

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION



TransCanada Keystone Pipeline, : Case No.
LP, 30-Inch Oil Pipeline/ : PU-06-421
Cavalier to Sargent Counties :
Siting Application :

TRANSCRIPT OF
HEARING
(VOLUME I)

Taken At
State Capitol
Bismarck, North Dakota
September 5 & 6, 2007

BEFORE THE HON. AL WAHL
-- ADMINISTRATIVE LAW JUDGE --

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September 5-6, 2007

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COMMISSION.

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1 (The proceedings herein were had and made
2 of record, commencing at 9:01 a.m., Wednesday,
3 September 5, 2007, as follows:)

4 JUDGE WAHL: Good morning. I'm Al Wahl,
5 the administrative law judge designated by the
6 Office of Administrative Hearings pursuant to the
7 request of the Public Service Commission to act as
8 the hearing officer for the hearing on an
9 application for a waiver of procedures and time
10 schedules and consolidated applications for a
11 certificate of corridor compatibility and a route
12 permit authorizing construction of approximately
13 218 miles of 30-inch crude oil pipeline and
14 associated facilities in Cavalier, Pembina, Walsh,
15 Nelson, Steele, Barnes, Ransom and Sargent
16 Counties, North Dakota. This is Public Service
17 Commission Case No. PU-06-421.

18 This is a continuation of the hearings had
19 July 23, 2007, in Valley City, North Dakota, and
20 July 24, 2007, in Park River, North Dakota.

21 Before proceeding, I will ask the
22 Commissioners for their comments and for any
23 directions for this continued hearing. Commission
24 President Susan Wefald.

25 COMMISSIONER WEFALD: Good morning. I'm

1 happy that we can be here together today to
2 continue this important hearing. At the previous
3 hearings that we held we were able to take care of
4 some of the matters regarding the public
5 convenience and necessity certificate and now we're
6 today talking more about the siting of the hearing.

7 There are a number of questions that
8 were -- and concerns that were raised at the public
9 hearing both in Valley City and in Park River. I
10 plan to ask questions that relate to some of those
11 concerns and questions that were raised at that
12 hearing and I'm looking forward to a chance to do
13 that. Thank you.

14 JUDGE WAHL: Commissioner Tony Clark.

15 COMMISSIONER CLARK: I would just like to
16 welcome everyone this morning. Good morning.

17 JUDGE WAHL: Commissioner Kevin Cramer.

18 COMMISSIONER CRAMER: Thank you. Good
19 morning to everyone, great to see so many members
20 of the public, as well as the applicants, Mr.
21 Delaney and the intervenors.

22 As Commissioner Wefald said, we have heard
23 a lot of information, a lot of testimony the first
24 two days of this hearing from the public. I'm
25 very, very glad we were able to accommodate that.

1 I was especially appreciative of the many people
2 who stepped up, sometimes in difficult situations,
3 and let us hear what your concerns are.

4 The fact of the matter is that those first
5 two hearings or first two days of hearings provided
6 tremendous opportunity for us as commissioners to
7 formulate in our minds some of the questions. As
8 you know, it also provided opportunity for the
9 company to hear your concerns. And it gives -- as
10 it was noted by the -- as noted by the objection
11 that was at the time overruled, but noted, the
12 company has that advantage to some degree. But I
13 think it is a good advantage for all of us and that
14 they can -- have had the opportunity now to process
15 some of that, hopefully answer some of those
16 questions and direct the testimony. Certainly if
17 not, they will be asked in the cross-examination,
18 and then, depending on the whole timeline of
19 things, certainly there will be opportunity, as
20 well, as for some further comment and testimony
21 from the public.

22 Having said that, one thing I wanted to
23 make clear to all of you, and I did file an ex
24 parte communication on this, after the hearings in
25 Valley City, I did go out and looked at some land

1 belonging to Mr. Starke and Ms. Klein. After the
2 Park River -- the Park River hearing, I also
3 contacted Mr. Vaughn Zacharias, who testified in
4 Valley City, and went out to his land which is near
5 Kathryn, North Dakota, so I could get a firsthand
6 look at some of the sensitive areas and see exactly
7 for myself, get a perspective in my own mind of
8 exactly where some of the concerns are. Now, I
9 know that there are 218 miles of pipeline. I have
10 not seen every mile of it, but I have taken it upon
11 myself to do that and to educate myself as best I
12 can, and I appreciate those of you, Ms. Klein and
13 certainly to Mr. Zacharias, for accommodating that
14 and allowing me that opportunity.

15 With that, I look forward to the rest of
16 this important hearing and, I guess, Your Honor, as
17 you say, let's go to work.

18 JUDGE WAHL: The record will show that it
19 is 9:05 a.m., September 5, 2007, the time and the
20 date noticed for the continued hearing of an
21 application for a waiver of procedures and time
22 schedules and consolidated applications for a
23 certificate of corridor compatibility and a route
24 permit authorizing construction of approximately
25 218 miles of 30-inch crude oil pipeline and

1 associated facilities referred to as the Keystone
2 Pipeline in Cavalier, Pembina, Walsh, Nelson,
3 Steele, Barnes, Ransom and Sargent Counties, North
4 Dakota.

5 TransCanada requests the Commission waive
6 the procedures set forth in North Dakota Century
7 Code Sections 49-22-08 and 49-22-08.1 to allow for
8 a single consolidated application for a corridor
9 certificate and route permit and request that the
10 Commission reduce the minimum width of the corridor
11 from six miles to one mile in accordance with North
12 Dakota Administrative Code Section 69-06-04-02.

13 The Commission's notice of hearing
14 specified the following issues to be considered and
15 determined upon this hearing.

16 First, will a location construction and
17 operation of the proposed pipeline produce minimal
18 adverse effects on the environment, natural
19 resources, and upon the welfare of the citizens of
20 North Dakota.

21 2. Is the proposed pipeline compatible
22 with the environmental preservation and the
23 efficient use of resources.

24 3. Will the proposed pipeline corridor
25 and route minimize adverse human and environmental

1 impact while ensuring continuing system reliability
2 and integrity and ensuring that energy needs are
3 met and fulfilled in an orderly and timely fashion.

4 4. Is it appropriate for the Commission
5 to waive the procedures as requested in the
6 application, including the request for a single
7 consolidated application for a corridor certificate
8 and route permit.

9 Counsel, please state your appearance for
10 the record and identify your associates. Mr.
11 Kelsch.

12 MR. KELSCH: Thomas D. Kelsch for
13 TransCanada Keystone, and with me is Todd Kranda
14 and Jim White.

15 JUDGE WAHL: Mr. Delaney.

16 MR. DELANEY: Good morning, Your Honor.
17 Good morning, Commissioners. Nicholas Delaney with
18 the Rinke Noonan Law Firm in St. Cloud. I also
19 have with me at counsel table Gary Leistico from
20 our office. We are here on behalf of the Dakota
21 Resource Council, Merle and Linette Kratochvil,
22 Mark Novak, Ramona Klein and John and Janie Capp.

23 JUDGE WAHL: Mr. Binek.

24 MR. BINEK: My name is William Binek. I'm
25 chief counsel for the Public Service Commission.

1 Seated to my right is Patrick Fahn, who is a public
2 utility analyst with the Commission.

3 JUDGE WAHL: Is there anyone present this
4 morning who will testify other than people who will
5 testify on behalf of TransCanada and who will be
6 called to testify by Mr. Delaney as an intervenor?
7 Is there anybody present who intends to testify at
8 this hearing, either in support of TransCanada's
9 application or in opposition to it, other than on
10 behalf of TransCanada or as an intervenor? All
11 right. I'm sorry. So we do have a couple people.
12 Will you please meet with me and counsel also at
13 the noon recess so we can talk about how your
14 testimony will be presented and when that may be
15 done.

16 All right. Mr. Kelsch, when you're ready.

17 MR. KELSCH: Thank you, Your Honor. I
18 would call Mr. Dean Cowling to the stand.

19 JUDGE WAHL: Mr. Cowling, if you will have
20 a seat, please. Mr. Cowling, you testified for the
21 previous hearings and you understand, of course,
22 that your continued testimony continues under oath
23 and subject to the penalties of perjury?

24 THE WITNESS: I do.

25 JUDGE WAHL: Mr. Kelsch.

1 MR. KELSCH: Thank you, Your Honor.

2 DEAN COWLING,

3 having been previously duly sworn, was examined and
4 testified as follows:

5 DIRECT EXAMINATION

6 BY MR. KELSCH:

7 Q. Mr. Cowling, could you please state your
8 name and position with TransCanada Keystone for the
9 record?

10 A. My name is Dean Cowling, and I'm project
11 director for the Keystone Pipeline, LP, (Keystone).

12 Q. Can you please provide, I guess,
13 highlights for your professional qualifications?

14 A. I have approximately 17 years worth of
15 experience in the pipeline business. In
16 particular, over the last seven years I've had a
17 number of different leadership roles, which include
18 from 2000 to 2003, I was manager for TransCanada's
19 eastern business development group, which looked
20 after partially owned pipeline entities for
21 TransCanada in the eastern states, mainly in New
22 England. I was also responsible for developing
23 greenfield pipeline projects, as well as
24 participating on acquisition teams for TransCanada.
25 After that role, from 2003 to 2005, I moved into

1 field operations, where I was the director of field
2 operations and I looked after TransCanada's
3 infrastructure in northern Alberta. My
4 responsibilities included oversight for safety,
5 people, compliance, asset performance, and cost.
6 The assets that we looked after included
7 approximately 9,300 miles of pipeline,
8 approximately 33 compressor stations with power
9 rope put at 395 megawatts, approximately 750 meter
10 stations, two power plants, which had approximately
11 260 megawatts worth of power, and I was also -- in
12 that area we had approximately 5,600 landowners.
13 Oh, excuse me.

14 Q. How about from more recently, in 2005 to
15 2007?

16 A. In late 2005 I was moved back down into
17 Calgary where I moved into TransCanada's project
18 development and execution group. In February time
19 frame of 2006 is when I became involved in
20 Keystone. My duties or responsibilities for
21 Keystone include the overall project management of
22 the project, which includes scope, schedule, cost
23 and safety, also responsible for the oversight of
24 permits and land acquisition, engineering,
25 procurement, and construction management.

1 Q. Mr. Cowling, do you have a copy of your
2 resume with your professional qualifications? I
3 guess I'm showing you what's been marked as Exhibit
4 T3?

5 A. I see this, yes.

6 Q. Is that document your resume?

7 A. Yes, it is.

8 MR. KELSCH: I would offer Exhibit T3.

9 MR. DELANEY: No objection.

10 JUDGE WAHL: Mr. Binek?

11 MR. BINEK: No objection.

12 JUDGE WAHL: Exhibit T3 is received.

13 Q. (MR. KELSCH CONTINUING) Mr. Cowling, do
14 you believe that Keystone's application addresses
15 the elements required by the Public Service
16 Commission and the North Dakota Century Code?

17 MR. DELANEY: Objection, calls for a legal
18 conclusion.

19 JUDGE WAHL: Sustained.

20 THE WITNESS: I believe Keystone's
21 application addresses the elements required by the
22 North Dakota Century Code. The corridor
23 certificate application --

24 MR. DELANEY: Your Honor, I'd move to
25 strike.

1 JUDGE WAHL: Motion granted.

2 Q. (MR. KELSCH CONTINUING) You don't have to
3 answer, Mr. Cowling. Mr. Cowling, do you believe
4 the Commission has all the necessary information
5 required to issue the requested permits?

6 A. I believe all the information necessary
7 for the Commission to issue requested permits are
8 set forth in our application and Keystone has
9 addressed the elements in the Commission's
10 guidelines.

11 Q. And, Mr. Cowling, when the applications
12 were prepared, were they prepared pursuant to the
13 North Dakota Public Service Commission's
14 application guidelines for certificate of corridor
15 compatibility?

16 A. Yes.

17 Q. Mr. Cowling, what role did you play in the
18 preparation for the application for a certificate
19 of corridor compatibility?

20 A. I was responsible for the general
21 oversight of the preparation of the application.

22 Q. And what portions of the application were
23 you specifically responsible for?

24 A. I was responsible for Section A, project
25 description; Section C, need for the facility;

1 Section D.2.d.iii, economics of construction and
2 operations; Section D.2.d.v, commitment of portion
3 of the transmitted product for use in the state;
4 Section D.2.d.x, other existing or proposed
5 transmission facilities; Section D.2.f, economic
6 considerations; and Section D.6, permits, licenses,
7 approvals, and consultation requirements.

8 Q. What portions of Keystone's application
9 for route permit were you responsible for?

10 A. Section B.7, the direct and indirect
11 economic impacts of the proposed facility.

12 Q. And at the hearings back in July, you kind
13 of went into more detail about all of those areas?

14 A. We did, yes.

15 Q. Mr. Cowling, can you please elaborate
16 specifically on the scope of the project in North
17 Dakota?

18 A. The scope of the project in North Dakota,
19 I would start with the initial capacity for the
20 pipeline is currently designed at a nominal
21 capacity of 435,000 barrels per day. With the
22 successful open season of the Cushing extension
23 that we announced earlier this year, we plan to
24 expand the system to 591,000 barrels per day. The
25 435,000 barrels per day we plan to place into

1 service in November of 2009. And the Cushing
2 extension we plan to place into service in November
3 of 2010.

4 In North Dakota there are approximately
5 218 miles of NPS 30-inch pipeline in the counties
6 of Cavalier, Pembina, Walsh, Nelson, Steele,
7 Barnes, Ransom and Sargent. We plan to have five
8 pump stations in North Dakota located approximately
9 40 to 50 miles apart; 13 mainline valves, which
10 will be located approximately 15 to 20 miles apart;
11 four check valves; and we plan to operate the
12 system at 1440 MAOP.

13 Q. What does MAOP stand for?

14 A. Maximum operating pressure -- allowable
15 operating pressure.

16 Q. Can you provide the Commission with an
17 update on Keystone's overall project schedule?

18 A. Yes. Keystone overall has a number of
19 different regulatory applications that it must get
20 through, both federally in Canada and federally in
21 the United States, as well as state permits in the
22 United States. In Canada, TransCanada Keystone
23 filed what's called a section 74 for the conversion
24 of a gas pipeline to oil pipeline. We received
25 approval from the National Energy Board earlier

1 this year with that application. We also have
2 filed a Section 52 application in Canada, which is
3 looking for the approval to construct and operate
4 the pipeline. We have gone through hearings
5 earlier this summer. We anticipate approval or a
6 decision on the Section 52 application in November
7 of this year.

8 We have also filed with the United States
9 Department -- the DOS an application for a
10 presidential permit, which is required to cross the
11 Canadian-U.S. border, and part of that process, the
12 Department of State is the lead agency in our
13 environmental review.

14 Earlier this summer the Department of
15 State issued our draft environmental impact
16 statement. The draft environmental impact
17 statement tentatively concluded that the proposed
18 Keystone project would result in limited adverse
19 environmental impacts during construction and
20 operations and would be an environmentally
21 acceptable action. There is comment periods on
22 that DEIS that actually, I believe, begin today.
23 Keystone believes that we will be in a position to
24 have a final environmental impact statement issued
25 from the Department of State in November of this

1 year, and we expect that -- or our schedule would
2 plan to have a presidential permit in the first
3 quarter of next year.

4 Q. What about other state action?

5 A. We have also begun our applications in
6 those states where we are required to work through
7 state processes. To date we have worked through
8 Illinois. We filed an application in Illinois with
9 the Public Service Commission and that was approved
10 earlier this year. Currently we are working in --
11 working through regulatory processes in the State
12 of South Dakota and the State of North Dakota. The
13 remaining states that require a state regulatory
14 approval, we will -- our plan is to begin those
15 filings later this year or early next year.

16 Q. What's the status of the -- or what is the
17 proposed proposal for the project schedule for
18 construction?

19 A. Well, maybe what I would just also say is
20 that we are right now planning for our
21 environmental and nonenvironmental permits that are
22 required for construction. We plan to start to
23 file those applications later this year, as well.
24 As it relates to construction, based on the
25 timetable that I've outlined in our overall project

1 schedule, we anticipate construction to begin in
2 May of next year.

3 Q. When -- assuming that the permits are all
4 approved, when would you -- or Keystone plan to be
5 in service?

6 A. And, again, I think I mentioned this a
7 little bit earlier --

8 Q. Okay.

9 A. -- but we plan to have the first phase of
10 Keystone in service November 2009 and Cushing in
11 November of 2010.

12 Q. Will Keystone provide other witnesses and
13 testimony to support these applications?

14 A. Yes. In anticipation of the public
15 hearings that were held earlier this summer and
16 with the subsequent hearing dates that were -- and
17 the reason that we're here today, we will be
18 prepared with testimony and witnesses who will be
19 responsible for various elements of Keystone's
20 application. Keystone's witnesses will also
21 address in their testimony today and tomorrow
22 certain issues that were raised during the public
23 testimony in July. Those witnesses will be made
24 available over the next two days, and they include
25 Mike Koski, who will focus on pipeline routing;

1 Scott Ellis, who will focus on environmental
2 consequence; Buster Gray, focused on engineering,
3 land and construction; Heidi Tillquist, focused on
4 risk and consequence; Meera Kothari, focused on
5 pipeline integrity and pipeline safety; and Brian
6 Thomas, whose focus will be on SCADA, leak
7 detection and emergency response planning.

8 Q. Mr. Cowling, can you please provide
9 TransCanada's experience in developing, building
10 and operating crude oil pipelines?

11 A. TransCanada has participated in the
12 development, construction, operations and ownership
13 of two significant crude oil pipelines in the
14 1990s. These included Express/Platte and OCENSA.
15 TransCanada was involved in the development of the
16 1,700-mile Express/Platte crude oil pipeline system
17 between Hardisty, Alberta and Wood River, Illinois.
18 TransCanada was a 50 percent joint venture partner
19 with Alberta Energy Company in both the ownership
20 and operations from 1995 to 2000. The joint
21 venture constructed approximately 785 miles of new
22 24-inch pipeline across Alberta, Montana and
23 Wyoming. The initial capacity of Express was
24 approximately 180,000 barrels per day, transporting
25 Canadian crude oil to serve refineries in the

1 Rockies and interconnect with the Platte system.
2 The Platte Pipeline was then upgraded to deliver
3 its maximum capacity of 120,000 barrels per day to
4 connect with other pipelines and a refinery in Wood
5 River, Illinois.

6 The second pipeline was the OCENSA
7 Pipeline, which transports approximately 480,000
8 barrels per day of crude oil from the Colombian
9 oilfields over 500 miles across the Andes Mountains
10 to the Caribbean port of Covenas, Colombia.
11 TransCanada was a 50 percent owner of the operating
12 company and held a 17 and a half percent equity in
13 the ownership consortium. Construction of the
14 OCENSA Pipeline commenced in late 1995 and
15 operations and startup in 1997.

16 I would also say that, in going back to
17 Express/Platte, TransCanada sold its interest in
18 that asset to Alberta Energy Company in 1999 and
19 TransCanada also sold its interest in the OCENSA
20 Pipeline to Interprovincial Pipelines in 2000.

21 Q. Mr. Cowling, in July at the public
22 hearings there were several statements regarding --
23 or concerns by landowners regarding landowner
24 liabilities once the pipeline is operating. Can
25 you please provide Keystone's views and position

1 regarding liability of landowners once the pipeline
2 is operating?

3 A. I believe liability protection is provided
4 for landowners in the easement document where
5 Keystone agrees to pay commercially reasonable
6 costs.

7 MR. DELANEY: Objection, Your Honor. The
8 witness is giving a legal conclusion.

9 JUDGE WAHL: Overruled.

10 Q. (MR. KELSCH CONTINUING) You may answer,
11 Mr. Cowling.

12 A. To pay commercially reasonable costs and
13 indemnifies and holds the landowner harmless for
14 any loss, damages, claims or actions resulting from
15 Keystone's use of the easement, except to the
16 extent such loss, damage claims or actions result
17 from negligence or willful misconduct of the
18 landowner or its agents.

19 Q. Mr. Cowling, there were also several
20 statements made at the public hearing in July
21 regarding Keystone's land agents and their
22 treatment of landowners. Can you please provide
23 Keystone's views and position on landowner and
24 community relationships?

25 A. Keystone is committed to working with all

1 of the landowners along our Keystone Pipeline
2 corridor. We believe in treating landowners fairly
3 and respectfully, and Keystone will not tolerate
4 disrespect to landowners from Keystone core staff
5 or from third-party agents working on behalf of
6 Keystone.

7 Q. Mr. Cowling, you testified about the
8 portions of the application for corridor capability
9 and a route permit that you are responsible for.
10 Do you adopt those portions of those applications
11 as your testimony today?

12 A. Yes.

13 Q. Mr. Cowling, I believe you have in front
14 of you an exhibit, T4, that is. Could you please
15 tell the Commission what that document is?

16 A. T4 is the tree and shrub mitigation
17 specifications. I believe this is -- just let me
18 take a look at it. I believe this is TransCanada's
19 proposal for the tree and shrub mitigation plan.

20 Q. And also in front of you is T5, and is
21 that the Public Service Commission's tree and shrub
22 mitigation proposal?

23 A. Yes, I believe it is.

24 Q. And on T4 are the differences indicated in
25 red marking?

1 A. Yes, they are.

2 Q. Is another one of Keystone's witnesses
3 better able to address the specific differences
4 between the two policies?

5 A. Yes. I have been briefed on this and
6 support our proposal, but Buster Gray will be
7 speaking to that specification.

8 Q. Just for the Commission's benefit, it is
9 Keystone's position that you would propose to do
10 the tree and shrub mitigation as described in
11 Exhibit T4?

12 A. That is correct.

13 MR. KELSCH: I would move to admit
14 Exhibits T4 and T5.

15 JUDGE WAHL: Mr. Delaney?

16 MR. DELANEY: No objection.

17 JUDGE WAHL: Mr. Binek?

18 MR. BINEK: No objection.

19 JUDGE WAHL: Exhibits T4 and T5 are each
20 received.

21 MR. KELSCH: I have no further questions
22 of this witness, Your Honor.

23 JUDGE WAHL: Mr. Delaney.
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CROSS-EXAMINATION

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BY MR. DELANEY:

Q. Good morning, Mr. Cowling. Nice to see you again.

A. Good morning.

Q. I think my questions are going to be fairly brief because you set out the specifics of your involvement. If I understood you correctly, your involvement was focused on the permitting for the pipeline project in general, you oversaw that portion of it; is that correct?

A. That's one area, yes.

Q. Have you or anyone else on behalf of Keystone -- or has Keystone, for that matter, received any permit from any federal agency, specifically the Department of the Interior or the U.S. Fish and Wildlife, under the Endangered Species Act?

A. I don't believe so. We are currently working with all of the other agencies that we need to work with, and that path is being worked in parallel with the state applications.

Q. I guess I would ask then, are you in the process of receiving any such permits from the Department of the Interior, the U.S. Fish and

1 Wildlife under the Endangered Species Act?

2 A. No.

3 Q. Now, as for environmental impacts, should
4 I be directing those questions to you or should I
5 direct those to Mr. Ellis?

6 A. I think you should direct those to Mr.
7 Ellis.

8 Q. Are you familiar with the frequency volume
9 study that was submitted to the -- I believe it was
10 the Department of Interior for -- or Department of
11 State for the presidential permit?

12 A. I've reviewed that. Heidi Tillquist has
13 prepared testimony that will walk through that in
14 detail.

15 Q. And who from Keystone should I direct
16 questions about other alternative routes? Would
17 that be Mr. Koski?

18 A. That would be Mr. Koski.

19 Q. Generally if there were to be a leak in
20 this pipeline during operation, is there going to
21 be some reliance upon local resources, such as
22 police departments, fire departments, and so on?

23 A. Yes, there will be.

24 Q. And can you elaborate on that as to, you
25 know, what reliance there's going to be on those

1 agencies?

2 A. I can. This will be covered in detail
3 again by Brian Thomas, who will cover emergency
4 response planning.

5 MR. DELANEY: I don't have any more
6 questions for Mr. Cowling.

7 JUDGE WAHL: Mr. Binek.

8 MR. BINEK: Thank you.

9 **CROSS-EXAMINATION**

10 **BY MR. BINEK:**

11 Q. In your testimony you talked about the
12 pipeline in North Dakota and that there would be 13
13 mainline valves. Are those valves primarily for
14 safety, for the ability to shut off the flow of oil
15 in the pipeline in the event of a rupture or other
16 problem?

17 A. The valves are used both for operational
18 purposes and for safety purposes. As it relates to
19 pipeline integrity and safety of the pipeline,
20 Meera Kothari will walk through the design of
21 the -- and what went into the design and the
22 placement of the 13 valves.

23 Q. And the four check valves, what is the
24 purpose of the check valves?

25 A. Check valves are typically more used for

1 safety. I believe typically upstream or downstream
2 of rivers is an example.

3 Q. Is there someone that --

4 A. Meera Kothari will talk to that.

5 Q. Okay. This is kind of an odd time to be
6 asking questions, but I believe that you are the
7 company representative who can respond to questions
8 of the Commission relating to requirements that the
9 Commission normally incorporates into orders in
10 siting cases; is that correct?

11 A. That is correct.

12 Q. And you have received a copy of the
13 questions that I prepared relating to these issues,
14 haven't you?

15 A. Yes, I have.

16 Q. Okay. I'm going to go through those at
17 this point, realizing that this ordinarily would
18 come toward the end of testimony, but it really
19 doesn't matter that much.

20 Again, are you a representative of
21 TransCanada Keystone Pipeline, Inc., or Keystone --
22 I'll refer to the company as Keystone -- with
23 authority to bind Keystone to requirements set
24 forth by the Commission in its order?

25 A. Yes, I am.

1 Q. Does the company -- does Keystone agree to
2 hold a preconstruction conference prior to
3 commencement of any construction, which must
4 include a Keystone representative, its construction
5 supervisor and a representative of Commission
6 staff, to ensure that Keystone fully understands
7 the conditions set forth in a Commission order?

8 A. Yes.

9 Q. Does Keystone agree to comply with the
10 rules and regulations of all other agencies having
11 jurisdiction over any phase of the proposed
12 pipeline, and that it shall obtain all other
13 necessary licenses and permits and shall provide
14 copies of all licenses and permits to the
15 Commission prior to construction of the pipeline?

16 A. Yes. However, we will provide federal
17 permits and licenses for the pipeline, as well as
18 specific permits that apply to North Dakota.

19 Q. Does Keystone agree to inform the
20 Commission of its intent to start construction on
21 the pipeline prior to the commencement of
22 construction, and once construction has started,
23 that it shall keep the Commission updated on
24 construction activities on a weekly basis?

25 A. Yes.

1 Q. Does Keystone agree that the pipeline
2 shall be buried to a minimum depth from the ground
3 surface to the top of the pipe of 48 inches in
4 rangeland, 48 inches for cultivated land, 48 inches
5 at the bottom of the ditch for road crossings, and
6 72 inches across undeveloped section lines?

7 A. Yes, except in areas of consolidated rock.

8 Q. What do you mean by "consolidated rock"?

9 A. This is areas of pipeline construction
10 where it's very difficult to dig where there is
11 lots of rock, and in these areas we would propose
12 the pipeline be buried to a minimum depth of 36
13 inches.

14 Q. How would that determination be made?
15 Would you consult the Commission and seek
16 Commission approval of that deviation?

17 A. The 36 inches, I believe, still meets or
18 exceeds industry code for depth of cover.

19 Q. Well, I realize that, but the Commission
20 ordinarily requires 48 inches of cover, so my
21 question is -- there really isn't any criteria set
22 out as to what this consolidated rock situation is,
23 and I guess the question I have is, would you --
24 prior to installing the pipe in the manner that
25 you've set forth here, would you agree to seek --

1 to ask for Commission approval for that deviation,
2 from the 48 inches or 72-inch requirement to 36
3 inches?

4 A. Yes, we would.

5 Q. Does Keystone agree to construct and
6 operate the pipeline in the manner described in
7 Keystone's application as revised at the hearing
8 and late-filed exhibits and supplemental materials
9 and in accordance with all safety requirements?

10 A. Yes.

11 Q. And I believe that in the prior hearings
12 there was discussion about an emergency plan that
13 Keystone would have in place prior to the beginning
14 of operation of the pipeline; is that correct?

15 A. Could you restate your question, please?

16 Q. My recollection is at the hearings that we
17 had in July, there was discussion about an
18 emergency plan that the company would have in place
19 prior to the beginning of operation of the
20 pipeline. Is that correct?

21 A. Yes.

22 Q. And this is an emergency response plan?

23 A. Yes.

24 Q. And when will that be available?

25 A. I think as outlined during the public

1 testimony hearings that we had earlier this summer,
2 we plan to have that prepared for the first quarter
3 of 2009.

4 Q. And will there be an opportunity for the
5 Commission to review that plan and -- the
6 Commission or some other agency to review that plan
7 and provide input as to requirements in the plan?

8 A. Yes, we plan to -- the Department of
9 Transportation, PHMSA, will actually review that
10 plan.

11 Q. The Department of Transportation for who?
12 The North Dakota Department of Transportation?

13 A. No. I'm sorry. That's federally.

14 Q. Any agencies in North Dakota that would
15 have any input into this plan, the Health
16 Department or the North Dakota Department of
17 Transportation?

18 A. Well, yes, we will consult -- as we build
19 the plan, we will consult with the local agencies.

20 Q. Does Keystone agree to promptly report to
21 the Commission the presence in the permit area of
22 any critical habitat of threatened or endangered
23 species or of bald or golden eagles which Keystone
24 becomes aware of and which were not previously
25 reported to the Commission?

1 A. Yes.

2 Q. Does Keystone understand that all cultural
3 resource mitigation plans must be submitted to the
4 North Dakota State Historic Preservation Office for
5 approval prior to the start of any fieldwork and
6 construction activity, and does Keystone understand
7 and agree that if any cultural resource,
8 paleontological, archeological, historical or grave
9 site is discovered during construction, it must be
10 marked, preserved and protected from further
11 disturbances until a professional examination can
12 be made by the State Historical Society, a report
13 of such examination is filed with the Commission,
14 and clearance to proceed is given by the
15 Commission?

16 A. Yes.

17 Q. Does Keystone understand and agree that
18 all crossings of greater roads shall be bored
19 unless the responsible governing agency
20 specifically permits Keystone to open cut the road?

21 A. Yes.

22 Q. Does Keystone understand and agree that
23 all preexisting roads and lanes used during
24 construction must be restored to a condition that
25 will accommodate their previous use, and areas used

1 as temporary roads or working areas during
2 construction must be restored to their original
3 condition?

4 A. Yes, with the clarification that area used
5 as temporary roads or working areas will be
6 restored as close as practical to their original
7 condition.

8 Q. What does that mean?

9 A. In those instances it's very difficult to
10 monitor use before and use after, and I would
11 suggest that Buster Gray will walk through this
12 particular item in detail when he comes up to the
13 stand.

14 Q. Does Keystone understand and agree that
15 construction must be suspended when weather
16 conditions are such that construction activities
17 will cause irreparable damage unless adequate
18 protection measures approved by the Commission are
19 taken?

20 A. Yes.

21 Q. Does Keystone understand and agree that,
22 where available, at least 12 inches of topsoil or
23 topsoil to the depth of cultivation, whichever is
24 greater, over and along trench areas where cuts
25 will be made must be stripped and segregated from

1 the topsoil, that any area on which excavated
2 subsoil will be placed must also be stripped of
3 topsoil, and after backfilling is completed and
4 excess topsoil must be placed over the excavation
5 area, blending the grade into existing topography,
6 that topsoil must be replaced over areas on which
7 it was stripped only such subsoil is replaced?

8 A. Keystone agrees that, where available, at
9 least 12 inches of topsoil or topsoil to the depth
10 of cultivation, whichever is greater, over and
11 along the trench areas where cuts will be made will
12 be stripped and segregated from subsoil across all
13 agricultural lands. However, Keystone's proposal
14 before the Department of State, as reflected in our
15 construction, mitigation and reclamation plan, is
16 to strip over only the trench area only unless the
17 landowner requests stripping over the spoil area,
18 as well. Buster Gray will talk in depth about
19 this, if required, when he comes up to the stand.

20 Q. Of course, if the Commission requires that
21 this stripping be -- that the topsoil be stripped
22 from areas where excavated subsoil is placed, the
23 company will comply with that, won't they?

24 A. Certainly. Certainly.

25 Q. Does Keystone understand and agree that

1 reclamation and cleanup along the right-of-way must
2 be continuous and coordinated with construction?

3 A. Yes, but there may be a break in
4 reclamation in the fall and winter due to seasonal
5 weather conditions, which is, from our experience,
6 typical.

7 Q. Does Keystone understand and agree that
8 reclamation, fertilization and reseeding is to be
9 done by Keystone according to the Natural Resource
10 Conservation Service recommendations, unless
11 otherwise specified by the landowner and approved
12 by the Commission?

13 A. Keystone agrees that reclamation and
14 reseeding is to be done according to the Natural
15 Resource Conservation Service recommendations
16 unless agreed to by the landowner.

17 Q. You're not agreeing to approval by the
18 Commission?

19 A. In our proposal for the conditions, we've
20 agreed to follow the Natural Resource Conservation
21 Service recommendations and to work with the
22 landowners.

23 Q. And if the Commission requires that if the
24 specifications of the Natural Resource Conservation
25 Service recommendations are not followed, that

1 approval must be obtained from the Commission, will
2 you comply?

3 A. Yes.

4 Q. Does Keystone understand and agree that
5 its obligation for reclamation and maintenance of
6 the right-of-way will continue throughout the life
7 of the pipeline?

8 A. Yes.

9 Q. Does Keystone understand and agree that
10 the width of clear cuts through wooded areas and
11 shelterbelts shall be kept at a maximum 50 feet
12 where possible?

13 A. Yes. In shelterbelts, but it is not
14 possible to construct 30-inch pipeline in wooded
15 areas inside of a 50-foot cut in both a safe and
16 practical manner. Keystone will agree to keep
17 clear cuts through extended lengths of wooded areas
18 to 85 feet, which we believe to be safe.

19 Q. And why isn't it safe to construct in a
20 50-foot width with this size pipeline?

21 A. In our experience, 50-foot widths is not
22 enough room to move heavy equipment around and to
23 have the numbers of folks that we're going to have
24 working on the pipeline. So that's based on our
25 experience. Buster Gray will talk about

1 construction activities in a 50-foot right-of-way
2 versus 85-foot when he comes to the stand.

3 Q. Now, we're to trees and woody vegetation,
4 which we have two exhibits that have been placed
5 into evidence here. Are you going to talk about
6 these, or will that be Buster Gray?

7 A. I would suggest that Buster Gray will talk
8 about the tree and shrub mitigation specification
9 that Keystone has put into evidence.

10 Q. I do have one question for you. Number 16
11 on Exhibit T4, it says -- this is your proposal --
12 Keystone's proposal?

13 A. Yes, I'm looking at it.

14 Q. It says, "Tree/Shrub replacements planted
15 by Keystone shall be inspected once a year for
16 three years, on about the anniversary of the
17 plantings, on or shortly before October 1 of each
18 year, a report shall be submitted to the NDPSC
19 documenting the condition of replacement planting.
20 If after three years the survival rate is less than
21 75 percent, the Commission may order a one-time
22 additional planting." First of all, I have a
23 question concerning this "planted by Keystone."

24 A. Yes.

25 Q. Why was that inserted?

1 A. As part of our proposal, landowners will
2 have the ability to plant their own trees, and it
3 is our -- in our proposal we're suggesting if
4 landowners plant their own trees, that they would
5 be responsible for them and that we would not be
6 going back out onto their land three years running
7 to check on the trees.

8 Q. Well, in order to monitor the survival
9 rate of trees, doesn't it seem logical that since
10 the tree replacement is an obligation of Keystone,
11 that Keystone would monitor the survival rate of
12 the trees?

13 A. If the Commission has that opinion, then
14 we will support that position. Our position today
15 is -- after some discussion is what we've proposed.

16 Q. And then the last part of this paragraph,
17 why do you suggest only a one-time additional
18 planting if survival rate is less than 75 percent?

19 A. Well, from my perspective and in
20 discussions and the advice that I was provided by
21 the folks that are going to be talking to you later
22 today, the 75 percent seemed like a very reasonable
23 number from an environmental perspective, and the
24 one-time planting is our proposal as it relates
25 to -- you know, we're not a tree -- we're not a

1 tree maintenance company and we would suggest that
2 after three years, that we would meet that hurdle
3 and it would satisfy the Commission, would be our
4 belief.

5 Q. Are you aware that in the past the
6 Commission has always required additional plantings
7 unless there's a survival rate of at least 75
8 percent?

9 A. I'm not aware of that, no.

10 Q. And if the Commission required additional
11 plantings until there was a survival rate of 75
12 percent, I assume Keystone will comply?

13 A. Yes.

14 Q. Does Keystone understand and agree that it
15 must obtain approval from the Commission or from
16 Commission staff prior to any changes in the
17 pipeline route or structure locations?

18 A. Keystone will inform the Commission of any
19 changes in the route and it understands that it
20 must get a prior approval from the Commission or
21 Commission staff prior to changes outside of the
22 one-mile corridor or if the change would impact an
23 exclusion or avoidance area.

24 Q. This is the route, not the corridor.
25 You're not in agreement that you would need to

1 receive Commission approval for any change in the
2 pipeline route or structure locations along that
3 route?

4 A. Sir, this is our proposal.

5 Q. You will comply with the Commission?

6 A. Yes. And over the next -- over the next
7 two days, we'll have a number of witnesses talking
8 to some of these items, as well.

9 Q. Are you aware that the Commission has
10 always required approval for any changes in the
11 route or changes in structure locations along the
12 route?

13 A. I was aware of that.

14 Q. Will Keystone agree to provide the
15 Commission with a copy of the pipeline alignment
16 drawings, with alignment data, showing the pipeline
17 as built in hard copy and electronic versions and
18 an electronic version of the as-built pipeline that
19 can be imported into ESRI GIS mapping software, and
20 will Keystone provide those filings within three
21 months of the completion of construction?

22 A. Keystone will provide this information.
23 However, our proposal is no later than six months
24 after completion of the pipeline.

25 Q. Does Keystone understand and agree that

1 the authorizations granted by the corridor
2 certificate and route permit are subject to
3 modification by order of the Commission as deemed
4 necessary to further protect the public or the
5 environment?

6 A. Yes.

7 MR. BINEK: I have no further questions.

8 JUDGE WAHL: Commissioners?

9 COMMISSIONER CRAMER: Yeah, I have some.

10 JUDGE WAHL: Commissioner Cramer.

11 COMMISSIONER CRAMER: Thank you.

12 **EXAMINATION**

13 **BY COMMISSIONER CRAMER:**

14 Q. Mr. Cowling, I think most of my questions,
15 like the others, will be for other people. Can you
16 give me a brief description at least of what those
17 14 mainline valves and four other valves -- check
18 valves -- how intrusive they are and what do they
19 look like?

20 A. They will be aboveground fixtures, I
21 believe, subject to check, probably require in the
22 neighborhood of 50 feet of land required for them.
23 They will be fenced, as well.

24 Q. That's helpful. Thank you. In your
25 landowner liability testimony you talked about a

1 commercially reasonable cost. Could you give a
2 little bit of definition of what you understand
3 "commercially reasonable cost" would be?

4 A. Yes. In our dealings with landowners we
5 believe that we're negotiating with landowners
6 using fair market value for the easement agreements
7 that we are purchasing.

8 Q. Okay.

9 A. We have done and -- we have done high-
10 level appraisals in areas along our pipeline, as
11 well as we move through the land acquisition
12 process, there's also a need to actually do like
13 appraisals in the area, so we've done that, as
14 well.

15 Q. You also said in response to a question
16 regarding a lot of the landowner testimony that
17 people were on their land that were disrespectful
18 or had not received prior permission, of course,
19 you probably have seen some of the correspondence
20 with the Commission even prior to this process
21 beginning. And you said that Keystone's committed
22 to and believes in respecting landowners, will not
23 tolerate any disrespect by Keystone employees or
24 third-party vendors. Would you acknowledge that
25 there's been a problem with that up to this point?

1 website there's also a number to call if a
2 landowner is unhappy. So those are the two
3 avenues -- or two of the avenues.

4 Q. And do you keep track then of the number
5 of complaints that come in regarding -- from
6 landowners on those hot lines or complaint lines?

7 A. Yes, we do.

8 Q. And would you be willing to share those
9 numbers with the Commission?

10 A. I think at a high level we will be able
11 to. I don't have them with me. So what we will do
12 before -- before this afternoon is we can get those
13 numbers.

14 COMMISSIONER WEFALD: Thank you.

15 JUDGE WAHL: Commissioner Clark.

16 COMMISSIONER CLARK: Thank you.

17 **EXAMINATION**

18 **BY COMMISSIONER CLARK:**

19 Q. Mr. Cowling, you had noted that -- I think
20 you said you'll be starting regulatory processes in
21 other states that require siting -- I can't
22 remember what the date was -- next year or late
23 this year.

24 A. Yes.

25 Q. Are there states that do not require from

1 the state level state siting that you'll be
2 crossing?

3 A. There are. An example would be, I
4 believe, Nebraska does not have a state process
5 that we will be going through.

6 Q. In those states is it a county-by-county,
7 township-by-township, or is there just not state
8 oversight?

9 A. Typically -- typically county-by-county.

10 Q. You'd indicated that construction will
11 start next year. How does that coincide with --
12 say, if you don't have all your regulatory
13 approvals in order, whether it be a state like
14 Nebraska where you've got county-by-county
15 decisions, how is that coordinated?

16 A. In our detailed schedule next year we plan
17 to build two spreads worth of pipeline
18 construction, and those spreads are in the State of
19 North Dakota and also a second spread that would be
20 in southern North Dakota and enter South Dakota,
21 approximately 40 miles. So we've aligned our
22 construction plan to coincide with the regulatory
23 approvals and the regulatory schedule that we're
24 currently working towards.

25 Q. I guess my question is, though, what if

1 the most northerly county in Nebraska denies your
2 permit and you've already started construction in
3 the Dakotas, how does that work?

4 A. We believe that in our schedule and
5 through all of the consultation that we've done --
6 we've done a lot of consultation both from a
7 landowner relationship with open houses, through
8 relationships with agencies in each one of the
9 states, that we believe -- and our construction
10 plan, so Nebraska will be constructed in 2009, that
11 we have a schedule that will allow us to build.
12 And we believe that the route that we have in front
13 of the Department of State today is a route that
14 is -- as per the Department of State is
15 environmentally sound.

16 Q. Doesn't that tend to force the hand of
17 whoever are the last entities that are in the
18 approval process? If you've got 400 miles of
19 pipeline built and one state somewhere in the
20 middle that raises its hand and objects and says,
21 no, it needs to be 50 miles this way or that way --
22 I'm just -- how does this all work?

23 A. Again, similar to North Dakota, as we work
24 through processes in county-by-county processes,
25 folks will have the ability to provide comment to

1 us.

2 Q. But they need more than comment. I mean,
3 you need approval, too, at some point. What if
4 someone in the middle there says, no, sorry, we
5 don't go along with this particular route, I mean,
6 you have to do it somewhere else, and you've got
7 hundreds of miles already in the ground, I'm not
8 sure how from a process standpoint that works.

9 A. Well, again, it's a risk that the project
10 is taking, that's for sure. I'm not sure, again,
11 that -- Nebraska is further down the road for us,
12 we believe that we have plans in place, and we
13 believe that we've done the appropriate things
14 actually along the entire pipeline corridor to
15 ensure that, and we're following the regulatory
16 processes, both federally, state -- statewide, that
17 we're doing the right things.

18 Q. You had said in response to the question
19 about landowner liability -- I think you had opened
20 your statement by saying, "I believe," and I'm not
21 sure if that was sort of intentional or not, but
22 just so we have a clear record, is it a fact that
23 the landowner liability issues that you stated are
24 fact, or is it that you believe that that is the
25 case?

1 A. They are fact.

2 Q. Okay. Thanks. I also had a question
3 about the --

4 A. I should say -- if you don't mind -- and
5 when I say "fact," I'm not a lawyer. I've been
6 advised by legal counsel that that is to be true.

7 Q. Okay. With regard to the disrespect to
8 landowner issues, because I think all three of us
9 have concerns about that and we did hear a fair
10 amount of testimony from landowners that had
11 concern with regard to, shall we say, perhaps less
12 than user friendly land agents and things like
13 that, have actual changes been made to mitigate
14 this, or have the land agents that you have
15 themselves been spoken with, or should I address
16 those questions to Buster?

17 A. I would suggest that you direct those
18 questions to Mr. Gray.

19 Q. Okay.

20 A. Again, as I think I stated earlier, our
21 value at TransCanada and at Keystone is that we
22 treat people with fairness and respect, and I've
23 relayed that numerous times through the project,
24 and Buster will be able to give you an update on
25 that.

1 Q. Okay. Thank you. With regard to the
2 emergency response plan and some questions that Mr.
3 Binek had, would you have any concern with a
4 Commission finding that had some sort of contingent
5 finding or contingency that would give us an
6 opportunity to independently review that particular
7 document? I know you discussed complying with all
8 the federal rules, but from where I'm sitting, I
9 would think we would also want an opportunity for
10 North Dakota agencies not just to be consulted,
11 but, if they have a concern, to be able to come to
12 us and express the concern and have the Commission
13 make a finding on that, whether it be our division
14 of emergency response or Department of
15 Transportation, or whoever?

16 A. Again, we will -- it is our view that we
17 will get all those agencies that are required to
18 provide input into that plan involved in the
19 development -- the further development of the plan,
20 because, again, I think Brian will go through in a
21 lot more detail the plan that we have before the
22 Department of State and as filed as an exhibit with
23 the Public Service Commission, but our plan would
24 be to do that and to file that or provide that to
25 the Department of Transportation as per typical

1 pipeline processes.

2 Q. Specific questions about the route, which
3 witness is that going to be?

4 A. That will be Mike Koski.

5 Q. And just one final kind of question,
6 comment, which is with regard to the tree
7 replacement schedule and the questions that Mr.
8 Binek asked. I mean, just to give you a heads-up
9 on my own perspective and thinking on it, I think
10 our rationale for including those tree replacement
11 schedules is not so much -- it's an obligation to
12 the landowner, but it's also an obligation to the
13 citizens of the state, that it's a natural resource
14 that needs to be replaced and made sure that it's
15 brought up, so that's kind of the lens that I look
16 through on that and welcome any comment that you
17 have.

18 A. And, again, I understand your statement,
19 and Buster will go in -- actually go into the plan
20 in detail and provide a lot more details around our
21 proposal.

22 COMMISSIONER CLARK: Thank you.

23 JUDGE WAHL: Any further questions from
24 the Commissioners? Followup, Mr. Kelsch?

25 MR. KELSCH: Thank you, Your Honor.

REDIRECT EXAMINATION

1

2 BY MR. KELSCH:

3 Q. Mr. Cowling, in response to a question by
4 Mr. Binek, I guess he asked what consolidated rock
5 was. Is it your understanding that that would be a
6 situation where there was solid bedrock that you
7 had to dig through?

8 A. Yes.

9 Q. We're not talking just about rocky ground?

10 A. No.

11 Q. If -- I think in your --

12 A. I'm sorry. And Buster will talk about
13 that as it relates to construction practices, as
14 well.

15 Q. In your response to Mr. Binek concerning
16 that -- about perhaps seeking Commission approval,
17 I guess, for a determination of whether you would
18 go to the 36 inches rather than the 48 or 72 inches
19 of cover, are there -- if you can answer, are there
20 practical considerations in construction that might
21 make it difficult to get a full Commission approval
22 of that? Would we be seeking staff approval?

23 A. Again, I think -- and Buster will go into
24 this in more detail, but as relates to pipeline
25 construction, typically, as we showed in our

1 presentation in July, the manufacturing line going
2 down the pipeline right-of-way, it would need to be
3 a very timely decision in order not to hold up a
4 tremendous amount of resource along the pipeline
5 right-of-way.

6 Q. Concerning the approval of the pipeline in
7 the various states, a number of states -- or, I
8 guess, is it true that just North Dakota, South
9 Dakota and Illinois are the only states that
10 require or have an extensive siting process?

11 A. Yes.

12 Q. The other states, Nebraska, as
13 Commissioner Clark was talking about, it's more of
14 just certain filing requirements; as long as you
15 comply with those type of filings, the company
16 would expect to be able to put the pipeline in?

17 A. Yes.

18 Q. So then the company would not be taking a
19 large risk in constructing in North Dakota in 2008
20 and South Dakota later before getting to Nebraska?

21 A. No, I don't believe so. And, again, as we
22 work through our process in detailed routing -- and
23 we've done a lot of work as it relates to finding
24 the best alternative for a route, and that being
25 said, as we work through additional detailed

1 routing, we will manage what I would call route
2 refinements as we move through construction.

3 Q. When is construction proposed for
4 Nebraska?

5 A. Construction is proposed for Nebraska in
6 2009. That would be in the May time frame of 2009.

7 MR. KELSCH: I have no further questions.

8 JUDGE WAHL: Mr. Delaney?

9 **RE-CROSS-EXAMINATION**

10 **BY MR. DELANEY:**

11 Q. Mr. Cowling, are there certain aspects of
12 the emergency response plan that deal with problems
13 that could rise during the construction phase?

14 A. I think there's actually two documents.
15 One document is our construction, mitigation and
16 reclamation plan, which is the document I think
17 that refers to emergency response during
18 construction, and that document has been filed with
19 the Public Service Commission.

20 Q. So as for your overall emergency response
21 plan, there is or there isn't any portion of that
22 that deals with the construction problems?

23 A. It is operations. And, again, our
24 construction, mitigation and reclamation plan deals
25 with emergencies during construction.

1 Q. These liability issues with respect to
2 landowners that you've testified about, if I heard
3 you correctly, your testimony today concerning
4 landowner liability is based upon the advice and
5 the consultation you've received from your
6 attorneys -- or the Keystone Pipeline attorneys; is
7 that correct?

8 A. Different attorneys that we have working
9 on our land acquisition program.

10 Q. So is it fair to say that your testimony
11 concerning landowner liability is no more than the
12 opinion of Keystone or Keystone's attorneys?

13 A. Well, I think it's fair to say that that
14 statement is Keystone's opinion.

15 MR. DELANEY: Okay. That's all I have.

16 JUDGE WAHL: Mr. Binek?

17 MR. BINEK: I have no further questions.

18 JUDGE WAHL: Any further questions from
19 the Commissioners?

20 COMMISSIONER WEFALD: No.

21 COMMISSIONER CRAMER: No.

22 JUDGE WAHL: Thank you very much, Mr.
23 Cowling.

24 THE WITNESS: Thank you.

25 JUDGE WAHL: Mr. Kelsch.

1 MR. KELSCH: I would call Mr. Michael
2 Koski to the stand.

3 JUDGE WAHL: Mr. Koski, you have testified
4 for the previous hearings and you understand, of
5 course, that your testimony continues under oath
6 and subject to penalties of perjury?

7 THE WITNESS: Yes, I do.

8 JUDGE WAHL: Mr. Kelsch.

9 MR. KELSCH: Thank you, Your Honor.

10 **MICHAEL KOSKI,**

11 having been previously duly sworn, was examined and
12 testified as follows:

13 **DIRECT EXAMINATION**

14 **BY MR. KELSCH:**

15 Q. Mr. Koski, could you please state your
16 name and your position with Keystone?

17 A. My name is Michael Koski. I'm currently
18 project director of the technical team, the
19 consulting team assigned to the project,
20 responsible for engineering, permitting,
21 regulatory, and land acquisition activities.

22 Q. Mr. Koski, could you please generally
23 describe your qualifications and experience with
24 pipelines?

25 A. Yes. I've got 19 years of experience -- a

1 little over 19 years of experience with the design,
2 routing, assessment, and permitting of a number of
3 various types of pipelines, including crude oil
4 pipelines, natural gas pipelines, water slurry
5 lines, and refined product pipelines throughout the
6 United States and other parts of the world.

7 Q. Mr. Koski, do you have a resume here with
8 you?

9 A. Yes, I do.

10 Q. And I guess I'm showing you what's been
11 marked as T6 for identification. Is that your
12 professional resume?

13 A. Yes, it is.

14 MR. KELSCH: I would move to admit T6.

15 JUDGE WAHL: Mr. Delaney?

16 MR. DELANEY: No objection.

17 JUDGE WAHL: Mr. Binek?

18 MR. BINEK: No objection.

19 JUDGE WAHL: Exhibit T6 is received.

20 Q. (MR. KELSCH CONTINUING) Mr. Koski, does
21 the Keystone application -- or was the Keystone
22 application prepared consistent with the PSC's
23 application guidelines for corridor certificate
24 compatibility?

25 A. Yes, it was prepared pursuant to those

1 guidelines.

2 Q. Are you responsible for certain portions
3 of the Keystone application for a certificate of
4 corridor compatibility?

5 A. Yes, I am.

6 Q. What is the first section of the
7 application that you are responsible for?

8 A. This is Section B, titled studies. This
9 section addresses the documents filed by Keystone
10 with various agencies that evaluate environmental
11 impacts of the project. These documents are
12 attached to Keystone's application in Appendix A
13 through D. The contents of the application are
14 described in Section B. I'm responsible for
15 ensuring that these studies were completed and
16 submitted to the indicated agencies and provided to
17 the Commission in support of Keystone's corridor
18 application. Specific responsibility for preparing
19 the studies was delegated to appropriate technical
20 experts. If the Commission or staff has detailed
21 questions with respect to the content of individual
22 studies, I would direct the Commissioners or staff
23 to appropriate experts who will be present at this
24 hearing -- or are present at this hearing.

25 Q. Can you generally describe the nature of

1 the studies that were prepared in connection with
2 the application?

3 A. Sure. Keystone completed extensive
4 studies in the assessment and development of the
5 project and in support of this application. These
6 studies included extensive cultural resource,
7 biological, wetland, and engineering studies
8 associated with the resources that could
9 potentially be impacted. Such studies were -- the
10 results of such studies were utilized in the design
11 of the project in support of these applications.

12 Q. What is the second section of the
13 application that you're responsible for?

14 A. The second section is titled study area.
15 It's Section D.1. This area addresses the corridor
16 area that was studied by Keystone in selecting the
17 proposed route. Keystone studied a number of
18 potential routes in North Dakota as part of the
19 United States Department of State (DOS)
20 environmental review process under the National
21 Environmental Policy Act, or NEPA, and determined,
22 taking into account extensive public and agency
23 input that the proposed route is superior to other
24 alternatives from an environmental standpoint.

25 On May 2nd, 2007, the Commission granted

1 Keystone a waiver of the requirement that Keystone
2 study a six-mile-wide corridor and approved the use
3 of a one-mile corridor subject to the requirement
4 that Keystone conduct additional studies with a
5 potential adjustment if the Commission so directs
6 to address specific concerns.

7 Q. What does the study area cover?

8 A. The study area generally covers the
9 following research areas or topic areas. That's
10 research and investigations, effects of
11 technologies, direct and indirect environmental
12 effects, various route alternatives, irreversible
13 and irretrievable commitments and problems raised
14 by federal and state and local agencies.

15 Q. What is the third section of the
16 application that you were responsible for?

17 A. The third section of the application is
18 titled Section D.2.d.i, location and design. I'm
19 responsible for the first three paragraphs of this
20 section, which address the route selection process,
21 and I described that process generally in my July
22 testimony.

23 Q. What is the fourth section of the
24 application that you're responsible for?

25 A. This is Section D.2.d.viii -- Section

1 D.2.d.viii, monitoring of impacts. I am
2 responsible for the discussion of environmental
3 training and environmental inspection and post-
4 construction monitoring and maintenance programs
5 committed to by Keystone.

6 Q. Mr. Koski, could you elaborate on the
7 monitoring of impacts portion?

8 A. Yes. The monitoring of impacts portion,
9 Keystone will implement a post-monitoring
10 construction program, some of which is outlined in
11 the construction, mitigation and reclamation plan,
12 to ensure that reclamation obligations and
13 specifications and landowner commitments are met
14 following construction.

15 Q. Does Keystone employ an environmental
16 inspection force, or will it?

17 A. Yes. Other components of that section
18 include the training and inspection commitments.
19 Keystone will implement a detailed environmental
20 inspection program during construction, which will
21 involve environmental inspectors dedicated to
22 environmental inspection activities in each
23 construction spread conducted by the project.
24 Environmental inspection is conducted to ensure
25 compliance with commitments, permit conditions,

1 regulations and specifications.

2 Q. Does Keystone monitor and maintain the
3 right-of-way after construction?

4 A. Yes. Again, commitments are made to
5 landowners and through various permitting
6 processes, which Keystone will conduct a post-
7 construction monitoring program to ensure
8 compliance with those commitments.

9 Q. What is the fifth section of the
10 application that you're responsible for?

11 A. This is Section D.2.ix, existing and
12 proposed rights-of-way -- it's utilization of
13 existing and proposed rights-of-way as corridors or
14 collocation opportunities during the route
15 selection process. As testified in my July
16 testimony, Keystone did consider collocating with
17 existing rights-of-way as one of the -- what I
18 described as routing opportunities that we looked
19 for during the route selection process, and did not
20 identify suitable collocation opportunities for use
21 in North Dakota.

22 Q. Were any existing rights-of-way
23 considered, and, if so, what was considered?

24 A. During the initial route selection
25 process, when the delivery points of the project

1 differed somewhat from where they are today, we did
2 consider an alternative which paralleled portions
3 of the I-29 corridor. That was rejected even at
4 that time with those delivery points for a number
5 of reasons.

6 There's basically two ways that an
7 interstate corridor such as I-29 could
8 theoretically be utilized. The pipeline could be
9 routed within the interstate right-of-way or
10 adjacent to the right-of-way. Routing within the
11 right-of-way was rejected mainly because it's
12 inconsistent with the North Dakota DOT
13 accommodation manual for utilities, and that's not
14 uncommon in the U.S. with interstate highways,
15 mainly for safety and expansion concerns.

16 Now, we also rejected locating it along
17 the existing corridor adjacent to it for a number
18 of reasons. Interstates tend to involve a number
19 of overpasses and interchanges. These overpasses
20 and interchanges tend to spur development or
21 connect areas of development. This is residential
22 and commercial development. So routing along the
23 interstate, you're forced at each one of these
24 interchanges to deviate away from the interstate
25 highway, which, of course, increases the overall

1 length of the project, and since you're still on
2 private landowners, you increase the number of
3 landowners and the length that you impact
4 landowners.

5 And then subsequent to the rejection at
6 that time, the project delivery point shifted to
7 include Cushing, Oklahoma, which resulted in an
8 overall shift of the project to the west, which
9 took us further away from I-29 and eliminated it as
10 a suitable collocation opportunity.

11 Q. Which portion of the Keystone application
12 for a route permit are you responsible for?

13 A. I'm responsible for Section B.11 of the
14 route application section, problems raised by
15 federal agencies, other state agencies and local
16 entities. I'm responsible for the statement
17 regarding concerns raised by the United States Army
18 Corps of Engineers.

19 Q. Did the Army Corps of Engineers raise any
20 concern over the routing of the pipeline?

21 A. They did not raise any concerns that they
22 indicated could not be dealt with through the 404
23 permitting process, which Keystone must follow.

24 Q. Mr. Koski, you've testified that you're
25 responsible for a number of the portions of the

1 application for corridor compatibility and route
2 permit. Do you adopt those sections of the
3 applications as your testimony today?

4 A. Yes, I do.

5 Q. At the public hearing in July, you
6 testified concerning avoidance areas and testified
7 that the proposed route was located within 500 feet
8 of 23 residences, and I believe you testified that
9 Keystone has obtained waivers from 18 of the
10 homeowners and developed reroutes that avoided four
11 residences. You testified that left one residence
12 that there was no reasonable alternative to routing
13 the pipeline within 500 feet of the residence
14 without a waiver. Could you describe that
15 situation for the -- to the Commission? And I
16 think we do have an exhibit, which would be T7 in
17 front of you.

18 A. Yes.

19 Q. And I believe that's also up on the wall,
20 as well.

21 A. Yes.

22 Q. What is T7?

23 A. T7 is an aerial depiction of the residence
24 in question. This particular residence is located
25 in Section 33-Range 57 West-Township 141 North in

1 Barnes County. The figure shown -- the residence
2 in question is located where I'm indicating with
3 this laser pointer here. The yellow circle is the
4 500-foot radius from that residence, and the red
5 line is our currently proposed Keystone Pipeline
6 alignment. The alignment, as can be seen here, is
7 located approximately 425 feet from the residence,
8 so less than the 500-foot requirement. It is
9 constrained to the west by this pond, so routing
10 further to the west is not reasonable. And it is
11 located across the road -- the county road from the
12 residence.

13 Alternatives to place this -- the pipeline
14 further than 500 feet or 500 feet or more from the
15 residence would require routing a significant
16 distance to the west, adding length and additional
17 landowners and impact, or to the east, which would
18 route through the actual property of the residents
19 and would again add additional length, more road
20 crossings and impact additional landowners.
21 Therefore, there's no reasonable alternative for
22 this particular location.

23 Q. Is the proposed route up on Exhibit T7,
24 does that go across the property owned by the
25 individual that has the residence in that area?

1 A. I don't believe so.

2 Q. Has that individual -- he was not at -- or
3 they were not at either of the public hearings?

4 A. Not to my knowledge.

5 Q. Or did not testify, I guess I should say.
6 Also at the July hearing a Mr. Mathews testified
7 that the pipeline was located approximately 156
8 feet from his residence at one point in time. Has
9 Keystone rerouted the pipeline by the Mathews
10 property?

11 A. Yes, it has. We had heard --

12 MR. KELSCH: Excuse me, Your Honor. I
13 guess I would move to admit the T7 exhibit, map.

14 JUDGE WAHL: Mr. Delaney?

15 MR. DELANEY: No objection.

16 JUDGE WAHL: Mr. Binek?

17 MR. BINEK: No objection.

18 JUDGE WAHL: Exhibit T7 is received.

19 MR. KELSCH: And I'm not sure if I -- did
20 I move his resume, T6?

21 JUDGE WAHL: You did, Mr. Kelsch.

22 Q. (MR. KELSCH CONTINUING) Mr. Koski, you
23 have in front of you, I believe, an exhibit titled
24 T8.

25 A. Yes, I do.

1 Q. And that's on the wall, as well?

2 A. Yes, it is.

3 Q. Is that a map of Mr. Mathews' property and
4 the pipeline in that area?

5 A. Yes, it is.

6 MR. KELSCH: I guess I would move to admit
7 T8.

8 JUDGE WAHL: Mr. Delaney?

9 MR. DELANEY: No objection.

10 JUDGE WAHL: Mr. Binek?

11 MR. BINEK: No objection.

12 JUDGE WAHL: Exhibit T8 is received.

13 Q. (MR. KELSCH CONTINUING) Mr. Koski, could
14 you indicate to the Commission what T8 shows?

15 A. Yes. T8 is an aerial depiction of the
16 area of the Mathews residence, and this particular
17 property is located in Section 1-Range 58 West-
18 Township 130 North in Sargent County. And as shown
19 on the figure, the Mathews' residence is where I'm
20 indicating with the laser pointer. The red line
21 was an original -- or an earlier route that was
22 being evaluated. Subsequent to this initial route
23 being established and studied, the route was
24 shifted further to the east and is now in excess of
25 500 feet from the Mathews' residence. And that

1 route realignment had reoccurred actually in May of
2 2007, and it's probable that Mr. Mathews was not
3 aware that the route had changed at the time of his
4 testimony in July.

5 Q. Also at the public hearing a number of
6 people had expressed some concerns about the
7 location of the pipeline in the Fordville Aquifer
8 area. Can you describe how the process -- or
9 describe the process of how Keystone located the
10 pipeline in this area?

11 A. Sure. As I had testified in July, the
12 route selection process for a project such as
13 Keystone is a multi-step process involving a number
14 of iterations that solicits input at various stages
15 of its development from various entities and the
16 completion of studies and the route continues to be
17 refined. Back in late 2005, Keystone had a route
18 concept that was subject to extensive agency
19 discussions and input and also a number of public
20 open houses that were conducted in late 2005.
21 During those data collection activities and events,
22 we received a number of suggestions that the route
23 as proposed should be shifted to the west, perhaps
24 just to the west of Lankin, North Dakota, because
25 the route concept as indicated at that time

1 actually went through the Fordville Aquifer, and a
2 lot of concerns that we heard in July were also
3 voiced at that time, and we took that input and
4 looked at our route in a little more detail in that
5 area, balancing all the other issues that are
6 relevant to route selection, and ended up with the
7 route as currently proposed to the Department of
8 State and is before the Commission now.

9 Q. Did the North Dakota Department of Health
10 comment concerning on that, I guess, original
11 location or possible location?

12 A. Yes, they did, and they certainly
13 suggested we move to the west.

14 Q. And did they have any input into where the
15 route ended up or the current location of the
16 route?

17 A. I believe so, but I wasn't involved in
18 those particular discussions.

19 Q. Now, at the hearing we heard -- public
20 hearing in July we heard, I guess, concerns from
21 the number of the people in that Lankin, Fordville
22 Aquifer area that the current location was not
23 preferred because it crosses some intermittent and
24 perennial streams that drain from the route toward
25 the area of the Fordville Aquifer. Did you

1 consider these concerns in evaluating whether the
2 current proposed route is the best route in the
3 area?

4 A. Certainly whenever we receive input such
5 as was heard in July, we do consider that input and
6 evaluate possible alternatives, and there are a
7 number of issues to be explored related to those
8 concerns raised. One, of course, is the proximity
9 to the Fordville Aquifer and the risk and
10 consequence associated with that aspect, along
11 those lines, will be discussed by Heidi Tillquist
12 later today in her testimony. I will provide
13 testimony related to route alternatives that were
14 considered as a result of such suggestions.

15 Q. Could you please describe that alternative
16 analysis?

17 A. Sure. There was a number of people who
18 testified suggesting that the route should move to
19 the east of the aquifer, also a number suggested
20 the route should be located further to the west.
21 So we -- again, as part of the regular route
22 refinement process and the consideration of input
23 received from any source, we've developed a number
24 of alternative concepts to be explored and
25 contrasted with the proposed Keystone route.

1 Q. Mr. Koski, you have in front of you
2 Exhibit T9, which is also up on the board. Could
3 you tell the Commission what that document is?

4 A. Yes. Exhibit T9 is a map product showing
5 the proposed Keystone alignment, which is in the
6 center here as indicated by my pointer, and it's in
7 blue for those of you that have an exhibit in front
8 of you. It's difficult to see on the screen up
9 there, I realize. I'll try to point it out.

10 It also shows a possible alternative
11 concept to the east as was suggested by some. And
12 in going to the east -- this is the general area of
13 the Fordville Aquifer right here where I'm
14 indicating. And in going to the east, we need to
15 come back here and shift east to avoid other
16 aquifers and some HCAs and then --

17 Q. HCA would be what?

18 A. High consequence area. And then we've got
19 all these other aquifers down here that lie to the
20 east of our existing proposed corridor, so to
21 avoid -- if the suggestion is to avoid all these
22 aquifers, then we end up with a route alternative
23 that goes considerably east and has to then stay
24 east of the rest of these before it can come back
25 to the proposed Keystone alignment. And this

1 results in a total route alignment change or a
2 total affected route of 160 miles. When compared
3 with the proposed route --

4 Q. Mr. Koski, do you have an exhibit, a
5 comparison chart, as well, a T10 in front of you?

6 A. Yes. This is a comparison chart of
7 relevant statistics used in the comparison of
8 alternative routes.

9 Q. I'm sorry to interrupt you. You can go
10 back to your comparison then.

11 A. Sure. As indicated, a reroute to the east
12 of the aquifer involves a route length total of 160
13 miles, would be approximately 15 miles longer than
14 the proposed Keystone alignment, would involve more
15 water body crossings, involves approximately two
16 more miles of wetlands, and continues to be closer
17 to a number of other aquifers than the current
18 proposed project. In addition, this route concept
19 involves 358 tracts of land, 358 required easements
20 of the proposed Keystone route, and to date
21 Keystone has acquired 230 of those tracts on a
22 voluntary basis within that affected portion of the
23 Keystone route.

24 Now, the route to the west in red here is
25 a route located further to the west, and

1 suggestions during the hearing in July indicated
2 that it might be preferable to route west of the
3 drainage area leading to the Fordville Aquifer.
4 This requires a reroute approximately eight to nine
5 miles west of the current proposed Keystone
6 location. It puts it in a relatively flat and a
7 wet area. We developed this route concept, again,
8 indicated in red on your figures and by my pointer
9 up on the wall. This route concept is
10 approximately three miles longer than the currently
11 proposed Keystone and it involves approximately ten
12 times the quantity of wetlands than the proposed
13 Keystone alignment does currently, and that portion
14 of the preferred route affected by this route
15 requires easements from 118 tracts of land, and
16 Keystone has already voluntarily obtained 70 of
17 those easements on the current alignment.

18 So in summary, both of these alternative
19 concepts are inferior from an environmental impact
20 standpoint. They would affect a greater number of
21 landowners. And we maintain that the proposed
22 Keystone alignment represents the minimal
23 environmental impact and impacts to landowners.

24 Q. And to the environment, as well?

25 A. Yes.

1 MR. KELSCH: I would move to admit
2 Exhibits T9 and T10.

3 JUDGE WAHL: Mr. Delaney?

4 MR. DELANEY: No objection.

5 JUDGE WAHL: Mr. Binek?

6 MR. BINEK: No objection.

7 JUDGE WAHL: Exhibits T9 and T10 are each
8 received.

9 Q. (MR. KELSCH CONTINUING) Also at the
10 public hearings in July, there was some testimony
11 about some concerns of the location of the pipeline
12 in the area of the Sheyenne River and Lake
13 Ashtabula. Have you reviewed the location of the
14 pipeline with respect to these concerns? And I
15 guess I would show you exhibits that have been
16 marked as T11 and T12, and if you could as part of
17 your description describe what those documents are.

18 A. Sure. T11 is a map product indicating the
19 preferred Keystone alignment in blue and a possible
20 alternative concept developed in response to the
21 comment that you just mentioned, and that is
22 indicated in red. Exhibit T12 is a comparative
23 table, again, including the statistics relevant to
24 the comparison of route alternatives.

25 Q. What alternatives -- or could you describe

1 the alternatives that you've considered and what
2 your determination is or recommendation is?

3 A. Yes. I would first like to point out that
4 the area of the preferred route is in a relatively
5 flat area with little significant drainage towards
6 the Sheyenne River and Lake Ashtabula. The
7 suggestion in July was to shift approximately one
8 and a half to two miles to take it out of the
9 drainage area of the Sheyenne River. In doing so,
10 this puts it in the drainage of the Maple River,
11 which in fact drains into the Sheyenne, so it's
12 really still part of the Sheyenne River. But even
13 so, moving that line a mile and a half to two and a
14 half miles moves it closer to other shallow
15 aquifers and would involve crossing an estimated
16 one and a half more miles of wetland than the
17 current proposed route. So, again, we feel that
18 the proposed Keystone route represents -- minimizes
19 the impact to the environment and to the
20 landowners.

21 Q. Now, will Heidi Tillquist talk about the
22 risk of transport of the oil to the river in this
23 case?

24 A. Yes, she will.

25 Q. What -- you indicated that by moving it to

1 the east, you would be in another aquifer and river
2 drainage area. What would those be?

3 A. It moves it into the Maple River drainage,
4 which flows into the Sheyenne, so it's really still
5 part of the Sheyenne River drainage area. And it
6 also moves it closer to the -- to the aquifer
7 that's indicated -- right here. Sorry for those of
8 you I inadvertently hit with this pointer.

9 Q. Mr. Koski, do you have an opinion
10 concerning the proposed location of the pipeline
11 concerning its effect -- the effects it will have
12 on the environment, the natural resources and
13 citizens?

14 A. Yes. The proposed route and corridor was
15 developed, again, as I said, through many
16 iterations involving input from numerous sources,
17 agencies, landowners, the public in general, and as
18 a result of our extensive studies as I described
19 earlier, and it is -- and it is my opinion that the
20 route as proposed minimizes the impact to the
21 environment and to landowners of the State of North
22 Dakota.

23 MR. KELSCH: I would like to move to admit
24 Exhibits T11 and T12.

25 JUDGE WAHL: Mr. Delaney?

1 MR. DELANEY: No objection.

2 JUDGE WAHL: Mr. Binek?

3 MR. BINEK: No objection.

4 JUDGE WAHL: Exhibits T11 and T12 are each
5 received.

6 MR. KELSCH: I have no further questions
7 of this witness.

8 JUDGE WAHL: All right. Let's take a
9 brief recess. Let's recess until five minutes
10 until 11, please.

11 (Recess taken at 10:48 a.m. to 11:00 a.m.)

12 JUDGE WAHL: We're back on the record.
13 Give me a minute to get online. Mr. Delaney.

14 **CROSS-EXAMINATION**

15 **BY MR. DELANEY:**

16 Q. Mr. Koski, I see that you have some notes
17 up there at the witness stand with you. What are
18 those exactly?

19 A. I have talking notes associated with my
20 direct testimony I just provided.

21 Q. Who prepared those notes?

22 A. I did.

23 Q. I want to talk a little bit about the I-29
24 corridor alternative that you analyzed. You
25 mentioned that there were safety concerns with the

1 I-29 corridor. What exactly were those?

2 A. In the context of the possibility of
3 routing a pipeline within the right-of-way of an
4 interstate such as I-29, interstate highways, of
5 course, are limited access highways for safety
6 reasons, and the presence of a fairly substantial
7 construction operation for the installation of a
8 large-diameter pipeline certainly would represent a
9 significant restriction and distraction to drivers,
10 as well as the obvious hazard to workers associated
11 with the pipeline.

12 Q. Why do you say hazard to the workers? If
13 they were constructing it parallel to the corridor,
14 they wouldn't be actually on the roadway, itself,
15 would they?

16 A. That's correct. I believe I mentioned my
17 response was with respect to the construction of
18 the pipeline within the interstate right-of-way.

19 Q. And what is the concern with respect to
20 limited access? Does that have to do with any
21 emergency response that may be needed down the
22 road, or are you talking about limited access with
23 respect to construction processes?

24 A. With respect to the flow of traffic along
25 an interstate highway.

1 Q. Okay. And what -- why does that have any
2 bearing on safety concerns with respect to
3 construction of the pipeline?

4 A. The interstate highways are designed the
5 way they are to facilitate the movement
6 undistracted and free movement of traffic. The
7 presence of a large construction project
8 immediately adjacent to the highway for a long
9 distance is not consistent with that limited access
10 philosophy.

11 Q. No. I think construction happens on
12 highways all the time, but that aside, have you
13 done any studies that have indicated there's going
14 to be more traffic accidents or limited traffic
15 flow on I-29 because you would be constructing a
16 pipeline along or parallel to it?

17 A. No.

18 Q. Okay. So you have no basis for your
19 testimony that there would be safety concerns
20 related to the construction parallel to the I-29
21 corridor?

22 A. No, I suppose not.

23 Q. And when you're talking about limited
24 access to the interstate -- well, let me strike
25 that.

1 The current route, the roadways that exist
2 along the route that you're proposing, aren't a lot
3 of those roadways county roads and township roads?

4 A. Yes, we cross a number of county roads and
5 township roads.

6 Q. And in your emergency response plan, which
7 I understand is yet to be completed, is there going
8 to be some reliance on local resources, such as
9 fire departments and police departments, to respond
10 to any leak or other catastrophe that may occur?

11 A. I would defer any comments on the
12 emergency response plan to Brian Thomas, who will
13 testify as to its contents later today.

14 Q. Have you done any analysis of the
15 conditions of those roadways whatsoever near your
16 proposed route?

17 A. With respect to? For that purpose?

18 Q. With respect to accessing it and accessing
19 the pipeline in the event of a leak.

20 A. Again, emergency response considerations
21 will be discussed by Brian Thomas later in this
22 hearing.

23 Q. Have you -- and maybe this will be
24 directed to Mr. Thomas, as well, but have you done
25 any analysis of the resources available along your

1 proposed route, such as the fire departments and
2 the police departments, in those areas?

3 A. Again, that would be best directed to
4 Brian Thomas.

5 Q. Okay. And you also testified that the --
6 one of the reasons the I-29 corridor wouldn't be
7 preferred is because it would impede development
8 along the interstate. Is that correct?

9 A. That is not my recollection of my
10 testimony. I testified that the presence of an
11 interstate both coincides with existing
12 development, meaning the interstates are sited to
13 connect areas of commercial and residential
14 development, i.e., towns and cities, but also
15 frequent interchanges associated with interstates
16 do serve as a spark for development -- additional
17 development at interchanges. You certainly see
18 businesses develop and residential areas develop
19 associated with interchanges at interstates. Each
20 of those represent an impediment to or a constraint
21 for a pipeline routed along an interstate. That
22 pipeline then must route around those developments,
23 which increases the length and number of landowners
24 impacted.

25 Q. Do you have any specific examples of

1 developments along the interstate that you would
2 have to work around?

3 A. We would have to go around Fargo, for
4 example.

5 Q. And how much more additional mileage or
6 distance would you have to go?

7 A. I can't answer a specific amount because a
8 very quick assessment would show that the I-29 does
9 not go where we want to go, in the first place,
10 and, if it did, the number of interchanges and
11 cities located along the interstate very quickly
12 and obviously shows a number of deviations that
13 would be required, and any deviation from a
14 relatively direct route increases length and
15 impact.

16 Q. Which would increase the amount of money
17 Keystone Pipeline Company would have to expend on
18 their project?

19 A. Cost is one -- one result of an increased
20 length of any linear facility, but so is the amount
21 of potential for impact to the environment and to
22 landowners.

23 Q. And why is there more potential for
24 environmental impact?

25 A. It's the area of the project increases as

1 the route increases, the area of impact.

2 Q. So would there be more potential for leaks
3 the longer the pipeline is?

4 A. I would have to defer that question to
5 Heidi Tillquist on risk.

6 Q. I believe you stated during your testimony
7 that the Army Corps of Engineers doesn't have or
8 hasn't presented you with any concerns with respect
9 to the 404 permitting process.

10 A. They haven't presented any concerns that
11 would not be dealt with through the 404 process.

12 Q. That would not be dealt with in that
13 process?

14 A. Correct.

15 Q. So you don't yet know whether the Corps
16 has any concerns with respect to the 404 process?

17 A. Until we conclude the 404 process, we will
18 not know all the conditions that will be imposed on
19 the project through the agencies associated with
20 that process.

21 Q. When do you expect that process to be
22 completed?

23 A. Major approvals are expected in early
24 2008.

25 Q. I'd like to direct your attention to

1 Exhibit T7, and perhaps, if at all possible, if you
2 could, for the benefit of others here, get it back
3 up on the wall. Thank you. Who is the individual
4 property owner for this property depicted in
5 Exhibit T7?

6 A. I believe it is Wittenberg family.

7 Q. Now, you mentioned that if you were to
8 reroute the pipeline as proposed to the east, that
9 more landowners would be impacted. How many more
10 landowners would be impacted?

11 A. I do not know the specific number.

12 Q. But yet you know that more landowners
13 would be impacted?

14 A. There would certainly be more tracts of
15 land, yes.

16 Q. But you don't know if there would be any
17 more landowners impacted? I understand it would
18 involve more land and more right-of-way, but would
19 more landowners be impacted?

20 A. I don't specifically know if there are
21 more landowners impacted.

22 Q. And you mentioned if you were to reroute
23 it to the east, that you would then be putting the
24 pipeline on Wittenbergs' property; is that correct?

25 A. Yes, that's correct.

1 Q. So as it stands right now with the
2 pipeline to the west of the county road, who owns
3 the property to the west of the county road?

4 A. I do not know the ownership there.

5 Q. Have you given the Wittenbergs the option
6 of having the pipeline rerouted to the east so as
7 to have it more than 500 feet away from the
8 residence, but on their property?

9 A. I do not know if we've made that offer.

10 Q. So who is it at Keystone that determined
11 that there is no reasonable alternative in this
12 particular instance?

13 A. We have a team assigned to routing the
14 project. I am the overall manager of that team. I
15 have a number of managers that oversee that team,
16 as well, and there are a number of routing
17 engineers assigned to specific portions of the
18 project throughout the entire area of the project,
19 and it is a -- my assessment of the information
20 presented to me by that team would suggest, it is
21 my opinion, that there's no reasonable alternative
22 other than what is presented here.

23 Q. Are you an attorney, Mr. Koski?

24 A. No, I'm not.

25 Q. The changes that are depicted in Exhibit

1 T8, were any additional landowners impacted by
2 those changes?

3 A. Yes, there were.

4 Q. But the pipeline company went ahead and
5 made those changes?

6 A. I don't understand.

7 Q. Well, you didn't make the changes in T7
8 and one of the reasons you cited was because
9 additional -- well, I'm sorry -- additional land
10 would be impacted, but you went ahead and made the
11 changes in T8 despite the fact additional
12 landowners would be impacted. Is that correct?

13 A. I do not know that additional landowners
14 would be affected in T8.

15 Q. Okay. And you mentioned -- you mentioned
16 that you had obtained a certain number of easements
17 for the proposed route. Could you recite those
18 numbers for me again? I missed them.

19 A. Certainly. The portion of the Keystone
20 project as currently proposed that is affected by
21 the eastern alternative Fordville route concept
22 that I just testified to earlier, involves a total
23 of 358 tracts of land of which Keystone has
24 acquired to date 230 -- easements on 230 of those
25 tracts of land. The portion of the project

1 affected by the west alternative route concept at
2 the Fordville Aquifer requires 118 total tracts of
3 land and to date Keystone has acquired 70 of those.

4 Q. Is it your opinion that the Commission
5 should consider how many easements you've gotten
6 for your proposed route?

7 A. It is just information presented.

8 Q. Have you done any analysis or have you
9 contacted the landowners that would be impacted by
10 these proposed changes to see if they would
11 voluntarily sign an easement?

12 A. No.

13 Q. The easements really have nothing to do
14 directly, that is, with any environmental impacts
15 the project would have?

16 A. No, they do not.

17 Q. Now, I would like to direct your attention
18 to Exhibit T9. The areas on T9 depicted in blue,
19 which, if I look at the key on the bottom left, is
20 defined as drinking waters, can you elaborate on
21 exactly what those areas are?

22 A. I would ask that Heidi Tillquist describe
23 those later in her testimony.

24 Q. So you don't know exactly what those areas
25 are or what's within those areas specifically?

1 A. They're high consequence areas, but the
2 methodology by which they are developed, presented
3 and utilized is best testified to by Heidi
4 Tillquist.

5 Q. Can you elaborate on exactly what a high
6 consequence area is?

7 A. Again, I would ask that Heidi Tillquist
8 provide that answer later.

9 Q. So you don't know what a high consequence
10 area is?

11 A. I would suggest that Heidi Tillquist can
12 best explain that.

13 Q. And I only ask, Mr. Koski, because you
14 just testified that these are high consequence
15 areas, so I was just asking you to define it since
16 you did indeed use that terminology.

17 A. And I rely on the input of numerous
18 experts -- resource experts in the formulation of
19 route selection decisions. Route selection is a
20 multidisciplinary process that involves input from
21 a wide range of expertise, and that is not unusual.

22 Q. So based on the input that you received
23 from the others you've consulted with within the
24 company or outside the company, for that matter,
25 you never along the line were given a definition of

1 a high consequence area?

2 MR. KELSCH: Your Honor, I would object.
3 He's asked and answered that question a couple
4 times.

5 JUDGE WAHL: Well, actually, Mr. Koski,
6 why don't you just tell us what your understanding
7 is of a high consequence area.

8 THE WITNESS: My understanding of a high
9 consequence area is an area that's been defined by
10 the USDOT as an area of potentially higher
11 consequence as a result of outside influences, such
12 as a spill associated with petroleum products or
13 any other potential contaminant, and that these are
14 developed for consideration in the operations and
15 emergency response planning of a project that could
16 affect such resources.

17 JUDGE WAHL: Mr. Delaney.

18 Q. (MR. DELANEY CONTINUING) Are you aware of
19 whether Keystone or anyone on behalf of Keystone
20 has obtained a permit from any federal agency,
21 specifically the Department of Interior or the U.S.
22 Fish and Wildlife, for a taking under the Federal
23 Endangered Species Act?

24 A. No, I'm not aware of any such permit.

25 MR. DELANEY: Those are all the questions

1 I have.

2 JUDGE WAHL: Mr. Binek.

3 MR. BINEK: Thank you.

4 CROSS-EXAMINATION

5 BY MR. BINEK:

6 Q. When you talked about alternatives that
7 were looked at and you talked about existing
8 right-of-ways, those were existing right-of-ways
9 where there are other pipelines; is that what
10 you're talking about?

11 A. Yeah. In the route selection process we
12 look for -- again, what I've always referred to
13 them as routing opportunities, and certainly
14 routing along a similar-sized existing pipeline can
15 present favorable opportunities for routing, so we
16 do look for those, yes.

17 Q. And what pipelines did you look at?

18 A. We didn't find any running in the general
19 north-south direction that could be utilized, so we
20 didn't look at any in detail because they didn't
21 really go where we needed to go.

22 Q. How did you determine the point at which
23 your pipeline would proceed south from Manitoba
24 into North Dakota?

25 A. That's largely defined by the use of an

1 existing natural gas pipeline owned by TransCanada
2 that is being converted for use to crude oil, and
3 the use of that facility was a key objective in the
4 route selection, and that defined largely where the
5 pipeline enters North Dakota from Canada.

6 Q. Well, does that pipeline stop north of the
7 North Dakota-Canadian border?

8 A. I would have to defer to others with
9 respect to the logistics of utilizing that existing
10 facility and how it relates to the Keystone
11 project.

12 Q. Who would be able to talk about that?

13 A. I'm not sure exactly who here is best to
14 talk to it. I'm sorry.

15 Q. So you don't know if that pipeline
16 continued on to the east at this point?

17 A. I do know TransCanada Pipelines has
18 facilities that continue to the east of that point.
19 What ones they are and how they're utilized and how
20 they fit into their overall operating system I
21 cannot speak to.

22 Q. This -- referring to Exhibit T9, this
23 west -- Fordville Aquifer west reroute --

24 A. Yes.

25 Q. -- how far to the west of the present

1 pipeline does that run in the area of the Fordville
2 Aquifer?

3 A. It is approximately eight miles.

4 Q. And what were the reasons that you don't
5 think that that route should be used or utilized?

6 A. Well, it adds an additional three miles of
7 length to the overall project and it involves a
8 substantial number of wetlands through the area
9 that the western alternative passes through.

10 Q. Okay. I'll refer you to Exhibit T10, the
11 western reroute. Where are these -- okay. The
12 wetlands, we're talking about the --

13 A. It's the very bottom column there.

14 Q. It shows 56; right?

15 A. Yes.

16 Q. And corresponding Keystone section -- oh,
17 okay. That's 10?

18 A. Yes.

19 Q. Okay. When you talk about wetlands, what
20 is it you're referring to --

21 A. These are wetlands --

22 Q. -- fish ponds or swampy areas or what?

23 A. These are wetlands that are defined on
24 National Wetland Inventory mapping products. The
25 exact definition of a wetland, it's my

1 understanding, is fairly complex and I would have
2 to defer the explanation of the exact definition to
3 Scott Ellis here if you needed an exact definition
4 of what constitutes a wetland, but it comes from
5 federally published National Wetland Inventory
6 mapping products.

7 Q. And would it be possible for Keystone to
8 cross those wetlands?

9 A. It's certainly possible to cross them,
10 yes, but one of our routing criteria is to minimize
11 the crossing of wetlands.

12 Q. Okay. Further up in Exhibit T10 is
13 streams.

14 A. Yes.

15 Q. And the Fordville Aquifer western reroute
16 shows 29 streams, the corresponding Keystone
17 section has 80 streams.

18 A. Yes.

19 Q. So what kind of streams are we talking
20 about?

21 A. These are streams -- this includes both
22 intermittent and perennial streams. The vast
23 majority of these in both cases would be
24 intermittent, which for the majority of their
25 existence are dry, but we categorize -- for

1 purposes of route selection at this level, we
2 quantify all streams, including intermittent. And
3 the reason it's lower on the western reroute is
4 because it's an area -- it's a very flat, wet area
5 where the water is just not moving anywhere, it's
6 sitting there, so there's, of course, less
7 drainages to move it.

8 Q. How do you prioritize between those two?
9 You've got a whole lot more stream crossings on
10 your existing route and you've got more wetlands
11 crossing the western route.

12 A. Again, the wetlands we know are wet. The
13 vast majority of the intermittent streams are dry
14 at the time of crossing, and we have a number of
15 techniques available for crossing streams, whether
16 they are wet or dry, that will be vetted through
17 the Section 404 process.

18 Q. The additional length isn't really a major
19 concern, is it?

20 A. Other than that three miles is three more
21 miles of impact and three more miles of landowners.

22 Q. But if it resulted in protection to an
23 important aquifer, wouldn't it be worth a
24 three-mile additional length?

25 A. I think if protection of the aquifer is

1 the defining criteria associated with that, I would
2 defer the response to that to Heidi Tillquist with
3 respect to consequence analysis.

4 Q. Now, going to Exhibit T7, this residence,
5 Wittenberg, I think. Is that the name?

6 A. That's my understanding, yes.

7 Q. Have they been asked for a waiver?

8 A. I do not know.

9 Q. Who would know?

10 A. I think Buster Gray would maybe be able to
11 testify to that later today.

12 Q. And as far as getting your pipeline more
13 than 50 -- or more than 500 feet away from this
14 residence just really involves, once again, a
15 little bit more distance for your pipeline, a
16 little more length to your pipeline and crossing a
17 few more tracts of land?

18 A. Yes. And if it were to the east, would
19 involve two additional road crossings.

20 Q. When you talked about the tracts of -- the
21 easements for the east alternative, you said -- and
22 I didn't quite follow you, you talked about 358
23 tracts. Is that the number of tracts of land that
24 the east alternative -- or eastern Fordville
25 alternative would cross?

1 A. No. That is the number of tracts of land
2 that the existing Keystone proposed alignment
3 crosses in the area of the alignment that would be
4 affected by the eastern reroute.

5 Q. Okay. And how many -- do you know how
6 many tracts would be crossed by the -- if you went
7 with the eastern reroute?

8 A. I do not know, no.

9 Q. And of those existing tracts on the
10 current proposed route, you have 230 of the 358
11 that you've acquired easements on?

12 A. Yes, so far.

13 Q. And the same is true with the western
14 alternative, you've got 70 of 118 tracts on the
15 existing route that have been acquired?

16 A. That's correct.

17 Q. Do you know how many tracts would be
18 crossed by this western alternative?

19 A. I do not know.

20 Q. I'm going to refer to Exhibit T11. You
21 talked about this reroute -- the Ashtabula reroute,
22 and you talked about it changing drainage areas.
23 This map doesn't show the drainage areas, does it?

24 A. It does not, no.

25 Q. Do you have maps that would show those

1 drainage areas?

2 A. I do not have them here. The -- and,
3 again, this exercise came from a suggestion at the
4 July hearings by an individual who testified that
5 perhaps we should look at an alternative one and a
6 half to two miles to the west -- or to the east --
7 I'm sorry -- of the proposed alignment to avoid the
8 drainage of the Sheyenne River.

9 MR. BINEK: I have no further questions.

10 JUDGE WAHL: Commissioners. Commissioner
11 Cramer.

12 COMMISSIONER CRAMER: Thank you.

13 **EXAMINATION**

14 **BY COMMISSIONER CRAMER:**

15 Q. I have one sort of general question, first
16 of all, Mr. Koski, and that is, as I listen to your
17 testimony and I hear about all of the challenges of
18 kind of weaving in and out of these waterways,
19 whether they're aquifers, rivers, streams that lead
20 to aquifers and go west, you know, you're uphill
21 from one, you go east, you're in it, you know, you
22 go a mile and a half east, you go from one river to
23 another river. Given all of that -- and even your
24 characterization of it being minimal adverse
25 effect -- or minimize, I think, is the way that

1 you --

2 A. Minimize.

3 Q. Minimize the adverse effect. Minimizing
4 the adverse effect to me means the least bad as
5 opposed to creating minimal adverse effect. Given
6 that, was eastern North Dakota -- let me strike
7 that and start over.

8 At what point did TransCanada make the
9 commitment to use the entire length that it's using
10 of the existing gas pipeline north of the border?
11 In other words, was that decision made in a vacuum
12 prior to the big picture, or was that made as part
13 of the entire picture being in place, if that makes
14 sense to you?

15 A. It does make sense. Again, I have to
16 defer to others on the use of that particular asset
17 and how it best fits other operations and approval
18 processes in Canada, which I'm not familiar with.

19 Q. Sure.

20 A. But, certainly, that determination, as
21 well as routing efforts in southern Manitoba, were
22 conducted generally around this same time as us
23 routing in North Dakota. Very quickly, though, it
24 had to land on a control point, which was, of
25 course, the border crossing, which is a key

1 component of our route selection process.

2 Q. Okay. With that in mind then, I want to
3 talk about opportunities, forgetting the I-29
4 corridor for a while because I think you've covered
5 that pretty well. Are you familiar with, for
6 example, some of the gas pipeline corridors that go
7 from Canada into the industrial Midwest across our
8 part of the country?

9 A. I'm somewhat familiar, yes.

10 Q. Are you familiar with the Alliance
11 Pipeline, for example?

12 A. I know of it and generally where it is.

13 Q. Okay. How about the Northern Border
14 Pipeline?

15 A. Same level of detail.

16 Q. Because you testified that none of these
17 other opportunities went where we want to go --

18 A. Right.

19 Q. -- and they probably don't go to Patoka,
20 Illinois, specifically. I just raise those as two
21 examples of existing corridors -- sited
22 corridors -- those are gas pipelines -- that go
23 very close to Patoka, Illinois, and -- at any rate,
24 so I just wanted to get your familiarity with
25 those, because I'm trying to assess -- I want to

1 get in my mind that your company has adequately
2 looked at all of the other opportunities.

3 A. Certainly. And the use of those two
4 particular projects that you mentioned -- pipelines
5 that you mentioned do not allow the utilization of
6 the existing gas pipeline in Canada, and they also
7 do not support the other project objectives also
8 serving and delivering to Cushing, Oklahoma.

9 Q. Okay. Given your familiarity with those
10 two projects, is there any point where those
11 corridors cross where you intend the Keystone
12 Pipeline -- in terms of going south, is there a
13 point where those would cross that, where they
14 would hook up at that point and go into, say,
15 Oklahoma?

16 A. They run generally east-west and we're
17 running north-south, so we do cross them, but they
18 don't -- again, they don't really go where we need
19 to go. We need to serve delivery points and honor
20 delivery points in both Illinois and in Oklahoma,
21 so we have to strike a compromise that best serves
22 both of those.

23 Q. Okay. You've testified quite a bit and
24 most of the questioning has been centered around
25 the waterways, and maybe there will be somebody

1 later that will testify more with regard to -- I'm
2 thinking about cultural resource, but let me just
3 ask a couple questions about that and we can
4 redirect them to someone else, if necessary. Do
5 you recall the person that testified about the --
6 there were two hilltops -- it was actually Mr.
7 Zacharias down near Kathryn -- that he believes
8 contain Indian burial grounds. In fact, he dug one
9 up at one point. And I did go look at that land
10 and the stakes are quite close.

11 A. Yeah.

12 Q. Are you familiar with that particular
13 situation?

14 A. I recall the discussion, and I do believe
15 that Buster Gray will testify to that later
16 today --

17 Q. Okay.

18 A. -- to that specific situation.

19 Q. All right. Because there was also
20 somebody, Mr. Borgeson, I guess -- oh, no, he was
21 up in -- he was referring to the Fordville Aquifer.
22 There was another person, Mr. Bures, that testified
23 about some burial grounds on his land near Lankin,
24 and I suspect Mr. Gray will speak to that, as well.

25 A. Yes, I believe so.

1 Q. Do you know in general what -- well, let
2 me just ask it straight out. What is the procedure
3 if human remains are discovered during the
4 construction process?

5 A. There is an unanticipated discoveries plan
6 that is developed, filed with the North Dakota
7 State Historic Preservation Office, the Department
8 of State, acting as the lead federal agency, which
9 is approved in advance of construction, and the
10 details of that unanticipated discoveries plan
11 would be adhered to during construction in the
12 event that --

13 Q. Would it be safe to say, would you say,
14 that given that not all Indian burial grounds or
15 any burial grounds, for that matter, are documented
16 by the State Historic Preservation Officer or have
17 met whatever criteria is required to be documented,
18 that TransCanada would want to avoid those that
19 aren't documented officially, but might be known by
20 local residents and landowners? You would want to
21 try to avoid those, if at all possible?

22 A. What Keystone has done is completed
23 cultural resource surveys throughout the entire
24 project looking for just that, looking for
25 undocumented -- previously undocumented sites, and

1 the first goal has been avoidance for anything that
2 is deemed to be eligible or potentially eligible
3 for registration. And then in the unlikely event
4 that the surveys have missed something, then the
5 unanticipated discoveries plan, of course, is
6 established solely for that purpose of should
7 something be uncovered. But certainly the
8 preferred approach is to avoid areas.

9 Q. So then preferred approach is to avoid.
10 That to me says that there is -- once in a while
11 you have the unpreferred. The unpreferred you're
12 referring to then, I assume, is you accidentally
13 come upon them as opposed to, say, a mitigation, or
14 is that an alternative in some cases?

15 A. Again, I would have to -- perhaps this is
16 best directed to Scott Ellis, who will testify
17 later, as far as the specifics of mitigation, that
18 once avoidance is not the option, what the other
19 mitigation steps are, but certainly it has been
20 Keystone's approach to date anything that has been
21 potentially eligible we have been able to avoid.

22 COMMISSIONER CRAMER: I have nothing
23 further.

24 JUDGE WAHL: Commissioner Wefald.
25

EXAMINATION

1

2 BY COMMISSIONER WEFALD:

3 Q. Are you the right person to ask about
4 any -- questions about the crossing of the Pembina
5 Gorge?

6 A. I'm familiar with it to the extent I know
7 how we're intending to cross the Pembina River, but
8 as far as details, I would ask that those be
9 directed to Scott Ellis later.

10 Q. I noticed on the maps that were provided
11 by the company with their application, and I'm
12 specifically looking at map 1 of 10, and this is
13 general project location land ownership (North
14 Dakota), and it also indicates shallow aquifers as
15 well as land ownership in the legend --

16 A. Yes.

17 Q. -- that in that area that there's shallow
18 aquifers that the pipeline is crossing.

19 A. Yes.

20 Q. And then I also see that that crosses some
21 state land. So can you tell me how that particular
22 site was chosen -- that particular route for the
23 pipeline was chosen, because I know that many
24 people have a fondness for the beauty of that area,
25 and I'd just like to have --

1 A. Sure. And that location is designated
2 state forest that we are crossing. The crossing
3 technique associated with the Pembina crossing will
4 be what we call a directional drill, meaning we
5 will drill under not only the river, but all the
6 forested areas associated with the state forest, so
7 there will be no impact to the scenic quality or
8 the trees associated with that Pembina River
9 crossing.

10 Q. What is the depth of the drilling that's
11 done?

12 A. I can't recall the exact depth that our
13 current design shows, but the standard is a minimum
14 of 25 feet below the bottom of the river.

15 Q. But I'm talking about below the trees.

16 A. Below the trees. I can't -- I'd have to
17 look at the exact design, but it is in the tens of
18 feet.

19 Q. Can you please submit that to the
20 Commission --

21 A. Absolutely.

22 Q. -- for that drilling below the forest
23 area --

24 A. Sure.

25 Q. -- in that location?

1 A. We can provide a crossing.

2 Q. And the depth below the river in that
3 area?

4 A. Certainly.

5 Q. But I have a question then about that it
6 shows an aquifer -- a shallow aquifer immediately
7 underneath that, so what is the depth of a shallow
8 aquifer?

9 A. I'll have to defer that question to Heidi
10 Tillquist for later.

11 Q. Heidi Tillquist?

12 A. Yes.

13 Q. What the depth is of a shallow aquifer?

14 A. Yes.

15 Q. Okay. And then how many miles in wetlands
16 are on the total route, you know, in -- now I'm
17 talking about your western reroute of the Fordville
18 Aquifer --

19 A. Yes.

20 Q. -- as represented in T9. And you indicate
21 on T10 that it would increase the miles of wetlands
22 from .227 length in miles to 2.959 miles.

23 A. Yes.

24 Q. I'm curious about how many miles of
25 wetlands in total are on the -- that you cross on

1 the total route through North Dakota.

2 A. Through North Dakota. It is contained in
3 this application, if I can just have a moment to
4 locate it.

5 Q. I found acres, but I couldn't find miles.

6 A. If it is not in here, I can certainly
7 provide that information.

8 Q. I looked in Table 3 of the TransCanada
9 application and under water resources it talked
10 about -- at that time with the route that was
11 presented, it talked about approximately 197 acres
12 are wetlands.

13 A. Yes, I see that.

14 Q. But it doesn't tell me about miles.

15 A. Well, certainly --

16 Q. Or perhaps you could change your chart
17 that you present to us and tell us how many acres
18 of wetlands then would be affected by the western
19 reroute.

20 A. Sure. We could certainly do either.

21 COMMISSIONER WEFALD: I would just like to
22 ask my staff, would either of you have a preference
23 for how either might be helpful?

24 MR. BINEK: Why not do both.

25 COMMISSIONER WEFALD: Okay. Let's do

1 both.

2 THE WITNESS: Okay. We'll do both.

3 COMMISSIONER WEFALD: All right. Thank
4 you. And then --

5 JUDGE WAHL: Excuse me. Are these going
6 to be -- counsel, are these going to be -- are you
7 going to modify the exhibits? Now, the reference
8 was to -- Commissioner, what exhibit is the chart?
9 Is that --

10 COMMISSIONER WEFALD: The chart is T10.

11 JUDGE WAHL: T10. So, counsel, will
12 TransCanada file, say, a T10-A with the revisions
13 or the changes?

14 MR. KELSCH: Yes, we could do that.

15 JUDGE WAHL: Let's do that and note that
16 as a late-filed exhibit, please. And then the
17 second revision, Commissioner, was in what form --
18 the other information?

19 COMMISSIONER WEFALD: The other
20 information that I wanted was the -- he was going
21 to submit the depth of the drilling under the
22 Pembina Gorge under the trees and under the river.

23 THE WITNESS: Yes, we call it the drill
24 profile of the crossing.

25 JUDGE WAHL: Perhaps, counsel, let's go

1 down to the bottom of your list. T28 is a
2 late-filed exhibit re depth of drilling in the
3 Pembina Gorge for the placement of the pipeline.
4 All right. Thank you, Commissioner Wefald.

5 Q. (COMMISSIONER WEFALD CONTINUING) I'm
6 interested in further exploring the Fordville
7 Aquifer western reroute. Can you show me where
8 Lankin would be located on that particular map?

9 A. Yes, I can. Lankin is generally in --
10 it's hard for me to see it from here. I can see it
11 on here. It is roughly coincident with this
12 location here (indicating).

13 Q. Okay. And what does the WHPA stand for on
14 the map?

15 A. That stands for wellhead protection area.

16 Q. Wellhead protection area. Can you give me
17 a definition of wellhead protection area?

18 A. Again --

19 Q. A simple definition, your understanding.

20 A. My understanding is it's an area where
21 certain activities are restricted for the purposes
22 of protecting wellhead areas. A detailed
23 description as to what activities or what that
24 means or how the process, I would have to defer.

25 Q. All right. And then in looking at the

1 Fordville Aquifer western reroute, it looks to me
2 as if major roads, it's the same three.

3 A. Yes.

4 Q. Minor roads, it's one more. And other
5 roads, there's two more; is that correct?

6 A. Yes.

7 Q. And then you have -- railroads, you have
8 zero crossings versus three?

9 A. Yep.

10 Q. And you have only 29 streams that you have
11 to cross, though, in the western reroute; isn't
12 that correct?

13 A. Yes.

14 Q. Rather than 80?

15 A. Yes. Again -- I'm sorry.

16 Q. Yes.

17 A. I was going to say, again, the
18 categorization of streams at this level includes
19 all intermittent streams, which for the most part
20 are small drainage ditches, which are essentially
21 dry most of the year.

22 Q. All right. But you did classify them?

23 A. Absolutely.

24 Q. And then going down -- so the main -- but
25 it does affect more wetland areas?

1 A. It does, yes.

2 Q. Now, when the folks from Lankin were
3 testifying, at least one mentioned that -- he
4 mentioned a high water table in the Lankin area.
5 In fact, he said if you drilled down four feet, you
6 might encounter water on the land where the
7 pipeline was going to be going through. Are you
8 aware of that situation in the Lankin area?

9 A. I'm not personally aware of that situation
10 in the Lankin area, but it's certainly something
11 that is encountered in pipeline construction
12 routinely and does not pose an issue for pipeline
13 construction.

14 Q. Okay. And then do you have special
15 requirements that you're required to follow in
16 going through wetland areas imposed by the federal
17 government?

18 A. Yes, we do. And they are outlined in our
19 construction, mitigation and reclamation plan.
20 They will be finalized through the Section 404
21 process, but in general it involves a limitation in
22 the types of activities that can be conducted
23 within wetlands. There are in certain types of
24 wetlands topsoil stripping requirements. In
25 certain types of wetlands there is reduced

1 right-of-way requirements, things like routine
2 refueling of equipment and such other activities,
3 maintenance of equipment, are, of course,
4 prohibited within wetlands, storage of potentially
5 hazardous materials would, of course, be limited,
6 as well. And we have specifications on signage to
7 notify the construction force of the presence of
8 wetlands, the location of wetlands and descriptions
9 in the field as to what can and cannot be done
10 within wetlands.

11 COMMISSIONER WEFALD: Thank you. That
12 answered my questions at this time.

13 JUDGE WAHL: Commissioner Clark.

14 **EXAMINATION**

15 **BY COMMISSIONER CLARK:**

16 Q. I am curious about exploring this concept
17 that, I think, Mr. Binek brought up of how things
18 are prioritized, I mean, a wetland versus a
19 drainage or stream crossing, and the reason I bring
20 it up is to go back to the T9, the western
21 Fordville Aquifer reroute option. Why is it a
22 bigger deal to cross a wetland than an area that
23 generally drains into an aquifer? The reason I ask
24 is that you'd rather avoid wetlands if you can,
25 you'd probably rather avoid drainage areas into

1 aquifers if you can, but isn't the bigger potential
2 human impact on a drainage area going into an
3 aquifer as opposed to a wetland? I mean, I love
4 ducks. I've got a duck sticker on my car and a DU
5 calendar on my wall. But, I mean, if we're
6 prioritizing things, why is it -- why in Keystone's
7 mind was it an inferior option to go a little bit
8 west, cross a few more wetlands as opposed to being
9 a drainage area for an aquifer?

10 A. Well, in considering this issue, you have
11 to kind of step back and consider all aspects of
12 the issue. What I've presented so far is just the
13 locational comparisons and the locational
14 justification for where we are. There's a whole
15 other component that needs to be considered, and
16 that's safety, reliability and consequence, which
17 also must feed into the decision. So if we are
18 trading streams for wetlands for the sake of just
19 streams or wetlands, that's one thing; but when you
20 factor in the reason you're trading these streams,
21 most of which are dry, anyway, to wetlands, which
22 we know are wet, is for a safety and reliability
23 issue, then we should also consider at the same
24 time concurrent with that decision the safety and
25 reliability aspects. So I would suggest if we hear

1 from Heidi Tillquist later on the consequence
2 aspects of it, then that further supports where we
3 are. But that is the continual balancing act that
4 we do in the route selection process, is optimizing
5 our impact, and I don't like to say trading
6 resources for resources, but there is that decision
7 that needs to be made to optimize and minimize the
8 impact.

9 Q. Previously Keystone had moved the line
10 from over the aquifer to somewhere just west of
11 that --

12 A. Yes.

13 Q. -- after hearing some concerns. Is it a
14 big improvement to move an oil pipeline from over
15 an aquifer to just to the west of an aquifer when
16 the drainage of the area is all sloped back towards
17 the aquifer, or how much of an improvement is that?

18 A. Again, from a safety and reliability
19 standpoint, I need to defer that to later, but
20 certainly there are physical considerations, as
21 well. We heard testimony in July by others of the
22 physical nature of the Fordville area, crossing of
23 high water tables and streams and just an abundance
24 of water at or near the surface, and certainly that
25 is something we would like to avoid, as well, or

1 minimize.

2 Q. Moving to T11, which is the Ashtabula
3 exhibit and that potential reroute, I think you had
4 mentioned that you felt the reroute was an inferior
5 option because it was -- was the main reason that
6 it was closer to a -- I realize there was
7 potentially some more land affected or landowners,
8 but that the main sort of environmental reason was
9 that it was closer to an east aquifer?

10 A. Yeah. Actually, the more significant one
11 was, again, the quantity of wetlands that are
12 crossed by the alternative, but it does -- if we're
13 considering aquifers, if we're moving things for
14 the sake of aquifers, then moving them closer to
15 one in one place and further away from them in the
16 other place, we have to sort of approach it in a
17 consistent manner.

18 Q. It's still quite a ways from that aquifer,
19 though, isn't it?

20 A. Yes, it is.

21 Q. Just a quick question about -- well, I
22 guess this is just a reemphasize. I hope somebody
23 can be provided regarding the question of why to
24 enter North Dakota where you decided to enter North
25 Dakota, and I understand you said someone else

1 might better be able to address that, because it
2 does seem a lot of subsequent actions or at least
3 subsequent considerations that the Commission has
4 to take into our deliberative process stem from
5 that initial decision about where you enter the
6 state. If you enter where you do, you end up
7 crossing the Pembina River Gorge area, you get
8 pretty close to Fort Ransom, Lake Ashtabula, the
9 Fordville Aquifer. I mean, there's a number of
10 particular consequences of that particular
11 decision, and I'm curious about why not move a
12 little further east, a little further west, sort of
13 the feasibility of the pipeline if you made that
14 decision.

15 A. Sure. I guess, if I could point out, too,
16 if you look -- we've got it up there. If you
17 look -- say, we were to move more to the east as an
18 entry point, then you're drawing to play a lot more
19 aquifers than where we currently are. If you go to
20 the west, you've got, again, more aquifers, the
21 Devils Lake area. So there are unintended
22 consequences that result from shifting that control
23 point, as well, which then must be dealt with.

24 Q. Sure. And I'm just hoping we can have on
25 the record some discussion of that --

1 A. I understand.

2 Q. -- so it's more than just Commission
3 speculation. And the only -- just quick thing that
4 I wanted to tie up, as well, you talked about the
5 North Dakota DOT manual for operation. That only
6 deals with -- and that I-29 corridor -- if it's
7 actually in the I-29 right-of-way; right?

8 A. That's correct.

9 Q. That doesn't affect -- if it was adjacent
10 to it, that would not have an effect on it?

11 A. That's correct.

12 COMMISSIONER CLARK: Okay. Great. Thank
13 you.

14 COMMISSIONER CRAMER: I just have --

15 JUDGE WAHL: Commissioner Cramer.

16 COMMISSIONER CRAMER: Thank you.

17 **FURTHER EXAMINATION**

18 **BY COMMISSIONER CRAMER:**

19 Q. Just one more clarifying question, and
20 perhaps somebody else was going to ask it.

21 Commissioner Wefald asked about crossing the
22 Pembina Gorge. You responded by talking about
23 crossing the Pembina River. And that to you may
24 not be a real important distinction. It is to us,
25 because the gorge is a specific scenic area, and I

1 just want to be sure that we understand whether you
2 are actually crossing the gorge or if it's some
3 other part of the Pembina River that's being
4 crossed.

5 A. Okay. As far as the definition and
6 location of the gorge, I would have to ask somebody
7 else to respond to that.

8 COMMISSIONER CRAMER: I'd like that
9 clarified at some point.

10 THE WITNESS: Okay.

11 COMMISSIONER CLARK: That's a good point.

12 JUDGE WAHL: You're noting that, Mr.
13 Kelsch, I'm sure.

14 MR. KELSCH: Yes.

15 JUDGE WAHL: Of course. Anything further
16 from the Commission? Followup, Mr. Kelsch?

17 MR. KELSCH: Thank you, Your Honor.

18 **REDIRECT EXAMINATION**

19 **BY MR. KELSCH:**

20 Q. Mr. Koski, I guess responding to a couple
21 of comments concerning the I-29 right-of-way. As I
22 understood your testimony, a pipe of this type, is
23 it permitted in the right-of-way with the North
24 Dakota DOT manual or not?

25 A. According to the policy manual from the

1 North Dakota DOT, it would not be permitted.

2 Q. Then Mr. Cramer -- or Commissioner Cramer
3 asked you a question concerning, I guess, your
4 definition of minimal or minimize adverse effects
5 to the environment, natural resources and the
6 people of North Dakota. Do you have an opinion
7 concerning the location of the pipeline as to
8 whether it will have minimal or minimize the
9 adverse effects?

10 A. Well, I believe that the corridor as
11 currently proposed minimizes the effects associated
12 with the project on the environment and on
13 landowners.

14 Q. In these areas where we've talked about
15 other potential reroutes, would those -- in your
16 opinion, would those reroutes have a lesser or a
17 greater adverse effect on the natural resources,
18 environment and people of North Dakota?

19 A. It's my opinion that the alternatives I
20 presented today would have a greater environmental
21 impact than the preferred option.

22 MR. KELSCH: I have no further questions.

23 JUDGE WAHL: Mr. Delaney.

24 MR. DELANEY: Yes, I have some questions.

25

REXCROSS-EXAMINATION

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BY MR. DELANEY:

Q. Mr. Koski, you've referred a number of the environmental-related questions to, I believe it was, Ms. Tillquist. So is it your opinion that the route as proposed is going to have less of an environmental impact, or is that Ms. Tillquist's opinion?

A. It's my opinion.

Q. And what is that based on?

A. The collective input of a group of experts that have facilitated the route selection process.

Q. Your role -- can you define exactly what your role in this route selection process was, because I understood it to not be related to necessarily the environmental-related consequences.

A. Well, Heidi Tillquist will testify to environmental consequences associated with a leak or spill as part of the pipeline. The environmental impact I'm referring to is the environmental impact associated with the footprint affected by construction.

Q. I don't mean to beat a dead horse here, but I do want to go back to T9 and T10. You talked about this western reroute and you said that

1 there's a significant wetland area if you were to
2 use that western route; is that correct?

3 A. It crosses a lot more wetlands, yes.

4 Q. In these wetland areas there's not very
5 much -- if I understood your testimony, there's not
6 very much drainage from those wetland areas; is
7 that right? It's confined water, generally
8 speaking?

9 A. The water tends to stay there, yes.

10 Q. On the contrary, these streams that you're
11 crossing -- these 80 streams that you're crossing
12 on the proposed route, those streams all flow to
13 the east, toward the Fordville Aquifer?

14 A. Yes, they do.

15 Q. And you mentioned a number of times that
16 -- well, that some of these streams are
17 intermittent streams.

18 A. Yes.

19 Q. How many of these streams are intermittent
20 streams?

21 A. I do not have that number here, but the
22 majority of them would be classified as
23 intermittent.

24 Q. So you don't know how many, but you know
25 it's a majority?

1 somewhere, and it is certainly within a drainage
2 area that drains somewhere, just not to the
3 Fordville Aquifer. And in that particular location
4 the abundance of wetlands would suggest that
5 there's a certain amount of retention that occurs
6 before that water eventually drains somewhere.

7 Q. Okay. So the water levels would have to
8 rise considerably for any water to escape that
9 wetland area?

10 A. Or it may just be a slower process.

11 MR. BINEK: I have no further questions.

12 JUDGE WAHL: Any followup by --
13 Commissioner Clark.

14 **FURTHER EXAMINATION**

15 **BY COMMISSIONER CLARK:**

16 Q. Just quickly, you had mentioned a number
17 of times that the streams, most of which are
18 intermittent.

19 A. Yes.

20 Q. And I can't recall if you had mentioned
21 this in your testimony. Would the wetlands -- do
22 they tend to be permanent wetlands, or are they
23 intermittent, as well?

24 A. My understanding from the wetland
25 scientists is that a wetland is always a wetland.

1 Q. Although --

2 A. Even if there's no water in it.

3 Q. Okay. That was what I wanted to clarify.

4 Okay. So it may be classified by U.S. Fish and
5 Wildlife, or whoever does that classification --

6 A. U.S. Army Corps of Engineers.

7 Q. -- Corps of Engineers --

8 A. Yes.

9 Q. -- but it may be just as intermittent from
10 a dry standpoint as the streams are?

11 A. Yes.

12 COMMISSIONER CLARK: Okay. Thank you.

13 Anything further from the Commission?

14 COMMISSIONER WEFALD: No.

15 COMMISSIONER CRAMER: No.

16 JUDGE WAHL: Counsel, followup? Mr.

17 Kelsch?

18 MR. KELSCH: No.

19 JUDGE WAHL: Mr. Delaney?

20 MR. DELANEY: No.

21 JUDGE WAHL: Mr. Binek?

22 MR. BINEK: No.

23 JUDGE WAHL: All right. We'll be in
24 recess until one o'clock, but now before we leave,
25 I want to meet with all of the people other than

1 TransCanada witnesses and other than people you
2 will call as witnesses, Mr. Delaney -- I want to
3 meet with everybody else who is here today to offer
4 testimony either for or against the proposed
5 pipeline. All right? We'll be in recess -- I do
6 not need a court reporter, so we'll be in recess
7 then until one o'clock.

8 (Recess taken at 12:06 p.m. to 1:03 p.m.)

9 JUDGE WAHL: All right. Mr. Kelsch, when
10 you're ready.

11 MR. KELSCH: I would call Mr. Scott Ellis
12 to the stand.

13 JUDGE WAHL: Mr. Ellis, have you testified
14 previously for these hearings?

15 MR. ELLIS: No, I have not.

16 JUDGE WAHL: Mr. Ellis, your testimony, as
17 you observed and heard earlier this morning, is
18 required to be under oath and I'm required by law
19 to advise you regarding perjury before
20 administering the oath. Perjury is a false
21 statement of material fact which you do not believe
22 to be true; in other words, generally speaking, a
23 lie. In North Dakota perjury is a Class C felony,
24 punishable by a fine up to \$5,000, imprisonment for
25 a period of up to five years, or both. Will you

1 raise your right hand, please?

2 (Witness sworn.)

3 JUDGE WAHL: Mr. Kelsch.

4 MR. KELSCH: Thank you, Your Honor.

5 **SCOTT ELLIS,**

6 being first duly sworn, was examined and testified
7 as follows:

8 **DIRECT EXAMINATION**

9 **BY MR. KELSCH:**

10 Q. Mr. Ellis, could you state your name and
11 address for the record?

12 A. My name is Scott Ellis. I reside in Fort
13 Collins, Colorado.

14 Q. Could you describe your professional
15 experience for the Commission?

16 A. I have been an environmental consultant
17 for the last 32 years with primary responsibilities
18 for preparing environmental impact statements for
19 pipeline projects, as well as supervision of data
20 collection programs for biological resources,
21 cultural resources and other information needed for
22 state and federal permits.

23 Q. What is your technical background?

24 A. My technical background is as a plant
25 ecologist and I'm a graduate of Cornell University.

1 Q. What are your responsibilities for the
2 Keystone project?

3 A. I'm responsible for both -- well,
4 primarily supervising the collection of information
5 needed for state and federal permits for this
6 project.

7 Q. Mr. Ellis, do you have -- I guess, showing
8 you what's been marked as T13 -- Exhibit T13, what
9 is that document?

10 A. That is my resume.

11 MR. KELSCH: I would move to approve
12 Exhibit T13.

13 JUDGE WAHL: Mr. Delaney?

14 MR. DELANEY: No objection.

15 JUDGE WAHL: Mr. Binek?

16 MR. BINEK: No objection.

17 JUDGE WAHL: Exhibit 13 is received.

18 Q. (MR. KELSCH CONTINUING) What parts of the
19 corridor application were your direct
20 responsibility?

21 A. I have responsibility for several areas.
22 I can list them off for you.

23 Q. You can list them off. That would be
24 fine.

25 A. Okay. They are Section D.2.a, exclusion

1 areas; Section D.2.b, avoidance areas; Section
2 D.2.c.ii (1), selection criteria, impact on
3 noise-sensitive land uses; Section D.2.c.ii (2),
4 selection criteria, visual effect on the adjacent
5 area; Section D.2.c.ii (3), selection criteria,
6 extractive and storage resources; Section D.2.c.ii
7 (4), selection criteria, wetlands, woodlands, and
8 wooded areas; Section D.2.c.ii (5), selection
9 criteria, radio and television reception, and other
10 communication or electronic control facilities;
11 Section D.2.c.ii (7), selection criteria, animal
12 health and safety, that was a shared responsibility
13 with witness Heidi Tillquist; Section D.2.c.ii (8),
14 selection criteria, plant life; and, finally, the
15 Section D.5, maps that are attached to the
16 application.

17 Q. Which of the North Dakota PSC application
18 exclusion areas were considered in the pipeline
19 routing?

20 A. We considered all of the criteria included
21 in the guidelines.

22 Q. And what were those?

23 A. They were designated or registered
24 national parks, memorial parks, historic sites and
25 landmarks, natural landmarks, monuments and

1 wilderness areas, designated or registered state
2 parks, historic sites, monuments, historical
3 markers, archeological sites and nature preserves,
4 also county parks and recreational areas, municipal
5 parks, and parks owned or administered by other
6 governmental subdivisions. In addition, areas
7 critical to the life stages of threatened or
8 endangered animal or plant species and also areas
9 where animal or plant species that are unique or
10 rare to this state would be irreversibly damaged.

11 Q. How was the exclusionary analysis
12 conducted?

13 A. It was conducted in sort of several steps.
14 I think the first step was to begin to compile
15 information from a number of different published
16 sources, as well as databases, specifically sources
17 such as the Natural Heritage Database here in North
18 Dakota, cultural resources records, and also
19 ownership that were available in various state
20 databases. Sort of to support that, we had
21 meetings with a number of different agencies over
22 the past year to ask for input on issues and any
23 other areas of importance that we needed to be
24 aware of as we looked at routing the pipeline.
25 Also, we have been conducting field programs that

1 are supported by aerial photo reviews of the
2 landscape and then, again, we have had field crews
3 on the ground doing cultural and biological and
4 wetland surveys.

5 So when we're sort of done collecting all
6 the information that we've gotten from the field
7 and from various sources, we plotted that up on
8 maps and defined a study corridor that's a mile
9 wide and we plotted up those various criteria
10 resources on those maps, and then we're trying to
11 determine to the extent the pipeline, both the
12 corridor and the route, intercept those criteria or
13 guideline resources that I described earlier.

14 Q. What were the results of the exclusion
15 area analysis that you went through?

16 A. What our sort of findings on exclusion
17 area were that we would not intercept any defined
18 exclusion areas by the pipeline route, itself.
19 However, we will be -- the Ransom State Park is
20 within a one-mile study -- within our one-mile
21 study corridor and it's -- the state park occupies
22 less than 50 percent of the width of the study
23 corridor and the boundary of that park is
24 approximately a quarter of a mile to the east of
25 the pipeline route within the study corridor.

1 Q. So the route won't be -- is not in the
2 state park?

3 A. Correct.

4 Q. Did additional information collected by
5 the project after the April PSC application filing
6 change the conclusions of the exclusion area
7 analysis?

8 A. We did do some additional field surveys
9 for threatened and endangered species this summer,
10 and specifically for the prairie fringed orchid and
11 the Dakota skipper butterfly. We sort of defined
12 the suitable habitats for those species and
13 conducted ground surveys wherever we could obtain
14 access. We did not find those species during our
15 surveys this year.

16 Q. What do you do with those field survey
17 results? Do you file those or --

18 A. Well, those are filed with -- as we have
19 developed them, we have developed technical reports
20 that have been filed with the Department of State
21 and with the Fish and Wildlife Service, and, again,
22 they are available to support any of the permitting
23 efforts that are further needed.

24 Q. Has Keystone identified any areas where
25 animal or plant species would be -- that are unique

1 or rare would be irreversibly damaged?

2 A. We have not found any areas based on our
3 review of both our fieldwork and the data we've
4 examined, and we've also factored in the kinds of
5 construction -- what kind of project it is and the
6 fact that it's a temporary surface disturbance and
7 anticipate good recovery from -- after
8 construction.

9 I think we also received some early input
10 from the North Dakota Game and Fish Department that
11 indicated that -- they've stated we do not believe
12 this project will have any significant adverse
13 effects on wildlife or wildlife habitat, including
14 rare or priority species provided best management
15 practices are implemented. And that is included as
16 a letter in Appendix E of the application, so it's
17 been filed with the Commission.

18 Q. And that would be part of Exhibit, I
19 believe, T2 that's been already admitted.

20 Since, I guess, the additional information
21 that you have looked at since April, has that
22 changed your conclusions concerning the exclusion
23 areas?

24 A. It has not.

25 Q. Which North Dakota PSC application

1 avoidance areas were considered in the pipeline
2 routing?

3 A. We considered all of the Commission
4 avoidance areas that are contained in the
5 guidelines. They are designated or registered
6 national historic districts, wildlife areas, wild,
7 scenic or recreational rivers, wildlife refuges and
8 grasslands, designated or registered state, wild,
9 scenic or recreational rivers, game refuges, game
10 management areas, forest, forest management lands
11 and grasslands, historical resources which are not
12 specifically designated as exclusion or avoidance
13 areas and where facilities would be located within
14 500 feet of a residence, school or place of
15 business, reservoirs and municipal water supplies,
16 water sources for organized rural water districts,
17 and we've interpreted this to be the water supply
18 wellheads and the surface water supply intakes that
19 are located on rivers and reservoirs. So we used a
20 fairly specific definition of that and we can
21 discuss that further. Irrigated land, which does
22 not really apply to underground transmission
23 facilities according to the criteria, and areas of
24 recreational significance that are not designated
25 as exclusion areas.

1 Q. How was the avoidance area analysis
2 conducted?

3 A. We used the same data compilation and
4 mapping methods that we used for the exclusion
5 areas. Again, it was just another sort of source
6 of data that was input to our mapping system so we
7 could determine whether the route was going to
8 intercept any of these specific categories.

9 Q. What were the results of the avoidance
10 area analysis?

11 A. We determined that there are North Dakota
12 game management areas within the corridor, but, to
13 our knowledge, based on the ownership information
14 we have, that we don't believe that any are crossed
15 by the proposed pipeline route. The pipeline will
16 cross the Tetrault State Forest at the Pembina
17 River. I think we were referencing the Pembina
18 Gorge in prior discussions. And, again, because it
19 is a state forest, it's clearly one of the
20 components that we needed to consider. We've -- I
21 think one of the major sort of -- and we sort of
22 had an initial discussion via Mr. Koski's
23 testimony, but I think a key factor here is that
24 the pipeline will be installed in a way that it
25 will go down and under the river and up and not be

1 on the slopes of the river gorge, itself. It will
2 come out on flat ground on either side, and we will
3 not be looking at surface disturbance within the
4 gorge, itself, but we will document that with the
5 directional drilling plan that was requested
6 previously. And to date we have not received
7 specific objections from the North Dakota State
8 Forest. There have been some prior discussions
9 with them, but at this point, to our knowledge,
10 there's not a specific set of issues that they've
11 brought forward in this proceeding, but Keystone is
12 more than willing to continue to discuss
13 appropriate mitigation measures for that site.

14 Q. Has Keystone provided the horizontal
15 drilling information to the State Forest for that
16 area?

17 A. They have not yet. Other findings, the
18 pipeline will cross within 500 feet of 23
19 residences. Waivers for passing closer than 500
20 feet have been obtained from 18 landowners.
21 Pipeline reroutes were established to move away
22 from four residences, and then one residence was
23 not avoidable, and that's been previously discussed
24 in Mr. Koski's testimony.

25 Q. Mr. Ellis, I'm showing you what's been

1 marked as Exhibit T14. Could you tell the
2 Commission what that exhibit is?

3 A. It is a waiver of the 500-foot buffer zone
4 avoidance area requirement.

5 Q. And those are copies of waivers?

6 A. And these are copies of the 18 waivers
7 that were obtained by the project with the affected
8 landowners.

9 MR. KELSCH: I would move to admit Exhibit
10 T14.

11 JUDGE WAHL: Mr. Delaney?

12 MR. DELANEY: No objection.

13 JUDGE WAHL: Mr. Binek?

14 MR. BINEK: No objection.

15 JUDGE WAHL: Exhibit T14 is received.

16 Q. (MR. KELSCH CONTINUING) Mr. Ellis, will
17 the project cross any public water supply wellheads
18 or surface water supply intakes?

19 A. Based on the information we've been able
20 to compile and map, we do not -- the project does
21 not cross public water supply wellheads or surface
22 water supply intakes as we have defined them. We
23 acknowledge that the pipeline does cross shallow
24 and surficial aquifers that may indeed provide
25 water to water districts.

1 Q. Who will discuss the risk of pipeline
2 leaks and spills and operational safety measures?

3 A. Ms. Heidi Tillquist will talk about sort
4 of some of the risk and consequences issues, and
5 Mr. Brian Thomas will also deal with some of the
6 safety and operational issues related to the same
7 subject. And I think we sort of interpreted
8 that -- the pipelines do go under a number of rural
9 water distribution lines. Our interpretation of
10 that is that those are water transmission
11 facilities, and not water sources, so we
12 acknowledge there clearly is, you know, a need to
13 cross under those facilities, but we did not see
14 that as an avoidance criteria in and of itself.

15 Q. Did additional information collected by
16 the project after the April PSC application filing
17 change the conclusions of the avoidance area
18 analysis?

19 A. It didn't really change the -- well, we
20 did find, I mean, as we, I think, had some
21 additional inquiries with some of the state
22 agencies, specifically the Department of Health,
23 we've learned that we do -- that the pipeline would
24 cross a wellhead protection area and the floodplain
25 of the north branch of the Park River, but no water

1 supply wellheads would be crossed. So using our
2 interpretation, our conclusions concerning that
3 factor have not changed.

4 Q. Please provide an evaluation of the noise
5 impacts on sensitive land uses.

6 A. Well, primarily the sensitive uses are
7 rural residential areas and houses, people living
8 near the line, and for the most part we anticipate
9 that the majority of the construction spread will
10 be by any individual residence within a week to 30
11 days, although the total length of construction may
12 go on longer, but the large equipment will come by
13 relatively quickly and then the level of noise will
14 drop off as the cleanup operations come behind.

15 The other source of potential noise is --
16 well, it will be the pump station electrical pumps,
17 and they are electrical, they're not -- that's how
18 they'll be powered. And, again, we're looking at a
19 relatively rural location for these pump stations
20 and with -- while we won't say there's no
21 residence, there's no residence immediately nearby,
22 and the project is at this time continuing some of
23 its design in terms of exactly what kinds of pump
24 equipment they're going to use and what sorts of
25 noise is being generated, and from there there will

1 be a further assessment on noise impacts, but we
2 anticipate that the noise impacts can be -- can be
3 managed successfully.

4 Q. Regarding noise, will Keystone comply with
5 the state and federal and local regulations?

6 A. Yes, the project will.

7 Q. Provide an evaluation of the visual
8 effects on the adjacent area.

9 A. Well, because it's a buried pipeline, most
10 of the visual effects of the project will be
11 temporary within such a year, the project will be
12 obviously underground, and then areas that have
13 been disturbed will be reseeded. Those areas,
14 while may be visible for some time, will blend in
15 as that land recovers. There will be some local
16 changes in areas where the project cuts through
17 windbreaks and wooded areas that would be a bit
18 longer term.

19 The main aboveground features of the
20 project are the pump stations, themselves, and
21 there are -- they occupy a site of -- I think the
22 site, itself, tends to be around five acres, but
23 the actual footprint of the pump station will be
24 smaller than that, and they will be individual
25 pumps that will be aboveground, and there's at this

1 point not a specific plan to shield those stations,
2 but they are relatively small and will be located,
3 as I said, along rural roads where it's anticipated
4 they will be compatible with other buildings in the
5 area.

6 Q. Provide an evaluation concerning impacts
7 to extractive and storage resources.

8 A. Based on our review, the project does not
9 cross any active sand and gravel or quarries
10 anywhere along the route in North Dakota. It is
11 not to say that there isn't substantial deposits of
12 those minerals underlying the pipeline in various
13 areas that have not been exploited, but we think
14 that area is -- the amount of area that would be
15 constrained by the pipeline is relatively small
16 given the amount of resources that are available.

17 Q. Provide an evaluation concerning impacts
18 to wetlands, woodlands, and wooded areas.

19 A. Well, as it pertains to wetlands, at this
20 point we've estimated that the total wetland
21 impacts will be approximately 197 acres or about 6
22 percent of the total construction disturbance
23 within the state. The majority of the wetlands
24 we're talking about are -- we call them potholes
25 and shallow wet meadow wetlands, and in some cases

1 wetlands adjacent to small drainages.

2 Keystone will construct across these
3 wetlands in accordance with its construction,
4 mitigation, and reclamation plan that's been
5 previously described. And as a general objective,
6 the project does not intend to permanently fill
7 wetlands in the State of North Dakota. That's one
8 of our fundamental plans that we should be able to
9 do.

10 Keystone must obtain a 404 permit from the
11 Corps of Engineers, as well as a 401 water quality
12 certification from the State of North Dakota, and
13 those permits, should they be granted, will
14 certainly contain conditions that will ensure
15 protection of wetlands and other water bodies.

16 We've estimated that about 40 acres or
17 about 1 percent of this project surface disturbance
18 will occur in woodlands or wooded areas. The trees
19 will have to be removed from the construction
20 right-of-way in order to allow passage of
21 equipment, but those trees and shrubs will be
22 allowed to regenerate back up to a strip about 20
23 to 30 feet wide over the pipeline right-of-way so
24 that they'll have to be maintained in a herbaceous
25 or, you know, covered with grass or very low shrubs

1 so there would be ability to see those areas from
2 aerial patrol, so it's just kind of a basic safety
3 requirement that wherever we cross woodlands, we'll
4 need that strip.

5 Q. Provide an evaluation concerning impacts
6 to radio and television reception and other
7 communications or electronic control facilities.

8 A. Based on our evaluation, we do not go next
9 to or will interfere in any way with broadcast
10 towers or other broadcast facilities. Operation of
11 the pipeline system would involve some very small
12 receivers and transmitters that would have to be
13 licensed and operate within a -- within approved
14 frequencies. In fact, I think as -- and perhaps
15 Mr. Thomas can elaborate on this in his testimony,
16 some of these systems will be operated as -- like
17 telephone systems as opposed to sort of independent
18 transmitters and receivers. So we're not seeing
19 that there will be an issue between pipeline
20 operations and broadcast facilities.

21 Q. Provide an evaluation concerning impacts
22 to animal health and safety as it pertains to
23 effects on habitats and populations.

24 A. We anticipate that as the pipeline
25 traverses the state that clearing operations will

1 remove habitat wherever the soil has been disturbed
2 and mobile animals will move away and some
3 burrowing animals and less mobile animals will be
4 lost. Again, this is a linear project that extends
5 over a long distance, so it's not confined to any
6 one habitat. It's sort of stretched out over a
7 long distance, so we anticipate that sort of, I
8 will call, population level effects are going to
9 be, you know, relatively minimal.

10 Water withdrawal will come from --
11 probably come from perennial streams, larger water
12 bodies, and these will be short-term withdrawals
13 and then the water will be used and then returned
14 to that water body in accordance with permit
15 requirements, and, again, we're going to expect to
16 have to get a hydrostatic discharge plan that will
17 specify what can be returned where.

18 In the long term from sort of a wildlife
19 habitat standpoint, there may be a need to mow and
20 cut woody vegetation from the right-of-way in
21 wooded areas, but, again, these are relatively
22 small areas, but, again, there will be some minor
23 maintenance activities that will occur along the
24 line over the life of the project.

25 Q. Provide an evaluation concerning impacts

1 to plant life.

2 A. I think the major sort of finding here is
3 that about 70 percent of the project surface
4 disturbance will occur in agricultural lands that
5 are annually tilled. So, again, they're primarily
6 lands that have already sort of been taken out of,
7 we'll say, native habitats and are being used for
8 agricultural purposes. Another major component are
9 grasslands, of which we've estimated around 12
10 percent of the surface disturbance will be in
11 grasslands that range from pastures and reseeded
12 areas to a limited number of native prairie areas.
13 And I think I've kind of covered wetlands and
14 woodlands previously.

15 Q. Okay. How were the maps included in the
16 application prepared?

17 A. We developed -- well, really there are
18 sort of two sets of maps. One set is a
19 topographic-based map that was attached to the back
20 of the application. That includes the route and
21 the corridor and the mileposts, but provides sort
22 of an overview of the topography that the project
23 crosses. The second set of maps are sort of paired
24 with the first one, is the corridor -- the study
25 corridor that we've used for the analysis and then

1 the various guideline factors, exclusion and
2 avoidance areas, that occur in or near that
3 corridor. So those are really the substance of the
4 mapping that we've done and those, as I've said,
5 are attached to the application.

6 Q. What parts of the route permit application
7 were your responsibility?

8 A. I was responsible for irreversible and
9 irretrievable commitments of natural resources
10 should the proposed site corridor or route be
11 designated and, also, coordination with federal and
12 state agencies, and specifically the U.S. Fish and
13 Wildlife Service, the North Dakota Game and Fish
14 Department, the North Dakota State Health
15 Department and the North Dakota State Historic
16 Preservation Office. Those were sort of my areas.

17 Q. Provide an evaluation concerning
18 irreversible and irretrievable commitments of
19 natural resources.

20 A. The primary long-term commitment of
21 resources is the use of land to install aboveground
22 facilities, pump stations and valves. And, again,
23 these will be in place for the life of the project
24 and have to be used for those purposes. We've
25 estimated that about 1,413 acres of permanent

1 50-foot-wide right-of-way will remain, although it
2 can be used for existing land uses. The only thing
3 that cannot be done is structures can't build on
4 it, so that represents a commitment of land for
5 long-term uses that limit, you know, the full range
6 of uses on that land. And then, again, we will be
7 developing -- there will be minor maintenance of
8 vegetation communities in shrublands and woodlands
9 that are needed for aerial patrol visibility.

10 Q. What size area would that be, or do you
11 know?

12 A. It's about 20 acres, is what we've
13 estimated in those kinds of wooded areas.

14 Q. Describe the consultations with federal
15 and state agencies that were used to develop this
16 application.

17 A. Start with the Fish and Wildlife Service.
18 There has been sort of two different areas of
19 interaction with the service. One area is we have
20 been interacting with the refuge staff that
21 administer the easement program that the Fish and
22 Wildlife Service has here in North Dakota and South
23 Dakota. The Fish and Wildlife Services had a lot
24 of input in terms of trying to figure out ways to
25 minimize impacts to their wetland easements, as

1 well as their provision of recommendations on how
2 to construct across some of these wetland areas,
3 and the project has made some adjustments at their
4 recommendation to reduce effects on those easements
5 as well as wetlands in general.

6 The other major interaction with the Fish
7 and Wildlife Service is that we're developing --
8 we're conducting field programs and consultations
9 with the service on behalf of the Department of
10 State to provide the technical information to
11 service needs to develop a -- either a concurrence
12 letter or a biological opinion for the project, and
13 that information is in the form of field survey
14 reports and draft biological assessments.

15 North Dakota -- sort of moving on, North
16 Dakota Game and Fish Department, again, early on we
17 interacted with them to identify sensitive areas
18 that they were concerned about, and they have
19 provided a feedback in letter form, and we've
20 continued to interact with them over the past
21 several months as the project has evolved.

22 North Dakota State Health Department, I
23 think the major focus there was to identify
24 aquifers, wellhead areas, water supply sources,
25 and, also, we're going -- in terms of just our

1 database on where all the water sources are, and
2 then sort of also discussions with them on their
3 401 certifications that go with the 404 program, as
4 well as hydrostatic testing and other permits that
5 we might need from them.

6 And, finally, the North Dakota State
7 Historic Preservation Office, I guess in the trade
8 here we call them the SHPO, we've worked with them
9 since the project initiation to define survey plans
10 to do pedestrian surveys along the pipeline route,
11 develop research designs that were reviewed by the
12 staff at the Historic Preservation Office, and then
13 as we have completed technical reports over the
14 past year and a half, we've filed those with the
15 State Historic Preservation Office for their
16 comment, and then sort of in conjunction with
17 feedback from the Department of State, which is the
18 lead federal agency, we'll address their comments
19 on the reports, and that's the sort of process
20 that's ongoing right now.

21 Q. Going back to the North Dakota State
22 Department of Health. Did you also discuss with
23 them about pipeline leaks, spills, leak prevention
24 or emergency response?

25 A. Yes, some information was furnished to the

1 Department of Health in terms of just sort of basic
2 project operations for their consideration as they
3 evaluated potential risks to groundwater and
4 surface water resources.

5 Q. In previous testimony today there was a
6 question concerning what would happen or Keystone's
7 position concerning cultural sites, what would
8 happen if you find them or whether you can avoid
9 them or impact. What's the response concerning
10 that?

11 A. I think for the most part the overall
12 philosophy is to avoid all eligible cultural
13 resource sites that is possible. Now, usually when
14 you can't avoid them, it's because there's some
15 constraint that you can't move around easily.
16 There are sometimes options, and we've seen
17 approvals in other circumstances where it's
18 possible sometimes to drill under a site in order
19 to preserve the integrity of the site and still
20 maintain the alignment that was originally there.
21 Now, there could be a circumstance where there
22 really are no other options to place the pipeline,
23 and that's a different -- then there would be kind
24 of a new consultation process that would start with
25 the Department of State and the State Historic

1 Preservation Office in development of a treatment
2 plan where we would identify essentially, I guess
3 you would call it, an excavation or an actual
4 investigation of the site that may result in
5 removal of artifacts and sort of the scientific
6 documentation of the site, but that would represent
7 essentially a removal of that site so that the
8 pipeline could be constructed. But that's sort of
9 what we call a last-resort approach to managing
10 eligible cultural sites.

11 Q. Are there any sites in -- or do you
12 anticipate any cultural sites in North Dakota that
13 you would not be able to avoid?

14 A. To date we have not identified any sites
15 that we believe that we cannot avoid at this point.

16 MR. KELSCH: I have no further questions.

17 JUDGE WAHL: Mr. Delaney?

18 **CROSS-EXAMINATION**

19 **BY MR. DELANEY:**

20 Q. Good afternoon, Mr. Ellis. You mentioned
21 some field surveys that were done on the Dakota
22 skipper and I believe it was some kind of orchid.
23 What kind of orchid?

24 A. Prairie fringed orchid.

25 Q. Prairie fringed orchid. What was the

1 impetus behind those field surveys?

2 A. The impetus was to primarily provide
3 information for the Section 7 consultation with the
4 Fish and Wildlife Service.

5 Q. Okay. And so these were the two plant
6 species that were identified as endangered or
7 threatened or federally protected that exist in
8 North Dakota potentially on the proposed route?

9 A. Well, these are the ones that we felt had
10 the highest potential to be on the lands that we
11 were going to cross, yes.

12 Q. Are there other protected plant species
13 that could potentially be on the route?

14 A. We investigate -- I think these are the
15 primary ones based on our consultations with the
16 Fish and Wildlife Service. We discussed the list
17 with them and they looked at our list and they
18 looked at their own list, and this is kind of what
19 we ended up with based on their input.

20 Q. Is there a more extensive list of
21 potential plant species, either in your application
22 or otherwise, that the pipeline company has
23 prepared?

24 A. Yes, we -- I mean, we did acknowledge that
25 there are other, you know, plants and animals that

1 could potentially occur.

2 Q. Is that in the application that it was
3 submitted to the PSC, or is that part of the
4 document submitted to the U.S. Department of State?

5 A. My recollection is that there are some of
6 those animals and plants in the application.

7 Q. Okay. In the application to the PSC?

8 A. Correct.

9 Q. Could you possibly point me to where in
10 the application those are?

11 A. They are on page 20.

12 Q. The only two I see here are the Dakota
13 skipper and western prairie fringed orchid, and I
14 guess what I was curious about is whether there was
15 additional plant species that could potentially
16 exist in North Dakota that are protected but you
17 did not do a field survey for.

18 A. Well, I think what we did is we examined
19 the habitats that we would cross and we evaluated
20 the potential for occurrence, and we pretty much
21 concluded that -- we took sort of a habitat
22 approach to it. We said we didn't feel we needed
23 to look for all possible plants because of the
24 relatively small scale of the surface disturbance
25 and the fact that there was not a majority of

1 this -- of what we're crossing is going to be
2 private land, that would not be -- the project
3 could not be managed in the future.

4 Q. I want to make sure I understand you
5 correctly. So you're saying there are potentially
6 other protected -- federally protected plant
7 species that may exist within the route that you
8 did not do a field survey for? Is that possible?

9 A. I -- again, I'm sort of trying to outline
10 a process by which we tried to locate and identify
11 which ones we really needed to look for.

12 Q. Okay. And I'm not concerned about the
13 process so much as whether there is the possibility
14 of other species that a field survey was not done
15 for or there isn't. And if you don't know, you
16 don't know, but what would be your answer?

17 A. Well, I think that my answer is there is a
18 possibility that there are -- I think there I will
19 put it this way. We investigated the habitats that
20 we felt potentially contained the species that
21 could be -- that would be on the list, but I will
22 not say we were able to survey all areas where they
23 might occur because of access and other factors.

24 Q. So are there some areas of right-of-way
25 that were not surveyed?

1 A. Yes.

2 Q. Okay. And what about the -- and when I
3 say "not surveyed," I'm including your field
4 surveys for the Dakota skipper and the western
5 prairie fringed orchid. There were -- during that
6 survey process you were unable to survey the entire
7 right-of-way that you're currently seeking?

8 A. Well, we surveyed all the areas that we
9 could identify as being potential habitat that we
10 had access to.

11 Q. Okay. So there is other areas that you
12 didn't have access to that could be potential
13 environment for these species?

14 A. That is possible, yes.

15 Q. You mentioned there wouldn't be any
16 irreversible damage and that whatever disturbance
17 there would be would be temporary in nature, and I
18 believe you were referring collectively to animal
19 species and plant species, and correct me if I'm
20 wrong.

21 A. Yes.

22 Q. That doesn't mean that there wouldn't be
23 some temporary damage and some temporary
24 disturbance along the entire route?

25 A. Well, by definition you're going to have

1 temporary disturbance because you have to disturb
2 the soil in order to build a pipeline, yes.

3 Q. In your application you refer to -- I'm
4 reading the application and I see the terminology
5 "sensitive species." When the application says
6 "sensitive species," what is that exactly referring
7 to? I guess I could direct you to a specific
8 portion. Page 20, the last paragraph, and it would
9 be the second sentence of the last paragraph, at
10 the end of that sentence.

11 A. Yes, I see the sentence you're referring
12 to.

13 Q. What do you mean in that sentence by
14 "sensitive species"?

15 A. Well, I think in this case it's intended
16 to encompass a range of species that are defined
17 either by North Dakota or the federal government as
18 sensitive.

19 Q. Is it fair to say that when you say
20 "sensitive species" in that particular sentence,
21 that you're referring to the animal and plant
22 species listed in the paragraph above, that being
23 the gray wolf, bald eagle, greater prairie chicken,
24 whooping crane, Dakota skipper, and then I believe
25 there's some species of special concern, the

1 Sprague's pipit, Baird's sparrow, swamp sparrow,
2 northern prairie skink, and then the Dakota skipper
3 and western prairie fringed orchid? Are those the
4 sensitive species you're referring to?

5 A. Yes.

6 Q. And according to the application it says
7 there would be incremental long-term disturbance to
8 the soil in the right-of-way in the route; is that
9 correct?

10 A. I'm sorry. Incremental long-term
11 disturbance to the soil?

12 Q. Well, I'm sorry. I'll read directly from
13 the application.

14 JUDGE WAHL: Give him the page number.

15 Q. (MR. DELANEY CONTINUING) This is page 20.
16 We're on the same page. The second sentence that I
17 previously referred you to, it says, "Surface
18 disturbance activities along the pipeline
19 right-of-way will, however, result in the
20 incremental long-term disturbance of portions of
21 native tall-grass prairie, wetland, and woodland
22 habitats which may contain potentially suitable
23 habitat for a number of sensitive species." Now,
24 what do you mean by "incremental long-term
25 disturbance" in that sentence?

1 A. Well, I think in this case it means that
2 as -- by "incremental," I think we're really
3 meaning that you go out and you disturb it, you
4 install a pipeline and you have to -- that that
5 habitat has to recover over a period of time. But,
6 you know, it changes over time based on species
7 composition. So to some degree it's an
8 acknowledgment that it does take a while for these
9 kinds of habitats to recover.

10 Q. So if I understand your testimony
11 generally, this project will disturb habitat for
12 some animal species that are protected, as well as
13 some plant species, but there will be recovery of
14 that habitat eventually?

15 A. Yes.

16 Q. And you mentioned that there wouldn't be
17 any significant impact on any populations. Do I
18 read into that that there may be some impact?

19 A. Well, I think that the thought process
20 here is the fact that this is a linear project and
21 has a fairly narrow footprint which has -- while
22 there are -- there's a linear disturbance path, the
23 adjacent habitats are as -- remain as they were
24 and, therefore, you know, even though the quality
25 of that recovery habitat may not be as high as the

1 adjacent habitat, it's not unusable and you can --
2 the populations can use that area and cross over;
3 in other words, not creating a wide different kind
4 of habitat as much as one that's being recovered
5 over time.

6 Q. Well, and there will be a period of time
7 at least during the construction phase where the
8 species will be inhibited from crossing over that
9 particular right-of-way or route that you're
10 seeking; am I correct?

11 A. Well, I think largely it's tied to the
12 construction period, itself, when you're actively
13 constructing, you know, a pipeline, and a lot of it
14 would be similar to what farm equipment would be
15 doing in other circumstances along similar country.
16 But, yes, I mean, it would be -- my view of it
17 would be primarily that, that primary sort of
18 construction period and then the time it takes to
19 get the grass and other plants back on the
20 right-of-way.

21 Q. You testified that there was information
22 provided to the Department of Health. What
23 information was specifically provided to the
24 department?

25 A. I'd like to defer that question to Heidi

1 Tillquist.

2 Q. Has Keystone or anyone on behalf of
3 Keystone received a permit from a federal agency,
4 specifically the U.S. Department of the Interior or
5 the U.S. Fish and Wildlife -- received a permit
6 under the Endangered Species Act?

7 A. Not yet.

8 Q. Is Keystone in the process of obtaining a
9 permit under the Endangered Species Act?

10 A. That is the intention, yes.

11 Q. And what permit would you be seeking?

12 A. From the Fish and Wildlife Service we
13 would be seeking a -- either a -- depending on how
14 they view the project, a concurrence letter or a
15 biological opinion.

16 Q. Are those permits or are those just
17 endorsements of some kind? I guess my question was
18 specific to permits.

19 A. Well, I would call that result of
20 consultation a -- it's a result of consultation,
21 but it's a critical one, it expresses the opinion
22 of that agency, being the Fish and Wildlife
23 Service. I don't want to split hairs on permits,
24 but it is a document that they must provide.

25 Q. Do you have to actually apply for the

1 permit, or is this just a result of informal
2 consultation?

3 A. Well, I mean, there's a very clear process
4 that has to be initiated between the lead federal
5 agency, in this case the Department of State, and
6 the Fish and Wildlife Service in terms of the
7 evaluation on the project, and they must -- you
8 know, they must consult as the project moves along,
9 and in the end the Fish and Wildlife Service will
10 offer an opinion in either a concurrence letter or
11 biological opinion.

12 Q. But they won't be issuing any permit. Do
13 you need a permit, I guess, or have you been made
14 aware that you need a permit to move forward with
15 the project from the U.S. Fish and Wildlife?

16 A. I'm sorry, I don't really understand this
17 question. I understand the Section 7 process, but
18 I don't really understand, you know, the permit
19 part of your question.

20 Q. Are you familiar with any of the
21 permitting processes under Section 4 or Section 10?

22 A. Not in detail.

23 Q. So to the best of your knowledge, has
24 TransCanada sought or have they received a permit
25 under Section 4 or Section 10 of the Endangered

1 Species Act?

2 A. To my knowledge, they have not sought
3 those permits.

4 Q. Have they received any of those permits?

5 A. I am not aware of that.

6 MR. DELANEY: Those are all the questions
7 I have.

8 JUDGE WAHL: Mr. Binek.

9 MR. BINEK: Thank you.

10 **CROSS-EXAMINATION**

11 **BY MR. BINEK:**

12 Q. In your testimony you were talking about
13 trees and shrubs being allowed to regenerate. In
14 what areas will trees be allowed to regenerate?

15 A. It would be allowed to regenerate in
16 the -- within the portion of -- the construction
17 right-of-way and then it narrows down to that 20-
18 to 30-foot strip, all the areas that have been
19 previously disturbed within the construction
20 right-of-way within a woodland would be -- that
21 would be permissible, you might say, and that area
22 to be -- allowed to recover back to trees and
23 shrubs.

24 Q. Okay. So they would be allowed to recover
25 back to trees, but you're not suggesting that in

1 those areas you would not have the responsibility
2 for planting trees under the Tree Mitigation
3 Program?

4 A. Yeah, I guess I did not intend -- or at
5 least I don't think the intention in this section
6 was to suggest that, you know, we would not --
7 regeneration covers different methods of getting
8 the trees back. It could include planting, as
9 well. Generation just meant the trees could come
10 back in that area.

11 Q. In other words, if trees grew back in
12 those areas, that's okay, but you will plant trees
13 elsewhere, not count on regeneration to cover any
14 of your planting responsibilities?

15 A. Understood that that may be a condition
16 that the project would need to address and that
17 would be part of the regeneration formula, I guess
18 you would say.

19 Q. Okay. I'm still not quite sure that we're
20 talking on the same page here. However -- however
21 the trees are inventoried, the trees that will be
22 removed, the Commission is going to require a
23 two-to-one replacement of those trees; right?

24 A. Yes.

25 Q. You understand that?

1 A. I understand that, yes.

2 Q. Okay. Are you counting in any of these
3 areas of regeneration of trees as a part of that
4 two-to-one replacement obligation that the company
5 -- that Keystone will have?

6 A. I would say not in the context of the way
7 the application was written here. I think we were
8 intending to simply state -- or maybe not simply,
9 but to try to say that the area that was previously
10 disturbed could come back to woodlands and
11 shrublands as they were before, but it was not a
12 next step to say we're going to replant at a
13 two-to-one ratio in those areas. That is not --
14 it's just not stated here. I guess I'm trying to
15 say that that intention was purely as it's an area
16 that trees could come back in is not a mitigation
17 commitment, per se.

18 Q. Okay. Now I think we're on the same page.
19 You said with cultural sites you avoid all sites if
20 possible, and you're not aware of any cultural site
21 that you won't be able to avoid?

22 A. Well, I think we need to qualify what
23 cultural sites mean. I think what we're looking
24 are those eligible culture sites that, you know,
25 again meet certain historic preservation criteria.

1 But if they are potentially eligible or eligible,
2 you know, at this point that's where we are, we're
3 avoiding all of those. I mean, let me put it
4 differently. Let me give you an example. For
5 example, we have historic railroads. Those are
6 eligible properties and those railroads are going
7 to be bored, we're going under them to maintain the
8 integrity of those sites. It doesn't mean that the
9 pipeline is not going to go across the railroad.
10 It means that that historic property, itself, will
11 be preserved. So I guess when I say we say
12 avoided, it means that we are trying to ensure that
13 the integrity of that site is being maintained over
14 the long term.

15 Q. Now, are you the person who will talk
16 about archeological sites, or should that be
17 addressed to someone else?

18 A. Well, I can talk about them in general
19 terms. In other words, I can talk about what we
20 have done and in general. I mean, I cannot give
21 you specifics about a site as much as sort of an
22 overview of the programs. And if there are some
23 specific sites or areas that you want more
24 information on, we would be glad to furnish that to
25 you, but I'm not prepared to give that to you in

1 detail today.

2 Q. Well, there was something that came up at
3 the hearing in Park River about sites that may be
4 Indian mounds or something on someone's property.
5 What has Keystone done with regard -- or have you
6 looked at those, have you done anything regarding
7 those sites?

8 A. Yes, actually, we have, and actually
9 Buster Gray will address that --

10 Q. Okay.

11 A. -- in detail. In fact, there has been --
12 I will just say this, there has been coordination
13 with the landowner to make some adjustments to
14 avoid that concern that that landowner has. I
15 believe Buster will actually provide some exhibits
16 to document that.

17 Q. So anything along those lines, Buster is
18 the person to talk to?

19 A. Correct.

20 MR. BINEK: Okay. I have nothing further.

21 JUDGE WAHL: Commissioners. Commissioner
22 Wefald.

23 **EXAMINATION**

24 **BY COMMISSIONER WEFALD:**

25 Q. Will you be sending a letter to the State

1 Forest Department with your drilling proposal?

2 A. Yes, we will be glad to do that.

3 Q. Will you do that in the next week so that
4 we have a chance to see the State Forest Department
5 response?

6 A. Yes, I will -- I will say yes on behalf of
7 the project, within a week.

8 Q. Is the State Forestry Department one of
9 the departments required by state law that you
10 contact as you file the route permit with the
11 Commission?

12 A. I'm not -- I don't know the answer to
13 that.

14 Q. Okay. Will you tell me about the -- a
15 little more describe how noisy the 12 pump sites
16 will be that are going to be located in rural
17 areas. What's the decibel level, let's say, at
18 1200 feet or 500 feet?

19 A. I don't have -- it depends on where you
20 are, but I think we probably have been asked this
21 question before. First of all, I think there's
22 five pumps stations in the state.

23 Q. Oh, excuse me. I'm sorry. Five.

24 A. And then, again, there's kind of a general
25 standard of 55 dBA, decibels, a weighted sound

1 level at the nearest noise-sensitive area, which
2 typically is a residence. And we've been sort of
3 searching for an analogy for what that means, and I
4 guess the analogy that we're working with that we
5 found in some literature is it's about a -- it's a
6 car approximately going about 40 miles an hour
7 about a hundred yards away.

8 Q. Actually, we have in our Commission
9 brought in a decibel measurer into our workspace so
10 that we could find out what 50 decibels were?

11 A. Sure.

12 Q. And I found in my office it was like 48
13 decibels with my computer running, my lights going,
14 et cetera, and in our hearing room it was around 50
15 at that time before we had it fixed because of a
16 blower that we had in our ceiling. So I think the
17 Commissioners are familiar with decibel levels.

18 A. Kind of what that is.

19 Q. Yes. But I'm interested in knowing what
20 decibel level these are going to be at, let's say,
21 500 feet and 1,000 feet.

22 A. Well, again, I think, as I've said
23 earlier, at this point the project is still
24 defining what equipment they're going to install,
25 and those pumps have essentially a noise rating

1 associated with them, and so you can use them to
2 calculate noise at different distances from that
3 site.

4 Q. Do you have -- are you installing a
5 different type of pipe than what you use presently
6 on a pipeline in TransCanada?

7 A. I'm sorry. Different pipe or different --

8 Q. Different pump.

9 A. Different pump. I don't think so. I
10 think it's really a question of what vendor it is
11 that they're going to purchase from, and I'm not --
12 I'm not the person who can tell you that. But I
13 guess what I'm trying to say is that typically once
14 you know what kind of equipment you're going to
15 install, then you can then do your noise estimates,
16 you know, in terms of different -- you know, what
17 all these different distances away, what's that
18 going to sound like.

19 Q. If you were me and you wanted to know how
20 loud these were going to be, what question would I
21 ask you?

22 A. I'm sorry. How -- go ahead. I'm sorry.
23 Ask it again.

24 Q. If you were me -- if you were me and you
25 wanted to know how loud this equipment was going to

1 be at what distance, what question would I ask you?

2 A. Well, I think you would ask kind of the
3 technical question, which is decibels and all that
4 sort of thing. But then what we're trying to do is
5 kind of find things that are, you know, analogies
6 that you would feel comfortable with or familiar to
7 you.

8 Q. What if I don't need those analogies, I
9 just want to know the decibel level of the
10 equipment?

11 A. Then we would provide you noise
12 predictions based on the operation of that
13 equipment.

14 Q. All right. So can you give that to the
15 Commission?

16 A. I cannot give it to you today.

17 Q. All right.

18 A. But it can be provided as a followup
19 because, you know, I think this is an area that the
20 project is actively working on now as it looks at
21 its equipment, and then, you know, I think the
22 project would be, you know, more than willing to
23 provide you with that information.

24 COMMISSIONER WEFALD: Thank you. So can
25 we have that filed as a late-filed exhibit?

1 JUDGE WAHL: T29, Mr. Kelsch, please.

2 Q. (COMMISSIONER WEFALD CONTINUING) What is
3 the closest residence to one of the pumping
4 stations?

5 A. I'm sorry, I don't have that information.

6 Q. Where are the pumping stations located
7 specifically on the maps that we have provided to
8 us?

9 A. My recollection is that it is -- pump
10 stations are not depicted on these maps.

11 Q. Okay.

12 A. Certainly that information can be
13 provided.

14 Q. Has the pumping station information been
15 provided to the Commission in the application in
16 another place?

17 COMMISSIONER CRAMER: The mileposts.

18 Q. (COMMISSIONER WEFALD CONTINUING) At the
19 mileposts?

20 A. At the mileposts, I believe.

21 COMMISSIONER CRAMER: Page 4.

22 COMMISSIONER WEFALD: Page 4. Thank you.

23 Q. (COMMISSIONER WEFALD CONTINUING) So that
24 tells me the milepost number, but will that help me
25 on the maps that I have to locate those? I would

1 have to count down miles; right?

2 A. Yeah, you would have count down.

3 COMMISSIONER CRAMER: You would have to
4 count dots.

5 THE WITNESS: You would have to count
6 dots.

7 COMMISSIONER WEFALD: Perhaps a late-filed
8 exhibit could indicate on the topographic maps
9 exactly where those pumping stations will be
10 located.

11 JUDGE WAHL: Mr. Kelsch, can we make that
12 all part of T29? Can we combine the maps showing
13 the location of the pumping stations and the
14 estimated noise -- the estimated noise projections?

15 COMMISSIONER WEFALD: And the closest
16 residence to those pumping stations.

17 COMMISSIONER CLARK: Do you include
18 businesses in that, too?

19 COMMISSIONER WEFALD: Yes, businesses and
20 residences to those locations.

21 THE WITNESS: Okay.

22 COMMISSIONER WEFALD: Thank you.

23 THE WITNESS: Sure.

24 Q. (COMMISSIONER WEFALD CONTINUING) Then has
25 the -- when do you expect to receive -- you

1 mentioned that you're going to be working with the
2 State Health Department on a hydrostatic discharge
3 plan. When do you anticipate having that plan
4 approved by the State Health Department?

5 A. Again, I'm not the project planner.
6 Buster Gray may be able to give you more detail,
7 but I'll give you my estimate of it, and that would
8 be probably the latter part of this year, early
9 next year. It will just depend on, because the
10 objective is to get all these details pulled
11 together very soon, but it's still tied back to a
12 number of other planning efforts, but I'm guessing
13 it will be toward the end of this year.

14 Q. How about -- then the next thing I would
15 like to know is on map -- I believe it's map 8 --
16 map 8 of 10 in the Keystone Pipeline project
17 application that was submitted to the Commission,
18 it shows the pipeline crossing the Sheyenne River
19 Valley and on that map the crossing is
20 approximately -- it falls in between mile -- it
21 looks like mile 3 and 5, somewhere in that range,
22 crossing the Sheyenne River Valley. Are you
23 looking at that with me?

24 A. Yes, I'm looking at your location.

25 Q. And then you'll see it says Little

1 Yellowstone Park is within about a mile to the west
2 and then, oh, I'd say maybe three or four miles
3 south of that crossing is where Fort Ransom State
4 Park is located. And I'm wondering -- you
5 mentioned that you're going to be doing the deep
6 cut -- the deep underground cut in the state forest
7 area. Is it possible that you would be able to do
8 that same type of thing in the Sheyenne River
9 Valley? And the reason I'm asking that is because
10 there's a scenic road that winds through the
11 Sheyenne River Valley, and this particular section
12 of the Sheyenne River Valley is for North Dakota --
13 by North Dakota standards has a lot of tourism
14 located in it with both Little Yellowstone Park and
15 Fort Ransom State Park. So what are the chances --
16 because you had said that if you have to cut
17 through woods, you're going to have to not cut only
18 50 feet, it's going to be an 85-foot cut, which is
19 quite a large cut through that valley and it's
20 going to be visible for years and years. So I'm
21 just wondering what the possibility is in that
22 scenic area of the state of doing that underground
23 drilling through those woods and under that section
24 of the river.

25 A. I guess what the project would have to do

1 is look at the technical feasibility of that and
2 see if there were -- or possibly there's other ways
3 to minimize the loss of trees in that area through
4 route adjustments. But to answer your question, I
5 mean, just looking at it, it's a pretty -- it
6 depends on what the scope of that would be. It's a
7 pretty wide valley, I guess, is what I'll say.

8 Q. What if the valley -- you'll see I'm
9 looking at approximately 1, 2, 3 -- halfway down 3,
10 it looks like it would start -- I'm seeing the red
11 area, which the red area, I think, represents
12 elevation changes; is that correct -- or what do
13 the red marks represent?

14 A. I'm sorry. On the maps, themselves?

15 Q. Yes.

16 A. Well, I mean on the route or on the --
17 just on the map?

18 Q. On the map.

19 A. Certainly the brown areas -- I guess I'll
20 use the word brown --

21 Q. Yes.

22 A. -- are the topographic contours where --
23 you know, you can see where you drop down into the
24 valley and come back up again.

25 Q. Right. So let's say you start at the

1 northern part of the red -- of the brownish-red
2 area and you go to the river crossing and up to the
3 southern area of the brownish area. It looks to me
4 like it would be about one mile.

5 A. Yes. Well, that's the area that you
6 have --

7 Q. Would be concerned about?

8 A. -- concern about. I guess I'm not the one
9 to give you the feedback on whether that is
10 technically possible or not at this point, but it
11 is -- I understand what it is you're looking at.

12 Q. Who could give us that answer?

13 A. Well, I think there's a lot of components
14 to that. Some of it is length and also the kinds
15 of geology that underlie the site as to whether or
16 not it's feasible for drilling. I would suggest
17 perhaps Buster Gray could address it when you get
18 to some of the construction discussions as a place
19 to start.

20 COMMISSIONER WEFALD: Okay. Thank you.
21 That's all I have right now.

22 JUDGE WAHL: Any other questions from the
23 Commissioners? Commissioner Clark.

24 COMMISSIONER CLARK: Thank you.

25

EXAMINATION

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BY COMMISSIONER CLARK:

Q. I don't recall if Parks and Rec was on your list of agencies that you were in charge of interacting with.

COMMISSIONER CRAMER: State Parks.

Q. (COMMISSIONER CLARK CONTINUING) State Parks and Rec.

A. No, we did not. That was not mine. Whether -- I don't recall whether we have interacted directly with them or not.

Q. How close does the pipeline get at its closest again to Fort Ransom State Park? I think it's within a couple miles.

A. It's within a quarter of a mile.

Q. Within a quarter of a mile. Have you had any -- are you aware of making any outreach to either State Parks and Rec or receiving any feedback from them?

A. I think the answer is I'm not -- I'm not aware of any direct outreach to State Parks at this time.

Q. Could -- would you be willing to do that?

A. Yes.

Q. Could you go over again the distinction

1 that you made with regard to the north branch of
2 the Park River? And I wrote this note down, but I
3 can't remember what the distinction was. You
4 talked about crossing it and there was some sort of
5 mitigation plan or something like that, but could
6 you go over that again?

7 A. Well, I think the context for the north
8 branch --

9 Q. It had to do with wellhead protection, I
10 think, and drinking water. Could you go over that
11 one more time?

12 A. I guess the point there was that in our
13 April filing we had not identified that area.

14 Q. Okay.

15 A. And then with subsequent information since
16 that time we've been provided that information,
17 it's now been included on our maps that you've seen
18 as exhibits today.

19 Q. Right. But could you -- I think you've
20 drawn a distinction between -- it's something like
21 wellhead protection and protecting --

22 A. I see what you're saying, versus the
23 actual withdrawal points at the wellhead.

24 Q. Yeah, drinking water.

25 A. I guess when I'm using the word

1 "wellhead," i.e., where the actual water comes out
2 of the ground, and that was kind of our criterion
3 for were we affecting water sources.

4 Q. Okay. So it's something that's been
5 identified now and you're going to mitigate it, you
6 said?

7 A. Well, I think we have to factor it into
8 with all the other sort of operational concerns
9 that go with safety and pipeline integrity, which
10 we're going to get into in detail. But, the answer
11 is, yes, that has to be factored in.

12 COMMISSIONER CLARK: Okay. That's all I
13 have. Thanks.

14 JUDGE WAHL: Commissioner Cramer.

15 **EXAMINATION**

16 **BY COMMISSIONER CRAMER:**

17 Q. I guess maybe just a couple. Just I want
18 to clarify one thing. When you refer to
19 "eligible," is that -- the definition of
20 "eligible," does that mean eligible for the
21 register of national historic places or national
22 historic -- yeah, and national historic places, is
23 that the common?

24 A. That's the common -- that's the benchmark,
25 yes.

1 Q. That's the benchmark. Okay. So whatever
2 standard that is, that's what you mean when you say
3 "eligible"?

4 A. Correct.

5 Q. Okay. Then I have a -- and you might not
6 be the person. Maybe this becomes part of a
7 request, but maybe staff has asked this question at
8 some point, but would it be possible for us to have
9 GIS maps, in other words, electronic or digital
10 versions of GIS maps of the route?

11 A. I guess I will speak and say yes.

12 COMMISSIONER CRAMER: We may want that.

13 COMMISSIONER WEFALD: We received that
14 disk.

15 COMMISSIONER CRAMER: Right, we did, and I
16 have not looked at that most recently. I don't
17 know if it has the spatial layers or the spatial
18 data that a GIS map would have. It does not. So
19 that's what I would be looking for.

20 JUDGE WAHL: So, Commissioners, is this a
21 request for an exhibit?

22 COMMISSIONER CRAMER: It might as well be.

23 JUDGE WAHL: T30, Mr. Kelsch. And, Mr.
24 Kelsch, if you understand what's requested, we're
25 good.

1 COMMISSIONER CRAMER: Our engineers will
2 have a better idea probably.

3 MR. KELSCH: I don't. I'm sorry.

4 MR. BINEK: Your Honor, we have asked --
5 in the series of questions that I asked, I asked
6 the company to provide an electronic version of the
7 as-built pipeline that can be imported into ESRI
8 GIS mapping software. And I'll ask Pat --

9 COMMISSIONER CRAMER: The resident
10 engineer about that.

11 MR. BINEK: -- if that covers the
12 situation that Commissioner Cramer is asking about.

13 JUDGE WAHL: Yes, go ahead, Mr. Fahn.

14 MR. FAHN: If you're looking for the
15 pipeline, itself -- the route of the pipeline,
16 Bill's request would satisfy that. But if you're
17 looking for the aquifers and the --

18 COMMISSIONER CRAMER: That's what I'm
19 talking about.

20 MR. FAHN: -- and the wetlands and all the
21 other criteria that are mapped along the corridor
22 and route, that --

23 COMMISSIONER CRAMER: That's exactly what
24 I'm asking.

25 MR. FAHN: -- that is more than what we've

1 asked for.

2 COMMISSIONER CRAMER: That's what I
3 assumed.

4 JUDGE WAHL: And how is that described,
5 Mr. Fahn? Can you tell us for the record?

6 MR. FAHN: It would be the -- actually, it
7 would be the GIS projects and all associated layers
8 that created the maps that are in the application
9 along with any other layers that would show
10 wetlands, drainage areas, streams, water bodies,
11 all the things that needed to be analyzed by the
12 company.

13 COMMISSIONER CRAMER: That's it.

14 JUDGE WAHL: That would be Exhibit T30.
15 And I'm not sure, Mr. Kelsch, is this --

16 MR. KELSCH: There may be some
17 confidentiality problems with providing that
18 document, particularly with some of the HCAs which
19 are protected by federal law.

20 JUDGE WAHL: Why don't we do this. Let's
21 have that identified. I am identifying it for the
22 record as Exhibit T30, and then, Mr. Kelsch, you
23 look at that, consult with Mr. Fahn as necessary,
24 and hopefully work something out, and if it doesn't
25 satisfy Commissioner Cramer, we can address it

1 later.

2 COMMISSIONER CLARK: Judge Wahl, we can --
3 the applicant can ask for trade secret protection
4 on that in the context of this proceeding, I would
5 think.

6 JUDGE WAHL: Yes. All right.

7 Q. (COMMISSIONER CRAMER CONTINUING) I just
8 have one other question that might seem funny to
9 you, but, in your experience, do you usually
10 consider Russian olives to be trees or noxious
11 weeds?

12 A. Well, I will tell you my truthful opinion
13 of that, being a biologist, is that they're weeds
14 to me.

15 COMMISSIONER CRAMER: Okay. I'm glad I
16 asked. They make up forests in North Dakota.

17 THE WITNESS: I understand.

18 JUDGE WAHL: Commissioner Clark.

19 THE WITNESS: Let me qualify that. It
20 depends on where that tree is at any given time.

21 JUDGE WAHL: Commissioner Clark.

22 COMMISSIONER CLARK: I thought caragana
23 was a shrub. I've got a lot of weeds in my front
24 yard when you combine caragana and Russian olive.

25 I guess this would just be a request for a

1 late-filed exhibit, as well. With regard to the
2 Parks and Rec followup, if you could just submit
3 whatever documentation they provide to you. Thank
4 you.

5 JUDGE WAHL: T31, Mr. Kelsch.
6 Commissioner Wefald.

7 **FURTHER EXAMINATION**

8 **BY COMMISSIONER WEFALD:**

9 Q. Yes. Are you the person to go over the
10 tree and shrub mitigation specification submitted
11 by the company, or will there be another person who
12 has that?

13 A. That would be Mr. Gray.

14 COMMISSIONER WEFALD: Thank you.

15 JUDGE WAHL: Anything further from the
16 Commissioners? Followup, Mr. Kelsch?

17 MR. KELSCH: Thank you, Your Honor.

18 **REDIRECT EXAMINATION**

19 **BY MR. KELSCH:**

20 Q. Mr. Ellis, are you aware that the Park
21 River wellhead protection area is now treated as a
22 former wellhead protection area?

23 A. No, I'm not.

24 Q. Going back to, I guess, page 20 of the
25 application on the, I guess, paragraph iv, how was

1 it -- how did Keystone determine which surveys to
2 conduct on those five species of, I guess, wildlife
3 species, the gray wolf, bald eagle, greater prairie
4 chicken, whooping crane and Dakota skipper, and
5 then the wildlife species of special concern, the
6 Sprague's pipit, Baird's sparrow, swamp sparrow and
7 northern prairie skink?

8 A. Primarily through an evaluation of
9 habitats based on aerial photo interpretation and
10 databases supplied by the state and other sources
11 and consultation with the Fish and Wildlife Service
12 and some initial discussions with the North Dakota
13 Game and Fish Department.

14 Q. And so if any of those entities indicated
15 that a study was necessary, you did a study on
16 the --

17 A. We did the studies that we understood the
18 agencies wanted done.

19 Q. If they didn't want it done, then you felt
20 they weren't required?

21 A. Correct.

22 Q. You did a study on raptors; is that right?

23 A. That's correct.

24 Q. And a phone survey on prairie chicken?

25 A. Prairie chickens were not included in that

1 study.

2 Q. The Dakota skipper?

3 A. Yes.

4 Q. And the eagles?

5 A. Yes.

6 Q. And the orchid?

7 A. Yes.

8 Q. And then as -- I think you were here when
9 Mr. Cowling testified in answer to Mr. Binek's
10 questions concerning some of the -- that if -- the
11 question Mr. Binek had was that, would Keystone
12 promptly report to the Commission the presence of
13 any critical habitat or threatened or endangered
14 species or bald or golden eagles which Keystone
15 becomes aware of which had not previously been
16 reported to the Commission. That's your
17 understanding, in the construction, if they would
18 come across anything like that, they would report
19 that to the Commission?

20 A. Yes.

21 Q. Now, concerning the Pembina Gorge area,
22 there have been meetings with the Forest -- North
23 Dakota Forest Service and they have been informed
24 that we were planning the horizontal drilling under
25 the forest; is that -- or do you know that?

1 A. I do not know that personally.

2 Q. Okay. Now, concerning the question by Mr.
3 Delaney concerning the Section 10 of the Endangered
4 Species Act, it's my understanding that that's a
5 take permit. Do you know whether Keystone as part
6 of this project is applying for a take permit?

7 A. At this point, the project is -- my
8 understanding, is not applying for any take
9 permits.

10 Q. So as part of the federal review of that,
11 and I think you mentioned that you were either
12 seeking an opinion letter, or what was the other?

13 A. Or a concurrence letter.

14 Q. Concurrence letter. And so it's possible
15 that they could indicate you needed to do it as
16 part of that process, or not?

17 A. I guess, again -- this is from my own
18 experience -- I would not see that they would issue
19 a separate permit as much as there are instances
20 where they will allow take in the context of an
21 opinion. It is not a permit, per se.

22 Q. Okay. So if they indicated as part of
23 their opinion there was a take portion of that,
24 then we would address it at that time?

25 A. That's correct.

1 Q. At this point in time Keystone doesn't
2 anticipate that?

3 A. I do not anticipate it based on what we've
4 found so far.

5 MR. KELSCH: I have no further questions.

6 JUDGE WAHL: Mr. Delaney?

7 MR. DELANEY: I have no further questions.

8 JUDGE WAHL: Mr. Binek?

9 MR. BINEK: I have no questions.

10 JUDGE WAHL: Anything further from the
11 Commission for this witness? Thank you very much,
12 Mr. Ellis.

13 COMMISSIONER WEFALD: I have a question.
14 That's why he's bringing this up for me, but I was
15 waiting to see.

16 **FURTHER EXAMINATION**

17 **BY COMMISSIONER WEFALD:**

18 Q. Have you contacted all -- in 69-06-01-05
19 there's a list of designated state agencies and
20 officers, and these are in Commission rules, and
21 the following are the designated state agencies and
22 officers entitled to notice, ones referred to in
23 this article, and included in that list is the
24 Parks and Recreation Department, which makes me
25 wonder whether you have contacted every single

1 group that is listed under 69-06-01-05. Would you
2 like me to -- would you like to review those and
3 tell me, because those were not all listed at the
4 back of your application as agencies that were
5 contacted in North Dakota when I looked on page
6 4 --

7 A. I think --

8 MR. KELSCH: Commissioner Wefald, I
9 believe we have filed an affidavit of service, and
10 I'm aware as attorney for Keystone in this matter,
11 we have contacted all of these entities, provided
12 them with a copy of the petition -- or application,
13 if they requested it, and made a personal contact
14 with them, as well.

15 COMMISSIONER WEFALD: So are you saying
16 that the --

17 MR. KELSCH: Parks and Rec would have been
18 contacted.

19 COMMISSIONER WEFALD: They were contacted,
20 even though he said earlier they were not
21 contacted?

22 MR. KELSCH: He may not have personally
23 contacted them.

24 COMMISSIONER WEFALD: Isn't he in charge
25 of -- isn't he in charge of state agency contacts

1 and permits.

2 THE WITNESS: Not at all. No. I think --
3 if I may speak, it's -- you know, there were
4 specific agencies for whom I was responsible, but
5 not all.

6 MR. KELSCH: We can -- I think we filed
7 it, but we can pull out and file as an exhibit, if
8 you would like, the notice that we provided to all
9 the state agencies as required under 69-06-01-05.

10 COMMISSIONER CLARK: Who was tasked to
11 contact State Parks and Rec?

12 MR. KELSCH: From our office it was Bill
13 Delmore --

14 COMMISSIONER CLARK: Okay.

15 MR. KELSCH: -- contacted Mr. Doug Prchal.

16 COMMISSIONER CLARK: But there's not a
17 company witness who will be presented?

18 MR. KELSCH: I think we complied with the
19 statute by providing the application and contacting
20 with them and then Bill did a followup. I'm not
21 sure if there was any other staff person that did
22 -- of the company that did contact them directly.

23 COMMISSIONER CLARK: Okay.

24 MR. KELSCH: I guess our position was we
25 contacted them, and as far as our law firm's

1 position was, if they had any questions, we would
2 get them in touch with the appropriate person with
3 the company to answer any questions or answer any
4 concerns that they had.

5 COMMISSIONER CLARK: Sure. And that might
6 comply with the technicality of the rule. I think,
7 though, as a Commission that we may want to look at
8 this question of Parks and Rec more specifically
9 being that it does run so close to one of the very
10 few state parks in that neck of the woods.

11 COMMISSIONER WEFALD: We'll leave your
12 request for a late-filed exhibit.

13 COMMISSIONER CLARK: We've got the request
14 on.

15 COMMISSIONER WEFALD: That's very fine.
16 Thank you so much for clarifying your context.

17 JUDGE WAHL: Followup, Mr. Kelsch?

18 MR. KELSCH: No.

19 JUDGE WAHL: Mr. Delaney?

20 MR. DELANEY: No.

21 JUDGE WAHL: Mr. Binek?

22 MR. BINEK: No.

23 JUDGE WAHL: All right. Why don't we be
24 in recess until about a quarter to.

25 (Recess taken at 2:35 p.m. to 2:49 p.m.)

1 JUDGE WAHL: All right. Mr. Kelsch, when
2 you're ready.

3 MR. KELSCH: I would call Mr. L.A. Gray to
4 the stand.

5 JUDGE WAHL: Mr. Gray, you testified
6 previously at the hearings in Valley City and Park
7 River and you understand, of course, that your
8 testimony continues under oath and subject to
9 penalties of perjury?

10 MR. GRAY: I do.

11 JUDGE WAHL: Mr. Kelsch.

12 MR. KELSCH: Thank you, Your Honor.

13 L.A. "BUSTER" GRAY,
14 having been previously duly sworn, was examined and
15 testified as follows:

16 DIRECT EXAMINATION

17 BY MR. KELSCH:

18 Q. Mr. Gray, could you state your name and
19 your position with Keystone for the record?

20 A. My name is L.A., nickname Buster, Gray,
21 and my position is, I'm the engineering and
22 construction manager for the U.S. portion of the
23 Keystone project.

24 Q. And I would like to show you Exhibit T15,
25 and could you tell the Commission what that

1 document is?

2 A. It's a copy of my resume.

3 MR. KELSCH: I would move to admit Exhibit
4 T15.

5 JUDGE WAHL: Mr. Delaney?

6 MR. DELANEY: No objection.

7 JUDGE WAHL: Mr. Binek?

8 MR. BINEK: No objection.

9 JUDGE WAHL: Exhibit T15 is received.

10 Q. (MR. KELSCH CONTINUING) Mr. Gray, is
11 Keystone's application -- or does it include the --
12 was it organized to the PSC guidelines for corridor
13 compatibility?

14 A. Yes.

15 Q. What's the first portion of the Keystone
16 application for corridor compatibility that you are
17 responsible for?

18 A. Section D.2.c.i.

19 Q. And what does that include?

20 A. It's selection criteria and impacts on
21 agriculture.

22 Q. And you covered a majority of that in your
23 testimony back in July?

24 A. Yes. The presentation that I gave during
25 those hearings, I believe I touched on a lot of the

1 things relative to mitigations and reclamations
2 within agriculture. There were a couple of things
3 that are cited in the filing that I might address
4 relative to maintenance of surface drainage and
5 also suitability of the land for future type of
6 irrigation systems. And when we construct a
7 pipeline, much like a linear facility like a road
8 or a highway, we have to install drainage across
9 our construction area so that if there are heavy
10 rainfalls during the course of construction, we
11 don't dam the drainage, often cause flooding behind
12 the right-of-way. We do that with flume pipe or
13 culverts. And we also ensure that we don't place
14 all our topsoil in natural drainages to block that.
15 Also, once construction is completed, we restore
16 the contour of the land as well as the drainages to
17 their original contours to the extent practical.

18 Q. Will there be any long-term impact on
19 surface drainage from the construction?

20 A. There should not be any because we do
21 restore it back to its original use.

22 Q. Will there be any impact on the
23 suitability planned for irrigation?

24 A. No, there will not. With the pipeline
25 being below grade, to such irrigation, whether it's

1 a sheet flow-type irrigation across farmland or
2 pivot-type irrigation aboveground, would not be
3 impeded by the pipeline, itself. We do work to
4 site aboveground facilities, particularly relative
5 to pivot-type irrigation, where that would not be
6 an impact.

7 Q. What's the second portion of Keystone's
8 application for corridor compatibility that you
9 were responsible for?

10 A. Section D.2.d.i, location and design,
11 although there's just a portion of that that I'm
12 responsible for, and that's relative to the
13 construction, mitigation and reclamation plan.

14 Q. Could you please describe the general
15 conditions of the construction and mitigation and
16 reclamation plan?

17 A. During my testimony in July I talked about
18 the document, and it's a document that is a plan
19 that we've compiled of mitigation requirements and
20 reclamation requirements, that many of them are
21 things that we've utilized throughout the
22 construction industry over the past 10 to 20 years
23 that we found minimizes the impacts to land during
24 construction. Some of the things, though, that I
25 don't know that were clear in that testimony was

1 that it's not only agricultural lands, it covers
2 all types of lands that we cross. That would be
3 wetlands, water bodies, also it would cover
4 grassland, pastureland, and even residential/
5 commercial areas where we are in closer proximity
6 to structures. Additionally, it covers things --
7 it covers things that are not maybe specific to a
8 tract of land relative to things like noise control
9 during construction, dust control during
10 construction, weed management or management of
11 weeds, fire prevention, various other topics that
12 are covered relative to mitigations to the public.

13 Q. Could you please describe the spill
14 prevention and containment portions of the CMR
15 plan?

16 A. Yes. That portion of the plan is specific
17 to construction and construction activities and has
18 no relation relative to the long-term operations of
19 the pipeline. It deals with, we have to put in
20 temporary fuel storage tanks at contractor yards,
21 we refuel equipment on the construction
22 right-of-way, and it deals with spill containment
23 and prevention and cleanup measures for that type
24 of a spill that might occur during construction.

25 Q. What is the third portion of Keystone's

1 application for corridor compatibility that you
2 were responsible for?

3 A. Section D.2.d.ii, and that's concerning
4 the training and utilization of available labor in
5 North Dakota for the generalized and specialized
6 skills required.

7 Q. At one of the hearings that we had in this
8 matter in July, Commissioner Wefald had asked a
9 question about hiring North Dakotans and using the
10 Job Service of North Dakota. What's Keystone's
11 position on hiring?

12 A. Large-diameter pipeline construction like
13 Keystone is typically done by union or organized
14 labor contractors because of the substantial
15 workforce required for the construction, and
16 although these labor unions have means for new
17 members and new entries into their processes, I did
18 take the opportunity to look on the North Dakota
19 Job Service websites and investigate some of our
20 ability to interface with that organization, and we
21 are committed to interface with North Dakota Job
22 Service relative to -- even if we can't post the
23 particular job to North Dakota Job Service, maybe
24 giving the instructions of how potential workers
25 might become employed through unions and union

1 organizations. There are a small number of
2 nonunion-related jobs that certainly we could work
3 towards posting through that system.

4 Q. What's the fourth portion of Keystone's
5 application for corridor compatibility that you
6 were responsible?

7 A. Section D.2.d.vi, on labor relations.

8 Q. What does that section deal with?

9 A. And I took it to -- I took it and the way
10 we responded to the question was relative to
11 disruptions during the work relative to labor
12 issues, and, as I mentioned, all of the contractors
13 that work on large-diameter pipeline construction
14 are signatory to national union agreements through
15 the Pipeline Contractors Association, and those
16 agreements have been in place since around the
17 mid-1950s, were when the initial agreements were
18 put into place, and they're renewed on periodic
19 bases, but over the course since they started those
20 agreements, there's never been a disruption to
21 construction of a pipeline project relative to
22 labor.

23 Q. What is the fifth portion of Keystone's
24 application for corridor compatibility that you
25 were responsible?

1 A. Section D.2.d.vii, coordination of
2 facilities.

3 Q. What does that section address?

4 A. It addresses, again, with a long linear
5 facility not only existing utilities, but other
6 infrastructure, be it railroads, highways, power
7 lines that we cross when we construct a linear
8 facility like a pipeline, and that is an ongoing
9 process and actually it's easily seen. We cross
10 hundreds, if not thousands, of other linear-type
11 facilities along our pipeline route. We do some
12 investigation, as other people have testified,
13 relative to existing utilities and routing
14 concerns, but, also, we have to cross these
15 utilities and infrastructure. We typically do that
16 for private companies' facilities by a notification
17 process where we request the location of their
18 facilities, the type of facilities, their
19 requirements for crossing those facilities, and
20 even notification procedures for that, as well.
21 Those type -- that type of information is
22 incorporated into our construction contracts for
23 our contractors to comply with. Regarding public
24 facilities like highways and roads, those types, we
25 typically have to get a permit from a local

1 jurisdiction, and we will typically apply under
2 their guidelines for those types of permits.

3 Q. So you would need to get a permit from the
4 local county or perhaps township to be able to
5 cross or cut through a road?

6 A. That's correct. And I think another issue
7 that we had heard in the July hearing was relative
8 to not only a crossing of a road, but use of roads,
9 and I believe one of the questions from the
10 Commission that Mr. Binek put forward, also,
11 that -- my experience has been, although we don't
12 seek necessarily a formal permit for the use of
13 those roads except for overweight or oversized-type
14 loads, that when we seek our road crossing permits,
15 be it from townships or counties, this issue will
16 be raised to us, and we typically will either enter
17 into some type of written agreement with the county
18 or something that is an addendum to the permits we
19 receive to crossing roads that will address this
20 particular issue and making us responsible for
21 those damages, as well.

22 Q. And somewhat along the same lines, maybe a
23 little bit different, one of the questions that Mr.
24 Binek had asked Mr. Cowling concerning the --
25 restoring temporary roads, I think Mr. Cowling's

1 answer was that, yes, with the clarification that
2 areas used as temporary roads or working areas
3 would be restored as close as practical to their
4 original condition. Mr. Cowling indicated you
5 would explain, I guess, the rationale for that
6 qualification. What would that be?

7 A. Well, and I think maybe in the use of as
8 close as practical is when we utilize roads, and
9 maybe that terminology will be more towards an
10 open-cut road to where when we restore it, even if
11 we restore it as best we can and we patch it with
12 asphalt or whatever, we cannot make it exactly the
13 way it was before it existed. We can restore it to
14 its usability and standard, but I think we always
15 in our business try and communicate that the
16 expectation is a reasonable expectation, but not a
17 literal expectation of what we can do. So as close
18 as practical in the context of cutting a road, I
19 think it's much more -- you can visualize it much
20 easier relative to restoration of a road that we
21 have traffic going down that maybe the gravel or
22 the stone is washed to the side of the road
23 right-of-way or pool back. I do believe we do
24 restore those to their original condition to the
25 satisfaction of the commissioners or the local

1 jurisdiction.

2 Q. Now, would that also include temporary --
3 with temporary roads, is that where you might be
4 going on somebody's land, that would then be
5 restored back to cropland or something like that?

6 A. I took that to be a temporary road that we
7 might utilize of a private landowner's, which we do
8 make arrangements to do that from time to time, and
9 I took it to mean that. You know, we also
10 construct temporary roads for access sometimes
11 ourselves, but we typically will remove those. But
12 if we are using an existing one, we will restore it
13 to its original condition.

14 Q. What is the sixth portion of Keystone's
15 application for corridor compatibility that you
16 were responsible for?

17 A. Section D.3, mitigative measures, and I
18 believe the testimony I gave just a few minutes
19 earlier probably covers that adequately.

20 Q. What portion of Keystone's application for
21 route permit are you responsible for?

22 A. Section B.2. It's on the effects of new
23 energy conversion and transmission technologies and
24 systems designed to minimize adverse environmental
25 effects. Actually, that section there's just a

1 small paragraph in it relative to the construction,
2 mitigation and reclamation plan that I'm
3 responsible for and, again, I think in my previous
4 testimony I've kind of covered that subject.

5 Q. Are you also responsible for Section B.8?

6 A. Yes. That section covers existing plans
7 of the state, local government, and private
8 entities for other developments at or in the
9 vicinity of the proposed site, corridor, or route.
10 And in a pipeline, again, it's an ongoing process
11 for us, from the routing phases through to actual
12 acquisition of land relative to potential plans or
13 development of existing, if you want to say,
14 governmental agencies or, for that matter, private
15 landowners, also. For -- relative to public
16 agencies, things like if the highway department's
17 proposing to four-lane or widen a highway four or
18 five years in the future -- some highway
19 departments have very long projected plans of
20 development -- we typically will work with those
21 agencies to design and construct our pipeline to
22 facilitate those improvements.

23 Another example from a municipal point of
24 view would be the City of Yankton, South Dakota, on
25 our project, we crossed the Missouri River actually

1 within the city limits of Yankton, and we're
2 working with the city relative to an industrial
3 park that they are developing to move our pipeline
4 out of the city at that location.

5 Relative to private landowners is -- an
6 example I would give is typically with drainage,
7 is, in the Midwest -- I don't know as much in North
8 Dakota as other states -- but drain tile and
9 drainage ditches to get water off of land for
10 agricultural purposes. If a landowner is proposing
11 to dig some drainage on his farm or he is proposing
12 to install a drain tile system, if we are made
13 aware of those, we will work with the landowner to
14 facilitate those so that in the future when he
15 installs those systems, there would be no impacts.

16 Q. In this regard, do you recall back in July
17 at the public hearing Mr. Starke talking about the
18 possibility of a future housing development on his
19 property and the impact of the pipeline on the
20 development? What impact would the pipeline have
21 on Mr. Starke's property should it ever develop?

22 A. Yes. Mr. Starke from our initial request
23 for permission to survey has raised concerns about
24 potential development or impacts to development of
25 his land. It's just east of Valley City along the

1 interstate. And I'm going to say several people in
2 my staff have had conversations or met with Mr.
3 Starke. I have spoken personally with Mr. Starke
4 over the telephone some months ago, actually even
5 prior to the July hearing. And I think when I say
6 the concern Mr. Starke has is related to the
7 avoidance area criteria of the Public Service
8 Commission, the 500-foot avoidance or exclusion
9 zone that's a part of the siting requirements, and
10 Mr. Starke's opinion is that if we build the
11 pipeline in essence to what he proposes to develop,
12 there's a thousand-foot strip through the center of
13 his property that would become undevelopable for
14 selling for small-type lots for homes or ranch-type
15 homes. And when I describe -- when I say an
16 opinion, I don't think it's opinion, I think it's
17 actually just factual with an easement, with a
18 50-foot permanent easement, we don't preclude a
19 landowner from building a home or a structure a
20 certain distance back other than the width of the
21 permanent easement, which is 50 feet. 25 feet
22 either side of, say, the center of the pipeline a
23 home or structure or other thing could be built.
24 So I believe at this point in time to us -- and we,
25 you know, will continue to try and work with Mr.

1 Starke relative to these issues, but we believe
2 there's a fundamental difference in our belief
3 about what his impacts would be.

4 But, secondly, we have also communicated
5 to Mr. Starke the development of this property and
6 any impacts the pipeline would cause is a damage,
7 much like if we mow somebody's crops down, it's a
8 damage, and if Mr. Starke has damages relative to
9 this tract of land and that is a point of
10 negotiation relative to his potential impacts, then
11 we certainly would sit down with him to address
12 those issues.

13 Q. Are there situations where developments
14 spring up right next to a crude oil line or gas
15 line?

16 A. Is -- and pipelines -- you know, there are
17 literally thousands of miles of pipelines in the
18 United States, and indeed pipelines have not
19 obstructed the development of land, and it's
20 been -- almost every metropolitan area in the
21 United States that has an airport -- a commercial
22 airport has a refined products or an aviation fuel
23 pipeline sited to an airport. Well, most airports
24 in most metropolitan areas you can't access without
25 coming through developed lands. So over time --

1 airports were on the edges of cities where over the
2 past 20 and 30 years they are embedded with cities
3 that have grown out around them, and the
4 development of subdivisions and housing complexes
5 and apartment complexes and even commercial
6 developments develop right around pipelines all
7 around the United States.

8 Q. I think you have in front of you Exhibit
9 T18. Could you describe what that document is?

10 A. This is a map of -- in southwest Houston,
11 which has been my home for a number of years, and
12 it shows an existing pipeline in the southwest
13 sector of Houston that's coming through a golf
14 course and where a subdivision has been developed
15 and then apartment complexes which abut virtually
16 right to the edge of the permanent easement that's
17 depicted on this particular drawing. This
18 particular pipeline I worked on about 25 years ago,
19 so I'm intimately familiar with it and the
20 development around it.

21 MR. KELSCH: I would move to admit Exhibit
22 T18.

23 JUDGE WAHL: Mr. Delaney?

24 MR. DELANEY: No objection.

25 JUDGE WAHL: Mr. Binek?

1 MR. BINEK: No objection.

2 JUDGE WAHL: Exhibit T18 is received.

3 Q. (MR. KELSCH CONTINUING) Mr. Gray, at the
4 hearing a number of people had indicated that they
5 had requested Keystone to reroute around their
6 property and they felt they didn't receive a
7 satisfactory response from Keystone. Does Keystone
8 have a procedure for considering reroute requests?

9 A. We do. It's called a route variation
10 request, and it's a formal process that we utilize
11 relative to requests for reroutes from a myriad of
12 sources, whether it's somebody within our own staff
13 for an environmental or some other reason, or a
14 landowner request that we put into a system that we
15 have. It's a multidisciplinary team that reviews
16 these requests, and when I say multidisciplinary,
17 it includes engineering, land, construction, I
18 don't know if I said environmental, but when I say
19 multidisciplinary to evaluate the request for
20 reroute, it also considers cost that is
21 accumulated. This is circulated among our project
22 team for recommendation relative to a reroute,
23 which generally ultimately resides with me to make
24 a final decision on. And when those come to me, I
25 make those decisions, they are documented in a

1 system that we have. When I describe that that
2 ultimate decision is mine, certainly TransCanada as
3 the owner of the project, I seek an approval from
4 TransCanada of the recommendation that I made.

5 Q. At the July hearings there were two
6 requests for reroutes, one was made by Mr. Bures
7 and one by Mr. Zacharias, due to concerns about
8 possible presence of Indian artifacts or cultural
9 resources on the pipeline route. Has Keystone
10 reviewed these reroute requests, and what was the
11 outcome of that review? I guess I'm showing you
12 what's been marked as Exhibits T16 and T17, if they
13 could help you with your discussion? I think we
14 have -- is that the Mr. Bures one, the T16 exhibit
15 up first?

16 A. Yes. At the July hearing Mr. Bures
17 testified about concerns of some -- he called them
18 burial mounds or mounds that the green, little
19 circles graphically coincide with to the extent of
20 the accuracy we could put them there, and he was
21 concerned that -- excuse me -- a reroute that we
22 had put into place that is shown in red moved from
23 an area that he believed that if we followed on the
24 blue route would not -- would not impact -- boy, I
25 don't do a good job of holding that very still --

1 the blue -- when I say the blue route, is a route
2 we had talked to Mr. Bures about and he was
3 satisfied that that route would avoid the cultural
4 resource issues that he was concerned about from
5 his family and from his heritage. We had rerouted
6 to the red route, trying to satisfy some route
7 concerns to the south, and in doing such we got
8 kind of between the burial mound areas. As Mr.
9 Bures testified from particularly his family over
10 time, particular artifacts in that area have been
11 found, we were not aware of it. Mr. Bures
12 certainly was not happy with that particular
13 reroute.

14 After the hearing in July, we arranged a
15 meeting with Mr. Bures on his property with
16 representatives of Keystone, as well as the
17 cultural resource consultants we have in that area,
18 and reevaluated that area. Mr. Bures has indicated
19 that he's much more satisfied with the blue route
20 than the red route, and we have gone back into our
21 system and accommodated the blue route. I have to
22 try and show -- to bring it back to the red route,
23 there's a short, little extension of the blue line
24 to tie it back into the red line. But Mr. Bures,
25 his cultural resource concerns, we have culturally

1 resource surveyed the blue route and we find it to
2 be benign of cultural resource sites. And at this
3 point in time the route that I've just described is
4 the approved route in our system.

5 MR. KELSCH: I would move to admit T16.

6 JUDGE WAHL: Mr. Delaney?

7 MR. DELANEY: No objection.

8 JUDGE WAHL: Mr. Binek?

9 MR. BINEK: No objection.

10 JUDGE WAHL: T16 is received.

11 Q. (MR. KELSCH CONTINUING) Then I would
12 direct your attention to T17, the Zacharias map.

13 A. This is -- just a general location, this
14 is just a few miles north of the Sheyenne River
15 near the Barnes, and I forget the other county
16 line, but the north line of Barnes County --
17 Ransom. And Mr. Zacharias, much like Mr. Bures,
18 had expressed a concern about some cultural
19 resource issues on his land. Mr. Zacharias's
20 home -- and he actually lives in this small corner
21 of the tract of land, and when we had originally
22 surveyed the route that you see in blue, our
23 original route, our cultural resource survey crews
24 actually, through artifacts, identified a site in
25 this area that is green. To avoid that site, we

1 relocated the pipeline easterly, which, one, became
2 closer to his home, but, secondly, from, again, his
3 family heritage, his understanding and discovery of
4 artifacts on the property that indeed this area is
5 more sensitive to his belief that you would find
6 more cultural resource issues in that area.

7 He had given us permission to survey on
8 the blue area, but when we had approached him about
9 the red area, he had denied survey permission for
10 the reasons that I stated. We dispatched a member
11 of my staff to meet with Mr. Zacharias and the
12 cultural resource team, as well, and Mr. Zacharias
13 has indicated that he believes a route to the west
14 would be less likely to engage cultural resource
15 artifacts as the red route, and we are pursuing,
16 with his permission, the survey of that route as we
17 speak.

18 The comment that I have there that maybe
19 leaves an unknown, if you see this kind of bowl,
20 that's a railroad track and right-of-way, and
21 there's a very deep cut for the railroad which
22 leaves very high embankments at that area, and my
23 engineer had routed to the east because this kind
24 of got up out of those very deep cuts from a
25 construction point of view, unknowing that he was

1 moving closer to the concerns Mr. Zacharias has.
2 When you move westerly, back this direction, and
3 it's hard to tell from just looking at maps, but
4 indeed you come back up out of that cut area, as
5 well, to where actually this is maybe a little more
6 difficult than the red, but substantially different
7 than if you were crossing down in this location.

8 And Mr. Zacharias -- we'll await the
9 results of those cultural resource surveys, but he
10 is satisfied at this time that we're working with
11 him to try and work through his cultural resource
12 issues.

13 MR. KELSCH: I would move to admit T17.

14 JUDGE WAHL: Mr. Delaney?

15 MR. DELANEY: No objection.

16 JUDGE WAHL: Mr. Binek?

17 MR. BINEK: No objection.

18 JUDGE WAHL: T17 is received.

19 Q. (MR. KELSCH CONTINUING) Mr. Gray, during
20 Mr. Cowling's testimony, we had introduced two
21 exhibits, T4 and T5. I direct your attention to
22 those two exhibits, the tree and shrub mitigation
23 documents, T4 being the Keystone mitigation
24 document and T5 being the Public Service Commission
25 mitigation document. I guess what I would like to

1 do is have you go through the T4 and indicate the
2 reasons concerning the, I guess, changes -- or
3 recommended changes that Keystone has to the PSC's
4 tree and shrub mitigation specifications. I guess,
5 what has Keystone done since the last hearing
6 concerning the tree and shrub mitigation?

7 A. Since the July hearing and being presented
8 the tree and shrub mitigation specification
9 document, we have had conversations with the North
10 Dakota forester and -- at least when I say --
11 people on my staff have spoken with the forester, I
12 have not personally, and we had a teleconference
13 with the PSC Commission staff, and a gentleman on
14 my staff has also talked to the USDA forester who's
15 over this region of North Dakota concerning, I
16 guess, mitigations and applications of this
17 specification agreement.

18 Q. Okay. And perhaps we could just maybe go
19 down the T4, and if you could kind of describe the
20 changes and why Keystone is proposing the change --
21 changes to the mitigation specification.

22 A. I think from background, I would certainly
23 like to say it's Keystone's, and certainly mine as
24 the construction manager of the project, that we
25 recognize North Dakota's intention to reforest the

1 two-to-one ratio. More of our intention here was
2 to refine the agreement to what we thought was -- I
3 don't know if easier to administrate, more
4 definition of administration of your requirement.
5 I believe some of these items may be taken
6 different from that, but hopefully I can explain
7 some of that intent as we go through.

8 Q. Okay. Can we start with the inventory.
9 Is Keystone describing or defining how an inventory
10 would be done?

11 A. Right. And the current agreement that's
12 used by the PSC really doesn't have a definition of
13 how trees are inventoried, and since we are a large
14 project that impact -- I think the number that I
15 was given was approximately 180 tree locations
16 along the pipeline route, and a significant number
17 of these being what I would call woodlots or
18 riparian areas, not a shelterbelt or a windbreak
19 that's a very narrow area, that governmental
20 organizations use sampling methods to quantify
21 trees within large acreages, and we are suggesting
22 for our project that that definition would be good
23 for our project in large areas, siting that we will
24 literally count and inventory the trees and
25 windbreak and shelterbelt areas.

1 Q. So does that -- I guess, Section 1, does
2 that include an inventory process that other
3 governmental entities have used?

4 A. It does. Many forestry agencies use
5 various types of sampling methods to quantify
6 trees.

7 Q. So this doesn't really change; it just
8 would explain how it would be inventoried?

9 A. That's correct. We will still inventory
10 the trees. We're just requesting definition here
11 so there's no dispute about the methods we would
12 use.

13 Q. Now, in the shelterbelt or narrow
14 windbreak, I guess here it would be defined as 30
15 feet or less, then you would actually count the
16 actual trees in the right-of-way?

17 A. That's correct.

18 Q. Moving on to the next page, is there a
19 difference in the -- in paragraph 3 concerning the
20 diameter of a tree?

21 A. Yes. We had reviewed some previous, I
22 guess, PSC orders relative to agreements, and
23 actually a diameter of tree actually in the more
24 recent agreements we'd seen was a two-inch-
25 diameter-breast-height tree. We had spoken to the

1 North Dakota forester concerning that diameter, and
2 because some of the more recent agreements are in
3 western North Dakota where there's not as much
4 forested area, it's mainly windbreaks and
5 shelterbelts, the North Dakota forester had
6 suggested that the one-inch diameter tree is very
7 important to a windbreak structure relative to its
8 snow fence-type characteristics, and he felt
9 relatively strongly. Well, on those we're
10 suggesting or we're recommending that we would
11 count to a one-inch-diameter-breast-height. In
12 large woodlot or riparian woodlot areas where you
13 have more of a mass of trees, the North Dakota
14 forester did not think that requirement was as
15 valuable as it is in a windbreak area. And our
16 discussions with the North Dakota forester were
17 that a three-inch-diameter-breast-height he felt
18 like would be reasonable, but he was quite specific
19 to indicate that that would be based on concurrence
20 with Public Service Commission staff.

21 Q. What about, moving on to Section 5, in the
22 non-windbreak -- I guess -- excuse me. Let me
23 rephrase that question.

24 When the -- I think there was some
25 testimony by Mr. Ellis that within the right-of-way

1 Keystone would allow all but 20 to 30 feet of the
2 permanent 50-foot easement to revegetate. What's
3 Keystone's position concerning that revegetation?

4 A. Is -- when I was describing the
5 clarification made in the agreement -- or in the
6 specification is to better just define what is the
7 maintained corridor. And actually in a prior
8 agreement to that I think the PSC requirement was
9 actually 25 feet within the pipeline. I don't know
10 if that's the exact language. So it was kind of a
11 50-foot corridor, if you use that measurement. We
12 are actually reducing that to a 20- to 30-foot and
13 we are just simply trying to write the language
14 within the specification to better define that.

15 Q. Moving on to paragraph 6, what were the
16 changes or what were the reasons for the changes to
17 that paragraph?

18 A. A lot of it is the same relative to just
19 say it is to clarify the 20 to 30 feet, the upper
20 portion or the first few sentences of Section 6.
21 The last sentence talks about in the event that
22 topsoil is disturbed and not preserved, that we
23 would need to revegetate, and we -- actually, in
24 our construction, we think that would be very rare
25 that that would occur, but we tried to clarify that

1 more precisely, as well.

2 Q. Then moving on to, I guess, paragraph 7
3 there, under clearing there would be no changes,
4 then to paragraph -- I guess a new paragraph 8,
5 there was a change from 50 feet to 85 feet. What's
6 the rationale for that?

7 A. The rationale behind it is that for a
8 large-diameter pipeline, a 30-inch pipeline, is
9 just the space we need to construct with our large
10 equipment, our large pipe. I'll try and give a
11 visualization. I should have thought in terms of
12 bringing a graphic that would help show this, but I
13 didn't. We have to dig about a three-and-a-half-
14 to a four-foot-wide ditch at the bottom of the
15 trench, and according to the slope stability of the
16 soils relative to that trench, that trench for a
17 30-inch pipeline with four feet covers about 6 and
18 a half to 7 feet deep minimum. So you wind up with
19 a trench at its top that can be 10 to 15 feet wide
20 by itself. Then you have to have a place to put
21 all of the dirt that comes out of the trench, and
22 you call that the spoil side or away from a trench.
23 But in 50 feet we need about 25 feet as an absolute
24 minimum, and I don't know now that I wish I'd even
25 said that number, but 30 to 35 feet. We have to

1 weld and place our pipe on skids, we have to have
2 equipment that can travel along it to pick the pipe
3 up and place it in the trench, and 50 feet is just
4 simply too narrow for that work with our equipment
5 and the labor that works around the equipment and
6 the potential of the pipe and our equipment in the
7 trench, it is just not a safe operation for us.

8 It's our belief that that 50-foot requirement may
9 have been based on much smaller-diameter pipelines,
10 like a 10-inch or an 8-inch, which indeed you could
11 build a 10-inch or an 8-inch in 50 feet without a
12 lot of inconvenience or the safety issues that are
13 described; but a 30-inch, no, you can't.

14 Q. Now, would that just be limited to a woody
15 area? Would you be able to go through a
16 shelterbelt area at 50 foot?

17 A. That's correct. Where we run into more of
18 the safety issues is longer linear lengths of woods
19 like we are going through several hundred feet or a
20 thousand feet of continuous wooded area. But a
21 narrow strip of woods that's 20 or 30 feet wide or
22 narrow like with a shelterbelt, we can certainly
23 facilitate the 50 feet.

24 Q. Moving on to Section 9, there's a
25 clarification. Can you describe why that

1 clarification was needed?

2 A. That particular specification we were a
3 little confused with ourselves in conversation with
4 Public Service Commission staff. We believe it
5 more addressed the idea that during the course of
6 construction if we run into a situation where we
7 needed additional work space for something we
8 didn't anticipate or something we just ran into we
9 didn't know about and we needed additional space,
10 that we would be allowed to take that space, but if
11 we impacted forested areas, that we would quantify
12 those impacts and that would be, for lack of a
13 better word, added to the inventories.

14 Q. Okay. Then moving on to paragraph -- the
15 new paragraph 13, there's a change in the width.

16 A. The same -- same testimony as previous,
17 that that's just to clarify the 20 to 30 feet
18 versus our 50-foot permanent easement.

19 Q. You're actually lessening the impact?

20 A. That's correct.

21 Q. And then moving on to paragraph 14, what
22 were the changes in there relating to?

23 A. The change is the mechanism by which we
24 seek the landowner's feedback as to requiring the
25 trees to be planted on their property, and for a

1 large project that -- when I say I administer,
2 we're looking for not only the names of the
3 landowners, but the certainty of -- when I say the
4 areas to set up a program to manage these
5 particular spots in it, and this is -- it's
6 intended to provide a means of the landowner to
7 request that, but also to provide a means for us to
8 reasonably manage that effort to ascertain that
9 data.

10 Q. And it looks like you're giving the
11 individuals a time to decide whether they would
12 want trees planted on their property?

13 A. That's correct. We've stated that they
14 would have a 60-day period to respond to our
15 request, and the lack of response would waive that
16 request for trees.

17 Q. And then in that event, those trees would
18 be replaced at some other location?

19 A. That is correct.

20 Q. Now, what is the status of the requiring
21 easements, and have landowners been compensated for
22 trees as part of that?

23 A. In our -- when I say in our easement
24 agreements or negotiation with landowners, whether
25 it's a crop or a treed area, it's a damage because

1 we're removing something of value off the property,
2 and landowners are compensated for timber damages
3 just like they're compensated for crop damages.
4 And we have been into that process now for a little
5 over four months. We've acquired approximately 60
6 percent of the tracts in North Dakota.

7 Q. Now, would it from a -- I guess, a
8 procedural standpoint, would it be difficult to
9 now, after you've obtained a lot of these
10 easements, to have to go back to the landowners and
11 receive a written waiver?

12 A. I suggest to you that certainly in this
13 process of negotiation when we have -- when I say
14 consumed a negotiation, we would have to go back
15 indeed to the landowner to seek this waiver and
16 approval of this waiver. One, just from my
17 experience in acquiring rights-of-way and lands,
18 that going back post to a negotiation that's been
19 consummated is not one of the more favorable things
20 that we would like to do, but we certainly
21 understand the requirement as written by the
22 specifications. We have just suggested a mechanism
23 to accomplish that same task with the same
24 certainty with the same level of documentation that
25 just, in my opinion, relieves us of that undue

1 burden.

2 Q. And moving on to paragraph 15, it looks
3 like there's been some new language?

4 A. Actually -- and I'll have to look at the
5 other agreement, but actually I think that was some
6 new language we had proposed that we actually came
7 back and struck.

8 Q. Struck out. Okay. I'm sorry. So that
9 hasn't changed then? I apologize.

10 A. That hasn't changed.

11 Q. Okay. I was a little confused on that,
12 too. Moving on to paragraph 16, there's some
13 additional language concerning the 75 percent.
14 What was the reason for adding that additional
15 language?

16 A. Is we were kind of -- and actually we just
17 kind of discovered this recently, but we were kind
18 of surprised at the condition and the question that
19 was proposed to Mr. Cowling on behalf of
20 TransCanada that talks about survival rate is not
21 actually a part of the specification. So part of
22 our intent was to just bring it into this document
23 because it's easier for us to define and
24 administer.

25 The second part of it, though, about the

1 Commission may order a one-time additional
2 planting, I suggest -- I have some comments
3 relative to that, is that at the conclusion of
4 three years, in our conversations with foresters,
5 this 75 percent survival rate was a rate that the
6 forester said, you know, if you plant the trees
7 properly, you, I guess, water, maintain, do things
8 towards them, 75 percent should not be that
9 difficult to achieve unless you are in a -- three
10 years of just absolute drought or certain type
11 situations like that. So based on the fact that we
12 thought the achievement rate -- we would achieve
13 close to that, the idea being that after three
14 years that -- and for the example I would give,
15 that 70 percent survive, well, there's a 5 percent
16 deficiency that needs to be met to relieve this
17 criteria. Well, I believe -- it was my belief
18 that, well, if we come back and plant 15 percent
19 and 30 percent survive, then we've achieved our
20 goal. And because it doesn't tell you how much you
21 have to plant, that that would be a discussion
22 between Service Commission and us as to how to
23 comply. Strongly, I know the Commission recognizes
24 with their need to trees, but TransCanada is a
25 pipeline company, not a -- I forget -- arbor --

1 something with arbor, but we're not in that
2 business, and I think if we achieve where we want
3 to be and have a mechanism that ensures achieving
4 the three-year criteria, that we should be relieved
5 of our responsibilities and allowed to be released
6 from the conditions.

7 Q. I guess one of the -- was one of the
8 concerns that how long does this obligation go on
9 beyond even the three years?

10 A. That is the concern and we discussed among
11 ourselves, is that could it -- and part of it was
12 trying to conceive a way to have a term to the
13 agreement as long as we achieve a survival rate.
14 And, for example, that at three years, 70 percent
15 survive, we plant the 5 percent, now we go three
16 more years, and of that 75 percent survive, the one
17 and a half percent, so we were just trying to
18 design some means that -- we are not trying to
19 skirt the obligation. We're just trying to manage,
20 to administration of a way that allows us to
21 complete this requirement.

22 Q. Mr. Wefald had asked Mr. Ellis about the
23 feasibility of horizontal drilling under the
24 Sheyenne River location, scenic highway along the
25 Sheyenne River. I think it was map 8 of 10, I

1 believe, in the application. Can you comment about
2 the feasibility of drilling that crossing or any
3 construction concerns about doing that?

4 A. Yes, and I might go to the map, actually.

5 Q. I think it is 8 of 10, I believe.

6 A. And I would ask the Commissioner if I'm to
7 the areas, but typically when we will horizontal
8 directional drill an area like you have
9 described -- and I don't know whether it's the
10 brown or reddish-looking writing or stuff that you
11 see north of the river and south of the river, but
12 those are actually contour lines of the terrain
13 coming in and out of the river. My staff, when we
14 had looked at this -- it's approximately 7,000 feet
15 from the top bluff to the top bluff, for lack of a
16 better definition. 7,000 feet does get past the
17 limits of the technology of horizontal directional
18 drilling at this point in time for a 30-inch
19 pipeline. Certainly the geotechnical conditions
20 that you would gather from soil borings and things
21 for that type of length, it would be an extremely
22 long and risky directional drill to attempt at that
23 length. But at this point in time for those
24 reasons we've not considered it as an HDD, or
25 horizontal directional drill, that same type of

1 technology.

2 I would mention to you we do experience it
3 more in the western United States in our pipeline
4 work, but there are mitigation means to mitigate
5 the visual impacts of pipeline construction in
6 right-of-way. One of the key methods that's used
7 is -- I call it staggering the cut line through the
8 trees and things so you don't have a straight
9 viewpoint. You do some things with putting some
10 angles in the pipeline so you can't see like a
11 powerline corridor. But there are things that can
12 be done to mitigate those visual impacts.

13 Q. Thank you. In a question that Mr. Binek
14 had had originally of Mr. Cowling, and a response
15 to answers to some of Mr. Binek's questions, one
16 had to deal with the depth of the pipeline -- the
17 buried depth of the pipeline. Mr. Cowling's answer
18 was that the pipeline would be buried to the depth
19 of 48 inches in rangeland, cultivated land and the
20 bottom of ditch or road crossings, and 72 inches
21 across undeveloped section lines with the exception
22 of in areas of consolidated rock that it would be
23 buried to a minimum of 36 inches. What is your
24 understanding of consolidated rock and why can't
25 you go down the 48 or the 72 inches?

1 A. Consolidated rock is indeed a continuous
2 solidified rock that is not fractured or it's not
3 easy to dig or break up to get out. Typically we
4 have to create a trench by using blasting
5 techniques.

6 COMMISSIONER WEFALD: Later we'll ask that
7 question.

8 COMMISSIONER CRAMER: We're sorry.

9 THE WITNESS: But we typically have to
10 create our trench by blasting techniques, which is
11 literally drilling holes and placing dynamite to
12 fracture the rock to be able to excavate it. And
13 typically we find in those areas where that rock
14 exists, we typically find there's not a lot of
15 other land use other than it's rock, and so farming
16 operations, those types of situations, typically
17 don't exist. Therefore, the sheer effort and work
18 required to get 48 inches of cover versus 36 inches
19 is quite an effort. And actually the federal
20 codes, the safety guidelines we work under allow us
21 that -- that exception for cover under our own
22 federal safety guidelines.

23 Q. (MR. KELSCH CONTINUING) Do you know
24 whether Keystone has checked to see whether there
25 is any solid bedrock or this consolidated rock?

1 A. We literally do not believe there would be
2 any along our pipeline route. However, I have
3 worked in -- had some work in North Dakota before,
4 and in eastern North Dakota we have run into some
5 boulders as big as a car and things. Now, we can
6 excavate those out and get them out versus the
7 blasting to it, but I guess when we go -- none of
8 us can see underground and when you excavate a
9 trench, you may run into situations like that and
10 we just like to be able to deal with it the normal
11 way we do.

12 The comment concerning PSC approval is
13 more of a logistics issue for us. And I don't have
14 an understanding of how quickly Commission staff
15 could respond to a request of that approval, but in
16 my testimony in July I spoke of we move a mile, a
17 mile and a half a day, we move very rapidly. For
18 efficiency of our operations, it's costly for us to
19 skip areas and come back, and seeking approval on
20 that type of dynamics is something we would prefer
21 to avoid. However, if it's a mandate through the
22 conditions, we will comply with it.

23 Q. What type of a time frame, I guess, would
24 you request or would you need so you wouldn't have
25 to skip and come back?

1 A. I would suggest to you probably within a
2 few days. I'd say two to three days.

3 Q. There was a question about Mr.
4 Wittenberg's property that was still within the
5 500-foot avoidance area, I think 425 feet away from
6 the pipeline. Do you know whether Keystone has
7 attempted to obtain a waiver from Mr. Wittenberg?

8 A. We did attempt to acquire a waiver from
9 him, and he did not want to sign the waiver.

10 Q. There were concerns raised by some of the
11 people testifying at the July hearings about the
12 treatment of the landowners by some land agents.
13 Have you done anything -- any investigation or
14 looked into complaints concerning landowners'
15 complaints?

16 A. Yes. And certainly I was present at both
17 of the hearings in North Dakota and I know -- I
18 actually had made notes relative to the landowners'
19 names. I didn't bring those notes with me today,
20 but I did note each of those. The land group for
21 the U.S. team ultimately reports to me, and as Mr.
22 Cowling said, the company's policy, as well as our
23 own policies are to treat landowners with dignity
24 and respect. The assertions that were made I took
25 back to our office in Kansas City, contacted the

1 state supervisors in North Dakota concerning those,
2 and because the people that testified didn't
3 necessarily give us a name of an individual -- we
4 have, I think, today some 15 to 20 agents working
5 in North Dakota, but my investigation,
6 unfortunately, like so many situations, is somewhat
7 nonconclusive, is I don't have a person's name, I
8 can't pinpoint to the actual event that occurred,
9 but in the inquiry with the supervisors and the
10 agents, they certainly denied the accusations. The
11 comment being as a manager or anybody that manages
12 people whose employment you control is dealing with
13 your employees is very important, and for me, I
14 have to make decisions to remove people from
15 projects, and I do have to do that from time to
16 time, but to remove somebody from his employment
17 and his income, I have to have substantial
18 evidence, and I have not been able to get that on
19 these particular issues that were brought up to us.

20 I would like to cover some others areas,
21 though. That we had hearings in South Dakota prior
22 to the North Dakota hearings where we had another
23 few landowners that spoke about these types of
24 issues, as well. We had -- we had a training
25 session in July prior to the North Dakota hearings,

1 after the South Dakota ones in early July, where
2 one of the focused topics was sensitivity to
3 landowners in South and North Dakota relative to
4 their farming operations, their hours that they are
5 working, to address that specific issue in it. We
6 take it extremely seriously because pipelines are
7 neighbors for these landowners after construction
8 goes, it's a very serious matter to us, and we will
9 continue to investigate and deal with it that way.

10 I do think relative to things for me as a
11 manager that I gauge is there are approximately
12 3,500 landowners along the main line pipeline route
13 in the United States crossing from North Dakota
14 into Illinois. We have achieved survey permission
15 in excess of 90 percent of those along the entire
16 pipeline route, in the Dakotas in excess of 95
17 percent. And when I describe that interface to
18 you, we interface with landowners many times. We
19 seek permission to survey for civil surveys,
20 cultural surveys, environmental surveys. As a
21 matter of fact, it bothers me that we inconvenience
22 landowners in our business more than we should, but
23 we believe we have contacted landowners now in the
24 10 to 15 thousand times range and the complaints
25 that I have had registered to me registered in

1 numbers like 20. And so I gauge feedback in those
2 areas.

3 There's one other topic that I have to
4 cover. When we talk about complaints, we have
5 complaints of various kinds. One's dignity and
6 respect, one is threatening, those types of things.
7 Those are one group of complaint. Another group of
8 complaints are whether it's I do not want the
9 pipeline, whether I don't want -- there's something
10 about the route I don't want, but if you could move
11 it, I might deal with you. A lot of times people
12 throw that into the complaint category. In our
13 business that's not a complaint. But the one
14 relative to how we relationship and interface with
15 people is one that, if we don't conduct our
16 business properly today, we will live through it
17 through construction, we will live through it
18 through operations. It's too valuable for us to
19 manage poorly.

20 Q. Now, you said you had 20 complaints. Is
21 that just in North Dakota, or is that along --

22 A. That's across the project.

23 Q. The whole U.S. portion of the project?

24 A. That's correct.

25 MR. KELSCH: I have no further questions.

1 JUDGE WAHL: Mr. Delaney?

2 MR. DELANEY: I don't have any questions.

3 JUDGE WAHL: Mr. Binek.

4 MR. BINEK: Thank you.

5 CROSS-EXAMINATION

6 BY MR. BINEK:

7 Q. How are you going to cross the Sheyenne
8 River? Is that going to be bored?

9 A. No, sir. Right now it's proposed to be an
10 open-cut crossing, which is an excavated crossing.

11 Q. And who has to approve that?

12 A. If we seek it -- I'm going to try and
13 answer, but if somebody needs to correct me, I'm
14 going to defer to them, but we typically have to
15 get those approvals from the Corps of Engineers for
16 the crossings of water bodies, and we would submit
17 the methods that we're going to cross by stream or
18 type and they will either accept or reject that
19 application.

20 Q. In crossing the Sheyenne you talked about
21 the distance -- because of the distance, you
22 couldn't bore that. Could boring be done in
23 sections, so you bore the one side down to
24 basically the river bottom, possibly bore the river
25 to the other side and then bore under the trees

1 again?

2 A. Mr. Binek, what you're describing I would
3 suggest to you could be done. It is
4 technologically feasible to do what you've
5 described. It's extremely timely and it's
6 extremely costly to do that. I do not -- I cannot
7 say in my 30 years in this business that I have
8 ever been confronted with a requirement or a
9 condition like that, but as far as the technical
10 feasibility goes, as long as the geotechnical
11 conditions are you don't have rock, gravel, things
12 that make the drilling operation impractical or
13 infeasible, that it could be done. The
14 practicality of doing it I do question.

15 Q. Well, I can understand that, but it's been
16 emphasized here that this is a scenic area, it's
17 close to a park, you know, it's an area that should
18 be maintained if at all possible, and so that's the
19 reason that I bring it up, and if it is -- if it is
20 feasible, even though it might be -- might take
21 more time and might cost some additional money, if
22 it can preserve the scenic beauty of that area, it
23 maybe is worthwhile.

24 A. Understood. There is one other thing that
25 I would mention to it, and I'll probably testify

1 with my hands. I don't know another way to do it.
2 When we drill or bore something, for lack of a
3 better word, we have to string out the pipe that is
4 to go under the bore and weld it into a long
5 section. And I'll just use the 7,000-foot example
6 because I think we can picture it. If I were to
7 bore, tunnel a hole that length, I have to weld up
8 a 7,000-foot piece of pipe to pull back into that
9 hole, and so that description that you just gave of
10 the three pieces, it would require the logistics of
11 the laying out of that pipe to be able to string it
12 out, because once you start pulling it back, the
13 potential of stopping to make a weld increases the
14 risk of failure dramatically so you want a
15 continual pullback. So if I have the river here,
16 say, this bluffs or bank is coming in, this bluffs
17 or bank is coming in, the logistics to be able to
18 lay out those pipe sections, not destroy the woods
19 and do those things -- I guess what I'm saying is,
20 it's not as simple as it sounds. It's certainly
21 something that could be investigated, but it's not
22 just a slam-dunk even if you said you could do it.

23 Q. Are you willing to investigate it?

24 A. Yes. I believe we're willing to
25 investigate means to mitigate the concerns of that

1 area. I think we would ask in doing that
2 investigation that we be allowed to look at all
3 options, not just a drill option.

4 Q. I have no problem with that as long as the
5 drill option is one of the things that's looked at.

6 A. Very well. We agree.

7 Q. And I guess we should have some method for
8 reporting back to the Commission on that
9 investigation.

10 JUDGE WAHL: Well, Mr. Binek, I'll give
11 you T32. Now, you're going to have to help me with
12 what you want.

13 MR. KELSCH: I think it's T32, Your Honor.

14 JUDGE WAHL: I'm sorry. It is T32. Thank
15 you, Mr. Kelsch. You want a report or what?

16 MR. BINEK: The witness talked about an
17 investigation. I'm not sure what he would look at.
18 You know, I brought up the boring, but there are
19 other possibilities. Mr. Fahn has a suggestion.

20 JUDGE WAHL: Mr. Fahn.

21 MR. BINEK: Rather than repeat it, I'm
22 going to ask him to give his thoughts.

23 MR. FAHN: The thought that I had was that
24 the company would -- the Commission would issue its
25 order, it would require that TransCanada file for

1 Commission approval of the crossing method at the
2 Sheyenne River, and we could agree here that one of
3 those -- that one of the -- that that request for
4 approval would request approval of the method
5 you're determined is the most appropriate, but it
6 would also include a description of your analysis
7 of other methods.

8 THE WITNESS: And you're suggesting that
9 being a -- after -- after the Commission's -- that
10 would be a condition of an order?

11 MR. FAHN: Condition of the route permit.

12 THE WITNESS: Understood. We are familiar
13 with dealing with conditions on permits or
14 certificates, and certainly a condition to -- I
15 certainly believe what you've described is
16 plausible, that we could investigate. One of the
17 issues we have as Mr. Binek was bringing it forward
18 is to make a final determination of the capability
19 to do any HDD, you need geotechnical soil borings
20 and we can't achieve those in time to turn
21 something around in a matter of weeks. It just
22 can't happen.

23 MR. FAHN: Do we have more than weeks?

24 THE WITNESS: Pardon?

25 MR. FAHN: We may have more than just a

1 couple weeks' time to accomplish this.

2 THE WITNESS: And what I describe into it
3 is that getting the geotechnical work done, getting
4 the reports, it's going to take a month or two, I
5 would say, to get all of the information together
6 to give a report about a crossing recommendations
7 or mitigations relative to an HDD.

8 MR. FAHN: When was construction proposed
9 to begin?

10 THE WITNESS: Oh, okay. Construction is
11 in May of next year. I thought you were tying it
12 to maybe a certificate order. You're not tying it
13 to --

14 MR. FAHN: Not the order, but the route
15 permit would be conditioned upon.

16 THE WITNESS: Very well. No. I certainly
17 believe it could be achieved in that time. No,
18 there is not a problem with that.

19 JUDGE WAHL: All right. So then, Mr.
20 Binek, this is not an exhibit? This will be a
21 matter for the Commission's preparation of an
22 order?

23 MR. BINEK: That's correct.

24 JUDGE WAHL: All right.

25 MR. BINEK: One moment.

1 Q. (MR. BINEK CONTINUING) In the tree and
2 shrub mitigation specifications that you prepared,
3 you use the term woodlot area and riparian area.
4 Would you define what you mean by those two terms?
5 I think it's under 1.a in Exhibit 4.

6 A. Yes. To me a woodlot area is indeed a
7 forested area that is not near a stream or a river,
8 where a riparian area is a woodlot area that's
9 adjacent to a river or stream.

10 Q. And then 1.c you talk about the sampling
11 locations, two sample plots will be established.
12 What size plots are you talking about?

13 A. The size of discussion that my staff
14 gentleman had with the North Dakota forester, I
15 believe, was something on the neighborhood of a
16 couple hundred feet by a couple hundred feet in
17 size, but I would like to confirm that dimension.
18 I'm just working from my memory right now. But it
19 would be agreed upon with the North Dakota forester
20 to establish what he believed would give a sampling
21 that could be accurately extrapolated to the whole
22 acreage that's involved.

23 Q. I think you defined the maintained
24 corridor is that portion -- that 20 to 30 feet that
25 would be kept clear; is that right?

1 A. Yes.

2 Q. In number 3, you put in this one-inch
3 diameter, but you've taken out the terms "shrubs."

4 A. The intent there was not -- that we will
5 still deal with shrubs. The intent was the trees
6 are the one-inch diameter. And maybe I understand
7 your point there is that by striking it, maybe
8 we've stricken the requirement for counting the
9 shrubs, and we would agree to change that. That
10 was not the intent to strike shrubs.

11 Q. Okay. And then on 16, and I talked about
12 this previously, the statement trees/shrub
13 replacements planted by Keystone shall be inspected
14 once a year for three years. Do you agree with me
15 that the inspection responsibility is for all
16 trees, whether they're planted by Keystone or who
17 they're planted by, that Keystone has the
18 responsibility for inspection?

19 A. I do agree with you, indeed, that it was
20 to -- if a landowner is maintaining. Our easement
21 rights and various things throughout permits, at
22 least through construction we don't really have a
23 right to get off of the footprint that we've
24 acquired, and we instituted that simply from the
25 idea that a landowner had trees replanted, we don't

1 have a right to just go across his property to look
2 at these, so it's another administration burden
3 that we would be taking on, and, indeed, that's why
4 the language was inserted, but we do understand
5 that is a requirement for all trees.

6 Q. And we've had a lot of discussion about
7 this 75 percent survival rate, but you do
8 understand, I hope, that the Commission has
9 required that in the past, that no matter how long
10 it takes, you have to have a 75 percent survival
11 rate?

12 A. We do understand that. I think, as I've
13 expressed, we're a very large project, crossing a
14 lot of area, and maybe in our desires to have it
15 more -- easier administration to a document is our
16 intent, but we do understand the precedence of
17 prior agreements.

18 Q. Then on this consolidated rock situation,
19 I guess what I was hearing is that you probably
20 agree that there isn't any bedrock in North Dakota,
21 but there might be some big rocks.

22 A. That's my understanding and experience.

23 Q. Okay. A big rock you can remove, though;
24 right?

25 A. The ones that I've seen to date, yes.

1 Q. And I think I heard you say that, you
2 know, within a time period of two to three days if
3 there was a situation that was such that you had to
4 ask for the right to go with the 36-inch cover,
5 that if there could be approval within a couple,
6 three days, that would be sufficient?

7 A. Mr. Binek, I think that it would. My
8 comment would be we do work six days a week, so I
9 might ask that it be calendar days.

10 Q. On the topsoil removal, how would you go
11 about determining what is topsoil and what is
12 subsoil?

13 A. It is typically done by visual observation
14 of a change in color between the topsoil and the
15 subsoil. That's typically how it's done.

16 Q. If you can't make that determination by
17 color -- and I bring that up because we have run
18 into this situation, and it could not be determined
19 by soil color, then what do you do?

20 A. One, certainly, we think the person that
21 knows his land the best is the landowner, and I
22 think we would consult the landowner. In lieu of
23 that, I believe that we would simply have to call a
24 soil scientist out to make that determination for
25 us at intervals along the right-of-way.

1 Q. Would one possibility be to remove -- if
2 it's in a cultivated area, to remove to the depth
3 of cultivation?

4 A. That would be a possibility, but I would
5 tell you that even though I'm certainly not a soil
6 expert, that's not in the best interest of the
7 protection of the land for cultivation, that we
8 would be better to try and determine the depth of
9 topsoil. But if a landowner suggested or
10 recommended to us that that's what we do, we would
11 do that.

12 Q. Then -- and I'm going through these kind
13 of standard questions that we had and the
14 responses. On the reseeded, the response was that
15 reseeded would be done according to Natural
16 Resource Conservation Service recommendations
17 unless otherwise agreed to by the landowner. The
18 Commission has had the provision that it was unless
19 otherwise specified by the landowner and approved
20 by the Commission. Do you have any problem with
21 the idea of having to get Commission approval in
22 addition to the landowner?

23 A. I don't think that we do. I guess, from
24 my experience, it has been that landowners many
25 times don't necessarily agree with a regulatory or

1 governmental agency, so this is likely to occur,
2 not unlikely to occur, and I think we are capable
3 of administering that request and that approval;
4 it's just this may be a cumbersome administration.

5 Q. And then the question of whether Keystone
6 understands and agrees that it must obtain approval
7 from the Commission or Commission staff prior to
8 any changes in the pipeline route or structure
9 locations, and the response was that what Keystone
10 understands is that it must get approval from the
11 Commission or Commission staff prior to changes
12 outside of the one-mile corridor or if the change
13 would impact an exclusion or avoidance area. Based
14 on the previous conversations here, do you
15 understand that what we're talking about is a
16 change in the route, not any change -- what we're
17 talking about is any change in the route, not just
18 a change within the corridor, that any change in
19 the route would have to have approval?

20 A. Yes, I do understand that.

21 MR. BINEK: I have no further questions.

22 JUDGE WAHL: We'll take a stretch for five
23 minutes, please, then we'll push through.

24 (Recess taken at 4:17 p.m. to 4:23 p.m.)

25 JUDGE WAHL: Let's be in order. We're

1 back on the record. Commissioners?

2 COMMISSIONER CRAMER: Sure.

3 JUDGE WAHL: Commissioner Cramer.

4 **EXAMINATION**

5 **BY COMMISSIONER CRAMER:**

6 Q. I don't know that I have a lot for you,
7 Mr. Gray, other than you've probably figured out
8 that this Commission as much as anybody, perhaps
9 more than any other regulatory body you've had to
10 deal with, has a heart for reclamation and a fair
11 amount of expertise in it because not only have we
12 had a lot of experience with pipelines, but we also
13 have the mining reclamation program, so our
14 standards for reclamation are quite high. One of
15 the thoughts -- one of the thoughts I had, and this
16 really in the form of -- I guess the best way to
17 put it in a question is, how would you respond to
18 the prospect of having a third party -- having
19 third-party oversight on location during
20 construction to kind of be a -- to mitigate some of
21 the timing issues that have been expressed, some of
22 the concerns with regard to quick approval and
23 suggestions like that, as well as looking out --
24 quite honestly, this topsoil issue that Mr. Binek
25 raised is one that's been a constant with us, and

1 you know you're dealing with farmers, you're used
2 to that, their topsoil is pretty precious. It
3 blows around a lot around here. Have you ever seen
4 anything like that or had a condition like that
5 that would provide the opportunity for some sort of
6 a third-party overseer, because we, frankly, don't
7 have the staff that could do it?

8 A. Certainly in my career, particularly on
9 federal certificated projects through the FERC, you
10 typically do get some conditions relative to the
11 number and types of environmental inspectors that
12 have to be a part of the construction team. In
13 that definition, the bulk of those people generally
14 are employed by us, they're just dictated to us.
15 But we are constantly under oversight of other
16 folks, everything from landowners to permitting
17 authorities for roads or railroads and things. So
18 your suggestion of some type of oversight of the
19 Commission, I would certainly tell you there is
20 precedence of jurisdictional oversights. You know,
21 from my perspective in managing construction and
22 the means by which I believe we manage ours, I do
23 not believe that oversight to be necessary. I do
24 believe we meet the conditions and the
25 requirements. However, you know, the background is

1 it does occur and it has been implemented.

2 Q. One other thought with regard to the tree
3 and shrub mitigation specifications, and maybe it's
4 as much a statement as anything, but the reason
5 that I have, and I think we all expressed some
6 concern about the one-time planting, is you operate
7 from the assumption that 75 percent is relatively
8 easy to get to. We might have an experience where
9 at the end of three years there was a 10 percent
10 success rate. A one-time planting wouldn't do much
11 for that. And so I appreciate -- and I think I
12 heard the clarity finally that you understand that
13 a one-time planting after three years just might
14 not be enough to get to the goal that we require.

15 A. And, Commissioner, I fully understand what
16 we've done to date is, we have given you some
17 recommendations that we would like staff and you to
18 consider. We fully understand you have the
19 authority and the right to implement the agreement
20 as it currently stands or even with modifications,
21 if you desire to do that. You know, from simple
22 matters, you don't get anything unless you ask for
23 it.

24 Q. Sure.

25 A. And I think that is the -- we have

1 proposed what we think is a reasonable approach of
2 administration and we are asking for that
3 consideration, but the ruling will be the ruling
4 and we will comply.

5 COMMISSIONER CRAMER: And we understand
6 that this process is as much a negotiation as it is
7 a lot of other things, so I appreciate that. I
8 have nothing further.

9 JUDGE WAHL: Commissioner Wefald.

10 **EXAMINATION**

11 **BY COMMISSIONER WEFALD:**

12 Q. Yes. On page 3 of the application it
13 shows 110-foot construction zone, and I'm a little
14 concerned when I saw that in your tree plan or
15 whatever -- I think it's in the tree plan or
16 somewhere -- yes -- that it said that, in number 9
17 -- no, number 8 on the tree plan that you propose,
18 the width of construction right-of-way clear cuts
19 through woody areas shall be limited to 85 feet or
20 less where practical. Does that mean that could be
21 up to 110 feet?

22 A. When I describe where practical, that is
23 why we put that word there, is that -- I'm trying
24 to describe situations that we were coming off of a
25 bluff or somewhere where there's quite a topography

1 change in elevation, that to make the grade that we
2 need to build and lay our pipe upon, we may
3 literally need to clear more room to be able to
4 build that transition coming off a hill or down a
5 bluff. I think this would be very much an
6 exception, but, again, when we get into certain
7 topographical spots like I've described, you
8 literally can run into a circumstance where it's
9 just physically not possible, and that's what the
10 words "where practical" were for.

11 Q. So would it be a maximum of 110, or could
12 it be more?

13 A. Is where, I think in my testimony earlier,
14 like at a road crossing or a river or a stream
15 crossing where you have a large amount of material
16 to excavate and you have to store it somewhere, we
17 might have to clear even more trees than the 85
18 feet to facilitate placement of that spoil.

19 Q. All right. And you didn't answer my
20 question.

21 A. Okay. I'm sorry.

22 Q. Is it going to be up to 110 feet, or can
23 it be more?

24 A. It could be larger.

25 Q. Than 110 feet?

1 A. That's correct. I think that would be
2 very rare from the topography in North Dakota, but,
3 again, we were just seeking the latitude to use
4 judgment to those areas.

5 Q. Okay. Thanks. How about, can you do it
6 within 85 feet if necessary?

7 A. If necessary, I think in --

8 Q. Safety. Not convenience.

9 A. Not convenience. Safety, I would suggest
10 to you for normal construction you can. At a river
11 crossing you may run into circumstances because
12 there if you're five feet plus below the bottom of
13 a stream, you may be 40 or 50 feet deep below the
14 banks, and it's just a huge amount of spoil to
15 move. Our equipment has to work off a level
16 surface area to the extent possible to be safe, and
17 if we can't get that material far enough away to do
18 it safely, then it's a problem for us.

19 Q. So it could be -- that's a good reason,
20 though, that you might want -- that we may want to
21 strongly consider directional drilling, right,
22 because then you do not have all that spoil pile
23 laying there and needing 110 feet of clearing?

24 A. Commissioner, I guess where I would
25 describe in it is -- is --

1 Q. Is that why people do require directional
2 drilling instead of the other method -- one of the
3 reasons?

4 A. No. The primary reason -- the primary
5 reason is relative to the length across like a
6 large stream, the inconveniences to the stream in
7 larger, like a Missouri or Mississippi River where
8 traffic and things are, it's more due to size and I
9 would say endangered or threatened species than it
10 is relative to forested areas.

11 Q. On the -- oh, I have a question that
12 relates to Mr. Bures and the mounds. We're back up
13 by Lankin. You had a potential new route for Mr.
14 Bures to go around the mounds that he identified.
15 How does that relate to if the Commission wished to
16 consider the reroute to the west that was presented
17 in Exhibit T9?

18 A. I'd have to see T9. I think that this is
19 within the area of T9. I believe that it is. I
20 would have to see a milepost or something. I'm
21 sorry, T9 doesn't have mileposts on it, so I'm
22 trying to find something I can relate to.

23 Q. I don't know of any maps that we have that
24 have mileposts in the original application.

25 A. The Fordville Aquifer area, it's my

1 understanding close to the town of Lankin, which
2 Mr. Bures's tract is close to, I'm almost certain
3 it would be within the western reroute. Without
4 seeing the milepost, I'm virtually certain of that.

5 Q. I'm sorry. I didn't quite understand the
6 answer so maybe I need to restate my question. My
7 question is, Mr. Bures on Exhibit T16 was showing
8 that -- a proposed reroute in yellow.

9 A. I see that.

10 Q. I believe that's near -- I believe that's
11 near Lankin, and I just don't know if it is north
12 of where you would be moving the line to the west
13 on T9. Is he north of where the -- help me
14 describe this. I'm sorry. Is it north from where
15 you have the route deviate to the west on T9, or is
16 it south of the interconnection of the reroute to
17 the west on T9?

18 A. I'm pretty certain it's south of it.

19 Q. South of it?

20 A. Yes.

21 Q. So if the reroute was to be chosen by the
22 Commission that's shown in red on T9, the western
23 reroute, then it would not -- then this reroute
24 would not be necessary?

25 A. That's correct.

1 Q. Okay. What was the length of the
2 directional drilling that you indicated was going
3 to happen up in the Pembina River Valley with the
4 state forest land?

5 A. Commissioner, I don't remember that
6 length. I would have to refer to something in it,
7 but I don't remember it.

8 Q. Did someone earlier today say it was
9 eight-tenths of a mile?

10 A. I think -- I think there was testimony to
11 a length. I just don't remember what it was.

12 Q. Whatever that length was -- whatever that
13 length was up in the Pembina River area, would you
14 include that as one of your options to investigate
15 that length in the Sheyenne River Valley?

16 A. Oh, I'm a little bit confused. On the
17 Pembina we have determined that we will cross that
18 by directional drill method.

19 Q. Yes, I understand that. And so I thought
20 I heard earlier today that that was eight-tenths of
21 a mile, so I'm just saying, will you consider --
22 will you include that as one of your options to the
23 Commission -- you said you would investigate
24 options for crossing the Sheyenne River -- if
25 eight-tenths of a mile could be considered as one

1 option to be considered for the Sheyenne River
2 crossing?

3 A. Oh, I'm sorry. I understand now. When
4 you say eight-tenths of a mile, which is
5 approximately 4,000 feet --

6 Q. Right.

7 A. -- that in essence crossing the river in
8 whatever length 4,000 feet would encompass.

9 Q. Yes.

10 A. Yes, we could consider --

11 Q. Because you might have -- be doing some
12 clearing at the top of the draws as you come into
13 the river, but then if you could do -- show us,
14 because obviously that's technically possible up in
15 the Pembina Gorge, should be possible in the
16 Sheyenne River Valley, still would be
17 three-quarters of a mile that may be able to --

18 A. That's correct. And that could be
19 investigated, yes.

20 Q. If that could be part of that
21 investigation.

22 A. Yes.

23 Q. What about the route for Mr. Wittenberg's
24 land? You went through route variations that have
25 been proposed for Mr. Zacharias and Mr. Bures. I'm

1 still concerned about Mr. Wittenberg back here, who
2 we heard has the -- that was on T7.

3 A. Yes.

4 Q. Exhibit T7. Has your company approached
5 Mr. Wittenberg about rerouting to the -- I think it
6 would be to the east?

7 A. We did not approach Mr. Wittenberg about a
8 reroute to the east. And one of the reasons for
9 not doing that, the route as it's presently shown
10 is not on his property in the red, and a reroute
11 would introduce the pipeline onto his property, and
12 I guess we were of the opinion that if he did not
13 want it on somebody else's property, he would not
14 want it on his own.

15 Q. But you made that assumption and you
16 didn't ever -- did you ever ask him?

17 A. We have not asked him.

18 Q. So will you be asking him?

19 A. At this point in time we don't -- we don't
20 see a reason to ask him. Mr. Wittenberg has
21 expressed he's not -- he's not responsive to
22 wanting the pipeline. He has said that. But we
23 have not asked him about a route to the east.

24 Q. Will you be asking him after this hearing?

25 A. We can certainly make that effort.

1 Q. Will you be asking him?

2 A. Yes.

3 Q. Yes. Thank you.

4 A. Mm-hmm. And the reason for my response is
5 if a landowner simply will not speak to us, it's
6 hard to ask the question.

7 Q. You can certainly still ask the question.

8 A. That's correct, we can attempt.

9 Q. I think --

10 A. No. I'm sorry. Yes, we can.

11 Q. Yes. Thank you. Do you use multiple
12 easement people to deal with each farm family?

13 A. Multiple right-of-way agents?

14 Q. Yes.

15 A. It's because of the course of what we do,
16 is indeed you can have one agent that has talked to
17 someone concerning survey permission and then as we
18 move into the acquisition phase. We attempt to
19 keep commonality between agents to landowners, but
20 if agents quit for whatever reason or we assign
21 additional agents into an area, there is the
22 potential that a landowner could be -- could
23 interface with more than one agent in acquisition.

24 Q. I just wondered because you said that you
25 couldn't tell who -- you didn't know who had dealt

1 with these people when they had concerns, and yet
2 you certainly knew who had expressed the concern
3 about the agent and so I thought you would know
4 which agents had dealt with those people.

5 A. And we did. We went back to the -- we
6 went back to the agent that was identified at the
7 Commission hearing and inquired of the instance or
8 the circumstances to the agent from that, and
9 indeed -- I think there was two or three instances
10 in those instances the agents did confirm that they
11 were landowners that they were handling the
12 interface with.

13 Q. But they didn't -- they didn't admit that
14 there had been any problem with the relationship?

15 A. No.

16 Q. Well, I can understand that.

17 A. I understand.

18 Q. Is that how you would deal with all of
19 your complaints about -- that come through your --
20 the ones that are -- you know, let's say I have a
21 complaint about an easement person who's dealing
22 with me. Do you just go to the person and say --
23 your employee and say, Well, did you think you had
24 a problem; if they say no, that's the end of it?

25 A. No. Is we will -- we will with landowners

1 that we can go back to attempt to interface to get
2 more specifics about the instance that they are
3 describing, and actually not in North Dakota, but
4 in South Dakota, the incidents that were brought up
5 to me in South Dakota during that hearing process,
6 I actually inquired of the landowners, themselves,
7 of names of agents, the particular instances, and
8 were not -- the landowners could not provide that
9 information to me. Not even in that instance the
10 agent's name could they provide me.

11 Q. Right. In North Dakota when we heard from
12 different people at the hearing that they were
13 having problems with agents, have you made that
14 same followup back to those people to ask about
15 specific situations and the name of the agent to
16 try to do an investigation -- to see, to follow up
17 in that way?

18 A. Commissioner, I'm not aware that those
19 were followed up, those three, in discussion with
20 those particular landowners. I can't answer that
21 now.

22 Q. Are you in charge of that department?

23 A. I'm in charge of that department. The
24 land department, the construction, several
25 departments that report to me.

1 Q. Yes.

2 A. But I have a land manager, as well, that
3 reports to me.

4 Q. If you can just let the Commission know in
5 a late-filed exhibit that those people who had
6 complaints, that they were recontacted, asked about
7 specifics, that would be helpful.

8 A. Very well.

9 Q. Thank you.

10 JUDGE WAHL: T32, Mr. Kelsch.

11 Q. (COMMISSIONER WEFALD CONTINUING) Then I
12 have one more area, and that is depth of soil --
13 topsoil, and when this comes to the Commission's
14 attention, then all three Commissioners are aware
15 of the concerns and how this works, and I am
16 concerned that you -- you don't know the depth of
17 the topsoil until you do a soil survey, is that
18 correct, along the route?

19 A. Is -- the depth of topsoils we get from
20 USDA information and things, we get some idea of
21 the extent of the soil depths throughout the state
22 and so we have some idea of what we're dealing --
23 going to deal with, but the actual depth is
24 determined just prior to the construction activity.

25 Q. So do you use the soil maps that are

1 provided?

2 A. We use soil maps to get a general
3 understanding of the depths of soils in regions of
4 counties and areas.

5 Q. So if there would be a dispute, let's say,
6 after you had removed topsoil -- let's say you had
7 removed eight inches of topsoil and the individual
8 whose land it was could show you by a soil map that
9 there was a depth of 20 inches of topsoil, would
10 you -- then how would you handle that discrepancy?
11 Once all of the topsoil had been piled in with the
12 spoil, what would you do to then remediate this for
13 the landowner?

14 A. I do understand the remediation concern
15 that you brought up, but we typically with the
16 landowner prior to accessing their land discuss the
17 topsoil issue and the depths that they are familiar
18 with in that area to determine what their belief is
19 of the area. The discrepancy that you've
20 described, I've just not experienced it in my
21 career. And if it occurred towards it, there would
22 be a damage that you would have to deal with the
23 landowner through compensation.

24 Q. And you commit to do that?

25 A. If we make a mistake -- a better example

1 for me is --

2 Q. Would you commit to do that?

3 A. That we would compensate for damage that
4 we cause relative to a mixing of topsoil, we would
5 commit to that.

6 Q. To not removing the correct amount of
7 topsoil; is that what you mean by mixing of
8 topsoil?

9 A. Well, in the example where you stated
10 there was 20 --

11 Q. If there was 20 inches of topsoil shown on
12 a map and you had removed eight and a farmer could
13 show you that it was 20 inches that's shown as
14 topsoil on a map.

15 A. I understand the question. I'm trying to
16 think in the terms of -- how we compensate for
17 damages relative to soil is typically with
18 revegetation and his productivity after the soil is
19 put back and --

20 Q. That's not damages.

21 A. That's the measurement that we use. And I
22 don't -- I'm trying to -- I'm trying to determine
23 in my mind how you would implement the condition
24 that you've described in compensation, how you
25 would apply it. I certainly agree we're

1 responsible for the damages that we do. I just --
2 I'm trying to determine how to determine the cost
3 of the damages in the situation you have described.
4 So where it's at, I think my answer is yes, we
5 would compensate for that, and then we would have
6 to figure out the means to do it.

7 COMMISSIONER WEFALD: Thank you. That's
8 all the questions I have at this time.

9 JUDGE WAHL: Anything further?
10 Commissioner Clark.

11 COMMISSIONER CLARK: I do have just a few,
12 and a number of my questions have been answered so
13 we won't go over those again. With regard --

14 First of all, I did want to recognize
15 Representative Ben Vig, a state legislator who has
16 been with us intermittently throughout the day.
17 Welcome. If you like the padded seats and
18 functional AV system, we ask you to thank state
19 legislators for providing funding for the upgrade
20 of the Commission room. And, yes, that's a
21 suck-up.

22 COMMISSIONER CRAMER: It's very effective.

23 **EXAMINATION**

24 **BY COMMISSIONER CLARK:**

25 Q. With regard to this Sheyenne issue,

1 because I think it is probably a big deal for the
2 whole Commission, and you got a sense of that
3 probably from Mr. Binek's question, as well. If an
4 open cut is done on the Sheyenne River in that
5 area, it sounded like from your testimony that that
6 would actually be one of the more likely suspects
7 for a greater than 85-foot cut than perhaps other
8 parts of the line; is that correct?

9 A. I have not personally been to the
10 riverbanks at that particular location, but you do
11 not have to have substantial riverbanks to have a
12 lot of spoil material to move, so I think the way
13 you're phrasing the question, I would have to
14 believe there's a large excavation to be done.

15 Q. I'm just thinking of -- you said steep
16 elevation changes, which by North Dakota standards
17 the Sheyenne River Valley is. In fact, it's quite
18 striking actually from that area, riverbank,
19 forested area, it's kind of one of the few spots in
20 the state where that would be the case. If there
21 is a large cut area -- and the reason I'm asking
22 this is, this is a popular canoe spot, and being
23 that it's close to the state park, it's fairly
24 heavily used for that particular reason and
25 marketed for tourism and recreation, and so on.

1 Visually what would be the impact if you're
2 canoeing down that river? Would it literally be an
3 open section of 85 to 150 feet or however long it
4 is where it's just been clear cut?

5 A. Yes. Certainly we can do some restoration
6 things with revegetation and things to it, but I
7 believe your description would be accurate.

8 Q. I would agree with staff, I think we need
9 to explore all options with regard to that
10 particular area. And also would reemphasize on the
11 tree replacement schedule we have had issues in the
12 past with drought problems, or I think up in Devils
13 Lake we had a wayward summer employee of a park
14 district who ran a Cub Cadet over a good chunk of
15 one one time. So, I mean, we do have problems that
16 happen and hope that you understand our concern.

17 On the landowner disrespect issues, just
18 to close the circuit on that, did you notice in
19 your investigation any trend at all as far as --
20 when you found out who the particular agents were,
21 was it the same agent three times, was it three
22 different agents, anything like that that would
23 cause suspicion?

24 A. It has not particularly been in North
25 Dakota. In South Dakota I believe two complaints

1 were relative to one particular agent in South
2 Dakota, but not in North Dakota.

3 Q. But you were able to identify the
4 particular agents in North Dakota?

5 A. Yes.

6 Q. But they were three different agents?

7 A. That's correct.

8 Q. Just a quick question, and this may be
9 more out of curiosity than anything else. In the
10 T18 that you submitted, which was the Houston
11 neighborhood which had an existing pipeline and
12 subdivisions that were built around it, and I think
13 you said that was 50 feet -- it was a 50-foot
14 easement in this area; is that correct?

15 A. I don't know that I said the width of the
16 easement in it, but it would be approximately 50
17 feet in this area from my memory.

18 Q. If something were to happen along that
19 line and you had to go in and repair it, would
20 access be a problem? Would you be able to get in
21 there and do the repairs necessary?

22 A. Is you do have to access the land to
23 repair, and your ability to get down the line and
24 work with the landowners in the situation is you do
25 have to do that, and what damages you cause by that

1 operation you're liable to reimburse or replace to
2 the landowners for that work.

3 Q. Okay. Then one final question. You have
4 brought up the possibility of mitigating visual
5 impacts by staggering cuts and things like that.
6 How -- logistically, how difficult is that? How
7 common is that particular practice? Does it have
8 any impact on the integrity of the pipeline,
9 itself, being that you're going from kind of a path
10 of least resistance to adding some zigs and zags in
11 there?

12 A. Certainly, you know, we bend the pipeline
13 to fit the topography of the earth relative to the
14 vertical elevations and then we make horizontal
15 bends where we turn the pipeline, as well. To
16 introduce a couple more bends in a pipeline of this
17 length would not be significant relative to that.
18 And the common practice of it is -- I would say
19 it's certainly a requirement I've seen more in the
20 western United States, in California and Colorado
21 and those areas, than I've seen in the eastern.
22 It's not an unusual practice, but is it common? I
23 would say it's probably not common.

24 COMMISSIONER CRAMER: Okay. Thanks.
25 That's all I've got.

1 JUDGE WAHL: Anything further from the
2 Commission? Followup, Mr. Kelsch?

3 MR. KELSCH: No further questions.

4 JUDGE WAHL: Mr. Delaney?

5 MR. DELANEY: I just have a couple.

6 CROSS-EXAMINATION

7 BY MR. DELANEY:

8 Q. Just so I'm clear, Mr. Gray, you weren't
9 involved in any of the permitting processes related
10 to the project?

11 A. It only stands that I am providing
12 technical expertise to that part of it. I describe
13 construction procedures and those types of things,
14 but as far as the interface with the agencies and
15 that goes, very little.

16 Q. You stated that there is going to be an
17 eight-tenths of a mile directional boring
18 underneath the Pembina River; correct?

19 A. If that is the dimension given this
20 morning. I assume that's correct.

21 Q. In your experience with pipelines, have
22 you ever done any directional boring longer than
23 that?

24 A. Is the extent of the technology for large-
25 diameter is around a mile. That's about the break-

1 over to where contractors just are reluctant to
2 take on because of the risk of being able to
3 successfully accomplish them.

4 Q. So you could go slightly over 5,000 feet,
5 that's about the threshold?

6 A. That's about the range.

7 Q. Okay. And there was some discussion about
8 compensating landowners in the event that topsoil
9 and subsoil were intermixed and you kept saying we
10 would commit to compensating. You're not a
11 representative of TransCanada Keystone Pipeline,
12 LP, are you?

13 A. I say I'm an agent -- I guess I consider
14 myself an agent or a representative of them as a
15 consultant.

16 Q. You actually -- you're not an employee of
17 the company, are you?

18 A. No, I am not.

19 Q. So you are -- you do have representative
20 capacity for TransCanada Keystone Pipeline, LP,
21 when you stated to the Commission the promise to
22 compensate landowners for any mixing of topsoil and
23 subsoil?

24 A. I guess the way that I would qualify that
25 at this point to it is that on previous projects

1 I've worked for for TransCanada, when construction
2 comes around, there is indeed some authorities and
3 rights that I have been granted on prior projects
4 for TransCanada, and I would believe that for this
5 project I would be granted those same types of
6 rights or authorities in it. I'm not -- I
7 certainly don't profess to be certainly an
8 attorney, by any means, but damages and
9 responsibility of damages as a liability is -- I
10 don't know what I want to say, but it's just
11 understood as any damage anybody causes to anything
12 else. So I don't know whether my authorization is
13 necessary or not.

14 Q. Well, we'll certainly need some
15 authorization to make any commitments on behalf of
16 TransCanada. So you're not an officer -- you're
17 obviously not an officer of TransCanada?

18 A. No.

19 Q. The only relationship you have to
20 TransCanada is contractual in nature, and that
21 you're the construction manager for the U.S.
22 portion of this project?

23 A. That's correct.

24 Q. With respect to the compensation to
25 landowners, is there language in the easements that

1 addresses -- I guess for those who have already
2 signed easements, is there language in the
3 easements that allows for additional compensation
4 in the event that there's damages due to
5 construction?

6 A. Is -- damages are dealt with in two
7 different ways. One is we call preconstruction
8 damages and, for example -- and it's the best
9 description for an example, you have corn on your
10 property and we're going to take the 110-foot
11 corridor, then we may indeed in the negotiation if
12 you desire to be paid upfront for those damages
13 relative to so many bushels of corn per acre per a
14 price, we will compensate you what we call
15 preconstruction damages. Damages that may occur
16 during construction -- construction, I got off the
17 110-foot right-of-way or somebody made a mistake or
18 we damaged an irrigation system or we did something
19 during our construction process, that would be
20 compensated separately from those other damages
21 that I mentioned.

22 Q. Okay. So, hypothetically speaking, if I'm
23 a landowner and I have signed an easement and I
24 have been promised certain compensation under that
25 easement agreement or right-of-way grant and during

1 the construction phase I noticed damages that I've
2 not been compensated for, either you've gone out of
3 the right-of-way or you've mixed topsoil and
4 subsoil, what is the process then that I must
5 undertake as a landowner? Do I just contact the
6 pipeline company and they send me a check, or how
7 does it work?

8 A. During construction we will have land
9 agents assigned to the construction office, and
10 those land agents have a multitude of
11 responsibilities about notifications and things,
12 but one of their jobs is to deal with things that
13 occur during construction, and construction damages
14 is one of those items that if a landowner has a
15 complaint relative to a damage, he would contact
16 our office and register his complaint, an agent
17 would meet with him to ascertain the details of the
18 damage that had occurred. Certainly one of the
19 things is to ensure that it's attributable to our
20 operation, and then, secondly, to assess the
21 reasonableness of the request for reimbursement of
22 that. And that's typically the process that's gone
23 through and most are -- most are settled when I say
24 on the right-of-way or locally with the land agent
25 and the landowner.

1 Q. Keeping on with my hypothetical, if I come
2 to you -- or if I come to the pipeline company, not
3 you, and I say, I have damages and the pipeline
4 company disagreed with me on those damages, I would
5 have to hire my own attorney to recoup the damages
6 that I believe I've suffered, would I not?

7 A. Boy, I may have to refer to someone else
8 relative to the -- to the content of the easement
9 and the judicial means you go about a recovery to
10 it, but unlike -- I mean, whether it's small claims
11 court or other things, I can't speak to, but I
12 don't know that you necessarily have to hire an
13 attorney.

14 Q. Well, let me ask it this way. If I'm a
15 landowner and I have a disagreement with a pipeline
16 company -- since you're familiar with the easement
17 language, if I have a disagreement with the
18 pipeline company and I do hire an attorney and I'm
19 successful in recovering against the pipeline
20 company, is there a provision within your easement
21 that allows me, the landowner, to recover my
22 attorney fees?

23 A. I don't know. I don't think so, but I
24 don't know.

25 Q. Is there any way you could provide a copy

1 of the easement that the pipeline company is
2 currently using or negotiating with the landowners?

3 MR. KELSCH: Your Honor, I think we're
4 certainly beyond the examination and redirect and
5 all that, and I don't really believe the actual
6 easement language is relevant to a siting issue.

7 JUDGE WAHL: Yeah, I rather doubt the
8 relevancy with regard to siting, Mr. Delaney.
9 What's the relevancy on this line of questioning?

10 MR. DELANEY: I guess I'm looking more at
11 the impact on landowners, and I think certainly
12 that's within the issues that are being explored at
13 this hearing.

14 JUDGE WAHL: I really don't see the
15 relevancy to siting. The objection is sustained.

16 MR. DELANEY: That's all the questions I
17 have.

18 JUDGE WAHL: Mr. Binek?

19 MR. BINEK: I have a couple.

20 **REXCROSS-EXAMINATION**

21 **BY MR. BINEK:**

22 Q. Can you identify the areas where there is
23 a potential that more than 110 feet of clearance
24 might be needed?

25 A. Mr. Binek, I think if we are -- through

1 our aerial photography and information we have, I
2 think we could make a reasonable judgment about
3 that. I do believe that's possible at this stage.

4 Q. Could you provide a late-filed exhibit
5 identifying those areas?

6 A. Yes.

7 JUDGE WAHL: T33, Mr. Kelsch. Mr. Binek,
8 would you restate the -- give me a title for the
9 exhibit, please.

10 MR. BINEK: Well, it's an identification
11 of what -- areas where more than 110-foot clearance
12 may be needed.

13 JUDGE WAHL: All right.

14 MR. BINEK: Excess clearance areas or
15 something like that.

16 JUDGE WAHL: I got it. Thank you.

17 Q. (MR. BINEK CONTINUING) The other thing I
18 wanted to ask about. I hate to go back to the
19 Sheyenne River and boring again or directional
20 drilling, but you indicated basically it's a mile,
21 is what you look at as kind of being the cutoff
22 point. Earlier in an exchange with Commissioner
23 Wefald you were talking -- there was discussion
24 about eight-tenths of a mile and she had asked
25 that, you know, that figure be used, and I guess I

1 would just request that when you're doing this
2 investigation, that you look at the one mile or the
3 maximum distance that directional drilling can be
4 done to evaluate this crossing of the Sheyenne
5 River.

6 A. That's agreed.

7 COMMISSIONER WEFALD: I agree with that.

8 MR. BINEK: That's all I have.

9 COMMISSIONER CRAMER: I have one question.

10 JUDGE WAHL: Of course.

11 **FURTHER EXAMINATION**

12 **BY COMMISSIONER CRAMER:**

13 Q. Along those same lines then, Mr. Gray, I
14 would also like to see a pretty thorough analysis
15 of as that distance grows -- and I don't know how
16 clearly this is, but for every foot or every yard,
17 what impact would that have then on the integrity
18 of the pipe, itself, because that's -- you know, it
19 would be one thing to mitigate tree removal and,
20 you know, the wider swath, if you will, only to
21 find out that the pipe is less safe or more likely
22 to leak. So if there could be some way to analyze
23 that, as well, to correspond to the length of
24 pipe -- the pull-through as you talked about and
25 the integrity of that pipe.

1 A. Certainly we could cover that, as well, to
2 it. We could cover that, also.

3 COMMISSIONER CRAMER: With that I would
4 tell you I was able to pull up the Sheyenne
5 crossing on Google Earth and it's pretty
6 fascinating.

7 JUDGE WAHL: So, Mr. Binek, is this
8 another exhibit now?

9 MR. BINEK: No.

10 COMMISSIONER CRAMER: It would be the
11 same.

12 MR. BINEK: It's a part of that study --
13 the investigation they're going to be doing, but
14 rather than limit it to 4,000 feet, it's that
15 maximum distance that we're talking about.

16 JUDGE WAHL: All right. Very good. But
17 let me be sure that I understand and that we've got
18 the record. But that was going to be a study that
19 was going to be pursuant to the Commission's order,
20 not as an exhibit.

21 COMMISSIONER CRAMER: Not an exhibit.

22 MR. BINEK: Right.

23 JUDGE WAHL: All right. That's fine. Any
24 further questions from the Commission? Mr. Kelsch,
25 followup?

1 MR. KELSCH: Just one.

2 REDIRECT EXAMINATION

3 BY MR. KELSCH:

4 Q. Mr. Gray, any -- or are damages resulting
5 from -- the question -- Commissioner Wefald's
6 question on mixing topsoil. Are they typically
7 measured by productivity loss resulting from the
8 mixing?

9 A. Yes.

10 MR. KELSCH: No further questions.

11 COMMISSIONER WEFALD: Do any state -- can
12 I ask one more questions?

13 JUDGE WAHL: Sure.

14 FURTHER EXAMINATION

15 BY COMMISSIONER WEFALD:

16 Q. Do any state -- or does the federal
17 government require a certain depth of topsoil to be
18 removed for everyone?

19 A. Is the --

20 Q. Is there a minimum depth of topsoil, say,
21 in North Dakota that is reasonable that we should
22 include in this order, whether it's 12 inches, 15
23 inches?

24 A. Is when I say through the FERC, who
25 regulates gas pipelines more predominantly than

1 others, so you see more, I guess, requirements or
2 standards through that agency, but the typical
3 requirement from them is 12 inches.

4 COMMISSIONER WEFALD: So that could be
5 something our Commission could consider, yeah, if
6 not. Okay. Thank you.

7 COMMISSIONER CRAMER: If I might then to
8 clarify it further.

9 JUDGE WAHL: Commissioner Cramer.

10 **FURTHER EXAMINATION**

11 **BY COMMISSIONER CRAMER:**

12 Q. Now, in the long list of questions that we
13 bind the company to that Mr. Cowling answered, I
14 believe there is a standard of 12 inches, is there
15 not, in that? Do you remember?

16 A. Yes, there is.

17 Q. You're the only person on the stand at
18 this point.

19 MR. BINEK: I think the standard is 12
20 inches where available.

21 THE WITNESS: Up to 12.

22 MR. BINEK: I mean, the reason for that is
23 not getting into subsoils, there are areas where
24 there isn't much topsoil, so --

25 COMMISSIONER WEFALD: Okay. Thank you.

1 So we already have addressed that as one question
2 from our staff. Thank you.

3 JUDGE WAHL: Anything further from the
4 Commission? Mr. Kelsch, followup?

5 MR. KELSCH: Nothing further.

6 JUDGE WAHL: Mr. Delaney, followup?

7 MR. DELANEY: No.

8 JUDGE WAHL: Mr. Binek, followup?

9 MR. BINEK: No.

10 JUDGE WAHL: All right. We're past a
11 reasonable hour of recessing, so let's do that.
12 We'll begin tomorrow with Ms. Tillquist, who is
13 going to be the star witness.

14 COMMISSIONER CRAMER: The busiest woman in
15 town.

16 JUDGE WAHL: The buck has been passed to
17 you. All right. So nine o'clock tomorrow morning.

18 Mr. Mathews, you've got some exhibits.
19 I'll see you now.

20 (Recessed at 5:10 p.m., September 5,
21 2007.)

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