?

1 A. I am.

2 Q. That's one of your duties?

3 You said yes?

4 A. Yes.

5 Q. Okay. Doesn't that require a certain -- I mean, it
6 would just seem to me -- and tell me if I'm wrong because
7 I've never worked for TransCanada, but it would seem to
8 me that if you are the technical representative who kind
9 of goes out and works with the contractors so that the
10 pipeline gets constructed in a proper manner, that you
11 would really need to know everything that was involved
12 from your knowledge, experience, and training to tell
13 these guys that what they're doing is right or wrong,
14 other than, you know -- and a safe pipeline being
15 produced; correct?

16 A. Yes.

17 Q. Would you liken your duty as the -- with oversight
18 responsibility and design and engineering, would you
19 liken that to like a captain of a ship?

20 A. I wouldn't say specific that. My role is to
21 coordinate review of specific issues as it relates to
22 various things that come up between the engineering
23 contractor within the construction contractor, to bring
24 those issues, to coordinate them with the specialty
25 engineers that we have, and ultimately come up with an

1 appropriate solution for any sort of questions or issues
2 that arise during the project process.

3 Q. So is your oversight responsibilities really more
4 like you just facilitate meetings?

5 A. Not specifically.

6 Q. But mostly.

7 A. No. I do -- I'm -- my role is to review, verify,
8 and validate through the processes that we have in place
9 at TransCanada any specific design or construction issue
10 that arises over the course of the project.

11 That would be using my specific skill base and my
12 knowledge, as well as reliance on other subject matter
13 experts within TransCanada or within our specialty
14 engineering firms that are expert in those particular
15 matters.

16 Q. According to -- isn't it correct, ma'am, that
17 beginning in October 2005 you were the lead project
18 engineer for the Keystone Pipeline Project?

19 A. Yes.

20 Q. Isn't that like being the captain of the ship?

21 A. I was leading the coordination and oversight of the
22 technical aspects of the project.

23 Q. And that's different from being the lead project
24 engineer, or is that the same thing?

25 A. I believe it's the same thing.

1 Q. Okay. So you were -- basically your job was to get
2 everybody together and they make all the decisions,
3 although you officially okay them; is that right?

4 A. No.

5 Q. Okay. Well, then tell me what your job was as lead
6 project engineer then that's different from that?

7 A. It was to collect the specific requirements from our
8 engineering firm, review those requirements, verify those
9 requirements, use subject matter expertise as required to
10 verify and validate those requirements, to sign off on
11 the technical requirements, confirming that they are
12 acceptable, based on verification and validation to
13 specific technical requirements and to pass those up to
14 our project managers and our management team for final
15 review and approval.

16 Q. Did I understand your testimony yesterday that you
17 don't know much about cathodic protection?

18 A. I'm not a cathodic protection specialist. We rely
19 on subject matter experts and corrosion experts to
20 provide that particular aspect of the project.

21 Q. But using this one little example -- I mean,
22 cathodic protection is very, very important for the
23 safety of a pipeline, is it not?

24 A. It's one of the aspects.

25 Q. Especially if it's near other pipelines?

1 A. It's one of the aspects, yes.

2 Q. I mean, it can cause corrosion that can lead to a
3 significant spill, can it not, if undetected?

4 A. It could have potential effects on the pipeline's
5 integrity.

6 Q. So you feel you could overlook someone else's work
7 specifically addressing cathodic protection even if you
8 don't know anything about it; is that right?

9 A. No.

10 Q. What is asset reliability, ma'am?

11 A. It's a department within TransCanada that oversees
12 pipeline integrity of operating pipelines.

13 Q. And you're, in fact, the pipeline integrity engineer
14 from July 2001 to April 2005 for the Keystone Project?

15 A. Not specifically for Keystone Project.

16 Q. Oh, that was for all the projects for Keystone --
17 for TransCanada?

18 A. I was an engineer within that department.

19 Q. And that involves coating?

20 A. Yes.

21 Q. And one of the things that can substantially affect
22 coating and corrosion is, as we just talked about,
23 cathodic issues; right?

24 A. Yes. I wasn't specifically involved in cathodic
25 protection.

1 Q. Okay. So your job is to make sure that the coating,
2 the welding, the materials and everything is done from an
3 integrity standpoint, but you don't know some of the
4 things that are involved that could affect the integrity
5 of any one of those; is that right?

6 A. I'm sorry. I don't understand your question.

7 Q. Your job as a pipeline integrity engineer for asset
8 responsibility, was it not, was technical specification
9 support for new capital pipeline projects involving
10 coating, welding, materials, NDE, other things; correct?

11 A. Yes. I was a support service to projects.

12 Q. But you wouldn't know things that could affect
13 coating or welding issues; is that right, from a
14 technical standpoint? You didn't have the training or
15 the experience to do that, did you? You'd have to go to
16 other people?

17 A. That was early -- that was one of my first
18 responsibilities at TransCanada. So I was an engineer in
19 training in 2001. And so I worked under senior engineers
20 who had those expertise, and they were persons that I
21 would seek out advice and requirements from, as well as
22 all of the specifications and standards within
23 TransCanada to provide any technical support to specific
24 projects related to those particular matters.

25 Q. So your answer would be no, you wouldn't have the

1 knowledge yourself?

2 MR. WHITE: Objection. Recharacterizing the
3 testimony.

4 MR. SMITH: Sustained.

5 Q. You talked a little bit about the Gulf Coast
6 Pipeline. We're going to address that a little bit
7 later, but I'm wondering if you can tell me at this point
8 when was that pipeline built?

9 A. It was constructed between August 2012 through the
10 end of 2013.

11 Q. And when was the base Keystone Pipeline built?

12 A. Between 2008 and 2009.

13 Q. If there were any problems with the construction of
14 either of those pipelines, you did design them; right?
15 You were the overall responsible person for design?

16 A. I was not the designer. I was the TransCanada
17 engineer oversight on those projects.

18 Q. You had oversight responsibility for the design and
19 engineering?

20 A. Yes.

21 Q. Okay. That means that you were the person who gave
22 the final okay that everything was built correctly,
23 designed correctly, built correctly; correct?

24 A. The authenticating engineer provides that okay or go
25 ahead. From a TransCanada perspective procedurally, my

1 job was to ensure that those requirements met the
2 TransCanada project requirements, the corporate
3 requirements.

4 Q. And really to try and make sure that this pipeline,
5 in fact, was going to be built safely?

6 A. Correct. We provide validation and verification
7 oversight.

8 Q. So if there were any problems that then happened as
9 to the integrity of those pipelines since you were doing
10 validation, that was your responsibility, was it not?

11 A. It was part of my responsibility.

12 Q. Is this new job that you have, is that because of
13 how well you did during the design and oversight of
14 design and engineering of those pipelines?

15 A. I'm not sure I understand your question.

16 Q. Is this like a promotion for you, your new job?

17 A. It's a new opportunity.

18 Q. Do you have a lot of training and education in
19 business development, ma'am?

20 A. No, I do not.

21 Q. Ma'am, would you agree with the premise that
22 preventing leaks is a primary goal because any leak could
23 release product into potentially sensitive ecosystems or
24 critical resource areas?

25 A. Yes. It's one of the primary goals.

1 Q. I mean, you would agree with me, ma'am, that what
2 TransCanada is transporting in its Keystone base and Gulf
3 line as well as what is proposed in the KXL Pipeline
4 contains very toxic stuff; isn't that right?

5 A. It's a hazardous liquid, yes.

6 Q. Very hazardous, isn't it?

7 A. I wouldn't know the relativity, but, yes, it's
8 defined as a hazardous liquid under federal regulations.

9 Q. How many ways can a pipeline fail?

10 A. There are multiple ways a pipeline can fail.

11 Q. Please tell us.

12 A. As described in our risk assessments and our threat
13 assessments, modern pipelines can fail in a number of
14 different ways. There are potential threats such as
15 internal and external corrosion, third-party damage,
16 equipment failure, or outside force type failures.

17 Those are all different types of pipeline threats
18 that are detailed in our Risk Assessment that was
19 conducted.

20 Q. And one of your jobs in doing oversight was to make
21 sure that none of those things happened?

22 A. Part of my responsibility is to review the potential
23 pipeline threats to the pipeline and work with our design
24 engineers to ensure that we have safeguards and various
25 design requirements built in to prevent, mitigate, and

1 monitor those particular threats to the pipeline.

2 Q. You would agree with me that that's a very important
3 responsibility, is it not?

4 A. Yes.

5 Q. I mean, when you -- you're proposing to come through
6 South Dakota you're going to go over major rivers?

7 A. Yes. There are a few major rivers.

8 Q. Many, many streams?

9 A. There are many streams, yes.

10 Q. Many tributaries to streams and rivers?

11 A. I'm not sure specifically how many, but yes.

12 Q. I didn't ask for a number, but just more of a
13 category.

14 A. Yes.

15 Q. Cropland?

16 A. Yes. I believe so.

17 Q. Grazing lands?

18 A. Yes.

19 Q. You do understand, do you not, that as the pipeline
20 goes into the southern part, southeastern part of
21 South Dakota, that you were going through some of our
22 richest farmland?

23 A. I understand that.

24 Q. And you understand that there's a danger of the
25 proximity of some of the most important aquifers for

1 water resources for our folks in our state, do you not?

2 A. I do.

3 Q. One of your duties, was it not, was to deal with
4 pipeline routing?

5 A. Yes.

6 Q. And that had to do with such things as close to
7 geological or hydrological features that might be issues?

8 A. Yes.

9 Q. This will also include areas where there was a
10 potential for slope slides?

11 A. Yes.

12 Q. Could you tell the Commission how many miles of the
13 315 miles that is proposed by TransCanada to come across
14 our state is in what has been geologically described as
15 high level -- high danger slope slide areas?

16 A. Based on our design and our analysis, approximately
17 1.6 miles would be considered in that high hazard, high
18 landslide type scenario.

19 That's based specifically on desktop and engineering
20 data collected over the last duration. We still have
21 some field verifications that are required to validate
22 whether it's essentially truly a landslide type situation
23 or if it's more surface erosion in those particular
24 areas.

25 Q. And did you say a total of 1.6 miles within our

1 state?

2 A. That's correct.

3 Q. I'd like to show you a map from the FSEIS. You did
4 read the FSEIS, did you not?

5 A. I'm generally familiar with it, yes.

6 Q. Okay. And I would imagine then that you looked at
7 the landslide hazard area map that the State Department
8 thought it was important enough to include in the FSEIS
9 regarding landslide areas; correct?

10 A. Yes.

11 Q. Okay. Now just so we aren't confused about the
12 tables, do you see right here where it says high
13 landslide hazard area?

14 A. I do.

15 Q. What color is that?

16 A. Pink.

17 Q. Orange, pink?

18 A. Sure.

19 Q. Are you going to look at that map and tell that
20 Commission -- well, let me ask it this way: Pump
21 stations have to be no more than how far apart?

22 A. Generally about 50 miles.

23 Q. 50?

24 A. 50.

25 Q. 50?

1 A. Generally 50 miles apart.

2 Q. PHMSA thought a little bit differently, didn't they?

3 A. I don't think so.

4 Q. Okay. Well, let's use your figures of 50 miles.

5 You would agree, ma'am, that on this map you see where it

6 says PS 18, PS 19?

7 A. Uh-huh yes.

8 Q. Those are pump stations; right?

9 A. Yes.

10 Q. Well, let's just -- for an example, Pump Station 20

11 to Pump Station 19, that's in the pink?

12 A. Yes.

13 Q. Is that 50 miles?

14 A. Yes. I don't know. There's no mileposts on there.

15 I assume so.

16 Q. You would agree it's at least 20 miles?

17 A. Yes.

18 Q. And between Pump Station 19 and Pump Station 18,

19 possibly 50 miles, at least 20 miles?

20 A. Yes.

21 Q. Between Pump Station 18 and Pump Station 17, again,

22 at least 50 miles -- or at the most 50 miles, at the

23 least 20 miles?

24 A. Yes.

25 Q. If my math is right, that's somewhere between 60 and

1 150 miles just in those pump stations being in a -- what
2 the State Department regards as a high hazard slip slope
3 area; isn't that right?

4 A. Based on this particular map.

5 Q. Did TransCanada submit something after the FSEIS
6 came out and said, gosh, you guys are mistaken. It's
7 only 1.6 miles; it's not 80, 100, 150, 200 miles?

8 Did TransCanada do that?

9 A. No. This particular map is a scale of 1 to 7
10 million. It's a map that's used in the initial onset of
11 a project in terms of categorizing or characterizing a
12 particular area.

13 I believe this map was produced by the U.S.G.S., and
14 it particularly details that it's an extremely high level
15 map.

16 We as engineers use maps such as this at the very
17 initial onset of the project. As we progress through
18 detailed engineering we collect our own data through
19 various sources, whether it's public data or engineered
20 data, as well as through desktop review of aerial imagery
21 or video imagery to prepare analysis related to various
22 threats such as this particular threat.

23 Once we progress those designs and narrow down to
24 specific areas, field visits are then conducted to verify
25 those particular areas and to really understand whether

1 it truly is a site that is prone or potential to a
2 landslide or if it's something more related to surface
3 erosion.

4 Once we gather and collect that particular
5 information, we're able to further refine our designs as
6 it relates to those particular locations and build in
7 specific design criteria, whether it's, you know, deeper
8 burial or other particular mitigative measures that are
9 done during construction, whether it's grading out the
10 slope or installing particular monitoring as we move
11 forward during construction.

12 So I agree that this map at a high level shows the
13 route going through a pink area of high landslide.
14 However, the map is very generalized and very high level
15 map that's used early on in the project as opposed to at
16 the stage of the project that we are.

17 And that's why I can say that it's not the 160 or so
18 miles that appears to be in it. It's more closer to
19 about 1.6 miles that we've identified in discrete
20 locations where continual refinement still needs to take
21 place to further determine if it's actually a landslide
22 issue or more of a surface erosion type issue.

23 Q. Did you listen to the testimony of Ms. Tillquist?

24 A. I did.

25 Q. She stated that the engineering studies haven't been

1 completed yet. Do you remember that?

2 A. We are continuing to refine our engineering studies.

3 Q. And your testimony is of what is clearly hundreds of
4 miles of what the U.S. Geological Survey says is a high
5 hazard slip slope area that you've already designed a
6 pipeline right through this area and are claiming that
7 only 1.6 miles is at issue -- or in danger of slip slope.

8 Is that your testimony, ma'am?

9 MR. WHITE: Objection. Argumentative. We don't
10 need to restate the witness's testimony. She gave a very
11 comprehensive answer to the question.

12 MR. ELLISON: I'm glad that you like them,
13 counsel, but I am allowed to ask my own questions.

14 Thank you.

15 COMMISSIONER HANSON: Please address those
16 remarks to Mr. Smith when it's on an objection.

17 MR. ELLISON: You're correct, Mr. Hanson. I
18 apologize.

19 COMMISSIONER HANSON: May I look at that map,
20 please.

21 Q. You would agree with me, ma'am --

22 MR. SMITH: I haven't ruled on this. Are you
23 able to answer his question, Ms. -- again, I --

24 A. Yes. I am able to answer that the work that's been
25 done to date as we have moved through the progression

1 from detailed design into the state where we're at with
2 our engineering, that our desktop analysis with the
3 collective engineering data that we have on hand at this
4 point inclusive of LIDAR as well as other particular data
5 sets, our geotechnical engineers have verified from a
6 desktop perspective that only 1.6 miles in very discrete
7 locations have a potential for landslide type potential
8 and that additional verification as we move through to
9 finalize the designs will require some additional field
10 visits to confirm those particular aspects of the
11 project.

12 But as we sit today, with the designs as far as the
13 particular burial depths, as far as the particular
14 construction techniques that we've got going through
15 these areas, we don't foresee any specific additional
16 design changes over and above potentially verifying
17 additional measures that would need to be applied during
18 construction, as far as maybe grading out some of these
19 areas or potentially, if required based on those site
20 visits, to install monitoring type equipment, if needed,
21 or other type of construction techniques in order to
22 physically install the pipe in those particular areas.
23 Q. Other than the general statements that you've been
24 making, have those details been provided to this
25 Commission which is being asked to recertify a

1 construction Permit and for you to, therefore, show that
2 you are capable of meeting those Conditions?

3 Have you provided all of that detailed information
4 to the PUC?

5 A. No. I have not provided any details specific to
6 this to the PUC.

7 Q. And you haven't provided it to the State Department?

8 A. I have not provided anything specific to the State
9 Department. They do have our plans on file with them,
10 but I have not provided anything specific to them.

11 Q. Okay. You haven't notified them that instead of
12 hundreds of miles, it's only 1.6 miles that goes through
13 what U.S.G.S. has determined to be a high hazard slip
14 slope areas?

15 A. I'm not aware of any notifications that's required.
16 Their assessment was based on the 1 to 7 million scale
17 U.S.G.S. map as part of the overall review of the
18 project.

19 That particular map, as I mentioned, is a map used
20 in the initial stages of a project to characterize
21 potential for those types of threats to the pipeline, and
22 then once we get into detailed analysis and detailed
23 engineering of the pipeline we start to refine down and
24 really look at the localized areas and information in
25 much greater detail than what's projected on that

1 particular map.

2 Q. So basically what you're doing is you're saying to
3 this Commission, look, you should recertify our
4 construction because somehow, especially if another
5 agency is overlooking our shoulders and they catch us, we
6 will make sure we take care of everything and make this
7 pipeline safe. Is that --

8 MR. WHITE: Objection. Argument.

9 MR. SMITH: I'm going to sustain that.

10 Q. Now this is essentially, ma'am, your third trip
11 before this Commission?

12 A. It is.

13 Q. You testified in 2007, the original XL base
14 pipeline?

15 A. I did.

16 Q. And you testified in 2009 regarding the proposal for
17 the original construction permit?

18 A. I did.

19 Q. Did you in 2009 tell this Commission before it
20 issued a construction permit about the slip slope issues
21 and that you had reduced hundreds of miles of what
22 U.S.G.S. said was a high slip slope area down to
23 1.6 miles?

24 MR. WHITE: Objection. That assumes that that
25 map existed at the time of the 2009 proceeding. That

1 hasn't been demonstrated.

2 MR. ELLISON: It doesn't matter if it has. I'm
3 asking if she did this.

4 MR. SMITH: You've asked her what?

5 MR. ELLISON: I asked her if she advised this
6 Commission in 2009 that of a large area within our state
7 that they propose to cross with this pipeline, that even
8 though a lot of it had been identified in geological
9 maps --

10 Q. Well, let me ask it this way. Did you study
11 geological maps from U.S. Geological Survey that existed
12 in 2009 prior to your testimony in 2009?

13 A. I did not.

14 Q. Were you aware of the extent of the slip slope
15 areas, high hazard slip slope areas in the State of
16 South Dakota that you asked this Commission for authority
17 to traverse?

18 A. I was not aware specifically, but that's part of the
19 aspects of engineering that are looked at during the
20 engineering process.

21 Q. Would you have any reason to believe that U.S.
22 Geological Survey does not do at least as good of job as
23 your engineers?

24 A. No.

25 Q. I want to talk to you for a moment, ma'am, about the

1 Special Permit Application that PHMSA -- I'm sorry. That
2 TransCanada filed with PHMSA for the KXL Pipeline.

3 You are familiar with that, are you not?

4 A. I am.

5 Q. It's true, is it not, that what you asked PHMSA to
6 do was to give you authority to operate your pipeline at
7 higher than what federal regulations allow?

8 A. We did, yes.

9 Q. And then you withdrew that permit.

10 A. Yes.

11 Q. Now one of the reasons why you might want to operate
12 at higher than federal regulations is because TransCanada
13 can make more money that way; isn't that right?

14 A. No.

15 Q. Are you saying there's no increased economics by
16 being able to transport more oil down the same pipeline
17 route than you could with a lesser pressured system?

18 A. No. As I mentioned yesterday, we applied for a
19 Special Permit to PHMSA as part of being able to match
20 the design in the U.S. with the design in Canada.

21 There are many jurisdictions in the world that allow
22 for operations at a .8. And as part of the Pipeline
23 Safety Act in 2002 PHMSA explored alternative pressures
24 for our natural gas and oil pipelines. And so
25 TransCanada sought a Special Permit in order to operate

1 the pipeline at a higher design factor.

2 In that, part of that process was not necessarily to
3 apply for a waiver, per se, from safety sessions but to
4 add -- as part of that process in evaluating the higher
5 design pressure, the regulations and the regulator allow
6 for review of that and require additional safeguards be
7 put on the pipeline to ensure that it has an equivalent
8 level of safety than that of a standard pipeline.

9 So we're not trading it for safety or anything to
10 that effect, but essentially those 59 or 57 Special
11 Conditions would have allowed for the operation of that
12 pipeline to a higher design factor.

13 With the withdrawal of the Special Permit we are
14 operating the pipeline at a standard pressure but also
15 adding additional safeguards to the pipeline.

16 Q. So, in other words, you withdrew the special
17 Application, and PHMSA imposed 59 Special Conditions?

18 A. We voluntarily adopted to implement those Conditions
19 despite the withdrawal of that Permit.

20 Q. You voluntarily agreed to follow the 59 Conditions?
21 Is that what you're saying?

22 A. Yes.

23 Q. Because if you didn't voluntarily agree to it,
24 they'd say you can't have the Permit; right? I mean you
25 can't even operate this pipeline; right? Can't build it,

1 can't run it?

2 A. No.

3 Q. No?

4 I mean, if you had said to PHMSA, you folks want to
5 impose 59 Special Conditions, we don't like them, we're
6 not going to do it, what would you expect PHMSA's
7 reaction to be?

8 MR. WHITE: Calls for speculation. Objection.

9 MR. ELLISON: It's her job to oversee this whole
10 design and construction aspect. How could it be
11 speculation? She just said that --

12 Let her answer the question.

13 Q. Ma'am.

14 A. In withdrawing the Special Permit our design would
15 have reverted to the standard design as required by
16 federal regulation.

17 TransCanada in listening to the public's concerns on
18 pipeline safety voluntarily adopted the Special
19 Conditions that would have been imposed if it had
20 received the Permit to operate at the higher design
21 factor.

22 Q. Do you have any correspondence from PHMSA telling
23 you that these 59 Special Conditions were voluntary?

24 A. No.

25 Q. Now back in -- back when you made this Application

1 to PHMSA for the Special Permit, didn't TransCanada say
2 that it would increase the commercial capacity of the
3 over all Keystone system from 590 [sic] barrels per day
4 to 1.1 million barrels per day?

5 A. No. I think the 590,000 barrels per day is the base
6 Keystone capacity. With Keystone XL, with the original
7 design we were at the 900,000 barrel capacity. And with
8 the withdrawal of the Special Permit and the reduction in
9 the operating pressure as a result, that number is
10 830,000.

11 So that's essentially where the 1.1 million barrel
12 would come from. Because it's two different systems.

13 Q. Well, basically you're adding a line into the base
14 Keystone system that would increase the capacity; is that
15 right? Of the overall system?

16 A. Of the overall new system. As part of the new
17 project addition.

18 Q. And did TransCanada not state that the KXL Project
19 will increase the commercial capacity of the overall
20 Keystone Pipeline system from 590,000 barrels a day to
21 1.1 million barrels per day by the addition of the KXL?
22 Isn't that right?

23 A. Yes.

24 Q. Okay. Did you ever do the math of that? In other
25 words, if you have 1.1 million barrels as your ultimate

1 goal and the XL Pipeline system, the Keystone Pipeline
2 system, already could do 590 barrels a day and you were
3 asking for the increase, that's a lot less than 830,000
4 barrels per day, isn't it?

5 A. I'm not sure I follow. It's two separate systems.

6 Q. Well, I understand that. But what you were saying
7 was we want to add this pipeline, this KXL Pipeline, to
8 hook up to our core system so that we could go from the
9 current ability of 590,000 barrels per day to a higher
10 level of transport of a total of 1.1 million barrels.

11 You've already agreed with that; right, ma'am?

12 A. Yes.

13 Q. Okay. If you take 1.1 million and you subtract
14 590,000, would you agree that you come up with 510,000
15 barrels?

16 I'd give you a pen and paper if you want to do the
17 math.

18 A. I'm not sure I follow your question from the math
19 perspective.

20 The Keystone XL Pipeline can transport up to 830,000
21 barrels per day.

22 Q. Right. But that has not been the position of
23 TransCanada back in 2010. The position of TransCanada,
24 was it not, is that you wanted to add this link to
25 basically add another 510,000 barrels, not 830,000

1 barrels; isn't that right?

2 A. The ultimate design capacity of the Keystone system
3 is 660,000 barrels. The 591,000 is the nominal
4 throughput. So I'm not sure where your math -- or about
5 the math.

6 But what I do know is that the system currently as
7 designed is capable of transporting 830,000 barrels per
8 day.

9 Q. Would you agree that one of the issues that
10 TransCanada has been facing -- I think that you said that
11 one of the reasons why you withdrew the Special Permit
12 Application of PHMSA was because of public opposition?

13 A. No. I said that there were concerns brought forth
14 from the public about pipeline safety.

15 Q. Okay. We'll get to that in a moment. But isn't it
16 a fact that there was a media release that you put as
17 part of your Direct Testimony about this subject? Isn't
18 that correct?

19 A. Yes, I did.

20 Q. Ma'am, is this the media advisory that you attached
21 as Exhibit B to your Direct Testimony?

22 A. I did.

23 Q. Okay. Let's look down at the bottom here.

24 By the way, did you help draft this?

25 A. I did not.

1 Q. Why did you include it as part of your Direct
2 Testimony?

3 A. It was a way to demonstrate that we had withdrawn
4 the Special Permit Application and that we had
5 voluntarily committed to the Conditions associated with
6 that Permit.

7 Q. And this is basically to inform the public,
8 politicians, anybody else who wants to know basically
9 about what TransCanada wants to do; correct?

10 A. That's my understanding.

11 Q. All right. Does it not say "When completed, the
12 Keystone KXL Project will increase the commercial
13 capacity of the overall Keystone Pipeline system from
14 590,000 barrels a day to approximately 1.1 million
15 barrels per day." Correct?

16 A. Yes.

17 Q. Why didn't you tell the public that really your plan
18 was to do 300,000 plus more barrels per day?

19 A. That's outside my scope.

20 Q. The proposal to build this pipeline, I think you
21 said you -- TransCanada has voluntarily agreed to follow
22 the 59 Special Conditions of PHMSA?

23 A. Yes.

24 Q. And we do appreciate that you have volunteered this.
25 Isn't it right, ma'am, that what you are doing, what

1 you plan to do, is to build a pipeline that you feel
2 would be capable of operating above what federal
3 regulations currently permit and that what your plan is
4 once you get this pipeline in place, to then go and seek
5 that higher level again?

6 A. No. That's not my understanding.

7 As Mr. Goulet mentioned in his testimony, we have no
8 plans to seek a Special Permit to reapply.

9 Q. Are you aware that TransCanada in response to an
10 Interrogatory to Paul Seamans was asked, would
11 TransCanada continue to reserve the right to reapply for
12 a Special Permit? Are you aware that TransCanada
13 answered TransCanada reserves the right to reapply for a
14 Special Permit?

15 A. We have no plans at this time to reapply for a
16 Special Permit.

17 Q. Is that like we have no plans to invade Iraq at the
18 present time?

19 MR. WHITE: Objection.

20 MR. SMITH: Sustained.

21 Q. You know you have no plans, but you're all ready to
22 do it if ever you suddenly decide to have the plans.

23 A. The pipeline is designed with that capability to
24 operate up to a .8 design factor or 1,440. That's the
25 ultimate design of the project.

1 However, we will be licensed to only operate to the
2 pressure that's -- meets the current federal regulation.
3 We can't operate any higher than that.

4 Q. But you on behalf of TransCanada is not saying
5 that -- in fact, you're expressly reserving the right to
6 seek such a Special Permit in the future based upon the
7 pipeline that you hope that you're going to be able to
8 build?

9 MR. WHITE: Objection. Asked and answered.
10 Four times.

11 MR. SMITH: Sustained.

12 Q. I think you said, ma'am, that one of the reasons why
13 the -- the Special Permit Application to PHMSA to operate
14 above federal regulation guidelines was because of
15 concerns of the public; is that right?

16 A. Yes.

17 Q. And it was also for concerns of political leaders
18 too, wasn't it?

19 A. I believe there were leaders who brought forth the
20 concerns from the public regarding pipeline safety.

21 Q. And as a result of that, TransCanada decided that it
22 needed to take more steps to ensure the public and
23 stakeholders that, in fact, your pipeline was going to be
24 okay and not leak?

25 A. Yes.

1 Q. Are you aware that TransCanada has engaged in a
2 \$200,000 advertising campaign through the end of these
3 hearings in South Dakota?

4 MR. WHITE: Objection. Beyond the scope of this
5 witness's testimony.

6 MR. ELLISON: Asking her if she's aware.

7 MR. SMITH: And it has what relevance?

8 MR. ELLISON: I'm sorry?

9 MR. SMITH: What relevance does this have?

10 MR. ELLISON: It goes to whether this is part of
11 the steps to ensure the public that TransCanada's
12 pipeline project is a good idea, as this witness just
13 testified that was one of the things that they intended
14 to do.

15 MR. WHITE: The witness is an engineering and
16 design witness, not a public relations or lobbying
17 witness. Outside the scope.

18 MR. ELLISON: She attached this press release,
19 as she's testified, to her Direct Testimony. She made it
20 part of her --

21 MR. SMITH: She explained she didn't write it,
22 and it was put in there only to provide a brief
23 explanation of the letting of the Special Permit go.
24 That's what she said.

25 Sustained.

1 MR. ELLISON: Okay.

2 Q. Is it your testimony, ma'am, that one of the reasons
3 why you wanted to get this Special Permit from PHMSA was
4 so that you could offer a higher level of safety to your
5 pipeline system?

6 A. Yes.

7 Q. That suggests that the pipelines you built up to
8 that point didn't -- couldn't meet those standards.

9 Is that your position?

10 A. No.

11 Q. Does higher level of safety with a new pipeline mean
12 that all the previous pipelines that you have built, just
13 the ones you were involved in --

14 What does that say about those pipelines if you now
15 want to propose new things to make it more safe?

16 A. There are always continual improvements that are
17 made. When base Keystone was constructed it was
18 constructed with 51 additional safeguards and additional
19 Conditions.

20 When we constructed the Gulf Coast Project it was
21 constructed with 57 additional safeguards with continuous
22 learning from the previous project.

23 And with Keystone XL, with that additional
24 continuous learning, industry learnings from various
25 issues, it's a continuous process. So the safeguards

1 will continue to improve as modern pipeline construction
2 progresses.

3 Q. When TransCanada submitted its Application for this
4 Special Permit did you say -- did you yourself present,
5 TransCanada present, what later became the 59 Special
6 Conditions, or were those 59 Special Conditions put out
7 by PHMSA?

8 A. They were put out by PHMSA.

9 Q. Okay. So, again, you will build any pipeline under
10 any conditions as long as somebody makes you do it, some
11 agency makes you do it a certain way; correct?

12 A. That's not correct. We have internal specifications
13 that we layer on top of federal code and standards, and
14 we have additional requirements that we implement based
15 on project learnings from previous projects.

16 And those are the safeguards that we put forth on
17 our projects.

18 Q. Okay. Are you ready to move somewhere else, another
19 topic?

20 A. Sure.

21 Q. Okay. Do you know what HCAs are?

22 A. I do.

23 Q. What are they?

24 A. High consequence areas as defined by the PHMSA
25 regulations.

1 Q. And they generally include high population areas?

2 A. That's one of the high consequence area categories,
3 yes.

4 Q. Do you know what the cutoff is for a high population
5 area?

6 A. I'm not specifically recalling what the density,
7 population density number is. I don't know off hand.

8 Q. Do you know if any city in South Dakota would
9 qualify?

10 A. I'm sure some would.

11 Q. And what about that also includes areas for drinking
12 water?

13 A. That's correct.

14 Q. But, again, it's for high population areas?

15 A. No.

16 Q. It's any drinking water?

17 A. No. There are specific definitions within the PHMSA
18 regulations related to high consequence area categories.
19 One being populated area. Another category being
20 drinking water.

21 Q. And it's the position of TransCanada that there is
22 no HCAs for drinking water or high populated areas along
23 the route?

24 A. I don't believe that there are any direct high
25 consequence areas related to populated areas. I believe

1 that there are also no direct HCAs related to drinking
2 water where the pipeline route crosses a drinking water
3 HCA.

4 Q. I noticed you used your words carefully. You said
5 no direct. Tell us about the indirect connections.

6 A. So as Ms. Tillquist testified yesterday, that
7 process is ongoing to identify segments of pipeline that
8 could affect HCAs, and that's part of the additional
9 engineering analysis that's to be completed where we look
10 at downstream fate and transport related to a failure
11 scenario.

12 That particular type of analysis, as Ms. Tillquist
13 discussed yesterday, isn't completed until the pipeline
14 route is finalized and constructed because we want to use
15 the as constructed route for that analysis.

16 Additionally, as part of the regulations, that
17 detailed engineering discussion and the analysis that she
18 talked about yesterday isn't required to be completed
19 until we move into the operational phase of the project.

20 So at this point in time, as she discussed yesterday
21 and today as I'm discussing, the high consequence areas
22 related to the pipeline route where we cross have been
23 defined. We are still working to evaluate any potential
24 other segments that could affect, you know, different
25 HCAs that are around the pipeline.

1 Q. But at least as of 2014 when the FSEIS was issued
2 TransCanada still considered that there was 0.0 miles
3 related to drinking water, period, and 0.0 miles related
4 to population centers.

5 A. Correct. That the route crossed. Yes.

6 Q. So after five years that figure hadn't changed?

7 A. To my understanding, no.

8 Q. Okay. So the only thing that seems to be important
9 to TransCanada, at least that could potentially qualify
10 under an agency definition of an HCA, has to do with
11 ecologically sensitive areas?

12 A. No. I'll back up for a minute.

13 So in our analysis of the pipeline route we look at
14 all categories of high consequence areas that the route
15 directly crosses. Those are the mileages that are listed
16 in the FSEIS.

17 As part of the requirements under federal
18 regulations and as part of our requirements under the
19 Special Conditions, we're required to evaluate high
20 consequence areas continually over the life of the
21 pipeline and incorporate those particular areas into the
22 integrity management plans as we move forward.

23 So it's a continual evaluation of that. And so at
24 this time that's the analysis that's been completed, and
25 there are still additional analysis that's required.

1 Q. The numbers seem to go up and down in terms of how
2 many miles are involved.

3 A. We had some issues with typographical issues with
4 the numbers in the Tracking Table that we had provided.

5 Q. Right. Originally it was what, 34, 35 miles, and
6 now it's down to 14?

7 A. It was presented in the 2009 hearing as 34 miles.
8 With the detailed engineering and the routing that was
9 completed, we have -- it was noted as 14.9 miles.

10 As part of the additional rerouting that we've done
11 in the Cheyenne River area, that mileage has increased to
12 about 15.8, and I believe that Ms. Tillquist had
13 discussed that yesterday.

14 Q. Now when you're figuring -- trying to calculate
15 these areas, if a river is 100 yards across, you count
16 the river -- you count 100 yards.

17 Is that what you do?

18 A. If the river qualified under the high consequence
19 category, commercial navigable waterway, we would count
20 that from a high water mark to high water mark as defined
21 by the Corps of Engineers definition.

22 Q. You don't include the tributaries?

23 A. The tributaries would come -- if we were crossing
24 directly and it was within the definitions and the shade
25 files provided by PHMSA, we would include that as part of

1 the could affect analysis that I had mentioned potential
2 tributaries could be and -- in that particular analysis.

3 Q. Do you know how many tributaries are crossed?

4 A. Sorry. How many tributaries the pipeline crosses?

5 Q. Yes. For rivers and streams. South Dakota.

6 A. I believe it's a little over 300.

7 Q. Do you intend to give special protection to those
8 300 areas?

9 A. With the current design, those tributaries are
10 already treated with additional considerations as a
11 result of the design safeguards that we've included as
12 part of our internal designs and the Special Permit
13 Conditions.

14 In addition, within the FSEIS as part of Department
15 of State's independent engineering review of the project
16 conducted by Battelle and Exponent, there were a number
17 of criteria that were presented in that appendix whereby
18 Keystone would be required to complete additional
19 analysis related to water bodies to ensure that any
20 sensitive tributaries and such were reviewed again and
21 ensured that any additional design requirements were
22 applied to those particular locations.

23 And that analysis is underway as a result of that
24 document being issued in early 2014. And so we are
25 conducting that analysis at this point.

1 Q. Would it be fair to say that the State Department
2 hadn't -- if the State Department hadn't said to you we
3 want this done, you weren't planning to do it, were you?

4 A. Based on our analysis with the designs that we have
5 with the increased depth of cover act, all water bodies
6 above current federal regulations, the designs as
7 presented would ensure the safeguards for those
8 particular tributaries.

9 The independent engineering design review conducted
10 also requested TransCanada to consider additional
11 criteria and additional analysis be applied to those
12 particular tributaries. And so we are complying with
13 that, and we are looking at these additional criteria
14 based on that additional set of evaluation.

15 Q. If the State -- so the answer would be if the State
16 Department hadn't told you to do a reevaluation or even
17 an initial evaluation, you wouldn't have done that; isn't
18 that correct?

19 MR. WHITE: Objection. Asked and answered.
20 Again, recharacterizing her testimony.

21 MR. ELLISON: It was a yes or no answer, and I
22 didn't get either of those things.

23 MR. SMITH: Sustained.

24 COMMISSIONER HANSON: Overruled.

25 MR. SMITH: Okay. Overruled.

1 Q. Ma'am?

2 A. Sorry. Could you please repeat the question.

3 MR. ELLISON: Please read it back.

4 (Reporter reads back the last question.)

5 A. We had done an initial evaluation. The State
6 Department required us to look at additional criteria,
7 and so we are looking at that.

8 We would not have done any additional review, as our
9 designs, as presented, are safe.

10 COMMISSIONER HANSON: May I suggest that when
11 counsel is interested in yes or no, that they suggest
12 that to the party they are asking testimony of prior to
13 the question.

14 MR. ELLISON: Very well, Mr. Hanson. Thank you.

15 MR. SMITH: Are we at a point -- I can't tell.
16 I see there's another map up here.

17 Are we at a point where you're going to enter a
18 new subject matter or -- because I thought we're getting
19 to a point where a break --

20 MR. ELLISON: If you want to take a break,
21 Mr. Smith, with all due respect to the court reporter --
22 she's been doing fantastic -- within 15 minutes of
23 starting this morning she was already rubbing her hands.
24 Whatever she needs is just fine with us.

25 MR. SMITH: If you're still on this line of

1 questioning, go ahead.

2 CHAIRMAN NELSON: Let's break.

3 MR. SMITH: Chairman wants to break. We'll be
4 in recess. It's now approximately 10 after. We've been
5 taking 15 minutes so we'll go to 25 after.

6 (A short recess is taken)

7 MR. SMITH: We'll call the hearing back to order
8 in Docket HP14-001. Please proceed.

9 MR. ELLISON: Thank you, Mr. Smith.

10 Q. (BY MR. ELLISON) Ma'am, before we return to the
11 subject area we have been visiting about, I just want to
12 ask you a question.

13 Have you been -- what kind of engineering services
14 have you been providing to TransCanada over the last,
15 say, five years?

16 A. Sorry. What is my role?

17 Q. No. You're an engineer?

18 A. Yes.

19 Q. Okay. In fact, you're a professional engineer?

20 A. I am.

21 Q. Okay. What kind of engineering services have you
22 been providing over the last five years?

23 A. I don't perform any specific services. My role
24 is -- as the project engineer is to know the requirements
25 and to ensure that we have subject matter experts and

1 specialty engineers who can fulfill that function.

2 Within this scope of this project the specific
3 engineering services are provided by the third party.

4 Q. I mean, you are a licensed engineer, professional
5 engineer, but that's in Canada; right? By Canada?

6 A. Yes.

7 Q. You are not a licensed engineer in the
8 United States?

9 A. No.

10 Q. One of the things that the State Department pointed
11 out, did it not, that TransCanada had not done and that
12 it thought should be done was to specifically evaluate
13 59 stream crossings which were part of the Rainwater
14 Basin Wildlife Management District, specifically in the
15 area of the proposed KXL Pipeline; isn't that right?

16 A. That's correct.

17 Q. I mean, one of the concerns, at least in this aspect
18 of the State Department's FSEIS in 2014, was the concern
19 these areas were used by whooping cranes and other
20 wetland dependent special status species?

21 A. That's correct.

22 Q. And, again, these would not -- this is not something
23 that TransCanada was going to undertake until the State
24 Department five years after you got your initial
25 construction permit said you should do this?

1 A. No. That's not exactly correct. Our evaluations on
2 the environmental side included whooping crane habitat.
3 I'm not specifically the person or the witness to talk to
4 you about any of those environmental items.

5 The particular reference to the Rainwater Basin, I
6 believe that was primarily in Nebraska. I don't recall
7 any specific streams or locations in South Dakota as part
8 of those specific requirements listed in Appendix Z.

9 We have undertaken or are in the process of
10 undertaking all of that particular analysis to comply
11 with the requirements of Appendix Z, but I don't
12 specifically recall anything related to South Dakota on
13 that.

14 Q. Did you tell the State Department that you're
15 already doing all of these things?

16 A. Those requirements were issued early last year, and
17 so we are taking -- analyzing those items and reviewing
18 those at this point. That's what we're doing.

19 Q. Okay.

20 A. Whether there were communications related to our
21 review of Appendix Z, that would be something outside my
22 scope as to the communication to the Department of State
23 of what we're actually doing but we are undertaking those
24 evaluations currently.

25 Q. Since 2014?

1 A. Since the issuance of the FSEIS, yes.

2 Q. So, again, you were not doing these things prior to
3 the State Department saying they needed to be done.

4 A. These were additional items that were brought forth
5 as part of an independent engineering evaluation, and we
6 reviewed those particularities related to that assessment
7 and provided our items that we had worked on to that
8 effect. And within the FSEIS as currently required,
9 we're required to complete those particular evaluations,
10 and so we're undertaking those.

11 Q. Well, the FSEIS in 2014 didn't say, well, continue
12 on the work you're doing. They're saying do these
13 things. So apparently they believed they had not been
14 done. Is that a fair statement?

15 A. They believed that additional items need to be
16 reviewed, and we are doing that.

17 Q. TransCanada proposes to do horizontal HDD -- what is
18 that? Horizontal directional drilling? Is that what
19 that is?

20 A. Yes. There are a few locations in South Dakota
21 where we will be undertaking that technique.

22 Q. Very few.

23 A. I believe they're listed. I believe there are five.
24 Four or five.

25 Q. Okay. And for the rest of the perennial streams,

1 let alone the ephemeral or intermediate, you're not going
2 to use that methodology; is that correct?

3 A. Correct. I believe there are -- I think there are
4 10 or so, and so we will be using our standard method of
5 construction as was described by Dr. Schmidt yesterday.

6 Q. The open trenching?

7 A. That's correct.

8 Q. And is it your understanding that one of the effects
9 of open trenching and perennial streams is loss of
10 in-stream habitat?

11 A. That could be a possibility.

12 Q. Loss of bank cover?

13 A. The way that the open cut designs are depicted, the
14 bank stability is something that is part of our CMRP, our
15 Construction Mitigation Reclamation Plan, and there are
16 specific details within that plan on bank stabilization
17 and bank restoration.

18 So the open cut method is designed accordingly to
19 minimize and mitigate any specific issues related to
20 those particular items.

21 Q. Let me ask it again. Are you aware that open
22 trenching, the process itself, can cause loss of bank
23 cover?

24 A. Not specifically.

25 Q. So if Mr. Schmidt testified to that in his direct

1 testimony, it's just something that you're not aware of?

2 A. I'm aware that loss of cover on banks could be a
3 potential issue with that method. However, the designs
4 within our CMRP as reviewed by the Army Corps of
5 Engineers as prepared by Keystone ensure that banks are
6 stabilized.

7 We use many different techniques to stabilize the
8 banks such as riprap or other geotechnical means, and so
9 loss of cover over the pipeline or over the banks is
10 unlikely based on the burial depth of the pipeline under
11 the stream and that that depth is carried well past the
12 banks.

13 Q. Yes or no? Can open cut trenching cause loss of
14 bank cover?

15 MR. WHITE: Objection. Asked and answered
16 twice.

17 MR. ELLISON: That was a yes or no question
18 because I never got the answer.

19 A. I can't say yes or no based on my description, but I
20 would say no if I had to make a yes or no statement.

21 Q. So you would contradict Direct Testimony of
22 Jon Schmidt on page 13, paragraph 27?

23 MR. WHITE: Objection. Argumentative.

24 MR. SMITH: Overruled.

25 Q. Ma'am.

1 A. I would say in general it's possible.

2 Q. Okay. Thank you.

3 Would you agree that open trenching can cause
4 disruption of fish movement?

5 A. It's possible.

6 Q. Would you agree that open cut trenching can cause
7 disruption of -- can cause direct disturbance to
8 spawning?

9 A. It's possible.

10 Q. Would you agree that open cut trenching can cause
11 water quality effects?

12 A. It's possible.

13 Q. And would you agree that open cut trenching can
14 cause sedimentation?

15 A. It's possible.

16 Q. I want you to look, ma'am, at this map that's up on
17 the board.

18 MR. WHITE: Mr. Ellison, can you identify the
19 map so we know what we're looking at?

20 MR. ELLISON: I will do that. Thank you.

21 CHAIRMAN NELSON: Can we use the mics. please.

22 MR. MARTINEZ: It is Figure 3.3.3-2 of the
23 FSEIS.

24 Q. Do you understand, ma'am, from your familiarity with
25 the FSEIS that this is a map of our streams within the

1 State of South Dakota that are proposed to be crossed by
2 this pipeline?

3 A. Yes.

4 Q. It looks like there's quite a few. Would you agree?

5 A. Yes.

6 Q. Do you know that fishing is one of the major
7 sports -- major activities, major source of and good
8 source of revenue for the people of the State of South
9 Dakota?

10 A. Yes. I'm aware.

11 Q. You understand, therefore, why we are -- might be
12 very concerned about anything that might damage our
13 streams that we love to fish in?

14 A. Yes.

15 Q. Would you also agree, ma'am, that in addition to
16 different studies that the State Department recommended
17 not only to evaluate the quality of streams and their
18 uses but isn't it a fact, ma'am, that the FSEIS in 2014
19 recommended additional measures to protect those streams
20 and that habitat?

21 A. I'm aware of additional measures within Appendix C.

22 Q. I mean, you're aware, are you not, that if you have
23 a stream going through an area, that we're not just
24 talking about fish, we're talking about a lot of land
25 life as well that depends upon that stream for

1 nourishment, for water?

2 A. Yes.

3 Q. So we're really talking about an area that's much
4 larger in terms of potential environmental issues that's
5 much broader than the high water bank marks of a stream;
6 isn't that right?

7 A. I'm not sure I follow.

8 Q. Okay. Let me rephrase it.

9 Do you understand the concern of the people of
10 South Dakota goes way beyond the banks, the upper banks,
11 of any particular stream or river because it can affect a
12 much wider -- in fact, does affect a much wider
13 ecosystem?

14 A. Yes.

15 Q. In the FSEIS it was recommended, was it not, that at
16 small stream crossings that due to the -- that a
17 location's specific analysis be conducted of the fate and
18 effect of spills? That that be conducted?

19 A. Yes.

20 Q. Have there been studies as to worst-case scenarios
21 for each one of the 300 some odd streams that you have
22 identified?

23 A. The worst-case analysis has been prepared as
24 described yesterday by Ms. Tillquist in the Risk
25 Assessment.

1 The next piece of that assessment, as I discussed
2 earlier, is the fate and transport and could affect
3 analysis that's done as part of the detailed engineering
4 report closer to the time of construction.

5 Q. I'm sorry. Just so I understand, what has already
6 been done?

7 A. The worst-case discharge analysis as part of the
8 Risk Assessment has been complete. So as far as
9 identifying a potential worst-case release along the
10 pipeline for the purposes of the Risk Assessment.

11 And as we move through detailed engineering and
12 closer to the time of operations -- construction and
13 operations, additional analysis related to that specific
14 requirement for fate and transport of a spill release
15 would be completed as part of the detailed engineering
16 assessment requirements under the federal regulations.

17 Q. If the Commission wanted to find out the extent of
18 what has already been done, you haven't provided it to
19 them, have you?

20 A. No.

21 Q. Where could they go to look?

22 A. It has not been completed. It's in progress.

23 Q. One of the things that was recommended by the 2014
24 FSEIS, was it not, that as a result of the potential
25 damage, environmental damage that could be caused by a

1 spill, that TransCanada consider adding additional valves
2 to greater protect areas besides the HCAs?

3 A. Analysis has been done to comply with the Condition
4 related to additional valves. As part of the evaluation
5 of the requirements in Appendix C, additional analysis is
6 underway, as I described earlier, related to all of these
7 Conditions within Appendix C. So that analysis will be
8 undertaken and is in progress.

9 Q. Oh, so that also hasn't been done?

10 A. It's in progress.

11 Q. And until the 2014 State Department FSEIS, this
12 wasn't being conducted, was it?

13 A. Our analysis had been complete to that point of the
14 analysis required for valve placement to comply with the
15 federal regulations as well as our internal analysis
16 based on the Risk Assessment that Ms. Tillquist described
17 in great detail yesterday.

18 Q. Prior to 2014, how many streams were protected by
19 valves directly?

20 A. It would be any stream that met the criteria within
21 the federal regulations.

22 Q. Well, they seem to feel it was a lot more than what
23 had been done already. The State Department did, did it
24 not?

25 A. I'm not sure.

1 Q. Well, if they said to you that they wanted to
2 consider additional valves for small streams to protect
3 the environment, you must not have been doing it; right?

4 A. That's, as I mentioned, part of the evaluation of
5 the fate and transport analysis, and so that would come
6 as part of that analysis.

7 Q. I understand. But that wasn't being -- that hadn't
8 been completed. It wasn't done by 2014.

9 A. No. Because we weren't in that area or level within
10 the design process to be -- in order to be able to
11 complete that.

12 Q. And would you agree, ma'am, that when the State
13 Department recommended in the 2014 FSEIS that TransCanada
14 consider using additional valves, that small streams --
15 that that would be instead of an open trench method,
16 would it not?

17 A. No.

18 Q. You would do an open trench and then put in more
19 valves?

20 A. I'm not sure I follow.

21 Q. Okay. Well, they suggested using additional valves;
22 correct. And you hadn't done any prior to 2014.

23 There was no stream that had been designated for HDD
24 or for a particular valve protection on either side of
25 the upper banks.

1 A. No. That's not correct. We had identified a number
2 of water bodies in South Dakota that required valves in
3 proximity per the requirements under the federal
4 regulations.

5 In addition to that, as part of our valve siting and
6 valve placement methodologies we review the worst-case
7 discharge for valve siting and place valves at the
8 appropriate locations to ensure minimal impacts to the
9 environment.

10 This is also a requirement under federal
11 regulations. It doesn't specifically state and call out
12 streams, but it does state any other area which would
13 require protection from a release.

14 So inherently the analysis has been completed. The
15 State Department in the Appendix Z Conditions is
16 requiring to us do some additional analysis based on some
17 very specific criteria that was developed through the
18 independent assessment done by Exponent.

19 And so the next step is to take that specific
20 criteria as listed and then to apply it to -- apply it to
21 all the streams across the entire KXL routing, including
22 those in South Dakota, to confirm that no additional
23 valves would be required based on that additional very
24 specific criteria developed through that independent
25 assessment.

1 Q. As of 2014 what streams had special valve
2 protection -- had valves installed to specifically
3 protect them?

4 A. It would be the Little Missouri, the Cheyenne, the
5 Bad, and the White River. And based on the addition of
6 Bridger Creek, subject to check, I'd have to verify on
7 that one. But essentially it would be the major river
8 crossings that we are undertaking.

9 Q. Okay. Not streams?

10 A. Not any of the small streams at this point, yeah.

11 Q. And that's specifically one of the things that the
12 State Department addressed was small streams?

13 A. As part of that independent review, yes.

14 Q. That needed to have work done and specifically to
15 determine whether a valve would better protect them;
16 correct?

17 A. Based on a specific set of criteria, yes.

18 Q. What is a nonevasive boring?

19 A. I'm not sure I've ever heard that term before. I've
20 heard of trenchless installation and boring, but I don't
21 know the -- that might be a term that Exponent may have
22 used in their studies, but it would be essentially a
23 trenchless installation.

24 Q. So it's an alternative to open trench?

25 A. Yes.

1 Q. Okay. Didn't the State Department recommend in 2014
2 that not only additional valves be considered at streams
3 but instead of open trench installation that TransCanada
4 consider using nonevasive boring technologies?

5 A. Yes. At particular stream crossings. And that
6 evaluation has been completed as part of the 2014 review
7 of the Appendix Z.

8 Q. So tell us then please since it's been completed
9 what streams does TransCanada intend to use nonevasive
10 boring rather than open trench to install the pipe?

11 A. I don't believe that there were any in South Dakota
12 that met that specific criteria.

13 Q. Of all of the streams that are depicted on this map,
14 are you telling this Commission that none of them warrant
15 the extra protection that the FSEIS said should be done
16 at small stream crossings?

17 MR. WHITE: Objection. Argumentative and asked
18 and answered.

19 MR. SMITH: Overruled.

20 A. As Dr. Schmidt explained yesterday, there are over
21 approximately 300 intermittent and ephemeral streams.
22 Those streams would be dry during the time of
23 construction.

24 The open cut method would minimize the amount of
25 equipment and minimize the ground disturbance to that

1 particular area of where the pipeline crosses.

2 A horizontal directional drill or a bore type
3 installation could require additional footprint to be
4 able to complete the installation, and so from an
5 environmental sensitivity during the time of
6 construction, the open cut method on, you know, those
7 number of streams as mentioned, that would be the best
8 management practice in order to do so.

9 From a protection standpoint moving forward, as
10 mentioned, analysis related to scour has been completed,
11 and the particular depth of installation and carrying
12 that pipe depth back to a particular point to ensure that
13 the pipe is protected during operations has been
14 completed.

15 Q. Now Mr. Schmidt testified that with the exception of
16 Bridger Creek, which was now going to get HDD for
17 installation, that all of the rest of the streams,
18 ephemeral, intermediate, and perennial, were going to be
19 with the open cut trench method.

20 You heard his testimony, didn't you?

21 A. I did.

22 Q. And that was what he said, didn't he?

23 A. Yes.

24 Q. So you're telling this Commission that although the
25 State Department said that you should look at all the

1 small streams and decide whether not only additional
2 valves but in terms of installation, that noninvasive
3 boring technology should be seriously considered, that
4 none of our perennial streams -- let's just focus on
5 those -- that flow all the time, that none of them
6 warrant, as far as TransCanada's concerned, noninvasive
7 boring technologies; is that correct?

8 A. Correct.

9 Q. And I would imagine that the State Department
10 wouldn't be recommending such a technology if it was
11 likely to cause more environmental damage than the open
12 trench method.

13 You would agree with that, wouldn't you?

14 A. I think it was specifically related to depth of the
15 pipeline, and in certain instances an open cut method may
16 not be able to satisfy that.

17 As mentioned before, we've completed our analysis
18 related to environmentally sensitive species, habitat, as
19 well as scour, and there are no additional streams that
20 would require moving to a trenchless installation based
21 on the review that we've done, except for Bridger Creek,
22 which was more of a constructability issue than anything
23 as far as moving it to an HDD.

24 Q. Has TransCanada notified the State Department that
25 you have looked at their recommendation to better protect

1 streams and felt it was unnecessary for any of the
2 streams in South Dakota with the exception of Bridger
3 Creek? Has TransCanada notified the State Department of
4 that?

5 A. That's not within my scope to make those
6 notifications, and I'm not aware if any notifications
7 have been made.

8 Q. Has TransCanada prior to your testimony today
9 submitted its analysis report so that the Commission
10 could look because of its duty to protect our streams --
11 has that report been provided to the PUC so that it can
12 evaluate your findings?

13 A. No.

14 Q. Could you tell us that as to potentially sensitive
15 ecological areas where a release analysis has been done
16 where the potential exists, say, for medium spills?

17 A. I would not be able to tell you.

18 Q. What about for very large spills?

19 A. I would not be able to tell you.

20 Q. Isn't one of your duties in overseeing design of the
21 Keystone Pipeline, isn't that -- isn't location one of
22 your duties?

23 A. It is. Like I mentioned before, a Worst-Case
24 Discharge Analysis has been completed for the pipeline.
25 We went through some of that information yesterday in the

1 confidential session. And so that's the information
2 that's been presented. But I don't have any additional
3 information to provide.

4 Q. Would you agree, ma'am, that surrounding terrain,
5 drainage systems, including small streams and other small
6 waterways, could act as a conduit into an HCA?

7 A. Yes. That's possible.

8 Q. Could you tell us where in TransCanada's
9 applications or anything submitted to the PUC that you
10 have included a specific environmental analysis of such
11 potential areas or sources of impact of a spill into an
12 HCA?

13 A. I cannot say that there was anything filed with the
14 PUC. I am -- I'm trying to think back to the original
15 2009 hearing where we may have filed the Risk Assessment
16 with the PUC or may have been included as part of the
17 FEIS.

18 Within those documents there are some appendices
19 that are confidential that were provided to the State
20 Department and they may have been provided during the
21 2009 docket but I can't be for certain.

22 Q. Ma'am, do you recall Ms. Tillquist's testimony the
23 last Risk Assessment was done in 2009?

24 A. Yes.

25 Q. And this is what we've been talking about for a

1 while are things that the State Department thought should
2 be done in addition to what had been done in 2009; isn't
3 that correct?

4 A. Yes.

5 Q. One of the things that the State Department noted,
6 did it not, in its FSEIS, Appendix B, potential releases
7 and pipeline safety mitigation measures was a concern
8 that the expressions of average risk that TransCanada has
9 been using, that care should be taken when stating a U.S.
10 threat or state level threat because it downplays the
11 absolute importance of potentially large localized and/or
12 periodic events?

13 Would you agree with that?

14 A. I do not specifically recall reading that paragraph
15 in detail. But yes.

16 Q. Now I think we've had some testimony from
17 Ms. Tillquist that TransCanada, based upon what the
18 State Department has instructed, has already studied
19 potential impacts of a spill 10 miles downstream from
20 water bodies.

21 Are you aware of that?

22 A. Yes.

23 Q. Has that been provided to the Public Utilities
24 Commission?

25 A. Not to my knowledge.

1 Q. I guess I'm wondering, ma'am, and I'd like you to
2 enlighten me. You are here, are you not, as a
3 representative of TransCanada to convince this Commission
4 that TransCanada is willing and capable of complying with
5 all Amended Conditions; is that right?

6 A. Yes.

7 Q. Okay. It sounds like there's a lot of things you
8 haven't provided to them which might be helpful to them
9 in making that decision.

10 Wouldn't you agree?

11 A. I'm not sure specifically what documents the
12 Commission would require.

13 Q. Well, everything that we've been talking about,
14 would you agree, relates to construction?

15 A. Design and construction, yes.

16 Q. Okay. And that's -- you're here seeking a
17 recertification -- you're here seeking permission from
18 this Commission to recertify your construction Permit;
19 correct?

20 A. Yes.

21 Q. Now we've had some discussion, and I think you've
22 been here for the whole hearing; is that right, ma'am?

23 A. I have, yes.

24 Q. You're aware we've had some discussions about HCAs
25 and about the concern of whether they should be

1 confidential or whether they should be made available to
2 the public; is that right?

3 A. Yes.

4 Q. Okay. One of the things the State Department
5 suggested in 2014 was despite whatever methodology
6 TransCanada had been using before, they suggested that
7 one of the things that TransCanada do was to capitalize
8 on the PHMSA National Pipeline Mapping System and
9 determination of HCAs; is that right?

10 A. Yes.

11 Q. Is that National Pipeline Mapping System -- how does
12 one get access to that? The internet?

13 A. Yes.

14 Q. And one of the reasons for doing that was to better
15 quantify localized threats to the environment of
16 potential spills.

17 A. Yes.

18 Q. Could you tell us, ma'am, what the -- is there a
19 difference in the planned pipeline wall thickness when
20 TransCanada intends to go under a river versus what it
21 may use in the balance of the pipeline within
22 South Dakota?

23 A. If it were a horizontal directional drill based on
24 the construction stresses that would be exerted on the
25 pipe through that installation process, the wall

1 thickness would be thicker than that if we were
2 installing through an open cut type scenario.

3 Q. So it's an installation issue?

4 A. From a stress perspective during installation we
5 would require pipe wall when performing a horizontal
6 directional drill due to the pull forces of the pipe
7 being installed under the river.

8 Q. Is thickness a factor in pipeline safety?

9 A. Not necessarily. The requirements under the
10 regulation are to calculate a wall thickness that's
11 suitable for the intended operating pressure and to
12 maintain a percentage of 72 of that steel wall strength.

13 And so we would look at specifics on top of the base
14 minimum regulation as it relates to installation stresses
15 or other and account for that with additional thickness,
16 if required.

17 Q. Are you saying that what TransCanada does is it
18 makes its designs to the minimal required as opposed to
19 the maximum that would better benefit the environment,
20 protection of the environment?

21 A. We conduct our designs to the required -- to the
22 requirements as necessary, to ensure the pipeline is safe
23 to operate in any condition.

24 Q. The minimal requirements apparently?

25 A. No. The design requirements.

1 Q. The minimal design requirements?

2 A. No. The design requirements.

3 Q. Okay. I mean, the pipeline thickness for going
4 under an HDD is what, about a third thicker than it is
5 generally?

6 A. Generally.

7 Q. And you're saying that wouldn't provide any greater
8 degree of safety if all of the pipe was at, say, .62 as
9 opposed to .46?

10 A. Not specifically.

11 Q. Okay. As of 2007 you testified, ma'am, that there
12 were 20 near misses of a spill of TransCanada's
13 pipelines.

14 What's a near miss?

15 A. I don't recall that specific number, but a near miss
16 is an occurrence that could potentially happen.

17 Q. I'm sorry. Is a what?

18 A. A near miss is a potential of -- a potential event
19 or issue that could happen. But I don't recall the
20 information in the question.

21 Q. A potential event, or what was the other thing?

22 A. Issue.

23 Q. Issue. Does that mean a leak?

24 A. No.

25 Q. It includes a leak?

1 A. It's a potential for a leak, as my understanding of
2 the definition of near miss or near hit in terms of a
3 construction term.

4 Q. If you said that there were 20 in your 2007
5 testimony, question 19, page 6, would you agree with
6 that?

7 A. I don't know the context of that question or -- I
8 don't recall that information specifically.

9 Q. Well, let me give you the context. And that was
10 that you were discussing TransCanada's 576 spills. It
11 was within that context.

12 Does that refresh your recollection?

13 MR. WHITE: Objection. If we're going to
14 reexamine the 2007 testimony, can you hand it to the
15 witness so she can see it in context?

16 And give her time to read it and familiarize
17 herself with it in context.

18 MR. ELLISON: No problems at all, Mr. White.

19 MR. SMITH: It's on the website if you want to
20 just bring it up and put it on the screen.

21 Q. Please look at the entire document, but specifically
22 look at pages 4 through 6. And I believe your numbers
23 about the 20 near misses would be on page 6, ma'am.

24 MR. SMITH: What date was that?

25 MR. ELLISON: I'm sorry. I don't have the exact

1 date, but it was in 07-001. And these are more general
2 questions that were introduced by the witness at that
3 time. And I will connect it to today shortly, once we
4 get through this part.

5 MR. BLACKBURN: If I may, Mr. Smith, it was
6 dated the 21st day of September, 2007.

7 MR. SMITH: It was dated what?

8 MR. BLACKBURN: September 21, 2007. It may have
9 been filed a day or two later. It looks like it was
10 filed on September 24.

11 MR. WHITE: Sorry. Could we have that date
12 again?

13 MR. BLACKBURN: I believe it was filed on
14 September 24.

15 MR. WHITE: Is it her prefiled testimony or
16 transcript from the hearing?

17 MR. ELLISON: It was prefiled testimony.
18 Question 19, Mr. White.

19 Q. Does that refresh your memory now?

20 A. It does. And I apologize for not remembering.

21 Q. No apologies necessary. That's why the document was
22 given to you, so that you could refresh your memory.

23 A. So this particular document -- or this particular
24 issue related to the reporting criteria that TransCanada
25 provides on its website. We are part of the -- a program

1 regarding environmental sustainability which requires us
2 to report all types of spills, regardless of the size.

3 And at this time this was specifically related to
4 our natural gas pipeline system and the various types of
5 drips and spills that would occur during maintenance
6 activities and regular activity at the compression or
7 other pipeline facilities.

8 And so as is described in my, I guess, 2007
9 testimony, there was a specific definition for various
10 types of categories of spills within our incident
11 management system, and near hit is just one -- or near
12 spill is just one type of category where the spill may
13 have -- may not have actually been -- impacted the --
14 touched the ground or impacted the ground.

15 And so it was reported as such based on whomever had
16 filled out the tracking report.

17 Q. And you included it as part of your testimony that
18 there were 20 near misses back eight years ago?

19 A. It was a statistical breakdown of the quantity.
20 And, as I recall, this was a question that had come up in
21 some of the public comment meetings, and so we felt it
22 was important to include it as part of the hearings at
23 that time to clarify why this information was on our
24 website and what the information was related to because
25 there were questions about that during that proceeding.

1 MR. WHITE: Mr. Smith, before we go down this
2 line any further, can I ask whether there's any relevance
3 between the Keystone 2007 proceeding for a different
4 project and this 2014 certification proceeding that we're
5 in today?

6 MR. ELLISON: I'm going to get to it right now.

7 MR. SMITH: Okay. Are you going to explain what
8 the relevance is?

9 MR. ELLISON: Yeah. Through questions, if I
10 may, Mr. White.

11 Q. Would you agree, ma'am, that spills have been
12 expressed in many places as an area of concern on the KXL
13 Pipeline?

14 A. Yes.

15 Q. You did not include information as to the number of
16 near misses that TransCanada has experienced over the
17 last eight years in your Direct Testimony or in your
18 testimony here today; is that right?

19 A. I did not.

20 Q. Do you know what the number of near misses has been
21 over the last eight years of all of TransCanada's
22 pipelines?

23 A. I do not know that information.

24 Q. I think that you talked a little bit yesterday, I
25 think in response to questions from Mr. Blackburn, and

1 you mentioned the Platte Pipeline as being one of two
2 pipelines that a few years ago caused a -- there was a
3 corrosion issue, whether it was some kind of a cathodic
4 issue; is that right, ma'am?

5 It was too close to the Keystone Pipeline?

6 A. Yes.

7 Q. Okay. And what is the connection between
8 TransCanada and Platte Pipeline system?

9 A. There is no connection.

10 Q. There is none. You're aware, are you not, that in
11 1996 the Platte Pipeline had a spill of 220 barrels of
12 oil and that none of it was recovered?

13 A. I'm not specifically aware.

14 Q. If that was in your 2007 testimony, question 21,
15 page 6, would you disagree with -- would that refresh
16 your recollection?

17 A. If it was in my testimony, then yes.

18 Q. And this was the same pipeline -- and TransCanada
19 actually had some cathodic issues with. It was cathodic
20 interference, if I'm understanding the term right.

21 A. That's my understanding.

22 Q. And that cathodic issue -- and we're going to get to
23 some of the details of that in a moment. Where was that
24 issue?

25 Where did that issue arise where there was up to

1 almost a 97 percent wall loss?

2 A. My understanding is Missouri.

3 Q. And you're aware, are you not, that that was within
4 100 yards of the Missouri River?

5 A. I'm not aware of all the specific details of the
6 particulars of that incident. As I mentioned yesterday,
7 what I am aware of is that there was an issue and that
8 based on the investigation and the review of that
9 particular issue from our operations engineering, that
10 they passed that information on to the projects related
11 to updating the particular cathodic protection designs
12 for future projects and particularly for this project.

13 And we started implementing those design revisions
14 in 2012 with other projects with the Gulf Coast Project.

15 Q. Have you received any special training or advice
16 that if you're asked about A, that that means you try and
17 talk about B through Z as well?

18 MR. WHITE: Objection. Argumentative.

19 MR. ELLISON: Asked her if she's had training.

20 MR. WHITE: Invades the legal privilege.

21 MR. SMITH: Sustained.

22 Q. Now as someone who's responsible for oversight of
23 design, including location of a pipeline, being aware of
24 the 1996 problems of the spill with the Platte Pipeline,
25 would I be right in thinking that you would be concerned

1 about any proximity of a pipeline which already had a
2 significant spill being close to a TransCanada Pipeline?

3 Wouldn't that give you like a warning, warning
4 flag?

5 A. No. Pipelines are collocated all the time. We
6 typically prefer to be in collocated utility corridors in
7 order to minimize the environmental footprint and ground
8 disturbance.

9 And there are guidelines and standards related to
10 constructing through collocated corridors that we apply
11 to situations where we would have to follow other
12 utilities.

13 Q. And other utilities have the same responsibilities
14 too; right?

15 A. I would assume so.

16 Q. And so is what you're saying is that -- whose
17 problem was it when that pipeline was -- the cathodic
18 whatever got out of whack between your pipeline and two
19 others by the Missouri River?

20 A. It was an issue that was identified, and we were
21 working to resolve that issue with the other operators.
22 So it was a design issue that had been identified through
23 the required interference analysis and studies as part of
24 the installation and fine-tuning of the cathodic
25 protection system.

1 It was caught as part of that testing and
2 verification. My understanding from the operations
3 engineers is that they worked with the other operators to
4 resolve the specific issues, and then as part of that
5 integrity management requirements then proactively as
6 part of in-line inspection completed the additional
7 verification of our pipeline.

8 So I would say that it would be our problem as well
9 as the problem of the other operators within that
10 corridor. It was an issue that was mutually being worked
11 on by both operators.

12 Q. And I think you said it was a design issue?

13 A. From a perspective that as pipelines are installed,
14 to have immediate protection on the pipeline. And we've
15 broadened that scope.

16 And it's not necessarily to now pipelines that are
17 collocated but essentially once the pipeline is installed
18 in the ground as it's being installed, as part of our new
19 cathodic protection lines, we are installing sacrificial
20 anodes at the test station, as Mr. Goulet explained
21 yesterday or a couple of days ago that passive cathodic
22 protection system.

23 And so this is a learning based on that incident
24 that we have incorporated into our designs moving forward
25 for new construction projects.

1 Q. So basically every pipeline you build there are
2 problems. You try and do better on the next pipeline;
3 correct?

4 A. It's a continuous learning and continuous
5 optimization. We look back after projects at the
6 completion of those projects and look at specific issues
7 or such things that could have been done better in all
8 aspects, not only design but in all disciplines and
9 incorporate that information into the projects as we move
10 forward as we update specifications and designs and
11 construction practices.

12 Q. So does that mean if something that you haven't
13 quite learned yet in terms of the design technique causes
14 a major worst-case spill in the Little Missouri River or
15 the Cheyenne River, you'll go, hey, next time we'll build
16 it better?

17 A. No.

18 Q. But you can't say there won't be design flaws that
19 will cause a catastrophic failure, can you?

20 A. I can say that this is the safest pipeline that will
21 be built based on the additional safeguards and
22 requirements as set forth in Appendix Z.

23 MR. ELLISON: Could you read my question back,
24 please, and I would ask that the witness be instructed to
25 answer it.

1 (Reporter reads back the last question.)

2 A. Not that I'm aware of.

3 Q. Not that you're aware of that you can't say or --

4 A. I'm not aware of any design flaws that could cause a
5 catastrophic failure.

6 Q. When you get down to loss of a 97 percent of a wall
7 that's pretty close to a catastrophic failure; isn't that
8 right?

9 A. I can't comment on that issue.

10 Q. Huh. Okay.

11 When that pipeline was being -- before review
12 agencies were you telling them that you were using the
13 best possible technologies and design criteria and that
14 there shouldn't be a problem?

15 A. I'm not -- I'm not sure I understand your question.

16 Q. Okay. Well, you've just told us that, you know,
17 you're pretty sure there's not going to be any problem
18 here, and I'm just wondering if you told something -- the
19 same thing to regulatory agencies when that pipeline was
20 being built?

21 A. At the time the Keystone Pipeline was being built it
22 was -- it included more safeguards than any other
23 pipeline that was being built at that time.

24 Q. Just like you're saying right now about this one.

25 A. Yes.

1 Q. And by the way that one had a 400 barrel spill,
2 didn't it?

3 A. My understanding was that that spill was at a pump
4 station, and it was contained.

5 Q. By a wetland?

6 A. I'm not aware of the specific details.

7 Q. We'll get to that.

8 What is a sensitivity analysis?

9 A. I'm not sure. In what context?

10 Q. In the context of trying to understand and prevent
11 the drivers of incidents and estimating spill
12 frequencies.

13 A. That would be a question best answered by
14 Ms. Tillquist.

15 Q. Ma'am, you've been in the room. During the course
16 of this hearing you have heard four of your fellow
17 TransCanada officials say that you are the person to go
18 to to basically answer every question.

19 MR. WHITE: Objection. That's not what the
20 witnesses testified to.

21 MR. SMITH: Sustained.

22 Q. Isn't a mechanism that better helps determine
23 drivers of incidents and estimating spill frequencies of
24 the pipeline you are designing to construct important for
25 you as the overall person in charge of designing this

1 pipeline you want to put through our state?

2 Isn't it important that you know about that?

3 A. Yes.

4 Q. One of the things specifically that Battelle talked
5 about, as the 2014 FSEIS discussed, was that such an
6 analysis could help identify localized threats that you
7 are trying to prevent; isn't that correct?

8 A. Yes.

9 MR. HARTER: Mr. Nelson, John Harter. We've
10 lost power back here on this side. I don't see any power
11 on the wall at the cord.

12 (Discussion off the record)

13 Q. I think you talked a little bit, did you not, maybe
14 it was this morning in response to some questions from
15 Mr. Blackburn about inspection intervals, aerial
16 overflights.

17 Do you recall that, ma'am?

18 A. I do.

19 Q. Okay. As part of that, is there also something
20 that's called an EFRD?

21 A. Yes.

22 Q. What is that, ma'am?

23 A. That's an emergency flow restricting device or
24 another word for a check valve that we use for isolation.

25 Q. The check valve is something that works

1 automatically, doesn't it? I mean -- is that right?

2 A. There's required to be a pressure differential, but,
3 yes, it works automatically. To a certain extent.

4 Q. Okay. Well, if there is a pressure differential,
5 what is it designed to do?

6 A. Prevent backflow into the upstream segment.

7 Q. So if there was a leak, it might prevent it from
8 being more catastrophic than it might otherwise be?

9 A. Not necessarily.

10 Q. You mean it wouldn't provide that protection?

11 A. It would provide a certain degree of protection.

12 Q. Okay. How many check valves are currently planned
13 for the KXL Pipeline within the State of South Dakota?

14 A. I'd have to go back to the design information. I
15 don't know that off the top of my head. I don't have
16 that information off the top of my head.

17 I think -- I would assume possibly four or five.

18 Q. Over 315 miles?

19 A. Yes.

20 Q. So not at even every major river area?

21 A. It would be every major -- we specifically used that
22 design technique at major river crossings, primarily
23 dependent on the elevation at those river crossings.

24 So, for example, the Cheyenne River, the Little
25 Missouri, rivers of that width.

1 Q. Not the Bad River?

2 A. I'm assuming that that's part of it. I don't have
3 the list in front of me so I can't answer with specific
4 detail on all the rivers that have that.

5 Q. When check valves are -- when the pipeline is
6 designed to include check valves they're really done in
7 pairs, aren't they? Because you want to cut off both
8 sides of a potential spill?

9 A. No. It's just to prevent the -- the backflow. Our
10 design specifically for major river crossings includes an
11 automated valve and a check valve on the downstream side
12 and an automated valve on the upstream side.

13 The genesis of that design is that the original
14 design was just a manual isolation valve with a check
15 valve on the downstream side. Subsequent with the
16 Special Permit Conditions -- or Special Conditions, we
17 looked to automate all of the valves.

18 That particular manual valve was strictly there from
19 an isolation perspective for maintenance, but because the
20 conditions required all valves to be automated, we
21 updated the design accordingly. So for those major river
22 crossings the design was the check valve to prevent
23 backflow.

24 Q. So is it fair to say, yes or no, whether -- prior to
25 2014 and the State Department telling you that they

1 wanted a fully automated valve system, TransCanada wasn't
2 proposing to do that, was it?

3 A. No, we were not.

4 Q. And the reason why the State Department -- and by
5 the way, it was the State Department, it wasn't PHMSA;
6 right?

7 A. It was the Special Conditions brought forth by the
8 PHMSA agency to the Department of State and included by
9 Department of State. So yes. Department of State.

10 Q. And until PHMSA or the Department of State said you
11 needed to do this, TransCanada was not planning to?

12 A. We had no plans to do that.

13 Q. And PHMSA and the Department of State said to do
14 this because it would increase response or reaction time
15 to a potential leak; is that right?

16 A. Not necessarily. We had the check valve there from
17 a backflow or a spill prevention. The automation of the
18 valve at that point only enhances the pipeline system
19 because it adds additional instrumentation to the
20 pipeline that would enhance some of the operational
21 control systems, such as monitoring.

22 So it's another point on the system that has the
23 ability to provide additional feedback to the operation
24 of the control center.

25 Q. In an effort to try and make the pipeline safe;

1 correct?

2 A. Yes.

3 Q. One of the things that's required by regulation,
4 Section 195, is baseline and continual integrity
5 assessments?

6 A. Yes.

7 Q. And isn't one of the things that's supposed to be
8 done is to prioritize, by segment, all risk factors that
9 reflect risk conditions?

10 A. Yes.

11 Q. And one of the things that an assessment plan under
12 49 CFR 195 that's required is an evaluation for each
13 segment of a pipeline; is that right?

14 A. Yes.

15 Q. And what is the purpose of such an evaluation for
16 each segment?

17 A. It's as part of the Integrity Management Plan that
18 allows the engineers to verify and determine what
19 requires immediate versus later type of response related
20 to integrity management.

21 And so that specific plan and those items occur
22 during the operations phase of the project.

23 Q. When the regulations use the word segment, pipeline
24 segment, what do you understand that to be?

25 A. I don't have a specific confirmation of what that

1 definition would be off the top of my head.

2 Q. Okay. One of the things that -- would you agree
3 under the regulations 49 CFR 195 that as part of an
4 integrity assessment plan that includes coating type and
5 condition?

6 A. Yes.

7 Q. I believe that you told us yesterday that -- when
8 was it that the pipe that is proposed to be used for the
9 KXL Pipeline through our state -- when was that
10 pipeline -- pipe manufactured?

11 A. I believe it was 2011.

12 Q. And where was it manufactured?

13 A. There are multiple locations, Canada and the U.S.,
14 that that pipe was manufactured.

15 Q. No other places?

16 A. No.

17 Q. Okay. And am I correct in your recollection that
18 you told us that this pipe, because it didn't have
19 anywhere to go, just remained at the manufacturing
20 yards?

21 A. It's currently located at the manufacturing yards,
22 yes.

23 Q. All of it?

24 A. Yes.

25 Q. By the way, have you visited the site where that

1 pipe is being stored?

2 A. I visited a few sites.

3 Q. It's at a few sites?

4 A. There are a few sites, yes.

5 Q. And they're all manufacturing centers?

6 A. There are a couple that are manufacturing. I

7 believe there's one that's not a manufacturing site.

8 Q. Oh, so now there's one that's something else?

9 A. I believe so.

10 Q. Is this a picture of it (indicating)?

11 A. I don't know specifically. It looks like it.

12 Q. You mentioned to us that when pipe is going to be

13 stored outside for a while that it requires an extra

14 coating to protect it from weatherization; is that right,

15 ma'am?

16 A. Yes. Potentially.

17 Q. Potentially, problems with weathering?

18 A. Yes.

19 Q. Right. And, first of all, what is the color of the

20 protection coating that's put on stored pipe to prevent

21 the possibility of weatherization damage?

22 A. Sometimes it can be clear, and sometimes it can be

23 white.

24 Q. Okay. Do you know, looking at this picture -- we

25 don't see white there, do we?

1 A. No.

2 Q. Do you know whether that's even been coated?

3 A. I'd have to look. I don't know specifically what
4 was used at Gascoyne.

5 Q. You see that picture?

6 A. I do.

7 MR. WHITE: Mr. Smith, can we get an
8 identification of what these pictures are that we're
9 looking at?

10 MR. ELLISON: These are photographs that were
11 taken at the TransCanada Pipeline storage facility in
12 Gascoyne, North Dakota.

13 MR. WHITE: I'm going to object that there's no
14 foundation for any of these pictures. We don't know
15 where they came from, who took them, what they're of.
16 We're just relying on Mr. Ellison's statement.

17 MR. ELLISON: We have a witness who took the
18 picture who is present in the hearing room today. We
19 plan to add her as a substantive witness -- an additional
20 witness. We hadn't planned to do that until the session
21 came up about the coatings on the pipeline.

22 These pictures will reveal that there is an
23 effort to put a white coating on this pipeline, this
24 pipe, and that it is very incomplete.

25 MR. WHITE: Witnesses were already required to

1 be identified. Testimony was required to be prefiled.
2 It's too late to bring in surprise witnesses at this
3 point in time.

4 MR. ELLISON: This would be a rebuttal who was
5 unknown and could not have been known because we did not
6 know the witness would testify about putting on
7 protective coating to protect pipe that's been sitting
8 out for years.

9 MR. WHITE: The witness had prefiled testimony.
10 You knew that you were going to ask questions about
11 coating. If you had another witness on coating, you
12 should have identified that witness before we're sitting
13 here in the hearing room today.

14 MR. ELLISON: I did not know that this was going
15 to be an issue in this matter. I did not ask the initial
16 questions about it. It came out during the questioning
17 of Mr. Blackburn.

18 At that point then we went and sought to find
19 out did we have information to counter that, and we, in
20 fact, did. They are these photographs. And we can lay
21 the foundation for the taking of those photographs.

22 So we're in a situation where this is an
23 unexpected rebuttal witness that goes very much to the
24 credibility of Ms. Kothari.

25 MS. REAL BIRD: Mr. Smith, may I add I would

1 like to draw your attention to the Commission's Order
2 dated July 2. The Commission ordered that witnesses for
3 whom prefiled testimony was not filed would also be
4 precluded from testifying or offering evidence at the
5 hearing, except to the extent that such testimony or
6 evidence will address new facts, evidence, or opinions
7 introduced at the hearing that were not presented in
8 prefiled testimony.

9 MR. SMITH: Okay.

10 MR. ELLISON: Thank you, Ms. Real Bird. I would
11 join in that.

12 MR. SMITH: Okay. Let's address the foundation.
13 Can you address that issue?

14 MR. ELLISON: Yes, sir.

15 MR. SMITH: Please.

16 MR. ELLISON: The person who took these pictures
17 is present in the hearing room today. She is prepared to
18 come forward and testify under oath as to when she took
19 each of these photographs. And so if we want to --

20 MR. SMITH: Would it be an appropriate ruling
21 here to permit your cross-examination subject to
22 sufficient foundation -- subject to a later sufficient
23 laying of foundation and -- pardon me.

24 I mean, is that -- is that an appropriate
25 outcome here?

1 MR. ELLISON: That would certainly be much
2 better than stopping the testimony of Ms. Kothari at this
3 point, seeking permission from the Commission to call the
4 witness and her to lay the foundation.

5 But as an officer of the court, as an officer
6 of these proceedings, I would think that is a very
7 satisfactory means of allowing us to move on.

8 MR. SMITH: Mr. White.

9 MR. WHITE: My objection is to the bringing in
10 of new witnesses at this point in the proceeding. If
11 we're going to bring in new witnesses to address
12 everything that comes up on discussion, we'll be here
13 until next year.

14 MR. SMITH: I realize that. We did put that
15 exception in there, though, and we did it intentionally
16 because, again, curve balls get thrown at hearings even
17 when we have prefiled testimony.

18 So there is that exception. And I guess to me
19 this would seem to -- and, again, we've got foundation in
20 the future, and so there may be -- things that may come
21 up that we'll say no, you know.

22 But at this point I think subject to that, a
23 later showing of -- that it meets the standard we set
24 forth in our Order and foundation, my own inclination is
25 to allow the questioning to go forward.

1 MR. ELLISON: Mr. Smith, if I may ask a point
2 for procedure.

3 Would the Commission like -- and perhaps it
4 would be to Mr. White's -- reasonable for Mr. White's
5 understanding, for us to put together a short
6 supplemental written testimony that would outline -- from
7 that witness that would outline what her expected
8 testimony is to be? And I don't -- we would not be able
9 to work on that before tonight.

10 MR. SMITH: Right.

11 MR. ELLISON: And, obviously, we wouldn't be
12 putting on our rebuttal case tomorrow, I don't think. So
13 if that would be a suggestion that would be helpful for
14 all the parties, we'd be happy to do that.

15 MR. SMITH: I don't know that you need -- I'm
16 going to ask Keystone.

17 What do you think, gentlemen? Would that be
18 helpful to have him go through that?

19 MR. WHITE: Yes, it would.

20 COMMISSIONER HANSON: I'm going to ask, that
21 testimony has to be significantly limited to just simply
22 location of the pipe, when the picture was taken.

23 MR. ELLISON: Sure. I understand that, sir.
24 May I have just a moment?

25 Ma'am, to move on a little bit --

1 MR. SMITH: Yeah. I think we will allow the
2 questioning subject to a later demonstration of adequate
3 foundation and context for the exhibit and the -- and
4 what evidence this entails.

5 MR. ELLISON: We will certainly try and do that,
6 sir.

7 MR. SMITH: And I guess at Mr. Wilson's [sic]
8 request, a filing of a brief prefiled testimony, I
9 guess -- or written testimony so that he's got a basis
10 now for evaluating.

11 MR. ELLISON: Certainly.

12 CHAIRMAN NELSON: How long is this questioning
13 going to take on these photographs?

14 MR. ELLISON: I think we could probably get done
15 by noon.

16 MR. SMITH: No. He's got to be out of here by
17 10 to.

18 CHAIRMAN NELSON: 5 to.

19 MR. ELLISON: It will take more than a minute or
20 two.

21 MR. SMITH: With that, we're going to go into
22 recess until 1 o'clock.

23 (A lunch recess is taken)

24 MR. ELLISON: Perhaps just to save at least a
25 couple of moments, I could begin my mea culpa. And with

1 apologies to the Commission and TransCanada and to all of
2 the other parties, when I was displaying photographs of
3 the pipes that are in North Dakota I had mistakenly used
4 the wrong batch. And the batch that I used was -- I
5 think I used two pictures.

6 They were actually taken by someone who is not
7 in the room. We do have virtually identical photographs
8 that were taken by the person who I originally thought
9 had taken the photographs.

10 But I wanted the record to be clear about that
11 so that the photographs that we will be using are indeed
12 the photographs that were taken by the photographer who
13 is in the room who, absent a stipulation from TransCanada
14 that they have no issues with the photographs, we would
15 be preparing the short testimony for.

16 And I do apologize to this Commission for that.

17 MR. WHITE: Mr. Smith, if I might, Mr. Ellison
18 and I had a discussion over the break how to resolve the
19 foundation issue without the need to call an additional
20 foundation witness.

21 I think what we agreed upon is they would
22 provide us with the pictures and about 10 minutes to
23 review the pictures and try to assure ourselves of their
24 authenticity. And if we can reach that conclusion, then
25 we don't need to have a foundation witness come in later.

1 I'm in the process of trying to upload the
2 photos to my computer so that we can do that, if that
3 would be acceptable.

4 MR. ELLISON: Mr. White, is it your preference
5 that you do that before I begin further?

6 MR. WHITE: That would seem to make sense.

7 MR. ELLISON: I certainly have no objection.

8 MR. SMITH: Okay. We'll go in recess until
9 20 after. How is that?

10 (A short recess is taken)

11 MR. WHITE: We've had an opportunity to review
12 the photos. We are comfortable that they are photos of
13 the Gascoyne pipe yard as they purport to be.

14 I just would like the record to reflect the date
15 that they were taken, and I understand that was May of
16 2013. Is that correct, Mr. Ellison?

17 MR. ELLISON: That's the best information I
18 have, sir.

19 MR. WHITE: So with that, we would withdraw our
20 foundation objection.

21 MR. SMITH: Thank you. You may proceed,
22 Mr. Ellison.

23 MR. ELLISON: Thank you.

24 Q. Do you have a monitor in front of you, ma'am?

25 A. I do.

1 Q. Let me start by saying good afternoon.

2 A. Good afternoon.

3 Q. The white coat that is visible in this picture, is
4 that the kind of standard coating for weathering, the
5 extra coating that's put on to prevent weathering in the
6 pipe?

7 A. Typically it could be white. It could be clear.
8 But in this instance, yes, it is.

9 Q. You mentioned earlier about clear coating. Do you
10 know the name of any kind of clear coating that would
11 perform the same -- I mean, we're talking about the
12 concern is UV protection, is it not?

13 A. Correct.

14 Q. And can you tell us what clear coating would be used
15 as a substitute for the white coating that is typically
16 put on?

17 A. I don't have any specific details on the coating
18 manufacturer or material types. What I do know is that
19 sometimes we use a white coating, and sometimes there's a
20 coating that's more transparent.

21 Q. Does it depend upon what, whatever is locally
22 available, or how is that determination made?

23 A. Usually that's one of the circumstances.

24 Q. And you would expect that if someone started putting
25 on a coating, that they would finish the whole pipe,

1 would they not?

2 A. Yes.

3 Q. I mean, it doesn't make sense to try and protect a
4 pipe from UV deterioration unless you have done it from
5 one side to the other. Is that fair?

6 A. Yes.

7 Q. And a lot of times this white coating, some people
8 have described it, have they not, it's almost kind of
9 house paint, external house paint?

10 A. That's right. Could be similarly described.

11 Q. And the white coating that appears on this pipe in
12 this particular picture, does that appear to be the --
13 this pipe that is shown there is, in fact, coated?

14 A. Yes.

15 Q. With UV protected coating?

16 A. Yes.

17 Q. Okay. Another picture of the same yard. We've got
18 three different colors there. First let's start with the
19 brown ones.

20 Do you know what kind of coating that is?

21 A. Yes. That's our abrasion resistant coating. And so
22 when we do a trenchless installation, for example, an HDD
23 or a bore under a highway, for example, we protect the
24 corrosion coating with an overcoat that's somewhat
25 sacrificial in order to maintain the integrity of the

1 corrosion coating.

2 And so some particular coating applications or
3 products come with that particular color.

4 Q. Okay. So the orange, brown?

5 A. Sure. Brown.

6 Q. Will that work?

7 A. Yes.

8 Q. We've got at least from this photograph a small
9 number of pipes in comparison to the total that do have
10 that coating that you've just described?

11 A. Correct.

12 Q. Okay. And then we have a number of rows which are
13 all green?

14 A. Yes.

15 Q. And I think you told us this pipe is manufactured in
16 2011?

17 A. That's correct.

18 Q. And would there be any reason since -- I think you
19 amended your answer a little bit from yesterday where I
20 think you thought that everything was still at the
21 manufacturing yards.

22 A. Yeah. I failed to mention the Gascoyne. It escaped
23 my memory.

24 Q. And I appreciate that. And that's fine. But how
25 long would you have expected -- I mean, would you expect

1 that once -- I mean, the manufacturer only has so much
2 room.

3 Is that part of the reason why this group of piping
4 was moved out, or was there another reason why this was
5 basically stationed in North Dakota?

6 A. That was part of the reason. We stockpile pipe in
7 the manufacturing yard with additional space, and if
8 they've run out of additional lands within their
9 facilities, this would be a reason that we would have put
10 pipe here.

11 Q. And I think you told us, did you not, that if pipe
12 is going to sit out for a while, that you try and coat it
13 within a year.

14 A. A year to 18 months is typically after the pipe has
15 been manufactured. It's a way to mitigate any potential
16 degradation.

17 Q. I mean, when the pipe was moved out in 2011 I think
18 there was an expectation by TransCanada, was there not,
19 that you folks might be proceeding at any moment with
20 construction.

21 A. That's correct.

22 Q. In this picture would you agree with me, ma'am, that
23 at least what appears to the photograph's left that we
24 have pipe, some of which is partially white and some of
25 which is partially green?

1 A. Correct.

2 Q. You wouldn't expect that the green part has clear
3 coating on it as opposed to being unfinished with the
4 white coating.

5 Would you agree with that?

6 A. No. Not based on the date that was mentioned with
7 this photograph.

8 Q. I'm not sure I understand.

9 A. I understand the date of the photograph was May
10 2013?

11 Q. May 2013, yes.

12 Okay. So you're saying it has clear coat on some
13 and white coat on the other?

14 A. No. I'm saying that I agree that there was green
15 coated pipe there on May 2013.

16 Q. That hadn't been painted?

17 A. That hadn't been coated, correct.

18 Q. Okay. I misunderstood you. And thank you for
19 explaining.

20 And, again, a little bit closer photograph showing
21 the partially painted pipe; is that right?

22 A. Yes.

23 Q. Now is the pipe only painted on one side, or is the
24 whole pipe painted?

25 A. It's painted on the areas that are generally exposed

1 to the surface. So we would not paint the entire
2 circumference or pieces below the top surface of the pipe
3 that's exposed on the top row.

4 Q. Okay. And why are there -- it looks like there's
5 some kind of a seal that's on the side, the entrance or
6 the opening of the pipe.

7 What is that for?

8 A. Sometimes we installed end caps on the pipe on the
9 lower levels. With the pipe being in the northern
10 climate with winter, it serves to manage any snow getting
11 into the pipe or rodents or anything else of that nature.
12 Water, that sort of thing.

13 Q. Is water a problem for these pipes?

14 A. Not necessarily. We just don't want to have
15 foreign -- extra foreign materials in there. Because as
16 we move to construction we have to clean the pipe and
17 ensure there's no debris in the pipe and things like
18 that. So it's just another standard procedural item that
19 we do.

20 Q. Would there be any reason to do some pipes and not
21 others?

22 A. Typically it's just the bottom couple of rows that
23 we would do. As far as the height of the pipe, we don't
24 feel that the snowbank or anything will get that high at
25 that point.

1 Q. You don't understand that sometimes in North Dakota
2 there are feet of snow, many feet of snow?

3 A. I understand that. This would be 6 feet, as far as
4 the amount of protection.

5 Q. Okay. And things blow around quite a bit?

6 A. I would imagine potentially.

7 Q. What about rodents? You ever seen rodents climb up
8 things?

9 A. I'm sure. Not specific.

10 Q. You wouldn't disagree that really the upper two
11 layers of the pipe as depicted at least in this
12 photograph would not have much rodent protection?

13 A. We check the pipe for debris as it's moved out of
14 the pipe yard. Our standard practice is to cap the
15 bottom two rows.

16 Q. Can you tell us when, if at all, the remainder of
17 the unpainted pipe was painted?

18 A. Yes. Our painting operations commenced in October
19 of 2012 and concluded in July of 2013. So our
20 regulations require us to ensure we have corrosion
21 control on our pipe, and we have to prove that our pipe
22 meets these corrosion controls before they are installed.
23 And if they don't meet those requirements, then we simply
24 recoat the pipe.

25 Q. Are you saying that after seven months you wouldn't

1 have expected this piping to be coated?

2 A. We did not coat -- the requirements are after one
3 year would be generally when we would commence coating
4 operations for protection.

5 If we were anticipating to go to construction, we
6 would have not necessarily started that particular
7 application.

8 Q. Well, no. You mentioned, ma'am, did you not, that
9 the team or the crew started painting in October of 2012.

10 A. That's right.

11 Q. So my question was you mean after seven months it
12 still hadn't been completed?

13 A. There was a break for winter because we don't
14 typically complete the coating operation over the winter
15 period because it's not feasible as far as the
16 application process.

17 Q. Could you explain why it wasn't started the spring
18 before to compensate for the problems of painting during
19 the winter?

20 A. So the pipe was delivered in the summer through the
21 winter of 2011, and we commenced our coating operations
22 in the fall of 2012.

23 Q. Do you know why it wasn't started the previous
24 spring or summer?

25 A. At that point it wasn't necessary to commence that

1 operation.

2 Q. Let's switch topics.

3 Describe for us, ma'am, if you would -- we touched
4 really briefly on a couple of different ways on
5 corrosion.

6 What is the danger of -- is there something called
7 active corrosion?

8 A. There could be.

9 Q. What is active corrosion?

10 A. I don't have a specific definition -- a technical
11 definition for that.

12 Q. Okay. Well, if I -- let me read to you what
13 49 CFR 195 says and ask you if you agree with this
14 definition. "Active corrosion is continuing corrosion
15 which, unless controlled, could result in a condition
16 detrimental to public safety or the environment."

17 Would you disagree with that?

18 A. No.

19 Q. What are some of the causes of active corrosion?

20 A. The soils or the environment that it's contained
21 within.

22 Q. Could cathodic protections being out of line create
23 a condition that would also initiate active corrosion?

24 A. Potentially, if there was interference with cathodic
25 protection systems.

1 Q. Is that what happened down by St. Louis by Missouri?

2 A. That's my understanding.

3 Q. Do you have any idea, ma'am, how long that corrosion
4 had been active?

5 A. No, I do not.

6 Q. There are ways of testing a pipe to determine if
7 there is active corrosion; is that not right?

8 A. I believe there are.

9 Q. Could you tell us one of those methods, ma'am?

10 A. I don't know them specifically, but I believe you
11 can test the soils around where the pipe is buried, and
12 you can test the pipe itself if there are any particular
13 contaminants on the surface of the pipe that could cause
14 corrosion.

15 Q. One of the things that 49 CFR 195 requires, does it
16 not, is that if there's no loss greater than 80 percent,
17 it must be immediately prepared?

18 A. Correct.

19 Q. And that one of the things that's supposed to be
20 determined is to calculate whether the remaining strength
21 of the pipe shows that it is below the established
22 maximum operating pressure so that a predicted -- there
23 wouldn't be a predicted burst in pressure; isn't that
24 right?

25 A. Correct.

1 Q. And there's also other provisions in 49 CFR 195 that
2 talk about if metal loss is greater than 50 percent, you
3 can have months to actually take care of it; correct?

4 A. I understand that, yes.

5 Q. Can you explain why it was that pipe in the area of
6 the Missouri River by St. Louis -- I'm sorry.
7 Mississippi River by St. Louis was able to get to the
8 point that it was virtually 97 -- the walls were
9 97 percent gone?

10 A. I cannot.

11 As I mentioned before, the issue, interference
12 issue, had been identified and was being dealt with, and
13 TransCanada proactively as part of its Integrity
14 Management Plan ran in-line inspection tools to verify
15 the pipeline and its integrity and detected that
16 corrosion defect.

17 Q. Do you see this report that's on the screen, ma'am?

18 A. I do.

19 Q. Have you seen this report before?

20 A. It was shown the other day during testimony.

21 Q. So you recall some of the things that were discussed
22 within there?

23 A. To a certain extent.

24 MR. WHITE: Can we identify the report for the
25 record, please.

1 MR. ELLISON: I believe it's Exhibit 153. It is
2 the Study of Root Cause and Contributing Factors Keystone
3 Pipeline Corrosion Anomaly Investigation Final Report
4 2/13/13.

5 Q. I guess, ma'am, can you explain why the wall of this
6 pipeline was down to 3 percent of its original thickness
7 before it was detected?

8 A. I cannot.

9 Q. How can you assure this Commission that such a
10 similar problem won't occur again?

11 A. As I have mentioned previously, we have identified
12 the root cause of this particular issue and have taken
13 steps to update the designs for the Keystone XL Pipeline.

14 Q. Prior to this particular incident happening, you had
15 done -- you had done the best things that you could
16 around corrosion control that you were able to up to that
17 point; is that right?

18 A. We had used our company specifications, industry
19 best practices, and all codes and standards.

20 Q. I mean, is it fair to say that industry best
21 practices is a very fluid concept?

22 A. I don't know.

23 Q. Well, it seems to go, does it not, from one actual
24 or near disaster to another?

25 MR. WHITE: Objection.

1 Q. Does it not?

2 MR. SMITH: Sustained.

3 Q. Is the problem that occurred in this particular
4 matter or situation -- I think you said it was 40 feet.
5 The foreign pipeline was 40 feet from the TransCanada
6 Pipeline?

7 A. I believe so. I don't have the exact information.

8 Q. Okay. Then maybe if you could help me as what I'll
9 call a layperson on this. Is it the fact that it's a
10 metal pipe --

11 We're talking about a foreign metal pipe and
12 TransCanada metal pipe. And what is it that is the
13 problem between the two of them that can create corrosion
14 like this?

15 A. My understanding is that if the cathodic protection
16 systems of each of those systems are not complimenting
17 each other or aligned, there could be interference
18 between those two systems that could cause something like
19 this.

20 Q. Is there a way to monitor that outside of the
21 pipeline -- outside the pipe?

22 A. I believe there is. Through surveys and
23 interference studies similar to what we had conducted.

24 Q. But not up to that point.

25 A. It was identified, and the issue was being managed

1 and corrected as those studies were being performed.

2 Q. As part of the studies being performed was there an
3 analysis of what a worst-case spill might have been in
4 that area if that last 3 percent of wall went?

5 A. I believe the worst-case discharge analysis was
6 completed prior to the pipeline going in service and was
7 prepared and included as part of the ERP and submitted to
8 PHMSA.

9 Q. Do you know what the worst-case discharge would have
10 been in that particular area?

11 A. I do not.

12 Q. If it's 100 yards or so from the Missouri River,
13 that would be potentially very problematic, would it not?

14 A. I would assume so.

15 Q. Could you tell us, ma'am, is Section 195 CFR
16 Subpart H -- or Section 195 Subpart H, is that ambiguous
17 as to the requirements for installation of cathodic
18 protection? Or is it clear?

19 A. I'm not sure specifically. Our requirements -- my
20 understanding of our requirements is that we commit to
21 install our cathodic protection systems within six months
22 of operations. And, as mentioned previously, our designs
23 currently include installations of systems as the pipe is
24 going into the ground.

25 Q. As far as current designs for the KXL Pipeline, you

1 are aware that it does cross some metal pipe of the
2 Mni Wiconi project in South Dakota?

3 A. Yes, I am.

4 Q. And is the Commission in the possession of the
5 cathodic protection designs that will make sure that not
6 only that such corrosion doesn't start but that if it
7 does start, that it will be detected well before it
8 became dangerous?

9 A. We are required to file the construction plans so
10 the Commission would be in possession of those.

11 Q. The PUC would be?

12 A. When we file the construction plans, yes.

13 Q. Okay. Is that done?

14 A. Yes. The designs are done. We worked with the
15 Bureau of Reclamation to indirectly obtain the
16 requirements for that particular line, and those design
17 requirements for cathodic protection as well as crossing
18 designs were incorporated into our crossing design for
19 the -- I believe it's a 24-inch pipeline that we cross
20 around I think it's milepost 570, 571, or so.

21 And so all of those requirements from the Mni Wiconi
22 were incorporated into our crossing designs.

23 Q. Now in 2009 you ordered an audit, did you not, for
24 some defects that were occurring was it on the Gulf
25 Coast?

1 A. I don't think that's the right reference. I don't
2 know.

3 Q. Okay. Well, let me back up just a little bit.

4 We had some discussion from Mr. Goulet about the
5 Keystone base pipeline and a problem that developed
6 there, including a warning letter from PHMSA.

7 Do you remember that testimony?

8 A. I do.

9 Q. Okay. In fact, I think Mr. Goulet described it not
10 as a warning letter but as an advisory letter; is that
11 right?

12 A. I don't remember his specific wording.

13 Q. I'm going to show you what's been marked as DRA 66.

14 As someone who was involved in overall
15 responsibility for design for the Keystone Pipeline back
16 at this time, this would have been something, I would
17 imagine, that would have been an important thing for you
18 to have reviewed?

19 A. This particular warning letter?

20 Q. Yes.

21 A. I did not work on the TransCanada Bison pipeline.

22 Q. You didn't. Okay. How is that pipeline connected
23 to -- is that connected at all to the Keystone system?

24 A. No, it is not.

25 Q. Okay. It's a separate system?

1 A. That's a gas pipeline, a separate system, yes.

2 Q. And it says, does it not, that -- it doesn't say
3 that TransCanada reported a problem. It said this was as
4 a result of an inspection by PHMSA?

5 A. I don't have any knowledge or information about the
6 Bison Pipeline project.

7 Q. No. I'm asking you what this warning letter says.
8 Does it show on the first paragraph that it was as a
9 result of a PHMSA inspection on the second half of 2010?

10 A. Yes.

11 Q. And amongst the things that it recommended, did it
12 not, was the need for improvements in quality assurance
13 plans?

14 A. Yes.

15 Q. What was part of your job, wasn't it?

16 A. It was an aspect that I contributed into for the
17 overall project.

18 Q. Including personnel qualifications? Is that
19 something that you would be setting, the requirements of
20 personnel?

21 A. I would be contributing to the -- providing some of
22 the technical requirements but not the overall
23 requirements for the entire construction.

24 Q. One of the criticisms on page 2, was it not, was
25 that the quality assurance plan was basically limited to

1 inspection and nothing more that was thought by PHMSA
2 that should have been there to more properly provide
3 quality assurance; is that correct?

4 A. That's what is said in the letter.

5 Q. And then on page 3. What is Holiday detection?

6 A. It's a process that's used during the construction
7 to validate the integrity of the coating prior to the
8 pipeline being lowered into the ditch.

9 Q. And apparently this project before it was lowered
10 into the ditch did not have that; is that right?

11 A. I'm not aware of any of the specifics of the
12 Bison Project.

13 Q. Well, if it said the construction project did not
14 have an adequate quality inspection and testing procedure
15 for Holiday detection of coatings during field
16 construction, that would be what you're talking about
17 prior to -- should have been done prior to being lowered
18 into the ground.

19 A. I'm not sure of the specifics of the amount of
20 inspection that was done on that project.

21 Q. I'm just going to ask you questions from this
22 document.

23 A. Okay.

24 Q. Okay. There were warning letters that were
25 submitted to TransCanada in September of 2013 after

1 inspection by PHMSA?

2 A. Yes.

3 Q. And, again, this wasn't something that TransCanada
4 detected and notified PHMSA and then PHMSA sent out
5 somebody to verify a problem. This was a PHMSA
6 inspection that found something before TransCanada did;
7 isn't that right?

8 A. That's not correct.

9 Q. It's not correct. Okay.

10 Isn't that what it says in this letter?

11 A. We were aware of the issues related to this specific
12 description. It was work that we were -- as part of our
13 construction program, construction practices and
14 construction requirements, those particular items we were
15 fully aware of and were working with the normal -- during
16 the normal course of construction and quality management
17 postconstruction integrity verification of the pipe, as
18 part of the normal standard practices during pipeline
19 construction were aware of the issues.

20 PHMSA audits and performed site visits on a regular
21 basis to our pipeline and also witnessed some of the same
22 issues.

23 Q. Why would PHMSA have to send you a warning letter
24 that you were violating pipeline safety regulations if
25 you already knew about them?

1 A. I'm not sure specifically of the protocol from the
2 regulation as to the issuance and when they issue warning
3 letters or any specific communication.

4 We meet regularly during construction with PHMSA to
5 provide updates to them of the progress and the items
6 that are ongoing during construction. They visit our
7 site regularly on a weekly or biweekly basis to verify
8 construction activities and documentation so I'm not
9 sure.

10 These items were discussed as part of the ongoing
11 construction of the project with PHMSA.

12 MR. WHITE: Mr. Smith, if I might, I believe
13 we're having examination on DRA Exhibit 70, which my
14 understanding was that that exhibit had been excluded
15 from the case by prior Commission Order.

16 MR. ELLISON: I'm not going to move for the
17 admission of this exhibit, but it is proper for
18 cross-examination to use anything.

19 MR. SMITH: Did you have an objection related to
20 that?

21 MR. WHITE: Well, I'm not sure what the purpose
22 of this is. If this exhibit has already been excluded,
23 where are we going with it?

24 MR. SMITH: He said -- what he stated is he's
25 just using it as a mechanism to ask questions, not for

1 the purposes of introducing it as for itself to be
2 evidence in the case.

3 MR. WHITE: It appears to be more mechanism to
4 read the letter into the record but --

5 MR. SMITH: Yeah. I mean -- yeah. I don't
6 think -- I haven't heard much reading of it into the
7 record.

8 MR. ELLISON: No. I understand I can't do that.

9 MR. SMITH: Yep. I just -- he's been asking
10 questions that relate to it. But at least I can't see
11 it, but I can only see what's on the screen.

12 Q. One of the concerns, was it not, ma'am, was that
13 TransCanada didn't install its pipe in the best manner to
14 minimize damage?

15 Did you hear my question?

16 A. Could you repeat the question.

17 (Reporter reads back the last question.)

18 A. There was some construction damage attributed to the
19 installation of the pipe, which was found through high
20 resolution in-line inspection and then assessed and
21 repaired.

22 Q. And there was concern about coating damage, was
23 there not?

24 A. There was an instance of coating damage that was
25 found through inspection and audit, and that was

1 remediated and corrected.

2 Q. And what are girth welds?

3 A. Those are just the field welds that are made to the
4 pipes to join them together.

5 Q. And some of them were found to have damage to their
6 coating?

7 A. In some instances, yes, there was some damage to the
8 field coating on those girth welds.

9 Q. And because TransCanada agreed to fix those things,
10 it wasn't fined between 200,000 and 2 million dollars a
11 day?

12 MR. WHITE: Mr. Smith, I'd like to renew my
13 objection. Looking at the Commission's Order of July 17,
14 2015, the motion on which the Commission ruled at that
15 point was a request to prohibit DRA from offering any
16 exhibit or testimony regarding exhibits containing
17 information not timely produced.

18 That was the motion that was granted. Now we're
19 listening to testimony on this excluded exhibit.

20 MR. ELLISON: I didn't realize it included
21 testimony. I thought it only included exhibits.

22 MR. SMITH: I didn't specifically remember, but
23 it does.

24 Sustained.

25 MR. ELLISON: If that's what the Order says.

1 MR. SMITH: That's what it says.

2 My apologies, Mr. White. I didn't remember
3 that.

4 MR. WHITE: Thank you.

5 If I might, I'd actually like to move to strike
6 all the testimony that was offered with respect to this
7 excluded exhibit going back to the very beginning of that
8 examination.

9 MR. SMITH: I think I will grant your motion to
10 strike. That's what our Order said.

11 MR. WHITE: Thank you.

12 MR. ELLISON: I guess there's some things that
13 your attorneys don't want us to talk about, ma'am.

14 MR. WHITE: I'd also move to strike that
15 comment.

16 MR. SMITH: Motion granted.

17 Q. I think one of the things that you have testified
18 to, ma'am, is it not, is that every time there's any kind
19 of an incident -- well, one thing is TransCanada claims
20 it tries to learn from those incidents; is that correct?

21 A. Yes.

22 Q. And I think you were asked a question by
23 Mr. Blackburn and acknowledged that there were some
24 14 spills on the Keystone Pipeline base pipeline within
25 the first year of operation?

1 A. 14 spills within the pump station facilities on the
2 pipeline upon startup, yes.

3 Q. Well, isn't the pump station as well as the main
4 line the two major areas where 97 percent of any problems
5 develop?

6 A. I assume so.

7 Q. So the fact that it happened at a pump station
8 versus main line pipe is still within the most likely
9 problematic areas for a leak; isn't that correct?

10 A. Yes.

11 Q. One of the things that TransCanada did, and I think
12 again there were some questions from Mr. Blackburn,
13 TransCanada when it was providing materials and then
14 later incorporated into the 2014 FSEIS really talked
15 about how the only thing that this Commission really
16 needed to worry about was a spill of three barrels or
17 less.

18 Would that be a fair statement?

19 A. I don't know specifically. The spill risk items are
20 all Ms. Tillquist's -- able to speak to those specific
21 questions.

22 Q. Would you agree with me, ma'am, that since the
23 Keystone Pipeline was put into operation that there had
24 been at least three spills greater than three barrels?

25 A. I have not read all the data. I don't know

1 specifically what all the numbers are.

2 Q. Would you disagree with me that there was a
3 15-barrel spill in March of 2011?

4 A. I don't know all the details of when the spills
5 occurred or how much was released.

6 Q. Or 8 and a half barrel spill at the Severance Pump
7 Station in May of 2011?

8 A. I'm not aware of the details.

9 Q. What about the Ludden pump spill of 400 barrels in
10 May of 2011?

11 A. I'm aware there was a spill there, but I'm not aware
12 of all the details.

13 Q. I mean, as someone who's trying to design future
14 pipelines you're saying that -- are you familiar with
15 these accident reports?

16 A. I'm not specifically familiar with them. I know
17 that the reports are created.

18 Q. But, I mean, wouldn't you want to use information
19 that had been gathered, especially, I mean, a 400-barrel
20 spill is not insignificant, is it, ma'am?

21 A. No.

22 Q. Do you know how many gallons that translates into?

23 A. I don't know.

24 Q. And it was crude oil. It was tar sands oil;
25 correct?

1 A. It was crude oil.

2 Q. Is it your testimony that as the overall supervisor
3 for design for this pipeline, the KXL Pipeline, that it
4 wasn't important enough for you to look at an accident
5 report of this significant of spill especially where it
6 resulted in both soil surface and subsurface water
7 contamination?

8 A. The issues related to the spills have been reviewed,
9 and those specific issues have been addressed in the
10 designs of the subsequent pipeline construction, and all
11 of those issues were incorporated in the pump station
12 designs for the subsequent 2011 and Gulf Coast Pipelines
13 that were constructed.

14 And it's demonstrated that those issues were
15 corrected as there have been no other incidents that have
16 occurred with respect to these particular failure causes,
17 and that the line is transporting crude without incident.

18 Q. So nothing has happened yet in the next few years,
19 and so, therefore, that's to give assurance to this
20 Commission that nothing will happen in the future?

21 A. The specific issue related to these incidents was
22 investigated, corrected, and any specific design
23 requirements as a result of that particular investigation
24 were incorporated into the subsequent designs.

25 Q. Will you as a senior representative of TransCanada

1 guarantee to this Commission that there will never be a
2 spill as large or significantly larger than the Ludden
3 spill if the KXL Pipeline is built?

4 A. I cannot.

5 Q. One of the things that's involved in design,
6 pipeline design -- I imagine that includes detection
7 systems as well, does it not, ma'am?

8 A. Yes.

9 Q. And I think you told us earlier briefly -- and I
10 really apologize. I can't recall if it was a question
11 from myself or from Mr. Blackburn. I think you
12 described, did you not, that TransCanada has committed to
13 doing at least an aerial or a ground inspection every
14 three weeks?

15 A. We are committed to doing the surveillance
16 requirements as required by the Permit regulations and
17 the federal regulations.

18 Q. So, again, the minimum required?

19 A. What is required by the regulations.

20 Q. Isn't it true that in the FSEIS the State Department
21 recommended an overflight of at least once a week?

22 A. I believe there are some recommendations in the
23 Appendix Z of the FSEIS.

24 Q. So when you testified earlier that TransCanada was
25 committed to doing an overflight of ground inspection

1 every three weeks, had you forgotten about this
2 suggestion, strong suggestion, by the State Department
3 that due to the danger of spills that it increased to
4 once a week?

5 A. The Special Conditions in Appendix Z require the
6 three weeks. If there are additional conditions that we
7 are to review as part of the Appendix Z, that will be
8 done over the course of the finalizations of the designs.

9 Q. Would you agree that if there's a spill of less than
10 20 barrels, it would not be easily detected above ground?

11 A. I cannot confirm. I'm not a leak detection
12 specialist.

13 Q. But if you -- you just said that inspections were
14 part of what you do -- you set out to do as part of
15 pipeline design, that would be something important to
16 know, wouldn't it?

17 A. The detection systems -- leak detection systems are
18 a multilayered system with various computational and mass
19 balance type systems along with visual inspection
20 systems. I believe Ms. Tillquist described some of that
21 yesterday.

22 Q. Would you agree that in 2014 in the FSEIS that the
23 State Department, using Exponent's work, said that under
24 TransCanada's current detection commitment that a spill
25 of about 1,400 barrels could take place within two hours

1 before it was detected?

2 A. I'm not aware of the specific detail in reference
3 within the FSEIS of that but --

4 Q. Did you miss that one when you were reading
5 Appendix B?

6 A. I don't know.

7 Q. That's a real lot of crude, isn't it? 1,400
8 barrels.

9 A. Yes.

10 MR. ELLISON: Thank you, ma'am. At this time I
11 have no further questions.

12 MR. SMITH: I'll wait a minute, Ms. Craven, to
13 let them get down.

14 Okay. Ms. Craven, please proceed.

15 MS. CRAVEN: I just have a few questions.

16 CROSS-EXAMINATION

17 BY MS. CRAVEN:

18 Q. Kimberly Craven for the Indigenous Environmental
19 Network. I have just a few follow-up questions about
20 your credentials.

21 So you moved to Texas in 2010; is that correct?

22 A. I did.

23 Q. And prior to that you were a licensed engineer
24 practicing in Alberta?

25 A. I was.

1 Q. Pardon me?

2 A. I was.

3 Q. What year were you licensed?

4 A. I believe, 2004.

5 Q. And why did you become licensed?

6 A. I was -- I graduated in the engineering program, and
7 I practiced under a supervising engineer and applied for
8 my license and took the examinations.

9 Q. Is that a prerequisite for calling yourself a
10 professional engineer in Calgary?

11 A. I believe it is.

12 Q. Okay. And is there any reciprocity with any of the
13 other provinces? Are you able to call yourself an
14 engineer in any of the other provinces?

15 A. I don't know the specifics. I never tried to apply
16 in any of the other provinces.

17 Q. And since you moved to the United States in 2010
18 have you made any effort to become licensed in the
19 United States?

20 A. No. As I mentioned previously, engineers who
21 authenticate the designs are licensed professional
22 engineers in those particular states.

23 Q. And are those the individuals that you've been
24 supervising?

25 A. Those are the individuals that work with our

1 third-party contract engineering firm.

2 Q. Okay. And there is no reciprocity between the
3 United States and Canada for becoming licensed; is that
4 correct?

5 A. I don't know all the particulars. There might be
6 some temporary statuses in Texas, but I don't know all
7 the details, as I have not looked into that matter.

8 Q. Okay. Would you explain a little bit more about the
9 batching process, how that occurs? I'm curious about how
10 that will take place at the Marketlink terminal.

11 A. I believe Mr. Goulet explained that yesterday in
12 that the line would be stopped between Hardisty at the
13 head end of the pump station to the point of the
14 injection location at Marketlink, and then a batch would
15 be -- or crude oil would be accumulated in the tanks at
16 Marketlink and then injected into the pipeline at that
17 point.

18 Q. Okay. Thank you.

19 And it's my understanding that your testimony is
20 that you've had no involvement in the design of that
21 pipeline that's up there --

22 I understand Mr. Goulet to testify there's about
23 5 miles of pipeline. Have you had any involvement at all
24 with that?

25 A. No. I have not had involvement with that.

1 Q. Do you know who has?

2 A. I do not. We haven't started any permitting or any
3 detailed work on that particular aspect.

4 Q. So there's no permitting for the Marketlink?

5 A. No permitting has been done for that project.

6 MS. CRAVEN: I think that's all. Thank you.

7 MR. SMITH: Mr. Gough, your turn.

8 MR. GOUGH: Thank you.

9 CROSS-EXAMINATION

10 BY MR. GOUGH:

11 Q. Bob Gough, InterTribal Council on Utility Policy.

12 Good afternoon.

13 A. Good afternoon.

14 Q. And it's your testimony that you've lived in Houston
15 the last five years; is that right?

16 A. Thereabouts.

17 Q. Have you taken any steps towards being licensed in
18 the United States?

19 A. Not at this time.

20 Q. Is there any reason for that?

21 A. I am not providing engineering services. I don't
22 have any requirements to authenticate drawings because we
23 have personnel, engineering firms, responsible
24 engineering firms, that complete that work so there would
25 be no -- there's no requirement for me to apply for those

1 licenses.

2 Q. Okay. I have a question about the insertion of
3 pipes into the tunnels that are -- look to be drilled,
4 the HDD process.

5 What are the risks for scraping of the finishes off
6 of the pipes in that process?

7 A. So prior to completing the designs for the HDDs we
8 take soil boring samples to determine what layers of
9 soils are that we would be drilling through. So that's
10 one measure that we use as part of the design to give us
11 an indication of what type of materials we would be
12 crossing.

13 Secondly, we overcoat the corrosion protection
14 coating with an abrasion resistant overcoat so that in
15 the event there was some sort of scraping, as you
16 mentioned, that the corrosion protective coating would
17 not get damaged.

18 Q. So it's coatings, and then the pipes are dragged
19 into the tunnels? Is that what happens?

20 A. They're pulled in and installed, yes.

21 Q. Uh-huh. Is there any sleeving or anything put over
22 them going into the tunnel being dragged?

23 A. Typically we don't use any casings for that
24 particular type of installation.

25 Q. Uh-huh. Is there any way that you then once they're

1 in the tunnels check to see that your soil analysis and
2 the overcoating protections have all proved to be
3 adequate?

4 A. Yes. We perform a coating evaluation after the pipe
5 has been installed. And based on that coating
6 evaluation, we determine if there's additional mitigation
7 that would be required in the form of specific cathodic
8 protection at the entry and exit point of those drills or
9 any other repairs that would be required to that pipe.

10 Q. And what is the process of that evaluation?

11 A. I don't know all the specific details. However, we
12 have a corrosion specialty engineer come out to the field
13 and complete the testing. That data collection is then
14 sent to a corrosion engineer for analysis and evaluation,
15 and a specific remediation, if required, is prepared
16 during construction for installation.

17 Q. I'm not an engineer. I'm not sure how you would do
18 any of these things. That's what I'm trying to ask.

19 Do you run a camera down there? Do you take x-rays?
20 Do you send someone in to crawl under the pipe? I just
21 don't know how this is done. That's what I'm trying to
22 get a picture of.

23 A. It's done through a soil potential coating
24 evaluation. And they can determine if there are drops in
25 potentials -- electric potentials along the ground to

1 determine if there would be some sort of coating damage,
2 bare metal exposed within that installation.

3 Q. Okay. And are these -- well, are these electronic
4 things, these chemical tests, electronic? I just don't
5 understand how you do this. I hear a lot of words, but
6 I'm not understanding it. I'm sorry.

7 A. They are electronic tests that are performed with
8 instrumentation, and data is collected from that
9 instrumentation.

10 Q. Okay. Thank you. Thank you. Did you have any
11 oversight over -- you realize that you're the last
12 witness again and many of the other witnesses have said
13 the next one will answer my question.

14 I'm wondering, did you have any oversight over the
15 risk management, either input into the plan or oversight
16 over its Application during construction?

17 A. I'm sorry. Which plan?

18 Q. The risk management, the work that the witness
19 Tillquist spoke about.

20 A. I have some input into that plan. The engineering
21 data that's required within her plan is provided through
22 engineers from my team, and we work with her team on that
23 specific -- the specific inputs into that detailed
24 engineering assessment and the could affect analysis, the
25 fate and transport analysis that she discussed yesterday.

1 We provide some of those inputs to that plan.

2 Q. Did you have any input into the adverse weather
3 plan?

4 A. The adverse weather plan is a construction related
5 plan for specific situations related to, for example,
6 rain days or dust mitigation during a dry situation.
7 Construction and engineering do have some input into that
8 plan.

9 So, yes, engineering would have input into some of
10 that.

11 Q. What input did you have into that plan?

12 A. We haven't prepared the plan for Keystone XL at this
13 time. The base Keystone plan would be a go by for that
14 particular plan. But it hasn't been prepared at this
15 time.

16 Q. The documentation that I have entitled Response To
17 Condition H for the South Dakota Public Utilities
18 Commission by TransCanada in the Business to Deliver,
19 No. 25, Condition No. 25, the Re Status says it is
20 preparing an adverse weather plan.

21 And so far we can find no one who is in the work of
22 preparing this plan.

23 A. I believe it was in preparation, in that information
24 was being gathered such, as I mentioned, the go-by from
25 the base Keystone. But I believe at this time it's been

1 suspended. I don't believe there's any work being done
2 on it.

3 Q. And this was a plan only to deal with rainy days and
4 the interruption of construction cycles and things like
5 that?

6 A. That's correct.

7 Q. Most of your work has been focused on making sure
8 that this pipe works in such a way as to prevent leaks
9 and spills and the like?

10 A. Yes. That's part of the design oversight is to
11 ensure -- to identify the requirements and ensure those
12 requirements are implemented.

13 Q. And they are the kinds of risks that you've been
14 designing around?

15 A. I'm sorry. I don't understand.

16 Q. With regard to the Risk Management Plan, these are
17 the kinds of risks that you've been managing around?

18 A. That's a part of it, yes.

19 Q. Has there in your -- in any of your discussions or
20 any of your planning -- planning work on this project,
21 any discussion about the risks of the completed pipeline
22 and its operation?

23 A. That particular Risk Assessment is completed within
24 one year -- as we go into operations. It's required to
25 be completed at a later time, the risks of operations and

1 the pipeline threats. That's done at a later time.

2 Q. Has there been any discussion of the risk and
3 threats associated with it working properly?

4 A. I believe Ms. Tillquist addressed that yesterday
5 around potential threats related to equipment and things
6 of that nature.

7 Q. There have been no assessments done with regard to
8 the risks of the delivery of all of that tar sand oil to
9 the Houston or Louisiana refineries?

10 A. I'm not sure specifically in what context of risk.
11 We have performed a Risk Assessment, as discussed in --
12 yesterday by Ms. Tillquist, and additional updates to
13 that Risk Assessment as required by Appendix Z are in
14 progress and forthcoming as well as the additional
15 requirements under the federal regulations prior to going
16 into operations.

17 Q. We heard discussion, actually even a question from a
18 Commissioner yesterday, about the benzene cloud. But
19 there's little other discussion with regard to risks to
20 the air. We've seen land and water and had a lot of
21 discussion about that.

22 But with regard to the risks to the air, the
23 atmosphere, has there been much discussion about that
24 within your circles?

25 A. Just what Ms. Tillquist said, discussed yesterday.

1 I'm not aware of anything else.

2 Q. So there's been no discussion of the risk to the
3 atmosphere of the proper working of the Keystone
4 Pipeline?

5 MR. WHITE: Objection. Asked and answered.

6 MR. SMITH: Sustained.

7 Q. Has there been any discussion in terms of the
8 adverse effects the Keystone Pipeline may have on
9 weather?

10 MR. WHITE: Mr. Smith, I'm going to object to
11 this continuing line of questioning. This is not the
12 Risk Assessment witness. We had Ms. Tillquist up
13 yesterday for these areas. This is a design and
14 construction witness.

15 MR. SMITH: Sustained.

16 Q. Has there been any discussion in that regard with --
17 as to the operation of this pipeline, providing --
18 providing a threat to the atmospheric weather conditions?

19 MR. WHITE: Same objection.

20 MR. SMITH: Sustained.

21 Q. Have you in your work had to establish a -- the
22 carbon footprint of your construction and operation of
23 your pipeline?

24 A. That's not in my scope.

25 Q. Whose scope would something like that be in?

1 A. I'm not sure.

2 Q. Do you believe it may be in someone's scope at
3 TransCanada, you just are not sure who it is?

4 A. I don't know.

5 Q. Were there not calculations of such made in the
6 FSEIS?

7 A. I believe so. I wasn't involved in any of the --
8 any of that.

9 Q. You were not involved in any of that?

10 A. I was not involved in anything related to that.

11 MR. GOUGH: No further questions. Thank you.

12 MR. SMITH: Okay. I think I saw Ms. Joye Braun
13 in here earlier, but these beams I can't see very much.
14 Did she go?

15 MS. LONE EAGLE: She left, but I've included her
16 question with mine.

17 I don't see Ms. Kilmurry. Is she back there? I
18 don't think so.

19 So we're down to Mr. Harter. Oh, wait a minute.
20 I'm ahead of you, but she's not here.

21 So Mr. Harter.

22 CROSS-EXAMINATION

23 BY MR. HARTER:

24 Q. Good afternoon.

25 A. Good afternoon.

1 Q. If I had listened to these proceedings and never
2 seen you, I would think that you'd be much bigger. Your
3 colleagues have put a lot of weight on your shoulders.

4 MR. HARTER: Commission, I'm going to do my best
5 not to repeat myself, but because of the process that
6 I've seen here and last night I spent until 1 o'clock
7 trying to write up my stuff for -- and read through her
8 testimony. And plus I'm going to go through my notes
9 that all of her colleagues referred back to someone too
10 as best I can.

11 So I appreciate your indulgence.

12 Q. Ms. Kothari; is that right?

13 A. Kothari, yes.

14 Q. Would you say that these pipeline systems -- would
15 you say that they're built with the plan to fail?

16 A. No.

17 Q. So if they're not built with a plan to fail, then
18 why do we have to have all the safety precautions?

19 A. Because that's what the regulations require of us.

20 Q. Would the safety requirements not be needed if it
21 wasn't so dangerous?

22 A. The safety requirements are needed as part of
23 ensuring the protection of the -- our employees, the
24 public, and the environment.

25 Q. Thank you. I think you answered this, but I'm going

1 to ask it anyways.

2 Did you prepare your own testimony? Yes or no?

3 A. Yes.

4 Q. What is a herbaceous state? Please explain that.

5 You mentioned it earlier in testimony.

6 A. Could you reference me to that?

7 Q. Not really. I figured it had something to do with
8 plants, but I'm not sure.

9 MR. SMITH: Did she say herbaceous?

10 MR. HARTER: Could be.

11 A. I'm not sure. I believe that's an environmental
12 term. I'm not sure. I don't know where that is in my
13 testimony.

14 Q. You mentioned it so I just wanted an understanding
15 of what you were talking about. That's why I asked.

16 A. I don't remember. I'm sorry.

17 Q. Is the SCADA system for monitoring the best system
18 out there available?

19 A. Yes.

20 Q. Is the SCADA system that TransCanada is going to
21 use, is that a control system?

22 A. It is.

23 Q. Does this SCADA system that they're using, you say
24 it's a control system. Is it a leak detection system?

25 A. There are multiple components to the system. The

1 SCADA system is used to collect and transmit information
2 from the operations control center to the pipeline. And
3 attached to that is a complementary leak detection system
4 with multiple layers of detection methods.

5 Q. Explain those layers to me. Because I'm not
6 anywheres educated in this other than what I've been
7 trying to read through this whole process, plus what I
8 done last night.

9 The leak detection site of this system, if it's
10 there, if it's not just a control system, it's leak
11 detection, explain to me how the leak detection system
12 works.

13 A. I believe that's listed in the Findings of Fact in
14 the Amended Order, and it's a good explanation of that.
15 I'm not a leak detection expert, but that's a good --

16 Q. But as a lead engineer you cannot explain this to
17 me?

18 A. That's outside my area of expertise.

19 Q. That sounds like a general answer that we've been
20 getting.

21 Do you know what -- between the SCADA system, some
22 reading I done last night said an alpha system,

23 A-L-P-H-A.

24 Do you know anything about that?

25 A. I do not.

1 Q. You've never heard of any difference between a SCADA
2 and an alpha system?

3 A. I'm not sure. I'm not -- I'm not aware.

4 Q. Would it be your opinion that SCADA system works
5 pretty much without fail?

6 A. I don't have an expert opinion on the SCADA systems.
7 I'm not a SCADA automations engineer.

8 Q. Would that not fall in the operations and
9 maintenance part of what you got in your job description?

10 A. That's outside the scope of my job description. I'm
11 not responsible for any operations or maintenance.

12 Q. So is protection of human health and safety outside
13 the scope of your expertise?

14 A. We use the engineering tools and designs to ensure
15 that.

16 Q. To ensure what?

17 A. To ensure the protection of health, safety.

18 Q. You've done a fair job of explaining your difference
19 between your 72 percent and your 80 percent of maximum
20 operating pressure.

21 I guess what I struggle with on that is that you're
22 using a thinner wall pipe with higher pressure with a
23 more corrosive product running through it.

24 I would like you to explain to me how that's safer.

25 MR. WHITE: Objection. Assumes facts not in

1 evidence.

2 MR. SMITH: Sustained.

3 MR. HARTER: Her common knowledge would not --
4 with her expertise wouldn't fill into that?

5 MR. SMITH: I don't think anything like that's
6 been said. It's just maybe you can ask a couple of
7 preliminary questions to get to it --

8 MR. HARTER: Thank you.

9 MR. SMITH: -- that wouldn't be inaccurate.

10 Q. So is it fair to say that TransCanada has downgraded
11 the pipe wall thickness of Keystone XL?

12 A. No. The pipe wall thickness remains the same.
13 We've reduced the operating pressure to have it align
14 with the requirements in the current regulation.

15 So the pipeline will operate as a standard pipeline,
16 same as all other oil pipelines. However, we have
17 additional safety pressures included over and above that
18 from a standard operating perspective.

19 Q. Were you in Winner, South Dakota in the public
20 meetings? I cannot remember.

21 A. I believe I was.

22 Q. So at Winner, South Dakota public meetings plus the
23 PUC meeting, which I do remember you were there, it was
24 stated that in high consequence areas and under the roads
25 that the pipe wall thickness would be nearly

1 three-quarters of an inch thick.

2 Why has it been downgraded from this?

3 A. The wall thickness of the road crossings in
4 South Dakota remains unchanged at nearly three-quarters
5 of an inch thick. The wall thickness is 0.618 inches. I
6 don't believe that's changed since our public meetings in
7 Winner.

8 Q. Are you good at fractions?

9 A. Not without a calculator.

10 MR. HARTER: Give me a second.

11 Q. Just use big numbers. 750 minus 618.

12 A. Yes.

13 Q. What's the answer?

14 A. 132.

15 Q. 132. So that's 132-thousandths; correct?

16 A. Yes.

17 Q. That's the difference between nearly three-quarter
18 of an inch. I would not call .618 nearly three-quarters
19 of an inch. 100-thousandths is a lot.

20 Within your engineering degree do you get any
21 studies on like types of machining and working with those
22 types of figures?

23 A. Not to my knowledge.

24 Q. Well, within my years of experience I've had about a
25 year and a half working in a machine shop plus the other

1 stuff throughout my work.

2 If you turned a crank shaft 100-thousandths too
3 small, you're going to have a large failure. So with
4 this pipeline being 100 some thousandths smaller in
5 diameter, you don't see that as a problem?

6 A. No. The regulations require the wall thickness for
7 a crude oil line to be designed to incorporate .72 design
8 factor, as we discussed. We apply additional analysis
9 based on requirements and codes and standards for
10 crossing roads and apply those particular analysis to
11 determine the wall thickness for the roads so they are
12 adequate to ensure the loads that travel over the roads.

13 Q. Okay. So you said "roads." So this is high
14 consequence area size too, is it not?

15 A. The high consequence areas have been designed with
16 thicker pipe than that of the main line pipe, yes.

17 Q. I want to thank you for going there and answering
18 that. Because you're the first person in four years that
19 has given me that answer, probably over four years that
20 has given me the straight answer on that since the PUC
21 meetings.

22 Even with all the stuff that I've gone through on
23 this, you're the first person so I'm happy to see that
24 they enlightened you on the facts.

25 MR. HARTER: And I'd like the PUC board to make

1 note of what was said here on the pipe wall thickness in
2 the high consequence areas and under the roads.

3 Q. Would it be your opinion that with all the
4 regulations within your testimony -- there's been a lot
5 of talk back and forth about regulations.

6 With the regulation you need someone to enforce that
7 regulation. Wouldn't you say?

8 A. The regulation -- our governing body for this
9 pipeline is PHMSA.

10 Q. Right. So within all the papers -- and I surely
11 didn't get to look through all of them that come out from
12 Woods Fuller -- I read in a statement in there and I want
13 to know if you're aware of this statement. It stated
14 that TransCanada is not in charge of regulation and
15 regulating the pipeline. That's PHMSA's job.

16 Are you aware of that statement?

17 A. I'm not aware specifically of that statement.

18 Q. So when I read that it highly irritated me because
19 what that told me was that TransCanada can get away with
20 something, they're going to get away with it.

21 Would you say that's the history of what they've
22 done?

23 A. No, I would not.

24 Q. I wish they would have put page numbers on your
25 testimony. It looks to be on page 3 of your testimony.

1 Towards the bottom you are --

2 Why in this section from -- beginning with page 2,
3 No. 7 and you get to the backside where you mention the
4 two pipe wall thicknesses, why is there no mention of the
5 high consequence areas being .618?

6 A. So the design of the pipeline -- so the roads are
7 .618. The high consequence areas are thicker than this
8 main line pipe at .515 wall. When we applied for the
9 Special Permit it would have allowed the main line to
10 operate at a .8 corresponding to .465 wall.

11 Now that we've released the pressure, that would
12 correspond to the main line pipe, and then the high
13 consequence areas would operate at a lower design factor
14 corresponding to the .515 wall and then cascading further
15 down to the road to a .618 wall.

16 So the only thing that changed in the Finding of
17 Fact was the change in the operating pressure.

18 Q. When did this change in the Finding of Fact come?
19 Do you know?

20 A. Yes. We withdrew the Special Permit in August of
21 2010, and, therefore, that changed the design pressure --
22 reduced the design pressure to the standard regulation.

23 Q. Are you aware of one of the anomalies that came
24 along with the Keystone I that you talked about in your
25 prior testimony that one of the problems with the areas

1 of concern was that the maximum diameter of the pipe
2 expanded beyond limits?

3 A. I'm aware of an advisory from PHMSA asking operators
4 to verify their pipelines regarding that particular item
5 to which I believe I spoke about this earlier.

6 Q. Can you tell me, was -- so expand it beyond that
7 diameter. So was that a pipe wall thickness problem? It
8 wasn't heavy enough pipe?

9 A. No. That wasn't the specific issue.

10 Q. You run too much pressure?

11 A. No.

12 Q. You run too much oil in it?

13 A. No.

14 Q. Well, I don't understand what makes something expand
15 beyond maximum operating diameter. It's either heat,
16 pressure, or a combination of all of them.

17 A. The strength of the material. However, Keystone ran
18 the required in-line inspection tools for that particular
19 issue, and the pipe does not pose an issue to the ongoing
20 safe operations of the pipeline.

21 Q. Are you -- to the best of your ability is Keystone I
22 running at full capacity?

23 A. It is not. From an operating pressure standpoint.
24 We received a Special Permit to operate that pipeline up
25 to a .8 design factor, similar to the Application that we

1 submitted for the Keystone XL Project and subsequently
2 withdrew, but we are not operating that pipeline at its
3 maximum design pressure at this time.

4 Q. So you're not running a full volume of oil through
5 Keystone I?

6 A. We're not running at the maximum allowable operating
7 pressure at this time.

8 Q. I guess I'd like my question answered.

9 Are you running a full volume of oil through
10 Keystone I, or are you running it half full?

11 A. We are not running currently at the maximum
12 available capacity on Keystone.

13 Q. Okay. Thank you.

14 So if you're not running that line at maximum
15 capacity, why should this Commission give you a permit,
16 TransCanada a permit, to have another line? Are you
17 going to run this one at half full too?

18 So one question at a time. Why should they give
19 you -- renew a permit for a line that isn't needed when
20 the first one isn't running at full capacity?

21 MR. WHITE: I'm going to object. That's not
22 within the scope of this witness's expertise or
23 responsibility.

24 MR. SMITH: Sustained.

25 MR. HARTER: Excuse me?

1 MR. SMITH: She's an engineer, and you're asking
2 her about an upper management business decision. I don't
3 know.

4 I guess not with her new duties. Maybe those
5 fall within.

6 CHAIRMAN NELSON: Sustained.

7 MR. SMITH: Sustained. Otherwise, ask her
8 foundation.

9 MS. REAL BIRD: Mr. Smith, could he ask her if
10 there's an engineering reason for that decision?

11 Just trying to assist Mr. Harter.

12 MR. SMITH: Yeah. If he wants to go down that
13 on an engineering related reason like that as to why.
14 But in terms of the other one was a -- more of a -- I
15 don't know what.

16 MR. HARTER: Common sense question I think is
17 what you're looking for.

18 MR. SMITH: Yep.

19 Did you hear Ms. Real Bird?

20 MR. HARTER: Yes.

21 MR. SMITH: Okay.

22 Q. To the best of your knowledge as a professional
23 engineer, why is TransCanada asking for another permit
24 for Keystone XL when they're not running Keystone I at a
25 full capacity?

1 MR. WHITE: Same objection. That was the same
2 question that was just sustained.

3 MR. SMITH: That's sustained. That was the same
4 question.

5 MR. HARTER: Somebody bring me up a crib note.

6 MS. LONE EAGLE: Is there an engineering reason
7 why?

8 Q. Is there an engineering reason why Keystone I is not
9 running --

10 Is there an engineering reason why Keystone I isn't
11 running at full capacity?

12 A. So I'll re-explain my previous answer.

13 So we are running at full capacity of the design of
14 Keystone I. What I meant to say is that that pipeline is
15 available to operate up to a higher pressure and, thus,
16 the remaining available capacity is not being used.

17 So at this time from your context about Keystone
18 being full, it is full, but it is not utilizing the
19 ultimate design pressure at this time.

20 MR. HARTER: Well, I guess I -- from what I
21 heard I just got two different answers so I'd like the
22 Commission to make note of that.

23 Q. You stated earlier that running at 80 percent does
24 not make TransCanada more money. Is that correct?

25 A. That's correct.

1 Q. So running more volume of oil at the same time
2 doesn't have an effect of making them more money?

3 A. I don't understand your question. I'm sorry.

4 Q. In my rancher rationale, if you're running at
5 72 percent, you're moving less volume. If you're running
6 at 80 percent of maximum operating pressure, you're
7 moving more volume. Is that correct?

8 A. We are running it -- 72 percent. So I don't
9 understand your question.

10 Our pipeline design is to the standard regulation
11 with additional safeguards. So we are running at
12 72 percent.

13 Q. On Keystone I?

14 A. Yes.

15 Q. Okay. So on Keystone XL you're saying that you're
16 going to run that at 80 percent; is that correct?

17 A. No. We have withdrawn the Special Permit
18 Application, and we are -- we will be operating the
19 Keystone XL Pipeline at the standard regulated
20 requirement of .72 with the additional Conditions.

21 Q. Okay. I almost got this, I think. So you're going
22 to run KXL at 72 percent, but you're building it to an
23 80 percent engineering capacity.

24 Would that be a correct statement?

25 A. We are building Keystone XL to a 72 percent design

1 standard with additional safety measures that would have
2 been applied to the pipeline if it were running at an
3 80 percent.

4 Q. Okay. So one of the statements that was made about
5 the time that was withdrew, the Permit. And it's not a
6 statement that I'm aware that you made.

7 But the statement was that you could always go back
8 and reapply for that Permit. Is that true or not?

9 A. We have no plans to apply for a Special Permit at
10 this time.

11 Q. Okay. Thank you.

12 MR. HARTER: I just got a double answer again.
13 At this time that leaves like a hole you could run a
14 buffalo herd through. At this time.

15 Q. Either you're going to apply for the Permit or
16 you're not. What we want to know from a public
17 standpoint is are you going to run this at an 80 percent
18 capacity, or are you going to run it at a 72 percent
19 capacity?

20 A. We are running this pipeline at a 72 percent
21 capacity. I'm not aware of any plans to apply for a
22 Special Permit.

23 Q. But they have the ability to do that?

24 A. I'm not aware.

25 MR. HARTER: I would just like it made known for

1 the record that it was stated by the representatives that
2 they do have the ability to do that.

3 Q. You might have answered this already. I was right
4 ahead of myself so it might have been behind.

5 So on Keystone I we talked about that the expanding
6 beyond the maximum limits of the maximum operating
7 diameter was one of the factors on Keystone I. Can you
8 tell me what maybe the others were? The anomalies that
9 come with Keystone I, that you learned your lessons from,
10 you stated?

11 A. Yes. We talked earlier about the cathodic
12 protection item. In addition, we talked about the
13 14 leaks that had been experienced at the pump station
14 related to the small components --

15 Q. Let's stop there. I got a short memory so -- what
16 caused these small components to fail?

17 A. I don't know the specific root cause of that.

18 Q. Do you know if it happened to be from vibration?

19 A. I'm not aware of the specifics.

20 Q. I guess I struggle with these answers because you're
21 supposed to be a lead engineer on this, and you don't
22 know what caused these pipelines to fail.

23 When I have a breakdown out at the farm I have to
24 figure out why it failed, and then I've got to fix it.
25 So you don't know if it happened to be from vibration or

1 welding?

2 A. I don't know the specifics. It was not within my
3 scope.

4 Q. Do you know, did TransCanada bring anybody along
5 that can -- that these questions that have been evaded,
6 that it falls into their scope?

7 A. Mr. King may be able to answer some of those
8 questions.

9 Q. It's my understanding that Mr. King isn't going to
10 testify now. But thank you for your answer.

11 There's been some talk about all the pipelines in
12 the country. I think you were talking about that
13 earlier. I'm going to relate this to a redneck analogy.
14 Okay?

15 Would you play with a rabid dog until you got bit?

16 A. I'm sorry. I don't understand your question.

17 Q. If you had a sick animal that could give you a
18 disease you could die from, would you play with it until
19 you got bit?

20 MR. WHITE: I'm going to object. I think this
21 is a bit out of this witness's expertise. She's not a
22 veterinarian.

23 MR. SMITH: Sustained.

24 Q. Okay. Let's go into her expertise. Would you go
25 play on a leaking pipeline until it killed you?

1 A. I don't have any comment to that.

2 Q. Why?

3 A. We ensure the safety of our pipelines through all
4 the various requirements that we've discussed or that
5 I've discussed and that Ms. Tillquist has discussed over
6 the last few days.

7 And so I just don't have an answer for your
8 question.

9 Q. Okay. Let me rephrase it.

10 If you saw a pipeline that was leaking, you wouldn't
11 go stand out on it, would you?

12 A. I don't understand your question.

13 Q. If you seen one of your pipelines leaking, would you
14 go out and stand by it?

15 A. We have measures in place to --

16 Q. I didn't ask you that. Yes or no?

17 A. No.

18 Q. Thank you.

19 With that answered, what I'm hearing is from
20 TransCanada and a lot of other people that it's just one
21 more pipeline. It won't matter. It doesn't increase our
22 risk at all.

23 So if I don't have a pipeline on my property, I
24 don't have any risk right now. Would you say that's a
25 true statement?

1 A. Yes.

2 Q. So Keystone XL has the capacity to carry 900,000
3 barrels per day; is that true?

4 A. 830,000.

5 Q. In the original Permit Findings of Fact No. 15 it
6 states 720,000 to 900,000.

7 A. Yes. And subsequently we have withdrawn the Special
8 Permit and reduced the operating pressure, and, in turn,
9 that reduces the capacity to the 830,000 barrels.

10 Q. See, that's where I struggled at. Because my
11 understanding of Keystone when this first come out that
12 the 700,000 barrels per day was at 1,440 psi, which was
13 72 percent of maximum operating pressure.

14 Is that not a true statement?

15 A. No. That was at the .8 with reduced number of
16 pumping stations. The 900 is the number.

17 Q. Well, I'm still struggling with that because at that
18 time I don't believe when you started this you had filed
19 for your Special Permit to increase the pressure.

20 A. I don't recall the date for the Special Permit
21 filing. I believe it was 2008.

22 MR. HARTER: I'd just like to make note for the
23 Commissioners to maybe look at that. Because I guess
24 what it comes to to me is it seems to the public that the
25 facts are always changing and they come out and tell the

1 public one thing and give them a comfortable zone of
2 public safety and then they go and change it. And I
3 think that's very wrong and endangering.

4 MR. WHITE: I'm going to move to strike those
5 comments. Mr. Harter will have an opportunity to testify
6 as a witness. He's doing it now.

7 MR. SMITH: Granted.

8 Q. Okay. I rudely interrupted you.

9 So you told me the fittings -- the protection -- I
10 guess if you can go on from there. I can't find where I
11 scribbled it down at.

12 A. I believe those were what we had discussed, the
13 cathodic protection issue, the 14 leaks at the pump
14 stations, and then the low yield pipe advisory.

15 Q. So where I was going with my point was is that is it
16 your opinion that just one more pipeline doesn't matter?
17 It's just one more pipeline?

18 A. No.

19 Q. So you think that one more pipeline won't cause
20 anymore damage than none?

21 A. I do not believe so.

22 Q. So we were talking about a risk factor. So no
23 pipelines would be zero. Would you agree with that?

24 A. Yes.

25 Q. So would you say that a pipeline carrying 900 --

1 almost a million barrels would increase the chances by
2 1 million?

3 A. No.

4 Q. How come?

5 A. I believe Ms. Tillquist testified to the risk
6 assessments and those specific risk-related incident
7 frequency numbers.

8 Q. I'm going to show you a pamphlet, and then I'm going
9 to show you a picture inside a pamphlet. Okay?

10 A. Okay.

11 Q. What does the header on this say?

12 A. Protecting Livestock.

13 Q. Okay.

14 Okay. On the picture above the cow can you read
15 what it says?

16 A. Actually, I can't. I'll have to put my glasses on.
17 I'm sorry.

18 It says "Ingestion of crude oil."

19 Q. And below the cow by the arrow?

20 A. "Oil on pit surface."

21 Q. Okay. Then in front of -- above the camel?

22 MR. WHITE: Can I inquire whether this document
23 is an exhibit so that we can be looking at it? And if
24 not, what it is.

25 MR. SMITH: Is this an exhibit?

1 MR. HARTER: It's a reference.

2 MR. SMITH: Okay. But is it an exhibit?

3 MR. HARTER: No.

4 MR. SMITH: Okay. It's not an exhibit.

5 Mr. White.

6 MR. WHITE: Well, I would suggest that if we're
7 going to be asking a witness about a brand new document,
8 she ought to have some time to familiarize herself with
9 it.

10 I'd also suggest since she's been on over two
11 hours, it might be a good opportunity for her to look at
12 it over a break.

13 MR. SMITH: Before we do that, do you want to
14 tell us on the record what it is, and then you can give
15 it to Mr. White for him to review.

16 MR. HARTER: This is a document. Protecting
17 Livestock is the header on it. And it is a document that
18 talks about livestock ingesting byproducts of oils.

19 MR. SMITH: Okay. And who -- can you tell us
20 who the creator of this document was?

21 MR. HARTER: On the last page it says
22 Copyright 2006, API, All Rights Reserved.

23 I'm assuming that this is the American Petroleum
24 Institute. I don't see it written out fully. It says --
25 oh, it says API Creative Services below that.

1 MR. SMITH: Okay. And it gives an author's
2 name?

3 Well, that's good enough. Why don't we just go
4 into recess. Should we just take our 15-minute afternoon
5 break right now? Okay.

6 MR. WHITE: Thank you.

7 (A short recess is taken)

8 MR. SMITH: Call the hearing back to order in
9 Docket HP14-001. Took a brief recess to allow counsel
10 for TransCanada to review a document that's been
11 referenced by Intervenor John Harter, who is conducting
12 cross-examination.

13 Mr. White, do you have anything to add?

14 MR. WHITE: Yeah. So we appreciate the
15 opportunity to review the document over the break. We've
16 looked at it. The witness has looked at it. She's never
17 seen it before. She's not familiar with it.

18 It essentially relates to, as far as we can
19 discern, toxicology impacts to livestock from oil field
20 operations.

21 Mr. Harter, of course, is free to cross-examine
22 on it, but I just would indicate that the witness is not
23 going to know a lot about it.

24 MR. SMITH: Okay.

25 Mr. Harter, do you want to proceed?

1 MR. HARTER: Okay. I believe where we were at
2 is that I asked you to -- if you would read what's above
3 the donkey.

4 MR. SMITH: Camel, you mean?

5 MR. HARTER: Camel.

6 MR. WHITE: I might object to the relevance of
7 camels in South Dakota.

8 MR. HARTER: Better not send me elk hunting.

9 A. It states inhalation of oil vapors.

10 Q. Okay. There was some discussion about what we were
11 calling these fumes.

12 So are you a little bit familiar with the products
13 and what happens during spills?

14 A. No, I'm not.

15 Q. Amazing.

16 MR. HARTER: Am I allowed to ask her to read or
17 not?

18 MR. SMITH: Do you have an objection to that,
19 Mr. White?

20 MR. WHITE: I guess it depends on how much
21 you're asking her to read.

22 MR. SMITH: Let's not get carried away, though,
23 John. I think maybe if you want to, do you want to
24 request of Keystone if they have an objection to you just
25 entering this as an exhibit and then we can all read it.

1 MR. HARTER: I would like to enter this as an
2 exhibit if there's no objections to it.

3 MR. SMITH: It does appear to be an API
4 document.

5 MR. WHITE: Sorry. There was some uncertainty
6 around that as we were reviewing it over the break,
7 whether it actually is an API document or not. I mean,
8 it may or may not be. We really have no way of
9 ascertaining that without confirming with API.

10 So I hate to make an objection, but we do have
11 some foundational concerns about the document.

12 MR. SMITH: Why don't you, John, just give us a
13 brief summary of what it says.

14 MR. HARTER: Sure.

15 MR. SMITH: That really would be more for your
16 testimony. I think that's where we're at. She doesn't
17 have any knowledge of it.

18 MR. HARTER: I can do that. No problem.

19 Q. There was some conversation earlier about the
20 bonding process, and then there was a statement made
21 about internal and external corrosion. We've talked a
22 lot about the external parts of the pipe.

23 I would like you to explain to me what you meant
24 when you talked about the internal corrosion and what
25 causes that.

1 A. So the pipeline has potential for threats of
2 internal corrosion, and those are typically mitigated
3 through the use of cleaning in-line inspection runs and
4 other products that are introduced into the pipeline,
5 such as corrosion inhibitor during the integrity
6 management process.

7 Q. So do these corrosive products come from the product
8 that you're transporting through the pipeline?

9 A. There may be a point where the pipeline may be
10 susceptible to internal corrosion as a result of the
11 crude passing through. However, there are mitigation
12 techniques that are used during the integrity management
13 process.

14 Q. On the Keystone I line where it failed in the
15 diameter that was 2 inches, can you tell me if there was
16 internal corrosion at that point also?

17 A. I do not believe that there was, but I can't comment
18 for certain.

19 Q. Thank you.

20 MR. HARTER: I need to grab something out of my
21 bag, please.

22 Q. You stated that what you're moving into is future
23 projects; correct?

24 A. I'm transitioning to a new role, yes.

25 Q. Do you know Russ Girling?

1 A. I do not know Russ Girling personally, no.

2 Q. Russ Girling, according to this document that I
3 have, is CEO -- became CEO of TransCanada --

4 MR. WHITE: We can stipulate that it was 2009 if
5 that helps.

6 MR. HARTER: Thank you.

7 Q. So with coming into your new capacity, have you
8 heard any talk about twinning Keystone I or Keystone XL
9 in the future?

10 A. No.

11 Q. This document is a article that was in one of the --
12 not sure newspaper -- well, it says Generic Generates
13 Static Business Article.

14 I would like you to just read a short piece of that.
15 Okay?

16 MR. HARTER: Is there any objections to that?
17 It's just one paragraph. Small.

18 MR. WHITE: Sorry. Could you repeat what the
19 document is?

20 MR. HARTER: It's a newspaper article that
21 Mr. Girling was quoted in.

22 MR. WHITE: I guess I have no objection for her
23 reading it for what it's worth. It sounds like double
24 hearsay to me but --

25 Q. Would you read the section where the star is marked

1 on the paper?

2 A. "'Conversation on twinning Keystone with an adjacent
3 pipeline have already begun,' Mr. Girling said. It would
4 be a multibillion dollar project but TransCanada has
5 provided no detail."

6 Q. Where I guess I want to go from there is we talked
7 about the I'm going to call it endangerment to our states
8 with multiple pipelines carrying the same product.

9 So would it not be safe to assume that the more
10 product we're moving through an area that it is going to
11 create a bigger hazard, chance of a hazard?

12 A. No.

13 Q. So if you've got one pipeline that's got a chance to
14 spill -- let's say one pipeline's got one chance to
15 spill. So now you've got two pipelines with one chance
16 to spill. Now you've got twice as many chances to spill,
17 don't you?

18 A. No. Pipelines are the safest method of transporting
19 crude oil. As we have demonstrated, we have transported
20 over a billion barrels of crude oil safely.

21 Q. Was that with the first line leaking 14 times the
22 first year?

23 A. As I discussed previously, those leaks were confined
24 to the pump stations.

25 Q. Thank you.

1 Okay. You gave testimony to -- earlier about
2 routing issues in Nebraska; correct?

3 A. I believe there was a small discussion around that.

4 Q. And this is going to lead into South Dakota. Okay?

5 So what was the issue in Nebraska?

6 A. There was a routing issue around the sand hills area
7 in Nebraska.

8 Q. Thank you. So does the sand hills stop at the state
9 line?

10 A. I believe there are some sand hill type soils in the
11 south part of South Dakota.

12 Q. So are you aware that they are in the southern Tripp
13 County area?

14 A. I'm not aware specifically to the proximity.

15 Q. If there was an issue with the aquifer in the sand
16 hills of Nebraska and it comes into South Dakota into the
17 sand hills of South Dakota, why would someone not -- with
18 your expertise in helping with this route, why would you
19 not recommend to move it off the sand hills in
20 South Dakota also?

21 A. I don't believe that we are routed through specific
22 sand hills in South Dakota.

23 Q. Did you study the soil maps within the scope of your
24 job?

25 A. I did not study the soil maps specifically.

1 Q. Did you look at the reports from the soil maps?

2 A. My engineering team looked at the reports as well as
3 the environmental team.

4 Q. Did they report back to you?

5 A. Yes.

6 Q. So why do you not know that the sand hills of
7 South Dakota are just as endangered as the sand hills of
8 Nebraska in our aquifer?

9 A. I do not believe we are routed through sand hills on
10 our route currently in South Dakota.

11 Q. Well, I'm going to tell you that you are.

12 Condition No. 35 in the Conditions states southern
13 Tripp County was to be treated as a hydrologically
14 sensitive area, and you gave testimony to knowing that
15 earlier, I believe.

16 So to me it gives -- it would discredit a person's
17 knowledge of what they're doing if they don't know the
18 difference between where the sand hills end and where
19 they don't.

20 And if they didn't do that, and look into that,
21 wouldn't you consider that negligence of your job?

22 MR. WHITE: Objection. Argumentative.

23 MR. SMITH: I'm going to sustain that. Just ask
24 her questions.

25 MR. HARTER: It was too long. I understand.

1 MR. SMITH: You don't give the answer up front.

2 MR. HARTER: Yeah. I understand. I understand.

3 Q. Would you explain what an outside force failure is?

4 A. That could be attributed, as Ms. Tillquist spoke
5 about yesterday, to flooding, other types of damages.

6 Q. Slope side?

7 A. That could be a potential outside force.

8 Q. Did TransCanada have a pipeline in Mexico that was
9 damaged by a slope slide?

10 MR. WHITE: Objection. Irrelevant.

11 MR. SMITH: I'll overrule and let her answer it,
12 I guess. It's fairly irrelevant, but we'll see if she
13 has any knowledge of that.

14 A. I'm not aware of the details of the failure in
15 Mexico.

16 Q. So within your expertise and all the meetings you
17 have in your corporate office when you guys have a
18 failure you don't talk about it? Is that what you're
19 telling me?

20 A. No.

21 Q. So did you talk about this failure or not?

22 A. I did not talk about this failure in specific.

23 Q. Have you ever visited my property?

24 A. No, sir.

25 MR. HARTER: Could I ask the Staff to put up the

1 picture that we had up yesterday, please, of my property.
2 It's a map -- I think it's 55 or 56 of 58.

3 MR. WHITE: Sorry. I hate to interrupt, but I'm
4 looking at DRA 55, 56, 58. I don't see this there. I'm
5 wondering what exhibit it might be.

6 MR. HARTER: This is not a DRA exhibit. This is
7 the one that I referenced to yesterday. So I did
8 misspeak when I said that the map that I used yesterday
9 with the milepost was that map. Okay?

10 So this is the other map that I referenced
11 yesterday.

12 MR. WHITE: Is this marked as an exhibit?

13 MR. HARTER: It's just a reference.

14 MR. WHITE: So it's not an exhibit.

15 MR. HARTER: It's not an exhibit yet. I would
16 enter it into an exhibit if you would allow me. It is a
17 map from TransCanada. I do have a bigger paper version
18 of it here that I can go forward with it if you'd like to
19 see it.

20 MR. WHITE: I'm just wondering, since it's not
21 an exhibit, whether the witness is familiar with it or
22 has ever seen it.

23 MR. HARTER: That's what we'll find out, if
24 you'll allow me.

25 MR. SMITH: Where did you get it from?

1 MR. HARTER: From TransCanada.

2 MR. SMITH: From what? Discovery or --

3 MR. HARTER: It was during the process of
4 negotiation and throwing rocks at each other and all of
5 that stuff.

6 MR. SMITH: You mean with the first Keystone?

7 MR. HARTER: I can't remember if it was through
8 the eminent domain process or it was through the easement
9 access process.

10 MR. SMITH: What I was trying to get at, we've
11 got so many maps I was wondering if a map or a similar
12 one might be in the FSEIS.

13 MR. CREMER: You know, this is Karen Cremer of
14 Staff. I would suggest maybe if you gave the map to
15 TransCanada, they might recognize it, and that might
16 short circuit this a little bit in figuring out what this
17 is.

18 MR. HARTER: No problem.

19 MR. SMITH: Is that one of your exhibits? I
20 mean, somebody --

21 MR. ELLISON: Yes, Mr. Harter did. I believe
22 it's one of his exhibits. I believe he got it from one
23 of the county officials.

24 MR. SMITH: I thought we were referencing the
25 exhibit number. I know we've looked at this before.

1 MR. ELLISON: It's not been given an exhibit
2 number.

3 MR. WHITE: I don't believe it has.

4 The concern I have is that what's reflected on
5 the screen is only a portion of what the paper map shows.
6 The paper map has a lot of information, and the legend's
7 on the bottom.

8 So for the witness to appropriately respond to
9 questions on it, she needs to be able to see the entire
10 map, not just the excerpts on the screen.

11 So, again, we have a portion of the map.

12 MR. HARTER: The whole thing -- I'll flip it
13 over, okay. Because the whole thing will not fit under
14 this.

15 MR. WHITE: Is there a problem with letting the
16 witness look at the entire map before you ask her
17 questions on it?

18 MR. HARTER: Absolutely not, on my behalf.

19 MR. WHITE: Appreciate that.

20 THE WITNESS: I just need to write down the date
21 on this map because --

22 (Witness examines document)

23 A. Okay.

24 Q. If you would, you can keep that. I think I can run
25 off the little one. But identify in your mind what the

1 blue stripes are while you're looking at that.

2 (Witness examines document)

3 Q. Can you tell me on the map that you're looking at,
4 the area that has the blue segmented stripes, can you
5 tell me what that is?

6 A. In the legend it's stated as the Colome SWPA buffer.

7 Q. Okay. And would you explain to everybody what that
8 is?

9 A. So that buffer is the buffer of the Colome source of
10 water protection area.

11 Q. Can you tell me, if you know, what the cone of
12 depression of the City of Colome's water wells is?

13 A. I cannot.

14 Q. Do you believe that's a fact that what their cone of
15 depression -- you understand cone of depression, what the
16 cone of depression is?

17 A. Not specifically.

18 Q. Okay. You should have told me that because I just
19 learned it as I've been going through this also. But the
20 cone of depression is the sucking area of the wells.

21 Okay?

22 So when you were engineering the routing of this
23 line did you find out what the cone of depression of
24 these wells is?

25 A. So as Ms. Tillquist testified yesterday, we

1 discussed this particular area with South Dakota DENR.
2 I'm looking at your map specifically, and it looks like
3 the project data on this map is November of 2010, and
4 then this map was issued to you in March of 2011.

5 And then based on just what I know about
6 specifically your property and the route through this
7 area, we had a specific reroute in January of 2009
8 related to this specific area and then subsequently did
9 two reroutes on this particular tract in 2009 and then
10 again in 2011 for avoidance of some features based on
11 discussions from our land agents and our engineers and
12 environmental folks with yourself.

13 And then, I guess, this map is dated in terms of the
14 route because we actually have an updated route related
15 to your property from around October of 2013 where I
16 think the Keystone staff -- I believe they met with you.

17 I'm not 100 percent sure, but there was some
18 requested modifications to the route related to a wetland
19 and some trees and a well on your property. And so
20 that's not specifically reflected on this map here.

21 Q. And I would agree with that. The pipeline -- I'm
22 going to use my pen maybe. Oh, yeah. The pipeline will
23 enter the property on what looks like the bottom side of
24 the trees and diagonal across to meet the blue line
25 that's right there. Okay?

1 So where it shows the row of trees down the red line
2 it's going to enter right at the end of those trees, just
3 for the knowledge of the Commissioners. Okay?

4 The distance -- yesterday there was testimony that
5 it actually moved away from the line. Is that not true?

6 A. Yes. Oh, you mean from the --

7 Q. That you moved it further away from the City of
8 Colome's water source. Is that not true you stated that?

9 A. Yes.

10 Q. So do you want to stick with that statement?

11 A. Yes.

12 Q. Okay. Thank you. I guess I'd just go one step
13 further on this.

14 So without knowing what the cone of depression, the
15 sucking area of the City of Colome's wells are, how would
16 you know that you're in a safe zone?

17 A. So what I can tell you is that originally our route
18 was actually going through this source water protection
19 area, and now we are actually about 175 feet away from
20 the buffer that's been established by DENR, and that
21 buffer area is approximately 900 feet.

22 So the pipeline centerline is actually about a
23 thousand feet from the intake well point itself.

24 Q. Is that the north well or the south well?

25 A. I'm not sure specifically. That's the information

1 that I have specific from our information related to the
2 wellhead itself within this source water protection area.

3 Q. So you're not sure where they took that measurement
4 from within reference to how the line comes in? Would
5 that be from where you entered the property or somewhere
6 along that line?

7 A. I believe it's the closest proximity from our
8 pipeline to the wellhead is the thousand feet.

9 Q. Thank you.

10 Is that property outlined as an HCA?

11 A. I believe through discussions with the land agents
12 that we are installing thicker pipe on your property.

13 Q. But is it considered an HCA, to your knowledge, by
14 government standards?

15 A. Not to my knowledge.

16 Q. So the public water source, to your knowledge, is
17 not considered a high consequence area?

18 A. I believe the City of Colome's source water
19 protection area might have that designation, but I would
20 have to verify.

21 Q. Thank you.

22 In your opinion, with what you've had to do with my
23 property, would have TransCanada treated this as a high
24 consequence area if I would have refused to sign my
25 easement?

1 A. I'm not sure specifically. As mentioned before, we
2 work with individual landowners to find the best route
3 through the properties. We have four different
4 iterations of routing over your property based on your
5 feedback and discussions around various specifics.

6 That's all I can comment on.

7 Q. Okay. On the rerouting on my property, to your
8 knowledge, how many times was I contacted when you done
9 reroutes?

10 A. I'm not sure of the details of the contacts. All I
11 have to go by is the routing change request documents
12 that are created as part of the designing of the
13 pipeline.

14 Q. Thank you.

15 You alluded to -- you talked about earlier the depth
16 of cover of the pipeline. Okay. And you stated that was
17 4 foot to the top of the pipeline; is that correct?

18 A. That's true.

19 Q. Okay. I'm going to see how good you are at math.
20 With a 36-inch line and 7-foot trench how much fill
21 material is left over?

22 A. I don't -- I don't have that information.

23 Q. Okay. You should be able to answer the next one. I
24 didn't expect you to.

25 What do you do with that extra fill material?

1 A. So per our design and specifications, trench
2 materials are put back into the trench. I'm not sure I
3 follow your question.

4 Q. You're going to have some left over with a 36-inch
5 line, are you not?

6 A. The specifications on what -- the treatment of those
7 materials are outlined in the CMRP.

8 Q. If it's anything like digging a posthole, you never
9 have enough to tamp the post back in.

10 Do you know with materials left over will they what
11 I'm going to call hump the pipeline?

12 A. The reclamation specifications are outlined in the
13 CMRP.

14 Q. Thank you.

15 I guess, you know, there was talk earlier on --
16 where I'm leading to on this question is there was so
17 much talk earlier on terrorists finding where the
18 pipeline was at.

19 So, you know, how visible do you think the track of
20 the line is going to be to the human eye?

21 A. I'm not sure I can specifically comment on that. We
22 conduct reclamation on the properties to try to restore
23 them to equal or better condition than they were before
24 we started.

25 Q. Do you restore it to 100 percent condition?

1 A. I believe that's part of their requirements in the
2 CMRP.

3 Q. Thank you. Would you consider that because a
4 pipeline that there's some discussion of being a possible
5 target for a terrorist, in your opinion, would that put
6 my family at a higher risk?

7 A. I can't comment on that.

8 Q. To the best of your ability, there was talk about
9 bank erosion and such happening to pipelines and the
10 possibility of this happening in South Dakota.

11 Do you know on Keystone I if there was a bank
12 erosion that exposed Keystone I?

13 A. I'm not specifically aware of any type of incident
14 of that nature.

15 Q. Have you heard any talk through TransCanada through
16 your lead engineer position about this?

17 A. No, I have not.

18 Q. During your water crossings have you ever -- on
19 TransCanada's line have you ever had a washout of an open
20 cut?

21 A. I don't believe so.

22 Q. Are you aware of this happening in Chain Lakes,
23 Alberta?

24 A. I don't know the specific reference.

25 MR. HARTER: Would the PUC allow a picture of

1 this to be introduced into evidence? Would the PUC allow
2 a picture from the Chain Lakes, Alberta washout be able
3 to be entered into evidence?

4 MR. SMITH: Well, where is it? Do you have it?

5 MR. HARTER: Do we have that, Mr. Ellison?

6 MR. ELLISON: I'm sorry. Which one, John?

7 MR. HARTER: Chain Lakes, Alberta washout. Do
8 we have a picture of that available?

9 MR. MARTINEZ: I don't know. We can take a
10 quick look.

11 MR. SMITH: Let's move on while they're looking.

12 MR. HARTER: Okay.

13 MR. SMITH: You know, that should have been
14 submitted with your exhibits.

15 MR. HARTER: Actually, I just learned about it
16 and that's why. Just today even. So I apologize.

17 MR. WHITE: If the question is whether there
18 will be objection, the answer is yes, but prefer to see
19 the document first.

20 MR. SMITH: Thank you.

21 Q. There was some discussion earlier on your special
22 permits and the fact that you withdrew the Special Permit
23 on the Keystone XL.

24 Would you agree with me that that was because of
25 public outcry?

1 A. As is stated in my testimony exhibit, there were
2 concerns from the public about pipeline safety, and that
3 was the reason we withdrew our Application.

4 Q. Thank you.

5 From my knowledge because I can't remember when the
6 gentlemen were out on my place, when you're doing a
7 narrow dig through an area so you disturb less ground,
8 what is that called?

9 A. Just a neck down.

10 Q. A neck down?

11 A. Is that what they referred to?

12 Q. I'm asking you.

13 A. I think that might be what was referred to, I guess.

14 Q. Do you know if that's happening where you're
15 entering my property?

16 A. I don't have the specific details with me.

17 Q. Thank you.

18 MR. MARTINEZ: Mr. Smith, I've just located the
19 photographs that Mr. Harter is referencing. I'd be happy
20 to come and -- I've just dropped them on my flash drive.
21 I'd be happy to come and put them up on the laptop there.

22 MR. SMITH: I think it's Mr. White that probably
23 needs to see them.

24 MR. WHITE: Well, let me start with this. If
25 we're talking about Exhibits 1064, 1065, and 1066

1 identified as Chain Lakes, Alberta photos, those have all
2 been excluded.

3 MR. HARTER: Can they be used as reference to
4 talk about open cuts and waterways? It's been talked
5 about.

6 MR. MARTINEZ: I don't see why you couldn't take
7 a look at photographs and not necessarily enter them as
8 exhibits.

9 MR. WHITE: Prior Commission Order prevents
10 testimony on excluded exhibits.

11 MR. SMITH: There's an outstanding Order so I
12 can't do that. If the Commissioners now want to vote
13 differently and do something different, that's up to
14 them, but I cannot.

15 CHAIRMAN NELSON: No. Let's move along.

16 Q. There was some talk earlier about the Ludden,
17 North Dakota spill. Do you know if the SCADA system was
18 used on the Ludden spill? SCADA system?

19 A. I am generally aware that the SCADA system and leak
20 detection were active and identified that particular
21 spill.

22 Q. So, to your knowledge, that spill was pretty big,
23 and it's still in cleanup the last I knew. So we're in a
24 top-of-the-line system again that failed.

25 Have you heard any reasons within your business

1 expertise as to why these systems are failing to detect
2 these leaks?

3 A. I believe I just testified that that leak was
4 detected through the leak detection system.

5 Q. How did it get to cover such a big area if it was
6 through the leak detection system?

7 A. I'm not aware of the specific details.

8 Q. Okay. With designing your -- the Keystone XL
9 Pipeline a long, straight run, is that not more preferred
10 than having a line with a whole bunch of bends in it?

11 A. We design the route to fit the contours of the
12 terrain and to avoid select features. So a straight line
13 isn't always practical.

14 Q. I would agree with that. But where it is practical,
15 would a straight run versus bending around property be a
16 better way to put in your pipeline?

17 A. Potentially. It would depend on a number of
18 different circumstances related to environmental type
19 conditions, constructibility, what features are on that
20 particular terrain.

21 Q. One of my many jobs is being a part-time crop
22 adjuster for the -- through the FSA office. And my boss,
23 Larry Peterson, stated to me that TransCanada reps told
24 them that running a pipeline in a long, straight run is
25 better than having bend points in it because every bend

1 point is a spot that will have a wear area.

2 Would you agree with that?

3 A. Not necessarily.

4 Q. So there seems to be a conflict of information, what
5 TransCanada representation -- what you're saying here and
6 what they're telling my boss in a government agency.

7 Is that standard procedure for TransCanada?

8 MR. WHITE: Objection. That assumes that the
9 statement he just repeated is accurate. We have no way
10 of knowing that.

11 MR. SMITH: Sustained.

12 MR. HARTER: Would you entertain the witness
13 come up here?

14 MR. WHITE: Are you asking me, or are you asking
15 the Commission?

16 MR. HARTER: I'm asking you. You're the one
17 that's going to object.

18 MR. WHITE: Yes. I would object to that. It's
19 too late.

20 MR. HARTER: So you don't want the Commission to
21 have the facts to make a sound decision.

22 No?

23 COMMISSIONER HANSON: You need to question the
24 witness. If you have concerns of that nature, you don't
25 get into an argument with any of the other attorneys or

1 parties. You need to direct your conversation to us.

2 MR. HARTER: No problem.

3 I'm going to quick slide through my computer,
4 but I think I'm pretty much done.

5 (Pause)

6 Q. Do you have any knowledge of the pressure testing of
7 the pipelines once you get it put together?

8 A. I do.

9 Q. Do you know what your source is for getting the
10 water to do your pressure testing?

11 A. I believe those were listed in the FEIS, and I
12 believe Mr. Schmidt yesterday -- or Dr. Schmidt had
13 testified to that.

14 Q. I did not hear that. Do you know the answer?

15 A. I don't know the listing offhand.

16 Q. Do you know what the procedure is for -- that
17 they're implementing to cross the City of Colome's
18 approximately at least 50 year old pipeline that's steel
19 pipeline?

20 A. I do. I believe that -- I believe that that line is
21 on your property, and there are design plans to verify
22 its depth and lower that pipeline.

23 Q. To your knowledge, has there been an inspection of
24 the -- any -- the internal corrosion?

25 Have you had conversations with the City of Colome

1 so that you know what the Condition of that line is?

2 A. I have not had any personal conversations.

3 TransCanada would not facilitate the lowering of that
4 pipeline. That would be the City.

5 But our plan is to cross with that line being
6 lowered to a specific depth. Those design plans have not
7 been finalized due to some missing data at this point
8 around the actual depth of that line.

9 Q. I know there's been TransCanada employees that have
10 been out there because we've walked across that pasture
11 about 10 times, at least.

12 And in one area the manhole is just about exposed to
13 that line so the depth of cover is pretty close to the
14 surface. In one area of my property you're crossing
15 through blowouts that are just getting reseeded in
16 after -- I'm 52 years old, and they're just starting to
17 reseed in.

18 How do you plan on recovering that area that's
19 highly erodible?

20 A. I believe that there are specific criteria in the
21 CMR plan.

22 Q. Do you know if I've received a copy of that?

23 A. I do not specifically know.

24 Q. Okay. Thank you.

25 MR. SMITH: We need to move along here,

1 Mr. Harter.

2 MR. HARTER: I think I'm good. Thank you.

3 MR. SMITH: Something I forgot to do at the last
4 break was to remind Commissioner Nelson about letting you
5 know what the procedure will be to get in the building in
6 the morning.

7 CHAIRMAN NELSON: I'll just do that very
8 briefly. The doors normally open at 8 o'clock on a
9 Saturday morning, but they will have one of the two back
10 doors open. So if you try one and it doesn't open, the
11 other will be open, and that's starting at 7:30 in the
12 morning.

13 And, yes, we have checked, and they're supposed
14 to leave the air on all weekend. Supposed to.

15 MS. CRAVEN: Which one is the back door?

16 MR. SMITH: Back door? It's this one right
17 here, yeah. The two right where the security station is
18 back there.

19 MS. CRAVEN: Okay.

20 MR. SMITH: Okay. Ms. Lone Eagle, I think
21 you're next.

22 MS. LONE EAGLE: Thank you. I should be able to
23 get mine through relatively quickly. I have a majority
24 of just yes or no answers so if it's just yes or no
25 answers that I get, it will be pretty fast.

1 Basically I have no exhibits or anything for
2 this witness to look at. I'm just following up on some
3 testimony that she gave in response to other questions,
4 just some clarifications.

5 CROSS-EXAMINATION

6 BY MS. LONE EAGLE:

7 Q. And I do commend you. You've been very composed
8 under the pressure that's been placed on you, and I'd
9 just like to let you know that.

10 My first yes or no question is when designing a
11 pipeline and determining the appropriate route, is it
12 necessary to be familiar with the lands and waterways it
13 will cross?

14 A. Yes.

15 Q. Have you ever physically visited the Bridger Creek
16 Crossing area of the pipeline route? Yes or no?

17 A. Yes.

18 Q. How often is it necessary to review the channels of
19 the bodies of water for changes and variations to ensure
20 proper design and safety of the pipeline?

21 A. The designs -- so I'll back up.

22 The pipeline is designed with review of the
23 channels. We perform that analysis as part of design.
24 Once the pipeline is placed into operations, the
25 integrity management program also has provisions to

1 review the safe operations of the pipeline as a result of
2 specific integrity management activities.

3 We conduct aerial surveillance, as well as other
4 specific integrity programs that allow us to monitor the
5 specific waterways and then make any specific integrity
6 related activities or analysis based on those ongoing and
7 continual monitoring over the life of the pipeline.

8 Q. Okay. So it would be like several visits that you
9 would need to make?

10 A. In the onset of the design we do make several
11 visits, whether it's engineering or environmental
12 related. There are collections of bore holes for soil,
13 depending on what sort of design that we would want to
14 employ at a specific waterway crossing.

15 And then during construction obviously we have
16 inspection and personnel who are monitoring the
17 installation of the crossing.

18 Once we move into operations, those crossings are
19 monitored through various integrity programs, one being
20 the patrol, and additionally if there are other
21 monitoring requirements within the vicinity, whether
22 they're doing a data collection from cathodic test
23 points.

24 So there would be periodic visits by company
25 personnel as it relates to whether it's aerial monitoring

1 or if there's data collection from cathodic protection or
2 a specific site visit for any sort of waterway integrity
3 management, that would need to be done per the integrity
4 management programs.

5 Q. Okay. You specifically mention the word "patrol."
6 Is that what you referred to with the aerial, or is that
7 a combination of aerial and on the ground?

8 A. Typically it's done aerial. There may be a need to
9 be on the ground. It just really depends on the
10 specifics of the program and what the operational pipe
11 integrity folks are trying to accomplish.

12 Q. Okay. When was the last time you physically visited
13 the Bridger Creek Crossing area?

14 A. That would have been I want to say November of 2012.

15 Q. November of 2012. So about almost three years ago?

16 A. That's correct.

17 Q. Okay. One of the questions that Mr. Goulet asked me
18 to direct to you -- and I'm going to lay a little
19 foundation.

20 Are you aware that the Cheyenne River Sioux Tribe
21 has legislation that forbids TransCanada personnel,
22 contractors, equipment, pretty much everything having to
23 do with this pipeline from coming onto or within the
24 reservation boundaries?

25 A. I am.

1 Q. Are you also aware that at this point in time the
2 only access to that area is through the reservation?

3 A. I am aware of some portions of Highway 34 as well as
4 a small -- a private access road in that vicinity, yes.

5 Q. Okay. He told me to ask you specifically what your
6 plan would be for being able to legally access that area
7 given the legislation of the Cheyenne River Sioux Tribe.

8 A. We would essentially access the right of way through
9 that area by traveling up and down the right of way. I
10 believe there's also another road to the south and west,
11 if my memory serves me correctly.

12 But our intention is not to cross those particular
13 locations where the Cheyenne River Tribe has stated that
14 we cannot.

15 We have and will build specific training plans into
16 our on boarding with the contractor and our project
17 personnel and, as well, be able to post no project access
18 signs which we've typically done in the past for other
19 type of environmental areas which are restricted.

20 So that would be our intent is to travel up and down
21 the right of way and to train our personnel and post no
22 project access signs to that effect to ensure that we
23 don't go on those particular roads.

24 Q. Do you plan on building a new bridge?

25 A. I don't know definitely if there are any plans for

1 that particular option.

2 Q. Okay. Are you aware of any changes or variations in
3 the Cheyenne River channel since your last visit in 2012?
4 Yes or no?

5 A. No.

6 Q. Okay. Have there been any changes in the design of
7 the pipeline to accommodate the changing water channels?
8 Yes or no?

9 A. Yes.

10 Q. Are you familiar with the land or soil composition
11 surrounding the flowing of the water channels? Yes or
12 no?

13 A. I can't answer that as a yes or no. I need a bit of
14 a qualifying to that.

15 Q. Well, in designing the design of the pipeline with
16 the question I asked earlier, do you need to be familiar
17 with the lands and the waterways, wouldn't you also need
18 to be familiar with the type of soil that was along those
19 river ways, the composition, and how you're going to get
20 through that?

21 Yes or no?

22 A. I personally am not familiar. However, we have
23 geotechnical data that provides that information. That's
24 why I couldn't answer it as a yes or no. We have data.
25 I have personally not looked at that information.

1 Q. Okay. But you are not aware of what the soil
2 composition is, is what you're saying?

3 A. I am not personally aware. I do not recall
4 specifics on the data.

5 Q. Okay. But you do have data that have people who --
6 you have people whose information you rely on for this
7 design, is what you're saying?

8 A. We have collected physical soil bore samples from
9 the entry and exit points in multiple locations along
10 that particular design, and we have reviewed that data
11 and incorporated that into the design of that particular
12 crossing.

13 Q. Okay. Are you familiar with the movements of that
14 soil or land composition in surrounding the flowing water
15 channel?

16 A. Not specifically familiar.

17 Q. Okay. And this is another yes or no question. Can
18 surface erosion be a mitigating factor in developing a
19 landslide area?

20 A. I'm sorry. Can you repeat the question?

21 Q. Can surface erosion be a mitigating factor in
22 developing a landslide area? This goes to one of the
23 questions or some of the questions you were asked by DRA
24 when they brought up the landslide area.

25 A. I'm not sure I understand the question.

1 MR. SMITH: Do you mean -- Ms. Lone Eagle, do
2 you mean mitigating or exacerbating?

3 MS. LONE EAGLE: It is one of Ms. Braun's
4 questions. It's just -- I'm reading it how it's written.

5 So I would assume like would it be a major
6 factor one way or the other when you're trying to develop
7 an area that's a landslide area, I think is the question
8 that she was trying to ask.

9 A. And there's a distinction between surface erosion
10 and a true landslide location. The landslide location
11 would need to have ground movement as well as some other
12 attributing factors.

13 So I believe, as I testified previously, we have
14 done detailed desktop analysis and used various
15 engineering data sets to confirm specifically where
16 localized areas of landslide would be and then further
17 developed our designs to ensure that we are at a deeper
18 burial depth than the toe of those land slides.

19 As we move forward through additional detail and
20 process, site visits would be required at those locations
21 to further verify if it was surface erosion or truly a
22 landslide, localized landslide type scenario.

23 And with that we would develop further construction
24 engineering techniques such as grading out that area or
25 installing particular monitoring devices if they were

1 necessary.

2 And, lastly, during the operations of the pipeline
3 we are required to conduct any specific in-line
4 inspection runs to ensure if there had been ground
5 movement, that the pipeline integrity was not jeopardized
6 as a result of that.

7 Q. Okay. Thank you.

8 In considering Ms. Tillquist's testimony yesterday
9 for risk assessment, are you aware of the population of
10 the radius to the risk assessment area of the Cheyenne
11 River creek crossing? Yes or no?

12 A. No.

13 Q. Are you aware that area includes a portion of
14 Ziebach County? Yes or no?

15 A. Can you repeat the question one more time?

16 Q. Are you aware that area includes a portion of
17 Ziebach County? Yes or no?

18 A. I am generally aware.

19 Q. One of the Risk Assessment criteria has to do with
20 the economics of the area. Are you aware of the economic
21 status of Ziebach County? Yes or no?

22 A. No.

23 MR. WHITE: I'd just like to remind the witness
24 that if she needs to elaborate on these requests for yes
25 or no questions, she's certainly free to do that.

1 MR. ELLISON: Only on cross-examination. Any
2 counsel who wants to bring anything out on redirect, they
3 can do that, but that's not this witness's
4 responsibility.

5 MS. LONE EAGLE: Thank you.

6 Q. Ms. Tillquist also testified that the radius that
7 was used in the Bridger Creek area was 10 miles. Earlier
8 before the break you testified that it was 15.8 miles.

9 Why the increase for Bridger Creek Crossing area as
10 opposed to anywhere else?

11 A. The 15.8-mile figure that was discussed was the
12 total length of HCAs crossed by the pipeline in
13 South Dakota. The 10-mile reference from Ms. Tillquist's
14 testimony was related to the evaluation of flow path in
15 the event of a spill, as part of her Risk Assessment
16 analysis.

17 Q. Okay. I was confused because the question that was
18 asked earlier regarding that, you gave an answer of 15.8,
19 and it was specific to Bridger Creek.

20 So is that a clarification then? Was that a
21 misspeak earlier?

22 A. I don't recall that specific question, but my
23 current response is the response related to that.

24 Q. Okay. Thank you.

25 You also testified earlier during Mr. Ellison's

1 questions that pipelines usually follow a common
2 corridor. Is that correct?

3 A. Generally --

4 Q. Yes or no?

5 A. I can't speak with a yes or no to that question.

6 Q. Okay. Do pipelines generally follow a common
7 corridor? Yes or no?

8 A. Yes.

9 Q. Okay. To the best of your knowledge, especially
10 considering your current transition within TransCanada
11 into new projects, do you know, to the best of your
12 ability -- another yes or no question -- does TransCanada
13 plan to pursue more pipeline permits in the State of
14 South Dakota?

15 A. I do not know.

16 Q. Another yes or no question. To the best of your
17 ability could you please answer along these same lines?

18 Is one of the purposes of the Keystone XL to
19 establish a new corridor or another corridor in order to
20 add more pipelines later on?

21 A. No.

22 Q. Yes or no? No?

23 A. No.

24 Q. Ms. Tillquist also testified that she was unaware of
25 any further discussion regarding any monitoring of the

1 air quality with respect to the release of benzene into
2 the atmosphere and referred us to the next witness, as
3 far as that was concerned.

4 You're the next witness and I realize you may not be
5 able to answer this question but just following the
6 pattern of witnesses so far, what has been put in place
7 to monitor the release of benzene into the air?

8 A. Unfortunately, I cannot answer that question.

9 MS. LONE EAGLE: Okay. That's it for my
10 questions.

11 Thank you.

12 MR. SMITH: Ms. Myers.

13 MS. MYERS: Thank you. I just have a few here.

14 CROSS-EXAMINATION

15 BY MS. MYERS:

16 Q. Is it true the proposed route is to cross the
17 Mni Wiconi Rural Water System in a couple of places?

18 A. Yes. We cross in two places.

19 Q. In these locations where the Mni Wiconi water pipe
20 is crossed by the KXL route what type of water pipe is
21 the Mni Wiconi?

22 A. There is one 24-inch steel line and one 14-inch PVC
23 line.

24 Q. What inch was the PVC line?

25 A. 14.

1 Q. And what location is that?

2 A. The steel line is at milepost 514, and the PVC line
3 is at milepost 471, thereabouts.

4 Q. Thank you. So the KXL line will cross directly
5 above the PVC Mni Wiconi line; is that correct?

6 A. The KXL line will cross above it. However, based on
7 our discussions with the BOR and the crossing
8 requirements from the Oglala Sioux Rural Water Supply
9 Service, that PVC line will be lowered by 6 feet and
10 cased, and then we will actually be boring that line in
11 conjunction with the road 237 that will be a part of that
12 particular installation.

13 And with the 24-inch steel line it will be crossed
14 in conjunction with Highway 16. So we'll be boring past
15 that particular steel line.

16 Q. Okay. What is the exact distance between the KXL
17 pipe and the PVC pipe?

18 A. So our pipeline is required to be at 5 foot of
19 cover. There's a 6-foot clearance requirement between
20 the PVC line and the KXL line per the requirements of the
21 design requirements provided to us by the BOR.

22 Q. So there's six feet between the bottom of the KXL
23 line and the top of the PVC pipe?

24 A. That's correct.

25 Q. And where did that -- how did you come about with

1 the 6 feet? Is there a rule or regulation that requires
2 that?

3 A. Those were the design requirements provided by the
4 Mni Wiconi through to the BOR on to Keystone.

5 Q. Does that have anything to do with the chemicals
6 that will be being transported through the KXL line?

7 A. I'm not aware specifically. Those were the design
8 requirements that we reached out to confirm what the
9 requirements were for crossing those particular
10 pipelines, and those were the requirements we were
11 provided.

12 Q. And where do these requirements come from?

13 A. The Bureau of Reclamation.

14 Q. Okay. The PVC line, do I understand there will be a
15 sleeve around the water pipe?

16 A. That's correct. In conjunction with the clearance
17 separation between the lines.

18 Q. And also the sleeve is PVC, and the water pipe is
19 PVC; is that correct?

20 A. I believe the -- I don't know what the sleeve is --
21 its material. The water pipeline that's the 24-inch line
22 is the steel pipeline. The PVC line is the 14-inch line.

23 Q. But at the location mile marker 471 the water pipe
24 is PVC; correct?

25 A. That's my understanding.

1 Q. And the sleeve is PVC; is that correct?

2 A. I don't know the specified material of that sleeve.
3 The lowering in the casing is to be done by the water
4 line entity.

5 Q. Isn't it correct that PVC is permeable by benzene?

6 A. I believe Ms. Tillquist addressed that specific
7 question yesterday.

8 Q. In Permit Condition No. 40 it specifically says
9 TransCanada at the option of the utility or a private
10 owner will replace PVC tubing within 500 feet of the
11 project because of permeability to benzene.

12 So my concern is the sleeve is PVC, the water pipe
13 is PVC, and there's only 6 foot in between.

14 MR. WHITE: Is there a question there?

15 Q. So what's your concern about benzene permeating into
16 the water pipe if there should be a spill?

17 MR. SMITH: Ma'am, I don't think that's a
18 correct statement -- this is John Smith up here -- of
19 Condition 40. I don't think it is.

20 MS. MYERS: Let me check that.

21 MR. SMITH: It says polyethylene, and PVC is
22 different.

23 Q. What's the difference between PVC and polyethylene?

24 MR. SMITH: Well, the permeability is hugely
25 greater. PVC is relatively low. It has quite a low

1 permeability factor.

2 MS. MYERS: I would like to ask --

3 MR. SMITH: What this really allows -- the
4 purpose of this was to -- if at an option of a person
5 they wanted to have the lower grade pipe swapped out
6 for --

7 MS. REAL BIRD: I object to Mr. Smith
8 testifying.

9 MR. SMITH: I'm not testifying. I'm just saying
10 what the Condition actually says.

11 MS. REAL BIRD: You're explaining the difference
12 between the testimony. What the Condition says is not, I
13 agree.

14 Thank you.

15 Q. I would like to ask Meera the difference between
16 polyethylene and PVC.

17 A. I don't have the specific details for that.

18 Q. And would you know the difference between how the
19 benzene can permeate between the PVC or the polyethylene,
20 the difference?

21 A. No. That is a question for Ms. Tillquist.

22 Q. And I believe I asked her that yesterday, and I was
23 referred to you.

24 I need to look up Condition 40.

25 Condition 40 states "At the request of any landowner

1 or public water supply system that offers to provide the
2 necessary access to Keystone over his or her property or
3 easements to perform the necessary work Keystone shall
4 replace, at no cost to such landowner or public water
5 supply system, any polyethylene water piping located
6 within 500 feet of the project with piping that is
7 resistant to permeation by BTEX."

8 MS. MYERS: I'd like that noted in the record.
9 That concludes my questions.

10 MR. SMITH: Thank you.

11 Mr. Seamans.

12 MR. SEAMANS: Yes. I have a few questions.

13 CROSS-EXAMINATION

14 BY MR. SEAMANS:

15 Q. You did say that TransCanada has agreed to follow
16 the 59 Conditions developed by PHMSA; is that correct?

17 A. Yes.

18 Q. Did you also say that these were voluntarily agreed
19 to by TransCanada?

20 A. Yes. When we withdrew our Special Permit
21 Application in 2010 we voluntarily agreed to the then
22 57 Conditions that were part of the SFEIS.

23 Q. Okay. Let's switch to Keystone I. Were there also
24 some conditions developed by PHMSA for Keystone I?

25 A. Yes, there were.

1 Q. Were these Conditions voluntarily agreed to by
2 TransCanada?

3 A. Those Conditions were a part of a Special Permit
4 that was drafted by PHMSA.

5 Q. So they were not voluntarily agreed to? Are you
6 saying that?

7 A. They were agreed to based on our Application to
8 PHMSA for a Special Permit.

9 Q. So PHMSA did not have to impose them? You
10 voluntarily agreed?

11 A. We agreed.

12 Q. Okay. You probably already answered this question,
13 but I probably missed it.

14 Are any pipelines in the United States owned by
15 different companies other than yours -- have they also
16 been subjected to Conditions by PHMSA? Or do you know?

17 A. I am aware of earlier on gas pipelines which were
18 going through a .8 Special Permit, which is now adopted
19 into regulation since 2008. I'm not aware of any other
20 oil pipelines that are subject to these special permits,
21 aside from TransCanada's Keystone Pipelines.

22 Q. Okay. Thank you. Are you aware if TransCanada's
23 safety record had any bearing on PHMSA imposing or
24 writing up these Conditions?

25 A. I am not.

1 Q. Okay. I'm going to switch gears here a little bit.
2 As a professional engineer did you write a
3 professional exam?

4 A. I did.

5 Q. Are you familiar with the Alberta Professional
6 Engineering Act?

7 A. I'm generally familiar.

8 Q. Okay. I'm going to read a short segment from the
9 Alberta Professional Engineering Act. And I'll try to
10 read it kind of slow because it's -- "Practice of
11 engineering means reporting on, advising on, evaluating,
12 designing, preparing plans and specifications for
13 directing the construction, technical inspection,
14 maintenance, or operation of any structure, work, or
15 process." That's the end of that quote.

16 Now in regards to what I have just read, my question
17 is does your work qualify as professional engineering?

18 A. Could you repeat?

19 Q. Repeat it? Excuse me.

20 A. Yes. Could you repeat the statement?

21 Q. In regards to what I just quoted from the Alberta
22 Professional Engineering Act, does your work qualify as
23 professional engineering?

24 A. I'm sorry. I would like you to repeat the statement
25 out of the Act.

1 Q. Okay. From the Alberta Professional Engineering
2 Act? Is that what you want me to repeat?

3 A. Yes, please.

4 Q. Okay. They say "The practice of engineering means
5 reporting on, advising on, evaluating, designing,
6 preparing plans and specifications for directing the
7 construction, technical inspection, maintenance or
8 operation of any structure, work, or process."

9 And I apologize for putting all of these
10 specifications in your head at one time. Would you want
11 me to read it again?

12 A. No.

13 Q. Okay. Then my next question is in regards to what I
14 have just read, does your work qualify as professional
15 engineering?

16 A. A portion of that list does, yes. In my current
17 capacity.

18 Q. Okay. Thank you. Now your resume shows you as a
19 professional witness; is that correct?

20 A. No.

21 Q. Does your TransCanada permit to practice engineering
22 work in the U.S.?

23 A. I do not prepare any engineering work in the U.S.
24 As I have stated before, there are licensed professional
25 engineers that prepare all work for the U.S. project.

1 Q. Okay. Thank you very much.

2 MR. SEAMANS: I guess that's the end of my
3 questions.

4 Thank you.

5 MR. SMITH: Thank you, Mr. Seamans.

6 Staff.

7 MS. EDWARDS: Thank you. Kristen Edwards for
8 Staff.

9 CROSS-EXAMINATION

10 BY MS. EDWARDS:

11 Q. Several hours ago Mr. Blackburn asked you about
12 leaks on the base Keystone Pipeline at startup, and I
13 believe you stated you were generally familiar with
14 those; is that correct?

15 A. Yes.

16 Q. So speaking in general terms, do you know
17 approximately how large those leaks were? For example,
18 were they measured in gallons, teaspoons, ounces?

19 A. I believe they were measured in gallons. That's my
20 understanding.

21 Q. Okay. Were those leaks contained within the pump
22 station site?

23 A. I believe all but one was contained inside the pump
24 station.

25 Q. Are you familiar with the reporting requirements in

1 49 CFR 195.50?

2 A. I'm generally familiar.

3 Q. Do you know if any of those releases constituted a
4 reportable accident under that statute?

5 A. I believe that -- I don't know the total number, but
6 I believe that there were some that were reportable.

7 Q. And were they reported to the appropriate agency?

8 A. Yes, they were, to my knowledge.

9 Q. Thank you. Moving on, there was some discussion
10 about risks for land slides. Earlier you were shown a
11 map of the terrain with respect to landslide risks.

12 Do you recall that?

13 A. I do.

14 Q. Would the grade of the terrain mitigate the risk of
15 land slides?

16 A. Yes, it would.

17 Q. To your knowledge, was that taken into consideration
18 in that particular map?

19 A. I do not believe so.

20 Q. Would such terrain be included in the total mileage
21 for the length of the route with high risk for land
22 slides that you identified?

23 A. I believe it would.

24 Q. Would the portion of the route classified as high
25 risk for land slides need to meet an additional number of

1 criteria?

2 A. Yes, it would.

3 Q. Can you elaborate on that?

4 A. I'm not a geotechnical specialist, but there is
5 geomorphology that would require, I believe, certain
6 types of criteria such as land movement, as well as other
7 specific criteria in order for it to qualify as a
8 landslide, a localized landslide type terrain.

9 Q. The internal specifications for design and
10 construction referenced in your testimony, do they meet
11 or exceed regulations imposed by PHMSA?

12 A. They do.

13 Q. Have they gone through an internal process for
14 review and approval?

15 A. Yes, they have.

16 Q. And moving on to pipeline coatings. Is there any
17 conservatism in the total thickness of the pipeline
18 coating?

19 A. Yes, there is.

20 Q. How is the thickness of the coating specified?

21 A. It's based on these recommended practices as well as
22 TransCanada's internal coating specifications.

23 Q. Would a loss of a few mills of coating thickness be
24 critical to the overall coating performance if it was
25 still above the minimum value?

1 A. No, it would not.

2 Q. And in reference to cathodic protection
3 interference, the issue referenced in Missouri, do you
4 know which one I'm talking about?

5 A. I believe so.

6 Q. All right. Was there a physical crossing between
7 the TransCanada line and the foreign line?

8 A. I'm not sure at that specific location. However,
9 along that corridor there were multiple, multiple
10 crossings along that pipeline stretch of corridor. I'm
11 not aware specifically at the location in question if it
12 was at a crossing or strictly in a parallel.

13 Q. And one more. Do current federal regulations
14 require that all valves be automated?

15 A. No, they do not.

16 MS. EDWARDS: Thank you.

17 No further questions.

18 MR. SMITH: Commissioner questions.

19 CHAIRMAN NELSON: This morning in relation to
20 some discussion about some anomalies that have been
21 discovered you used the term "low yield materials."
22 That's a curious term to me. Obviously that means there
23 must be high yield materials.

24 Can you give us just a little bit more
25 explanation of this low yield material term? What does

1 it mean? Give us some additional explanation.

2 THE WITNESS: Sure. In the context of that
3 particular discussion it would have meant that the
4 strength of the material that was specified didn't meet
5 the actual specification. Notwithstanding that, the
6 material was still strong enough to meet the intended
7 operating requirements.

8 CHAIRMAN NELSON: So why is it called low yield?
9 What does that terminology mean?

10 THE WITNESS: I believe that's just a materials
11 engineering term in terms of the strength of the material
12 is designated as the yield strength of the material and
13 then the ultimate yield of the material, the maximum
14 capacities of that material.

15 CHAIRMAN NELSON: Is SCADA monitoring required
16 by regulation or law?

17 THE WITNESS: I believe it is.

18 CHAIRMAN NELSON: So this morning there was some
19 discussion that no Amended Permit condition addresses
20 SCADA monitoring. But in Condition 1 it requires
21 Keystone to comply with all applicable laws and
22 regulations in its construction and operation of the
23 project.

24 So would not that Permit Condition apply to
25 SCADA monitoring?

1 THE WITNESS: I believe so. I'm not 100 percent
2 certain on which regulation. I am aware, generally
3 aware, that within the PHMSA regulations if a
4 computational leak detection model is used, there are
5 specific criteria, and then within the API standards
6 there are specific recommended practices and requirements
7 for SCADA.

8 But I could not specify and point to which
9 specific regulations would have all the details on
10 that.

11 CHAIRMAN NELSON: Thank you. I've got one more
12 question, and I apologize because this doesn't have
13 anything to do with the Permit Condition but my curiosity
14 you've got to answer this.

15 At the White River HDD crossing, and I've looked
16 at the diagram of that, you're crossing 55 feet
17 underneath the riverbed. And as I looked at the diagram
18 you've got some 45 degree bends in your pipe to make that
19 kind of crossing.

20 How on earth do you get that pipe to do
21 45 degree bends as you're pulling it underneath the
22 river?

23 THE WITNESS: There are some crossing designs --
24 and I have to look at that in a little bit more closer
25 detail. I don't know if that -- that might be just an

1 engineering discrepancy on the drawing, but there are 3D
2 HDDs that are conducted whereby you would create your HDD
3 hole, and then you would have to veer or turn the hole to
4 a different angle in order to exit.

5 So it's not uncommon for that. We tend not to
6 always employ that technique but if there was some
7 specific feature based on the geotechnical core samples
8 that would require us to veer away or turn, that would be
9 indicative of that.

10 I have not specifically studied that drawing in
11 very great detail so I would not be able to give you a
12 appropriate explanation right at this moment regarding
13 that. But if you would like me to look at that and
14 provide you some additional detail, I would be happy to.

15 CHAIRMAN NELSON: Well, I'd love to. But,
16 again, I don't think it's directly applicable for this
17 proceeding. It's more for my curiosity because I like to
18 know how things work.

19 That's the end of my questioning, Mr. Smith.

20 MR. SMITH: Mr. Gough was requesting that we put
21 it up on the screen, but I didn't want to interrupt --

22 MR. GOUGH: I appreciate that. I didn't want to
23 call out during the questioning, but it sounds something
24 that would be intriguing to see as the discussion was
25 going on.

1 MR. ELLISON: And potentially highly relevant
2 because it has to do with whether this Commission should
3 recertify this with drawings that are like that. If
4 they're going to submit drawings that show impossible
5 engineering features, that's certainly something for this
6 Commission to consider.

7 MR. SMITH: Okay.

8 MR. GOUGH: Thank you.

9 MR. SMITH: Thank you. Again, we've been
10 allowing additional Intervenor cross if you want to --

11 CHAIRMAN NELSON: Don't forget this guy.

12 MR. SMITH: I'm sorry, Gary. Usually you say
13 something to get my attention.

14 COMMISSIONER HANSON: Thank you, Mr. Smith.
15 Good afternoon, Ms. Kothari.

16 Your name has been dropped by a lot of previous
17 witnesses. As a matter of fact, nearly every one of the
18 previous XL witnesses have dropped your name so I figure
19 you're a fountain of information.

20 Ms. Edwards asked you some questions, and I'm
21 going to tie in a little bit on those. I was hoping
22 you'd be familiar with the quantity, location, and the
23 cause of all the Keystone spills, and it sounds like you
24 have some information on that.

25 Are you aware, is there anything -- I did not

1 find it -- that specifies and gives that information as
2 an exhibit or any testimony that we presently have?

3 THE WITNESS: I do not believe that there is
4 anything in the testimony surrounding that, but I do
5 believe that yesterday Dr. Schmidt discussed that the
6 information was listed in the FSEIS, and we can certainly
7 provide that reference.

8 COMMISSIONER HANSON: Yeah. I was aware that
9 it's there. I just didn't know if it was presented as
10 evidence or testimony.

11 THE WITNESS: Not to my knowledge.

12 COMMISSIONER HANSON: Thank you. You said that
13 there were 14 spills, and I think everyone's well-aware
14 of that.

15 How many of those were in South Dakota?

16 THE WITNESS: I don't have the exact figure. I
17 believe there were -- yeah. I don't have that off the
18 top of my head. I'd have to look.

19 COMMISSIONER HANSON: Can you tell us what
20 efforts are being taken to prevent similar spills when XL
21 is brought online?

22 I believe a number of them were pumping
23 stations?

24 THE WITNESS: That's correct. The specific
25 designs at the pump stations have changed significantly

1 from the Keystone base project. And also based on
2 operational experience over the last five years of that
3 operation.

4 Those designs have been implemented on the Gulf
5 Coast Project and are being implemented for the Keystone
6 XL Project.

7 So I believe -- I don't have all the very
8 specific details on all the specific design changes, but
9 I am aware that there have been a number of changes
10 related to the specific design and components at those
11 pump stations relative to the stations that have recently
12 come online based on those particular incidents.

13 COMMISSIONER HANSON: And what was Keystone's
14 experience with -- or TransCanada's experience in the
15 construction and using those new methods?

16 THE WITNESS: Those new stations have been in
17 operation on the Cushion Extension, the new designs, as
18 well as the Gulf Coast Project, and thus far there have
19 been no specific indications that those issues have
20 resurfaced or systematic issues with the design.

21 COMMISSIONER HANSON: Thank you.

22 In your direct testimony, and it's been referred
23 to and you've discussed it to an extent pertaining to the
24 instance in which an adjacent foreign utility interfered
25 with a cathodic protection system, I'm curious, is it

1 possible with the XL line that it could create similar
2 challenges with crossings?

3 I see that you've stated that no similar
4 situation could exist in South Dakota because there are
5 no shared utility corridors. However, there's also the
6 crossings that you've alluded to as well.

7 THE WITNESS: Yes, sir.

8 And so with our specific designs related to
9 crossings, as Mr. Goulet had talked about, as we cross
10 particular pipelines we install test stations to be able
11 to monitor the cathodic protection of our line and the
12 foreign utility that we cross.

13 We're also installing the sacrificial anodes at
14 those particular crossings. We are making attempts to
15 contact all of the utilities that we cross to understand
16 better their specific piping design, the types of
17 materials that their lines are constructed of, and work
18 with those utilities to ensure that we've got
19 complementary cathodic protection systems so that
20 something such as that particular incident doesn't recur.

21 COMMISSIONER HANSON: Does this preclude any
22 future pipeline being laid in the same proximity to this
23 pipeline?

24 THE WITNESS: No. We would follow similar
25 design requirements. If there were to be another foreign

1 utility that would parallel the Keystone XL Pipeline, we
2 would undertake the appropriate interference and cathodic
3 protection studies with those utilities to ensure our
4 systems work in complementary with their particular
5 systems, not only for cathodic protection but for any
6 other specifics related to collocated pipelines.

7 COMMISSIONER HANSON: In regards to Colome and a
8 potential for the pipeline being 175 feet within the --
9 in the cone of influence of the -- where they obtain --
10 the intake well for their water supply, is there a
11 potential for a migration of product if there is a leak
12 in the pipeline under the pressure not to get to that
13 cone of influence?

14 THE WITNESS: My understanding from
15 Ms. Tillquist's testimony yesterday is that that cone of
16 influence or the buffer to that head is a 20-year travel
17 distance. And so I believe that that would be a low -- a
18 low possibility based on the specific emergency response
19 plans that we have in place and spill cleanup plans that
20 we have in place.

21 COMMISSIONER HANSON: And do you know if there
22 have been conversations with City representatives such as
23 mayors or council members in regards to this?

24 THE WITNESS: I believe earlier on in 2009 there
25 was some discussions. We were actually routed through

1 that particular area, right through that particular area,
2 and made the specific adjustments to where the route is
3 currently today, approximately 175 feet away from the
4 edge of that buffer.

5 I'm aware that Ms. Tillquist had discussions
6 with South Dakota DENR. I'm not fully aware of all the
7 discussions with local leaders around this particular
8 issue. But based on the information that we have, we
9 completed that reroute and adjusted the route to where it
10 is today.

11 COMMISSIONER HANSON: So your name was dropped
12 in regards to this so I was assuming you'd be able to
13 answer it.

14 Do you know if that movement of the adjustment
15 of the route of the pipeline was satisfactory to the City
16 representatives?

17 THE WITNESS: I'm not sure, specifically City
18 representatives. I know that the route is down gradient
19 from the intake itself, and I believe that the SD DENR
20 was satisfied with that particular route.

21 But as far as leaders, I don't have that
22 information offhand but can certainly verify and provide
23 that information back to the Commission.

24 COMMISSIONER HANSON: I believe that's extremely
25 important to know what the City representatives -- what

1 their opinion is of it and what their comfort level is
2 with it.

3 Appreciate knowing that.

4 When information was discussed regarding high
5 landslide hazard areas, the term slip slope, slip slope
6 high landslide hazard areas, and high landslide slip
7 slope. Are you familiar with slip slope at all?

8 THE WITNESS: I'm not specifically familiar with
9 that term. I am familiar with the landslide term.
10 There's a specific definition related to that from
11 geotechnical engineers and geomorphology analysis that's
12 conducted.

13 I don't have the technical definitions
14 specifically that we have -- we are reviewing that
15 particular hazard in greater detail past the level that I
16 have discussed here.

17 COMMISSIONER HANSON: When discussion was taking
18 place pertaining to the 1.6 miles you used the term
19 that -- and this was in reference to construction, that
20 it would be done in a very discrete area.

21 What did you mean by that, using that term?

22 THE WITNESS: Based on our analysis at this
23 point in time with the work that we've done, we've
24 identified several discrete locations that cumulatively
25 total the 1.6 miles.

1 And so the next steps as part of the detailed
2 engineering is to visit those particular areas and to
3 determine if they truly have a landslide potential based
4 on a set of geotechnical criteria or if they're truly
5 just surface erosion based on the data we have. We need
6 to conduct some additional site visits.

7 COMMISSIONER HANSON: Thank you.

8 And it was pointed out in the discussion that a
9 quantity of pipe has been stockpiled since 2011, I
10 believe it is.

11 What is the inspection process of the pipe prior
12 to during installation? Are you familiar with that at
13 all?

14 THE WITNESS: I am. Prior to load out from
15 those particular locations, the pipe will be inspected
16 for any disbondment and repair.

17 The pipe will also be inspected to ensure the
18 specification thickness requirements are met. If they
19 are not met, those pipes will be -- the coating will be
20 removed, and the pipe will be recoated.

21 Additional to that, when the pipe arrives on
22 site we also have additional coating inspection that's
23 done on the pipe, both visual as well as with testing
24 equipment, that's conducted prior to the pipe being
25 lowered into the trench.

1 And then subsequent to that, once the pipe is
2 backfilled we also conduct an above ground indirect
3 coating survey to verify the condition of the coating
4 after the pipe has been backfilled. And then any
5 specific damage noted as part of that survey would
6 ultimately require us to excavate the pipe, inspect it,
7 and then repair that coating prior to it being placed in
8 service.

9 COMMISSIONER HANSON: Thank you very much.
10 Appreciate your testimony.

11 Like Ms. Elizabeth Lone Eagle, I appreciate the
12 way in which you've conducted yourself under the amount
13 of questions. And I guess it's not over yet.

14 MR. SMITH: Any additional Commissioner
15 questions?

16 Are there any questions following on
17 Commissioner questions from Intervenors or Staff?

18 MR. RAPPOLD: Yes. Are we going to go in the
19 normal order?

20 This is Matt Rappold.

21 MR. SMITH: I suppose.

22 MR. ELLISON: Are we going to do this today?

23 MR. SMITH: Well, Commissioners.

24 CHAIRMAN NELSON: Let's give it a start and see
25 where we end up.

1 MR. SMITH: Normal order would be we would begin
2 with Mr. Clark if he has anything.

3 MR. CLARK: Cheyenne River Sioux Tribe has no
4 further questions for the witness.

5 MR. SMITH: And then I think you're next,
6 Mr. Rappold.

7 MR. RAPPOLD: Thank you, Mr. Smith.

8 The Rosebud Sioux Tribe has a few questions.

9 REXCROSS-EXAMINATION

10 BY MR. RAPPOLD:

11 Q. Regarding the buffer zone established by the
12 South Dakota DENR and Tripp County, the Colome water
13 supply, are you aware of any discussions that took place
14 with the Rosebud Sioux Tribe regarding that same buffer
15 zone?

16 A. I am not.

17 Q. Regarding the Bridger Creek Crossing on the Cheyenne
18 River Indian Reservation, do you realize that trespassing
19 in Indian Country in the United States of America is a
20 federal crime?

21 MR. WHITE: Objection. Calls for a legal
22 conclusion.

23 MR. RAPPOLD: Just a simple question.

24 It requires a yes or no answer.

25 MR. WHITE: Requires a legal conclusion.

1 MR. SMITH: I'm going to sustain the objection.

2 Q. Is it your testimony that the design requirements
3 for the Mni Wiconi water crossings had input from the
4 Oglala Sioux Tribe?

5 A. Yes.

6 Q. And what is the basis for that testimony?

7 A. I attended over teleconference two meetings
8 facilitated by the BOR in 2011 and 2012 where the
9 crossing designs were discussed with the Oglala Sioux
10 Rural Water Supply System and engineers, third-party
11 engineers for that system.

12 Q. Do you know if the Oglala Sioux Tribe developed
13 their own water crossing criteria?

14 A. I am not specifically aware. The discussions that
15 took place were around the specifics of the location and
16 the crossing and the design specifics, and through the
17 information provided to us from the BOR we have completed
18 the designs based on that and provided that back to the
19 BOR.

20 Q. That's a lot of information for not being
21 specifically aware. Would you agree?

22 MR. WHITE: Objection. Argumentative.

23 Q. Did you ever see the Oglala Sioux Tribe proposed
24 water crossing conditions?

25 A. I did not -- I have information provided by the

1 Bureau of Reclamation.

2 Q. Are you aware of any communications that TransCanada
3 is engaged with with the Bureau of Indian Affairs
4 regarding the Keystone XL Project?

5 A. I am not specifically aware.

6 Q. Could you tell us in your own words what engineering
7 means to you? What is engineering?

8 A. It's the design and -- it's the study or the
9 Application of specific principles for various
10 disciplines.

11 Q. And is the concept of science part of engineering?

12 A. Yes.

13 Q. And in your own words could you define science?

14 MR. WHITE: I'm going to object that this seems
15 to go well beyond the scope of follow up to the
16 Commissioners' questions.

17 MR. RAPPOLD: The line of questioning goes to
18 the credibility and veracity of the witness, and I
19 believe I'm entitled to inquire of those issues on
20 cross-examination and on recross.

21 MR. WHITE: This is recross.

22 MR. RAPPOLD: I understand, Mr. Smith, that this
23 is recross. I'm still entitled to inquire into the
24 veracity and competency of the witness as it relates to
25 her testimony, even on recross.

1 I'd appreciate the opportunity to do that.

2 MR. WHITE: He had that opportunity on cross.

3 MR. SMITH: Yeah. I mean, we try to limit now
4 to just follow up to --

5 MR. RAPPOLD: These are follow-up questions that
6 I developed as I was listening to the witness's answers
7 to all of the other questions on cross-examination.

8 MR. SMITH: We're going to overrule and let you
9 go forward.

10 MR. RAPPOLD: Thank you, Mr. Smith.

11 Q. Could you define in your own words, please, what
12 does science mean?

13 A. It's the study of various disciplines.

14 Q. Can you tell us what the word "believe" means?

15 MR. WHITE: Objection. Relevance.

16 MR. RAPPOLD: The question is relevant to the
17 witness's definition of engineering and science and her
18 testimony today.

19 MR. WHITE: I'm going to renew my objection to
20 reopening a new round of cross-examination.

21 The witness has been on the stand since
22 8 o'clock this morning. The attorneys have had multiple
23 opportunities to question her veracity and credibility.
24 It's now 5:30 in the afternoon, and we're restarting what
25 should have been done on cross.

1 MR. RAPPOLD: I didn't have the opportunity --
2 this is not anything -- it's questions that were
3 developed as I was listening to the witness provide her
4 answers to the questions that are entirely based on
5 science and engineering.

6 And I simply want to know what she -- what her
7 understanding of the word "believe" is and how that word
8 "believe" fits into her answers as an engineer.

9 MR. ELLISON: And the witness repeatedly stated
10 in response -- began her answers with "I believe."

11 MR. RAPPOLD: I'd also like to ask the court
12 reporter if she has a mechanism in her system over there
13 to tell us how many times the witness used the word
14 "believe" when responding to a question? I don't know if
15 I can do that or not, but I'd like to.

16 MR. SMITH: Well, in terms of allowing
17 Ms. Kothari to clarify what she intended by that word,
18 I'm going to let her explain what she meant by "believe."

19 MR. RAPPOLD: Thank you, sir.

20 Q. When you say "believe" what do you mean?

21 A. My responses were based on fact, not my personal
22 opinion.

23 Q. Would you agree with me -- would you agree with the
24 following definition of the word "believe": To have
25 confidence in the truth, the existence or the reliability

1 of something, although without absolute proof that one is
2 right in doing so.

3 Do you agree with that definition of the word
4 "believe"?

5 A. Yes.

6 Q. Does believing have any place in engineering or
7 science? Yes or no?

8 A. No.

9 Q. Thank you.

10 MR. RAPPOLD: I have no further questions.

11 MR. SMITH: Any other questions following on?

12 MR. CAPOSSELA: Peter Capossela, Standing Rock.
13 I will limit it to questions that were asked on redirect,
14 and I will be quick, Mr. Smith.

15 Thank you.

16 RECROSS-EXAMINATION

17 BY MR. CAPOSSELA:

18 Q. Ms. Kothari, did TransCanada obtain the design
19 requirement for the crossing with the Mni Wiconi pipeline
20 from the Bureau of Reclamation or the Oglala Sioux Tribe?

21 Where did you get it?

22 MR. WHITE: Objection. Asked and answered.

23 MR. SMITH: Sustained.

24 Q. Are you familiar with the design requirements
25 proposed by the Oglala Sioux Tribe for the Mni Wiconi

1 crossing? Are you familiar with them?

2 A. I'm familiar with the requirements that were
3 provided to TransCanada through the BOR based on the
4 discussions that we had from those two meetings.

5 Q. Okay. Did the Oglala Sioux Tribe prepare its own
6 design requirements?

7 A. I am not aware specifically.

8 Q. Did the design requirements that were obtained by
9 TransCanada include -- do you know, did they include
10 recommendations advanced by the Oglala Sioux Tribe?

11 A. I'm not sure specifically -- there was no specific
12 information on the document noting the Tribe rural water
13 system company name. It was the requirements that were
14 provided to us by the BOR based on the meetings that were
15 conducted and the correspondence that was conducted.

16 Q. Regarding pipelines that have been stored on the
17 ground for years, I guess, you testified that they're
18 expected prior to getting -- put in the trenches, after
19 they've been sitting on the ground for a number of years.

20 They are inspected before they're used for
21 construction; is that correct?

22 A. Yes.

23 Q. Who inspects them?

24 A. We have inspectors and qualified personnel who
25 verify the coating condition.

1 Q. So they're TransCanada employees who inspect them or
2 contractors, construction contractors?

3 A. There are TransCanada employees, construction
4 contractors, as well as third-party inspectors.

5 MR. CAPOSSELA: Thank you.

6 No further questions, Mr. Smith.

7 MR. SMITH: Any other follow on, please.

8 MR. ELLISON: Short questions, but I think
9 Mr. Blackburn will go --

10 MR. SMITH: Oh, I'm sorry. I couldn't see you.

11 Yeah. At this point we're at 5:30. So if we're
12 going to go on and on and on, we might as well break and
13 come back.

14 Is that what you want to do?

15 COMMISSIONER HANSON: Yes.

16 MR. SMITH: We're going to adjourn. Is that
17 okay?

18 MR. WHITE: I'm sorry, Mr. Smith. But before we
19 adjourn is it possible to get an order of witnesses for
20 tomorrow's session? So we know who's coming up?

21 MS. EDWARDS: This is Kristen Edwards for Staff.
22 Could I renew my request that Mr. David Schramm be
23 allowed to testify tomorrow because he has to get to
24 Illinois?

25 MR. SMITH: Is there any objection?

1 MR. CAPOSSELA: We don't object.

2 MR. WHITE: No.

3 MR. SMITH: I don't see any objection.

4 Ms. Myers, did you still want to go on Monday?
5 I can't see you because you're behind the pole.

6 MS. MYERS: Yes. I would like that, please.

7 MR. SMITH: On Monday as opposed to tomorrow.

8 MS. MYERS: I won't be here tomorrow.

9 Mr. Smith, we do have another Intervenor here
10 today, Carolyn Smith down on the end.

11 MR. SMITH: I'm sorry. I can't really see, and
12 I apologize for that.

13 MS. SMITH: I arrived this morning. I've been
14 listening this week online as much as I can. I don't
15 have any questions right now.

16 MR. SMITH: Okay. If you had any
17 cross-examination -- because I did not know you were in
18 here so I apologize.

19 If you do, let me know, and we can arrange for
20 that first thing in the morning.

21 CHAIRMAN NELSON: We need to figure out who's
22 going next with witnesses. We need to figure out -- we
23 need to answer the gentleman's question about witnesses
24 for tomorrow.

25 We've got a Staff witness, and then we've got

1 Cheyenne's witness.

2 And then, Mr. Rappold, do you have anybody?

3 MR. RAPPOLD: I have one witness, but she's a
4 rebuttal witness to both Staff and Keystone testimony.

5 Thank you.

6 CHAIRMAN NELSON: Okay. Then we are going to
7 Standing Rock.

8 MR. CAPOSSELA: Mr. Chairman, I do not have
9 witnesses that will be here tomorrow. I would invite
10 Dakota Rural Action, if they're prepared --

11 CHAIRMAN NELSON: Okay. Well, let me go to
12 Yankton.

13 Yankton.

14 MS. BAKER: Our only direct witness specifically
15 is unavailable tomorrow.

16 CHAIRMAN NELSON: She'll be here on Monday.

17 Okay. Mr. Blackburn does not.

18 So, Mr. Martinez, it might be your day
19 tomorrow.

20 MR. MARTINEZ: I was going to say I think we've
21 got Evan Vokes. We can have him ready for tomorrow.

22 And we do have Dr. Arden Davis, but he's not
23 going to be here until Monday. And I'm trying to figure
24 out when we'll get the Sibsons here. And, yes, we also
25 have John Harter listed as a rebuttal witness.

1 CHAIRMAN NELSON: Okay. That might give us a
2 start, but if you all -- I mean, if there's witnesses
3 that are not here that should be here tomorrow and we get
4 done with everybody else, we're just going to keep going.
5 If that means -- we'll go as far as we can.

6 MR. ELLISON: Well, we have advised the
7 Commission since the beginning of these proceedings, the
8 hearing, that Dr. Davis could not be here before Monday.

9 CHAIRMAN NELSON: Understand. Yeah. If we've
10 got somebody clocked in on Monday, that's fine.
11 Absolutely.

12 MR. ELLISON: Thank you. Just looking in this
13 direction, Mr. Nelson, so I just wanted to mention
14 that.

15 CHAIRMAN NELSON: Mr. White, I don't know how
16 much help that gives you, but that's where we're at.

17 MR. WHITE: So assuming we get through the
18 remaining direct witnesses other than those that are
19 parked for some other period of time, are we then
20 expected to begin our rebuttal?

21 No. I guess the Staff witnesses would go next.

22 CHAIRMAN NELSON: Correct.

23 MR. WHITE: Thanks. Appreciate it.

24 MR. SMITH: We're going to go into recess
25 overnight, and we will reconvene at 8:00 in the

1 morning.

2 (The hearing is adjourned at 5:40 p.m.)

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STATE OF SOUTH DAKOTA)

COUNTY OF SULLY)

:SS CERTIFICATE

I, CHERI MCCOMSEY WITTLER, a Registered Professional Reporter, Certified Realtime Reporter and Notary Public in and for the State of South Dakota:

DO HEREBY CERTIFY that as the duly-appointed shorthand reporter, I took in shorthand the proceedings had in the above-entitled matter on the 31st day of July, 2015, and that the attached is a true and correct transcription of the proceedings so taken.

Dated at Onida, South Dakota this 30th day of August, 2015.

Cheri McComsey Wittler,
Notary Public and
Registered Professional Reporter
Certified Realtime Reporter

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