

IN THE ARBITRATION UNDER CHAPTER 11
OF THE NORTH AMERICAN FREE TRADE AGREEMENT
AND UNDER THE UNCITRAL ARBITRATION RULES
BETWEEN

- - - - - -x
METHANEX CORPORATION, :
 :
 Claimant/Investor, :
 :
 and :
 :
UNITED STATES OF AMERICA, :
 :
 :
 Respondent/Party. :
 :
- - - - - -x Volume 6

FINAL AMENDED TRANSCRIPT

Monday, June 14, 2004

The World Bank
1818 H Street, N.W.
MC Building
Conference Room 13-121
Washington, D.C.

The hearing in the above-entitled matter
came on, pursuant to notice, at 9:05 a.m. before:

V.V. VEEDER, Q.C., President

PROF. W. MICHAEL REISMAN, Arbitrator

J. WILLIAM ROWLEY, Q.C., Arbitrator

Also Present:

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Tribunal Legal Secretary

MARGRETE STEVENS,
Senior ICSID Counsel
Tribunal Administrative Secretary

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C O N T E N T S

	PAGE
Methanex's Reply to USA's Motion	1369
WITNESS	
BRUCE BURKE	
Direct examination by Mr. Pawlak	1404
Cross-examination by Ms. Callaway	1415
EDWARD WHITELAW	
Direct examination by Mr. Pawlak	1491
Cross-examination by Ms. Callaway	1505

1 P R O C E E D I N G S

2 PRESIDENT VEEDER: Good morning, ladies
3 and gentlemen. We start day six of this hearing.
4 We have certain administrative matters to address
5 first. We record that we received a letter from
6 Paul Hastings on the 12th of June, relating to the
7 possibility for Mr. McGanish and Mr. Stirwalt to be
8 cross-examined by videolink this morning, and we've
9 all received, as members of the Tribunal, a copy of
10 that letter.

11 We've also received the first letter of
12 the 13th of June from Paul Hastings with the two
13 declarations from Mr. Stirwalt and Mr. McGanish,
14 and also the second letter from Paul Hastings of
15 the 13th of June, dealing with the California Code
16 of Regulations on methanol. Let me leave the
17 latter letter aside.

18 We've received the letter from the USA,
19 from Mr. Legum, but I didn't receive,
20 unfortunately, and it's the fault of the hotel, the
21 second letter from Ms. Menaker enclosing some

1 further legal authorities. If later on a copy
2 could be provided to the Tribunal Secretary, I'd be
3 very grateful.

4 MS. MENAKER: Yes.

5 PRESIDENT VEEDER: So far so good. I
6 assume we've all, Tribunal members and parties,
7 have received the documentation I've just received.

8 MR. LEGUM: There were actually two
9 letters sent by--there were two letters sent by the
10 United States. I guess because you haven't seen
11 the second one, I signed both of those.

12 PRESIDENT VEEDER: I received the first
13 one by E-mail, but I didn't receive the legal
14 authorities, which I thought were the subject of
15 the second letter signed by Ms. Menaker.

16 MR. LEGUM: That's correct. We dropped
17 them off at the Fairmont, but they didn't get to
18 you, apparently.

19 PRESIDENT VEEDER: They did not. They say
20 their computer is down, which is a perfect excuse,
21 always, to say they can't give it to you.

1 Now, the immediate administrative
2 difficulty we have is that the two witnesses have
3 been proffered by Methanex for cross-examination,
4 but before we turn to the United States's request
5 to put their cross-examination off from today until
6 tomorrow, is there any more news, Mr. Dugan, about
7 the third potential witness, Mr. Dunne?

8 MR. DUGAN: No, there is not. We've not
9 been able to locate him. We've not heard back from
10 him.

11 PRESIDENT VEEDER: Do you anticipate
12 hearing in the next few hours?

13 MR. DUGAN: Unfortunately, no, I do not.
14 We tried all over the weekend, and we tried all
15 kinds of searches to try to find him. We just have
16 not been able to locate him.

17 PRESIDENT VEEDER: Now, just thinking
18 through where this is going, the United States
19 would like to cross-examine the two witnesses
20 proffered, Mr. Stirwalt and Mr. McGanish, and
21 subject to hearing you, Mr. Dugan, we're

1 sympathetic to the application to put that off
2 until such time as, no doubt, the United States is
3 making further inquiries. That, I assume, could
4 take place this time tomorrow morning.

5 Mr. Dugan, is that possible for the two
6 individuals?

7 MR. DUGAN: I believe it is, yes. It's
8 all set up now. They will be there in 20 minutes.
9 We would obviously prefer to have it go forward
10 now.

11 PRESIDENT VEEDER: The other
12 administrative matter is setting up the videolink
13 from the World Bank, and there were difficulties
14 about doing it this morning, so I think we ought to
15 stop them going to wherever they're going because
16 we won't be able to establish a videolink at 10:00.
17 The Bank would need further notice.

18 MR. DUGAN: Okay.

19 All right, we'll go ahead and call them
20 and put it off until tomorrow morning.

21 PRESIDENT VEEDER: Let's just see where we

1 put it off to.

2 Mr. Legum, is tomorrow morning this time
3 going to be sufficient time for to you prepare your
4 cross-examination?

5 MR. LEGUM: It will, subject to one
6 caveat, which is we requested in our first letter
7 of June 13th for Methanex to provide us with the
8 license numbers of the private investigators in
9 question.

10 PRESIDENT VEEDER: We will come to that in
11 a minute.

12 MR. LEGUM: Excuse me.

13 PRESIDENT VEEDER: Let's immediately put
14 them off, if we can, if they can be intercepted on
15 their way to wherever they are going, and let's try
16 and re-fix this for 10:00 tomorrow morning.

17 MR. DUGAN: For 10:00 tomorrow morning.

18 PRESIDENT VEEDER: Or can you make it
19 earlier? I notice how much earlier it is in
20 California. If it's earlier it's what, 6:30,
21 6:00 a.m.?

1 MR. DUGAN: It is, yes. We'll set it,
2 we'll put it off for 10:00 tomorrow morning.

3 PRESIDENT VEEDER: 10:00 sounds a little
4 bit more civilized.

5 MR. DUGAN: Okay.

6 PRESIDENT VEEDER: But we're in your
7 hands. Whatever is easier at that end.

8 MR. DUGAN: All right. We will call them
9 right now and see if we can put it off.

10 PRESIDENT VEEDER: We'll ask the World
11 Bank to make the line with--it's at the Paul
12 Hastings office again?

13 MR. DUGAN: It's at Paul Hastings's office
14 again, yes.

15 PRESIDENT VEEDER: So, we will make that
16 link again with 24 hours' notice.

17 MR. DUGAN: Okay.

18 PRESIDENT VEEDER: Now, what about queries
19 that you were asked by USA in Mr. Legum first
20 letter? Can you deal with that today?

21 MR. DUGAN: Yes, we can deal with that

1 today. As I understand it, the reason why is that
2 the private investigators are registered under the
3 names of their individual entities, and that in
4 that registration it lists the specific qualified
5 investigators. So, unless you know the name of the
6 entities, in this case I think it's Bonanza
7 Enterprises and Beach Enterprises, you don't know
8 who to look for, but we will take care of that.

9 PRESIDENT VEEDER: I think if you can take
10 care of that formally or informally as soon as
11 possible, and that should be done.

12 Just thinking through, we've also got to
13 have legal argument on the U.S. motion. Mr. Dugan,
14 we've invited you to make a full reply. Could we
15 do that today or would that be best done after we
16 hear the factual witnesses tomorrow? Why I say
17 that is that on one view of Mr. McGanish's
18 declaration, it's clear what happened now. He made
19 entry into the closed area, whether the doors were
20 opened or closed is another matter, but certainly
21 he went into the private communal area to retrieve

1 the documents, so today we could certainly have the
2 further argument on the ordinance. And on the
3 assumed facts that Mr. McGanish's version is
4 correct, we could proceed with the legal argument
5 today.

6 We are a little bit concerned that if we
7 leave it over until after tomorrow morning, we are
8 eating into the time in which you will be needing
9 to prepare for your closing oral submissions on
10 Wednesday.

11 MR. DUGAN: I would prefer to do it right
12 now.

13 PRESIDENT VEEDER: Mr. Legum?

14 MR. LEGUM: I believe that from our
15 perspective, we would prefer to wait until we've
16 heard what the witnesses have to say before
17 presenting our response. This has been a moving
18 target, as the Tribunal is aware, and in our view,
19 it would be better to wait until after the
20 witnesses have testified.

21 PRESIDENT VEEDER: Would you object if you

1 have Mr. Dugan first because obviously he's got to
2 say something about the ordinance. He could start,
3 but obviously after we heard the further factual
4 materials tomorrow, I think both sides would have
5 to come back. So, we could hear Mr. Dugan today,
6 after our two witnesses, and then return to you,
7 Mr. Legum, in one shot tomorrow after we hear the
8 witnesses.

9 MR. LEGUM: We have no objection to
10 proceeding that way.

11 PRESIDENT VEEDER: The other
12 administrative matter is Mr. Vind. Obviously, if
13 we exclude the documents, all of them, then there
14 is no further cross-examination of Mr. Vind. But
15 if we allow in some or all of the documents, we
16 understand, Mr. Dugan, you would like a further
17 opportunity to cross-examine Mr. Vind.

18 MR. DUGAN: Yes, we would.

19 PRESIDENT VEEDER: Now, Mr. Vind's wife,
20 as we heard, was going into hospital. Do we know
21 when that is, or would he be available or

1 unavailable tomorrow afternoon or Wednesday or
2 Thursday?

3 MR. LEGUM: Subject to confirmation, I
4 believe that he is available tomorrow, but I should
5 check and find out in more detail what his
6 availability is this week.

7 PRESIDENT VEEDER: If you could do that
8 today, and then I think we would like to revisit it
9 later this afternoon.

10 So, just seeing where we've got to, we
11 would like to hear again about Mr. Dunne,
12 Mr. Dugan, and I hope that all attempts are being
13 made to find him today.

14 MR. DUGAN: All attempts are being made,
15 and we'll follow up on that.

16 PRESIDENT VEEDER: Obviously the window is
17 going to close today. If we can't find Mr. Dunne
18 by the end of the day, I think we have to come to
19 an end as regards any further factual material.

20 At some appropriate time after we hear the
21 two witnesses that are scheduled for today, we

1 would like to hear you on your legal argument,
2 Mr. Dugan, and do as full a job as you possibly
3 can. You could do it on various factual
4 assumptions. We would like to hear you in full.

5 MR. DUGAN: Now or at the close of the
6 testimony today?

7 PRESIDENT VEEDER: Well, I think maybe
8 it's more important to have the witnesses first,
9 given that I think they're ready and waiting,
10 aren't they, at the moment?

11 MR. DUGAN: They are ready and waiting at
12 the moment.

13 PRESIDENT VEEDER: Does that cause you
14 difficulty if we come to wait until this afternoon?

15 MR. DUGAN: No, that would be fine. I'm
16 wondering if we're going to wait until tomorrow
17 afternoon, if it wouldn't be just to wait until and
18 make the legal argument after the testimony.

19 PRESIDENT VEEDER: The only difficulty is
20 I think we are going to finish the witnesses early
21 today, aren't we, on Ms. Callaway's schedule.

1 MR. DUGAN: Yes. She is not here. She
2 was planning on being here at 10:30 because of the
3 way the schedule is set up, so we can't get started
4 until we find her and get her. I assume the
5 witnesses are here.

6 MR. LEGUM: My understanding is that
7 Mr. Burke is going first. That's what he was
8 scheduled to do. So, we told Mr. Burke to arrive
9 here at 9:30. He may be here already. I don't
10 know.

11 MR. DUGAN: Well, we will try to find
12 Ms. Callaway and get her here as soon as possible.

13 And then I'm prepared to do it this
14 afternoon. That's fine with me. I'm prepared to
15 do it anytime, really.

16 PRESIDENT VEEDER: Is Ms. Callaway coming
17 a long way? I mean--

18 MR. DUGAN: No, no, I think she should be
19 at the office, but we will try to find her and get
20 her as soon as we possibly can.

21 PRESIDENT VEEDER: It may be in the line

1 of what you're saying. It would be attractive for
2 you to start making your submissions now, then. We
3 wouldn't lose any time, but can you give us a rough
4 estimate as to how long you would need?

5 MR. DUGAN: Oh, I don't have very long. I
6 only have about 15 minutes.

7 PRESIDENT VEEDER: Oh, I see. I think in
8 the light of that circumstance, let's invite to you
9 make your legal submissions as far as can you now.

10 MR. DUGAN: Okay.

11 PRESIDENT VEEDER: And when Ms. Callaway
12 arrives, we will then switch to Mr. Burke. And in
13 the meantime, I think we're setting up for the two
14 witnesses, Mr. Stirwalt and Mr. McGanish for 10:00
15 tomorrow morning, query Mr. Dunne, we will hear
16 them then. We then have to hear any concluding
17 legal arguments from both sides, particularly the
18 United States, in the light of the factual
19 materials. The Tribunal will try to make a
20 decision, and it may be without reason--it probably
21 will be without reasons, but depending on that,

1 then we would schedule Mr. Vind for further
2 cross-examination tomorrow afternoon by videolink
3 with Los Angeles.

4 MR. DUGAN: There is one other
5 administrative issue. We had talked last week
6 about doing the motion for reconsideration of the
7 Partial Award Tuesday morning, and given the way
8 the schedule was set up where the witnesses will be
9 on at 10:00, perhaps it makes sense to hear that at
10 9:00 tomorrow.

11 PRESIDENT VEEDER: For us that makes
12 sense.

13 Mr. Legum?

14 MR. LEGUM: Our understanding, based on
15 the May 28 order, was that the parties were to
16 address the motion for reconsideration and other
17 matters in their opening statements, and that's
18 what the United States did. It was not our
19 understanding that that would be set down
20 separately for argument, and we've already
21 presented our argument on that. We'd assumed

1 Methanex had presented its argument on that
2 subject. So, we don't see the purpose behind
3 such--

4 MR. DUGAN: Well, I think last week I
5 especially specifically reserved on that, and you
6 didn't make the objection then, which I think is a
7 little late to make it now.

8 PRESIDENT VEEDER: Well, we'd certainly
9 would like to hear Mr. Dugan more on the
10 application, and if we have a window of opportunity
11 at 9:00 tomorrow, I'm minded to give it to him.
12 Obviously in response, Mr. Legum, you can still
13 come back in your closing oral argument or indeed,
14 tomorrow. So, we leave it open like that, but I
15 think we invite Mr. Dugan to develop further his
16 application. We certainly have very clearly in
17 mind the points you made in your opening oral
18 submissions.

19 So what we're trying to do is to protect
20 as best we can as much as possible of tomorrow for
21 you to take time to prepare your closing oral

1 arguments on Wednesday, that that window, that
2 opportunity is closing quite fast.

3 Is it still going to be possible to do
4 closing oral argument on Wednesday morning?

5 MR. DUGAN: Yes, from our point of view,
6 definitely.

7 PRESIDENT VEEDER: Mr. Legum?

8 MR. LEGUM: Mr. President, we learned on
9 Monday of last week that Methanex decided to defer
10 presenting part of its case-in-chief on the central
11 issue in this case, which is the Article 1101(1)
12 issue, until its closing argument. And in light of
13 that, we would request that the United States,
14 because it's responding not only to what we've
15 already heard, but also to matters that we will
16 hear for the first time on Wednesday, we would
17 request that the United States begin its closing
18 presentation on Thursday.

19 PRESIDENT VEEDER: Yes. Mr. Dugan,
20 subject to your comments, we think that request is
21 reasonable.

1 MR. DUGAN: If that's the case, can we
2 push off the Methanex closing until Wednesday
3 afternoon?

4 MR. LEGUM: We have no objection if the
5 U.S. can start its closing presentation after the
6 lunch break on Thursday.

7 PRESIDENT VEEDER: I think both of these
8 requests are reasonable. We are losing Tuesday
9 which is we had hoped you would both have available
10 in full. So, let's fix it on the basis that
11 Methanex starts its closing oral argument on
12 Wednesday afternoon, and then on Thursday morning
13 the U.S. responds. I'm sorry, Thursday afternoon.
14 Thursday after noon the U.S. responds.

15 MR. LEGUM: That's acceptable.

16 (Pause.)

17 PRESIDENT VEEDER: If we can raise a
18 practical matter which is that this room is booked
19 until Wednesday. This room is not booked for us on
20 Thursday, so on Thursday we are going to have to
21 find another room, which will not be as elegant, as

1 airy, as roomy, as pleasant as this room. Does
2 that make a difference to your respective
3 proposals? Mr. Dugan?

4 MR. DUGAN: No, not to us.

5 PRESIDENT VEEDER: Mr. Legum?

6 MR. LEGUM: Not to us, either.

7 PRESIDENT VEEDER: Well, we will work on
8 this basis, then, that Wednesday afternoon,
9 Mr. Dugan, you will begin your closing oral
10 argument, and on Thursday afternoon, Mr. Legum, the
11 United States will begin its closing oral argument.

12 And at this stage, neither of you are
13 intimating any request for posthearing briefs; is
14 that right?

15 MR. DUGAN: That's correct.

16 MR. LEGUM: That is correct.

17 PRESIDENT VEEDER: I think this is as far
18 as we could take the administration unless there's
19 any further applications from either side. We will
20 now turn to Mr. Dugan to begin his legal argument
21 as best he can on certain factual assumptions in

1 regard to the U.S. motion.

2 MR. LEGUM: Okay. Very good.

3 MR. DUGAN: Thank you very much.

4 Members of the Tribunal, when the Supreme
5 Court issued the case of California versus
6 Greenwood, which is, I think, quite clearly the
7 seminal case in this area, what they specified as
8 the most important criterion for whether or not
9 where trash is placed gives rise to a reasonable
10 expectation of privacy is the accessibility to the
11 public. And what I'm quoting now is from
12 Greenwood, and I'm quoting from page five of the
13 version of Greenwood that we gave you in the big
14 binder last week. And it states that, "Our
15 conclusion that society would not accept as
16 reasonable respondent's claim to an expectation of
17 privacy in trash left for collection in an area
18 accessible to the public is reinforced by the
19 unanimous rejection of similar claims by the
20 Federal Courts of Appeals."

21 So, I think until eyes of the Supreme

1 Court, the key is accessibility to the public. If
2 it's accessible to the public, then it's discarded
3 material in which there is no ownership and in
4 which there is no expectation of any privacy.

5 Methanex submits that that's precisely the
6 case with the dumpster here. It was a dumpster in
7 a commercial, not a residential area, so it was
8 obviously a lowered, perhaps a much lowered
9 expectation of privacy.

10 Regent abandoned its trash with the
11 cleaners. When it threw it away in its office, it
12 was discarding it and abandoning it.

13 The cleaners then disposed of this
14 discarded material in a dumpster, and the dumpster
15 was in a communal area. It was not in an area that
16 was reserved specifically for Regent. It was
17 available to and had to be available to all the
18 members, all the tenants in the building because
19 the only access was through those front doors. So
20 all the tenants in the building, all the members of
21 the health club, all of them had access to this,

1 and could come and go as they pleased through the
2 doors.

3 The doors were unlocked. In the testimony
4 of Mr. McGanish, they were invariably unlocked,
5 always unlocked, and that makes sense because all
6 the tenants had to have access at different times
7 to put their trash in there. That they were often
8 open, that the trash was visible when the doors
9 were open, and the trash was easily accessible.

10 It was right next to the public sidewalk,
11 adjacent to a parking lot. The garbage was
12 collected daily, and the doors were open, and it
13 was possibly for Mr. McGanish yesterday morning
14 simply to drive over there, open the doors, go in,
15 and take pictures. Nobody stopped him. Nobody
16 questioned him.

17 PRESIDENT VEEDER: Did he open the doors?

18 MR. DUGAN: No, I'm sorry, one door
19 was--the door was open when he got there. He
20 opened the other door, but the door was open when
21 he got there, and he simply went in and took

1 pictures. So I think that that is--that satisfies
2 the key criterion of accessibility to the public.

3 These dumpsters were put in a position
4 where anybody could walk in and take the discarded
5 material away, and so in that sense, because they
6 were so accessible to the public, there couldn't
7 have been any reasonable expectation of privacy
8 that Regent had with respect to the material that
9 was discarded there.

10 So, under classic Federal analysis, this
11 would be material that would not be protected by
12 any expectation of privacy. It would be material
13 that had been abandoned, discarded, and subject to
14 search and retention by any other person.

15 ARBITRATOR ROWLEY: Mr. Dugan, what is
16 your position as to whether Mr. McGanish, going
17 through those doors, would constitute a trespass?

18 MR. DUGAN: That it was not a trespass
19 because it was not marked, it was not posted as
20 being private, it was not posted as keep out, and I
21 think that that type of posting in a commercial

1 setting like that where you're right next to a
2 sidewalk in a building in which many of the doors
3 are accessible to the public is necessary in order
4 to establish a trespass.

5 In other words, I guess you could
6 interpret it as, but because it was a commercial
7 area, because much of it was open to the public, in
8 fact all of it was generally open to the public,
9 there was an implied license to open the door.

10 ARBITRATOR ROWLEY: Is there authority for
11 your proposition?

12 MR. DUGAN: We don't have any authority.
13 We will see if we can find some for you.

14 PRESIDENT VEEDER: I think we understand
15 the point you made last week, that you don't need
16 to post private on a dwelling.

17 MR. DUGAN: Correct, we don't need to post
18 private on a dwelling, but this was a commercial
19 area.

20 PRESIDENT VEEDER: There were some
21 commercial areas that don't post private notices,

1 either, for example, this World Bank building
2 doesn't have on the door private, confidential, no
3 entry. But nonetheless if you tried to enter it
4 without going through the proper security door,
5 would you say you were guilty of a trespass or no
6 trespass?

7 MR. DUGAN: I think you could walk through
8 the front doors downstairs without anything, and go
9 to the front desk and ask questions, so walking
10 through those front doors would certainly not be a
11 trespass. It's open to the public. Now, you can't
12 get past the security barriers unless you can state
13 your business with some specificity and get someone
14 to vouch for you, but I think the act of going into
15 a commercially open building is not a trespass.
16 There is no reason to believe it would be, and I
17 think, as I said, anyone can walk in the doors
18 downstairs. They may not get very far, but they
19 could walk in.

20 So, for that reason, we do not believe it
21 was a trespass. And remember, this was not an area

1 unlike the Disney case, where the area was
2 specifically reserved for a single tenant. This
3 was a communal area that was open to all the
4 tenants in the building and it had to be open to
5 all the tenants in the building because this is
6 where they had to take their trash at any time of
7 the day. So there was, presumably, a parade of
8 people going into the area and leaving the door
9 open.

10 And because there was no sign putting it
11 off limits, it's our position that it was not a
12 trespass.

13 Now, with respect to the Brea city
14 ordinance, I guess the first point to make with
15 that, with respect to that, is that it's not even
16 clear, as a matter of the intent, that this had
17 anything to do with enhancing privacy. In the
18 cases that we sent over with you, a number of the
19 courts said that ordinances like these are intended
20 to better regulate public health, disposition of
21 trash, those types of things, and they're not

1 intended to expand the privacy rights of any
2 individual in the trash. And I think if we look at
3 the legislative policy that the City Council of
4 Brea set forth in the preamble to this ordinance,
5 it's precisely the same thing. And this is--this
6 is from the entire code, I think was provided to
7 you. It's the first section. It's
8 Section 8.28.010 legislative policy.

9 And if I could read the whole paragraph to
10 you--it's not quite that long. The City Council
11 finds and determines that storage, accumulation,
12 and collection and disposal of refuse, trash,
13 rubbish, solid waste, debris, and other discarded
14 material, as well as recyclable material is of
15 great public concern in that improper control of
16 such matters creates a public nuisance which may
17 lead to air pollution, fire hazards, illegal
18 dumping, vector breeding, and infestation and other
19 problems affecting the health, welfare, and safety
20 of the residents of the city and adjacent
21 communities. The City Council further declares

1 that regulations provided in this Chapter designed
2 to eliminate--designed to eliminate or alleviate
3 such problems."

4 That's how it reads. I think it's missing
5 a verb.

6 So, we think that the policy here was not
7 to in any way enhance the privacy rights or the
8 expectations of citizens of Brea in the privacy of
9 their trash, but simply to prevent people like
10 vagrants going in and making a nuisance of
11 themselves and increasing the rat problem. That's
12 what it was intended to do. And many of the cases
13 that we cited to you took that same position as
14 well, that this was not intended to keep people
15 from searching the--searching the contents for
16 their own purposes.

17 Now, I think it was on Friday when we last
18 revisited this, and I think, Mr. Veeder, you asked
19 Ms. Menaker whether or not the Brea ordinance would
20 prohibit an FBI agent as opposed to a Brea city
21 police officer from going into the trash, and

1 Ms. Menaker very artfully dodged the question, but
2 I think from the material that we provided to you
3 that the answer is clear. If this were a Federal
4 court and this were the United States Department of
5 Justice instead of the United States Department of
6 State and the search at issue was a search by an
7 FBI agent, there is no doubt in my mind that the
8 position the United States Government would be
9 taking is that the Brea city ordinance was invalid
10 and inoperative and that the Brea city ordinance
11 could in no way preclude or make illegal the
12 legitimate activities of the FBI.

13 That, apparently, is the position that was
14 taken in some of the cases, and that's the position
15 that's been adopted by a number of the courts that
16 have dealt with this issue.

17 And if I could, I would like to read from
18 you, just to draw your attention specifically to
19 the Magna case, that's one of the cases that we
20 sent over. I think it was the first case that we
21 sent over to you on Saturday night. And turning to

1 the second page of that decision--it's only a
2 two-page decision--and going down to the paragraph,
3 the last paragraph on the left-hand column, halfway
4 through that last paragraph, in that case the
5 defendant said, the sentence reads, "Second, he,"
6 speaking of the defendant, "contends that his
7 expectation of privacy, as supported by Youngstown
8 City Ordinance which prohibits unauthorized persons
9 from rummaging through the garbage of another, an
10 identical argument was rejected in Dzialak,"
11 however that's pronounced. "This is a matter of
12 local municipal law and not Federal constitutional
13 law."

14 And then if you go over to the first
15 paragraph on the right-hand column, the last
16 segment, it states, "Judge Conte," who was the
17 judge below, concluded that, quote, Magna had no
18 Fourth Amendment rights in the garbage bag in
19 question; therefore, the search and seizure of its
20 contents without a search warrant were not illegal,
21 and the search warrant subsequently obtained in

1 reliance upon the fruits of the said garbage search
2 was not tainted. We agree with this reasoning.

3 So, that's the Sixth Circuit finding that
4 the existence of a provision that is in substance
5 identical to the provision in the Brea ordinance
6 was legally invalid, legally inoperative. It did
7 not in any way present a barrier to the FBI agents
8 to do their duty, it did not make the search
9 illegal. And we think that is precisely the
10 situation here, that the ordinance cannot stand
11 against--certainly against Federal law which
12 expressly states that anyone who throws garbage
13 away doesn't own them and has no expectation of
14 privacy with respect to those discarded materials.

15 PRESIDENT VEEDER: Just coming back to the
16 question of trespass, this tree-lawn area, as you
17 read this case, did that form part of the relevant
18 property, or was that in the real sense a public
19 area?

20 MR. DUGAN: I think it was probably--and I
21 don't know. The tree-lawn area, I think it could

1 have been his property between the sidewalk and the
2 curb. I think it's unclear from the decision
3 whether or not it was his property.

4 Now, with respect to the other aspect of
5 this, the conflict between this ordinance and the
6 laws of California, California has adopted the
7 general principle in its constitution that local
8 ordinances in conflict with the general law are
9 void. And I would like, if I could, to hand you up
10 a new case, called the Wexner case. I will wait
11 until you get this so I can point you to the
12 appropriate language in that.

13 (Pause.)

14 MR. DUGAN: If I could turn your attention
15 to page six of this case, the right-hand column,
16 the paragraph that starts with the headnote number
17 nine, the second sentence of that paragraph, and
18 that states that, Article 11, Section 7, of the
19 California Constitution provides that, quote, A
20 county or city may make and enforce within its
21 limits all local police, sanitary and other

1 ordinances and regulations not in conflict with the
2 general laws, end quote.

3 So, this principle of local ordinances
4 being invalid if they conflict with the general
5 laws of the state is not a common law doctrine in
6 California. It's a constitutional doctrine.

7 Now, contrary to the Attorney General
8 opinion of California that was provided by
9 California to the Tribunal yesterday, it's quite
10 clear in California that the phrase in the
11 Constitution, general laws, includes not just the
12 statutes of California, but the common law of
13 California as well. And that's what this case
14 holds.

15 Now, the Wexner case is a Court of Appeals
16 case from 1989. The Attorney General opinion,
17 which is not, of course, law, was from 1983. So, I
18 think to the extent that it was valid even then,
19 and I think this opinion, this Wexner opinion,
20 calls into question the validity of the Attorney
21 General opinion, it quite clearly has no force

1 here.

2 ARBITRATOR REISMAN: Could you tell us
3 what this case is about.

4 MR. DUGAN: No, unfortunately, I can't. I
5 haven't read the entire case. I was reading just
6 the portion dealing with the--the portion dealing
7 with whether or not the concept of general laws in
8 its constitution, in the California Constitution,
9 encompassed common law.

10 And this case quite clearly holds that the
11 phrase, general laws, in the Constitution does, in
12 fact, encompass the common law. It goes on to say
13 immediately after the provision that I just cited,
14 "This provision is in all material respects
15 identical to that of the former Section 11 of
16 Article 11, and so we are told is not intended as a
17 change in meaning, given that section by the
18 courts.

19 And then it goes on in footnote five,
20 which is on the next page, on page seven, in the
21 left-hand column, and if you drop all the way down

1 to the bottom of that footnote, I guess it's about
2 two-thirds of the way or three quarters of the way,
3 there is a sentence that begins, "Thus." "Thus, in
4 maintaining the prior law of supersession or
5 preemption, Section 13 codified the case law which
6 defined the extent of the authority of the courts
7 to determine the law, including the common law,
8 with which a local regulation was in conflict."

9 And then it goes on to say, "Thus, e.g.,
10 in re Kenny and Chavez v. Sergeant hold that the
11 terms, laws, or general laws in Article 11,
12 Section 11, (now Section 7) includes the common
13 law."

14 So, I think it's quite clear, as a matter
15 of California law, that city ordinances in
16 derogation of the common law are invalid and void.

17 Now, in California, the United States
18 proffered to you the Krivda case. I think the
19 Krivda case has been overruled in by the Supreme
20 Court of California in the Ayala case, which is
21 another of the cases that we presented to last

1 week. And I read the language in the Ayala case,
2 but I will read it again because I think it's
3 pertinent here.

4 Ayala took the position in that case that
5 there is no expectation of privacy in trash, and
6 this is page 22 of the Ayala decision, the
7 right-hand column, about halfway down. It states
8 that, "Moreover, the trial court found that he had
9 abandoned the containers of factual findings
10 supported by substantial evidence and to which
11 accordingly"--

12 PRESIDENT VEEDER: We are trying to find
13 the right tab. What tab it was?

14 MR. DUGAN: I believe it's Tab 2 of the
15 original one, of the original. It's People versus
16 Ayala.

17 And again--it's page 22.

18 Now, about halfway down that paragraph, it
19 states: "Moreover, the trial court found that he
20 had abandoned the containers, a factual finding
21 supported by substantial evidence and to which,

1 accordingly, we defer. Abandoning them, he
2 relinquished any expectation of privacy in them.
3 As a general matter, the overwhelming weight of
4 authority rejects the proposition that a reasonable
5 expectation of privacy exists with respect to trash
6 discarded outside of the home and the curtilage
7 thereof."

8 Now--

9 ARBITRATOR REISMAN: Just to clarify
10 Ayala, the facts in that case were that the
11 defendant had left the trash in a body shop where
12 he had taken his car to have it repaired.

13 MR. DUGAN: That's correct.

14 ARBITRATOR REISMAN: Is that really
15 consistent with someone putting trash into a
16 dumpster in a closed area in his own property?

17 MR. DUGAN: No, it's a different fact
18 pattern to be sure, but I think the pronouncement
19 of the California Supreme Court adopting in
20 essence--not in essence--I think that's precisely
21 the language that was relied upon by the U.S.

1 Supreme Court in Greenwood, adopting the concept
2 that trash, once discarded, loses all privacy
3 rights, is the key here. And the fact that it
4 dealt with a different factual pattern than what we
5 have here is not, in our mind, the relevant point.
6 The relevant point--

7 ARBITRATOR REISMAN: I understand that,
8 but the authority that you just brought our
9 attention to, quoting People v. Machuka, says, "The
10 expectation that a reasonable expectation of
11 privacy exists with respect to trash discarded
12 outside the home, and the curtilage thereof."

13 Does that really apply to the case you are
14 mentioning?

15 MR. DUGAN: I believe it does because I
16 think this is discarded outside certainly the
17 offices of Regent, and I think that's the key.
18 Once Regent got rid of it, consistent with this, it
19 lost all expectation of privacy in the trash. And
20 it actually got rid of it in its offices. I don't
21 think we have to go into that because it was then

1 taken by the cleaning people and put into a
2 dumpster in a common area, but the key is that it
3 was discarded, and it's the act of discarding, the
4 act of abandonment, that strips the former owner of
5 any expectation of privacy or any ownership rights
6 in the garbage itself.

7 Now, we don't think that the City of Brea
8 has any power to create any ownership interest in
9 trash that are contrary to this principle of
10 California common law. We think it's clear that
11 the ordinances, the Brea city ordinances cannot
12 conflict with the common law of California, and the
13 common law of California, we believe, cuts off the
14 right to ownership with respect to trash and the
15 right to privacy with respect to trash at the point
16 of abandonment.

17 Now, the Brea ordinance--

18 ARBITRATOR REISMAN: So, for purposes of
19 understanding these precedents, you're proposing
20 that we view the office in this case of Vind as his
21 home, and once the trash is taken out of the office

1 into the common area, even though it's still within
2 a space that he rents and pays for, this is
3 essentially outside of his home and in a public
4 place?

5 THE WITNESS: Well, ignore the fact that
6 he discards it in the office because I think that's
7 more of a red herring. The point is--

8 ARBITRATOR REISMAN: You mentioned that.

9 MR. DUGAN: I did and I mentioned it
10 before, so let me withdraw that so we can ignore
11 that. I think the key fact here is that the
12 cleaning people took the trash and put it into a
13 dumpster in a communal area that Regent
14 International did not lease specifically, and it
15 was that act of putting it in a dumpster accessible
16 to the public that constituted the final
17 abandonment by Regent of its trash and the final
18 cutting off of any expectation of privacy that
19 Regent had in the trash that it discarded because
20 that area was publicly accessible.

21 So, that's, I guess--that's how we view

1 that specific act.

2 Now, having abandoned all its rights in
3 the discarded material, having lost all his
4 expectation of privacy in the discarded material,
5 the question is can the Brea city ordinance change
6 that analysis. Can it change that calculus, and we
7 submit that it cannot.

8 And the way the Brea city ordinance reads,
9 it's written a little unclearly, but we read it as
10 attempting to create an ownership interest on
11 behalf of the former owner in property that has
12 been discarded. It states that no person other
13 than the owner thereof--"thereof" is a little bit
14 unclear as to what it refers to--the owner's agents
15 or employees or an officer or employee of the city
16 or permittee's agents or employees authorized for
17 such purposes, shall tamper or meddle with any
18 solid waste, green waste, or recycled material
19 receptacle or the contents thereof or remove the
20 contents thereof.

21 Now, we are saying that seems to imply at

1 least that the former owner of the discarded
2 material becomes--continues to be the owner of the
3 discarded material, and only--the owner, the former
4 owner of the discarded material or his agents can
5 access that material. Otherwise, it would mean
6 that it would be illegal for Regent, for example,
7 to go down and take its own trash out of the
8 dumpster. And we think that if that's what it
9 intended to do, and that appears to be what it
10 intended to do, it quite clearly conflicts with
11 Ayala by creating property rights in trash that
12 Ayala had squarely rejected.

13 ARBITRATOR ROWLEY: Mr. Dugan, I'm still
14 harking back to the trespass issue. I know you've
15 told us that Mr. McGanish did not commit an act of
16 trespass, and I've asked you for authority for your
17 proposition. But assume for a moment that the
18 proposition is wrong and McGanish, by going through
19 those doors or opening them and going in, did
20 commit an act of trespass, could you please address
21 us as to why an international Arbitration Tribunal

1 should accept evidence that is collected as a
2 result of an act of trespass.

3 MR. DUGAN: Well, let me just maybe
4 proffer what Mr. McGanish is going to testify to.
5 He was a member of the health club, the health
6 club, the salon that was on the first floor of the
7 building, and that will come out in his further
8 direct testimony tomorrow. So, I think even if
9 this were an issue, the fact that he's a member of
10 the health club would give him a license to enter
11 that area, and he specifically joined--he joined
12 the health club not because he thought it was
13 necessary, but because he thought it gave him a
14 belts-and-suspenders approach to being able to go
15 into that particular area.

16 Now, I think that the concept of trespass
17 is actually irrelevant to the analysis in many
18 ways. The Supreme Court has noted that the key
19 criterion here is accessibility. If it's readily
20 accessible to the public, then the trash has been
21 abandoned, and I think that should be the

1 controlling analysis here.

2 Now, that said, Mr. McGanish will testify
3 that he was a member of the health club, and I
4 think that gave him a further right to go in
5 legally, but it's certainly--the fact that he was a
6 member of the health club in no way affected the
7 accessibility of the dumpster. It was still very
8 publicly accessible, as he showed by what he did
9 yesterday.

10 So, I think in the combination of the two,
11 that it was accessible, and under American law,
12 that's enough to signify abandonment; and number
13 two, the fact that he was a member of the health
14 club I think disposes of the trespass issue, but we
15 will search for additional authority on that point.

16 ARBITRATOR ROWLEY: If it doesn't dispose
17 of the trespass issue, you will address us on the
18 question?

19 MR. DUGAN: Pardon me.

20 ARBITRATOR ROWLEY: If it doesn't dispose
21 of the trespass issue, you will address us as to

1 why we should exempt?

2 MR. DUGAN: We will.

3 PRESIDENT VEEDER: Could we come back to
4 the ordinance because there's a phrase on which I
5 would invite your assistance, and that's the phrase
6 at the very end of the paragraph that you read
7 which concludes, "from the location where the same
8 shall have been placed for collection."

9 Now, if you go back earlier into the
10 ordinance, in particular to Section 8.28.120,
11 placement of receptacles for collection, and you
12 look at the second paragraph, it looks as though
13 what that phrase means is where the same should
14 have been placed for collection at the curb in
15 front of the dwelling or the alley in the rear of
16 each dwelling, and then there are various
17 exceptions. And so, it's talking in paragraph D
18 about a receptacle which is in a public place.
19 It's not addressing the receptacle in a private
20 place at all.

21 Now, I'm not saying that's the right

1 interpretation, but is it a possible interpretation
2 of paragraph D? And if so, do you advance it?

3 MR. DUGAN: Yeah, I think it is a possible
4 interpretation of paragraph D, that where it is
5 placed is indeed a place where it's publicly
6 accessible; that the receptacle had to be at a
7 place where it was publicly accessible. And, in
8 fact, in this case it was at a place where it was
9 publicly acceptable. That's where the truck would
10 back up, open the doors, and load up the dumpster.

11 PRESIDENT VEEDER: Do we know anything
12 about how that operation, in fact, worked? Were
13 the dumpsters brought out of the building by the
14 cleaners on a regular, weekly basis, or did the
15 truck operators go into the building themselves?

16 MR. DUGAN: I don't know, but we can ask
17 Mr. McGanish because he did observe trash being
18 taken away on a few occasions, so that could be a
19 subject we could put to him.

20 PRESIDENT VEEDER: Just returning to the
21 question asked by my colleague, would it be

1 Californian law for the ordinance and to California
2 law as to whether or not there was a trespass or
3 another illegality or unlawful conduct, but when it
4 comes to what you call the equities, what do you
5 say are the relevant legal principles governing a
6 discretion, if we have a discretion? That,
7 presumably, would not be Californian law because we
8 are not sitting in California, subject to
9 Californian procedural law.

10 MR. DUGAN: No, I think that's right, and
11 I think I mentioned it briefly on Thursday or
12 Friday, and I made reference, I believe, Professor,
13 to your article where you talked about balancing
14 the equities and balancing the respective
15 interests, and I made the point that this is a case
16 of a private company up against the largest
17 institution in the world. The largest institution
18 in the world has blocked our efforts to obtain
19 relevant evidence, including precisely the evidence
20 we have at issue here. This evidence, had we been
21 able to use 1782, would have been subject to a

1 subpoena issued by the courts in California.

2 So, even if it turns out that the Tribunal
3 concludes that there was a trespass involved, we
4 nonetheless believed that it would be appropriate
5 to admit this into evidence for the reasons that I
6 think I outlined before. There is no doubt as to
7 the authenticity of this evidence, there is no
8 doubt as to the probative nature of the evidence.
9 It bears on some critical points in our case;
10 namely, the relationship between Vind and Gray
11 Davis. There is no doubt as to the truth-telling
12 nature of the evidence that's been presented.

13 And for those reasons, because the taking
14 the evidence into--admitting the evidence for
15 purposes of cross-examination of Mr. Vind would aid
16 the Tribunal in its truth-telling function. And
17 so, even if there were a trespass, I think that if
18 there were a trespass, it would be the most menial
19 of civil sins. And given that most venial of civil
20 sins stacked up against the other policies that we
21 think are very important here, including the

1 truth-telling function and including our inability
2 to obtain evidence in the other way, then we
3 would--we would argue that the Tribunal should
4 overlook that venial sin and admit the material,
5 nonetheless.

6 Now, I think just to finish my--what I was
7 saying about the conflict between the Brea city
8 ordinance and the California laws, there is a very
9 valid policy reason why ordinances like this are
10 not valid, if they conflict with the common law of
11 the particular state, and that's to avoid the
12 possibility that, for example, the tort laws in a
13 particular state could be altered by the ordinances
14 of each of the many municipalities across the
15 state. The policy underlying the general principle
16 that local ordinances should not conflict with the
17 common law is a policy that's intended to promote
18 the uniformity of laws.

19 And I think that one of the cases that we
20 gave you last week expresses this policy quite
21 clearly, and that's the case of Cheong versus

1 Antablin. That was Tab 6 in that same binder.

2 This was from the Supreme Court of
3 California, and if we could go to the very last
4 page of this decision. This was a case involving
5 two skiers at a ski resort, and there was an
6 accident between the two skiers, and one sued the
7 other and alleged a breach of some duty of care,
8 and so it was dealing with the particular duty that
9 one skier owed to another, and whether that duty
10 could be modified by a local ordinance. The
11 California Supreme Court concluded that, in fact,
12 the local ordinance did not modify the statewide
13 duty that had been enacted, and therefore, it
14 didn't reach the issue. But I think that in this
15 concurring opinion, and I believe this is the
16 concurring opinion of the justice who wrote the
17 majority opinion--there are a number of opinions in
18 this--he articulates the policy underlying the
19 California Constitution quite clearly.

20 And if you go to the last phrase of the
21 paragraph on the left-hand column--this is, I

1 believe, Justice Chin--states, "Arguably the same
2 standard of duty should apply statewide and local
3 governmental entities such as cities and counties
4 should not be allowed to regulate questions of
5 duty. And we think that's exactly what's happening
6 here. If the Brea city ordinance were allowed to
7 stand, it would alter the tort laws of California,
8 and it would be inconsistent with the tort law
9 established throughout the rest of California. And
10 specifically we can talk about conversion and
11 what--conversion is a good place to start.

12 Under Ayala and under the law of
13 California as reflected in Ayala, people lose their
14 property rights in trash once they discard it. If
15 this were deemed to extend it, as I said, it would
16 conflict with that. And there is one case that has
17 dealt with that issue, not in the context of a
18 statute like this, but in the context of how this
19 would alter the calculus of conversion law, of that
20 particular tort law. And that's the Ananda case,
21 the Ananda Church of Realization versus

1 Massachusetts Bay Company, and that's--I think was
2 Tab 1 in the authorities that we presented to you.

3 If you would just look at page six, and
4 this was a case for conversion. It states there in
5 the headnote starting 14, "Documents which have
6 been placed in an outdoor trash barrel no longer
7 retain their character as the personal property of
8 the one who has discarded it. By placing them into
9 the garbage, the owner renounces the key incidence
10 of ownership, title, possession, and the right to
11 control."

12 Now, if the Brea city ordinance creates
13 ownership interest in the former owner of the
14 property, then it's inconsistent with that
15 principle of conversion law. It would expand the
16 liability for conversion in a way that would create
17 precisely the type of checkerboard pattern of tort
18 doctrines throughout California that the
19 constitutional provision is meant to prevent.

20 And there may be other situations beyond
21 tort law that it would affect, but certainly the

1 conflict between Ayala and the principle of when
2 the possibility of the tort of conversion arises I
3 think is enough.

4 This ordinance conflicts with the Supreme
5 Court's conception of what the Fourth Amendment
6 allows. This ordinance would prevent FBI Agents
7 from searching the trash, which I don't think has
8 ever happened, and it's inconsistent with the tort
9 law of California and the law of California about
10 what constitutes abandonment of property, and so
11 for all those reasons we believe that the Brea city
12 ordinance was invalid. It was void under the
13 California Constitution; and therefore, the search
14 of the containers, the publicly accessible
15 containers, was not illegal.

16 PRESIDENT VEEDER: Thank you, Mr. Dugan.
17 Obviously this debate will continue in the light of
18 events tomorrow, and obviously we still have to
19 hear the United States. But subject to that, we
20 move on now to the first of our witnesses today,
21 Mr. Burke. And we welcome Ms. Callaway.

1 Ms. Callaway, are you ready to call Mr. Burke?

2 MS. CALLAWAY: Yes, I am.

3 PRESIDENT VEEDER: We are sorry we've
4 accelerated your program today, but we're glad to
5 see you. Let's break for five minutes while we
6 just sort out our papers and prepare the witness.

7 (Brief recess.)

8 BRUCE BURKE, RESPONDENT/PARTY'S WITNESS, CALLED

9 PRESIDENT VEEDER: Let's resume.

10 Good morning, Mr. Burke.

11 THE WITNESS: Good morning.

12 PRESIDENT VEEDER: You're here as an
13 expert witness, and we invite to you make the
14 declaration in the terms of the text before you, if
15 you are willing to do so.

16 THE WITNESS: I'm happy to do that.

17 I solemnly declare upon my honor and
18 conscience that my statement will be in accordance
19 with my sincere belief.

20 PRESIDENT VEEDER: Thank you. Mr. Pawlak.

21 MR. PAWLAK: Thank you, Mr. President.

1 DIRECT EXAMINATION

2 BY MR. PAWLAK:

3 Q. Good morning, Mr. Burke.

4 A. Good morning.

5 Q. As you know, my name is David Pawlak, and
6 I'm an attorney with the NAFTA Arbitration Division
7 of the Department of State, and I'm going to ask
8 you a few questions about your reports this
9 morning.

10 A. Okay.

11 Q. Let's begin by considering the documents
12 that are placed before you. Would you please take
13 the documents labeled in the right-hand corner
14 24 JS tab A.

15 A. I have that.

16 Q. Is that your rejoinder report in this
17 case?

18 A. Yes, it is.

19 Q. Could you please turn to page 13, the last
20 page of this document.

21 A. Yes.

1 Q. Is that your signature?

2 A. Yes, it is.

3 Q. And what is the date of this rejoinder
4 report?

5 A. It's April 22nd. It says 2003. It should
6 be 2004.

7 Q. Okay. Could you please consider
8 paragraphs 42 through 44 of your rejoinder report.

9 A. Yes, I'm looking at them.

10 Q. Could you please explain the purpose of
11 those paragraphs in your rejoinder report.

12 A. Well, the purpose was to address a number
13 of minor errors which were identified by
14 Mr. Macdonald in my December report, and I
15 basically have addressed those and, in my opinion,
16 defined them as typographical errors, to a large
17 extent.

18 Q. Do you continue to affirm that the
19 contents of your rejoinder report are true and
20 correct, to the best of your knowledge,
21 information, and belief?

1 A. I do.

2 Q. Could you please consider the other
3 document that's before you, and that is the one
4 that is labeled 13 JS tab B.

5 A. Yes.

6 Q. Is that your report expert in this case?

7 A. It is.

8 Q. Let's go to page 39. It's about two pages
9 from the last page.

10 A. Okay.

11 Q. Is that your signature at the bottom of
12 page 39?

13 A. Yes, it is.

14 Q. And what is the date of your expert
15 report?

16 A. December 1st, 2003.

17 Q. Subject to the minor errors that you
18 acknowledged and corrected at paragraphs 42 through
19 44 of your rejoinder report, do you continue to
20 affirm that the contents of your December report
21 are true and correct, to the best of your

1 information, knowledge, and belief?

2 A. I do.

3 Q. Could you please turn to paragraph four of
4 your December report.

5 A. Yes.

6 Q. That's on page one of JS, 13 JS tab B.

7 A. Right.

8 Q. There, you acknowledge your independent
9 duty to this Tribunal above and beyond any duty you
10 may have to the United States as the party that
11 retained you in this matter; is that right?

12 A. That's correct.

13 Q. And is it with that independent duty in
14 mind that you offer your testimony today?

15 A. I do.

16 Q. Mr. Burke, let's consider your
17 qualifications. Could you please tell the Tribunal
18 what your profession is.

19 A. I'm a chemical engineer by training, and I
20 work as a consultant to the global hydrocarbon
21 industry covering natural gas, refining, and

1 petrochemicals.

2 Q. Could you tell me about your educational
3 background?

4 A. As I mentioned, I'm a chemical engineer by
5 training. I received my degree from the University
6 of Pennsylvania about 1976.

7 Q. And after you graduated, where did you
8 begin working?

9 A. I joined Gulf Oil Corporation. I worked
10 for Gulf for about five years, primarily at their
11 Philadelphia refinery, but I also spent some time
12 at one of their Texas refineries.

13 Q. And how long did you work for Gulf Oil?

14 A. About five years.

15 Q. And where did you begin working after you
16 left Gulf Oil?

17 A. I joined a firm called Chem Systems, which
18 is a global consulting firm, and it's basically the
19 same firm I'm with now, though it's undergone
20 several name pages. It's currently known as
21 Nexant, Inc., right now.

1 Q. How long have you been working for your
2 current employer, Nexant, Inc., including the name
3 changes?

4 A. Including the name changes since 1980, so
5 it's about 24 years.

6 Q. And what is your current position with
7 Nexant, Inc.?

8 A. I'm a Vice President in charge of refining
9 with responsibility for North and South America.

10 Q. And about how many vice presidents are
11 there company-wide?

12 A. It's about 15.

13 Q. And what is the nature of the services
14 that are provided by Nexant, Inc.?

15 A. Well, we provide consulting services,
16 management consulting services, so we do studies,
17 basically trying to help the industry address
18 issues, and that covers again from natural gas
19 through refining through petrochemicals.

20 Q. Could you please highlight for the
21 Tribunal a few of your representative engagements.

1 A. Sure. I think with reference to this
2 proceeding, I've been directly involved in a number
3 of studies that have looked at the impact of both
4 the addition of oxygenates to U.S. gasoline pool
5 and also the ongoing reduction now that's going on.

6 I have also been involved in longer term
7 over this period looking at late phaseout, so a lot
8 of studies looked at gasoline pool issues and the
9 production in technology to produce gasoline in the
10 U.S.

11 Q. And have you at times worked for national
12 oil companies?

13 A. Yes, yes. I have worked for quite a
14 number of national oil companies. I've worked for
15 the firms in Venezuela, in Mexico, Brazil, Chile,
16 Argentina. In Asia I've worked in Thailand,
17 Malaysia, Indonesia, China. It's a representative
18 list.

19 Q. Have you provided consultancy services to
20 the private sector, as well?

21 A. Yes. In fact, more of my time has been

1 spent on the private sector, so over the course of
2 these years I've worked for essentially all of the
3 major private sector firms.

4 Q. Right. And are you a member of any
5 professional organizations?

6 A. I'm a member of the American Institute of
7 Chemical Engineers.

8 Q. And when is it that you became a member of
9 that organization?

10 A. I think it was 1977.

11 Q. Could you please turn to your
12 resume--that's the last page of your December
13 report--and that's Exhibit A to 13 JS tab B.

14 A. Right.

15 Q. Referring to the left-hand column at the
16 bottom, could you tell me, have you authored any
17 works in your field?

18 A. Yes, I've authored, I estimate, 30 to 40
19 works, combination of articles in industry journals
20 and presentations at conferences.

21 Q. And at what conferences have you presented

1 your work?

2 A. A range of conferences in both the U.S.,
3 Latin America, and Asia. Representative ones, I
4 think I presented several times at the National
5 Petroleum Refiners Association, which is the
6 biggest refining conference in the world, held
7 annually.

8 And I also served--presented a number of
9 keynote speeches in conferences at both Latin
10 America and Asia.

11 Q. Mr. Burke, how many years experience do
12 you have in total in the refining and
13 petrochemicals industry?

14 A. I think it's about 20--26, 28, something
15 like that.

16 Q. And have you taught others in your field?

17 A. Yes, I have. I have been involved in a
18 petroleum certification program for 10 years, which
19 is basically a program where people come literally
20 from all over the world and get a certification in
21 basically the petroleum industry. And I have

1 taught the refining and petrochemical sections of
2 that certification course.

3 Q. Mr. Burke, I would like to address briefly
4 your opinions and conclusions that have been
5 offered in this case. For that purpose, could you
6 please turn to paragraphs nine through 15 of your
7 December report. Paragraph nine begins on page two
8 of your December report.

9 For the record, that is 13 JS tab B.

10 A. Okay.

11 Q. Could you please tell the Tribunal what
12 was the principal question or questions that you
13 considered in your reports in this case.

14 A. Sure. There were three basic areas I was
15 asked to address as listed in paragraph nine. The
16 first was basically to look at the use of
17 oxygenates in motor gasoline in the U.S., so it's a
18 primary area of focus; to specifically look at the
19 use of MTBE and ethanol as fuel oxygenates, and
20 then to provide--to examine and then provide an
21 opinion as to whether or not methanol can be used

1 as a fuel oxygenate. That was one area.

2 The second was to look at the--compare the
3 three molecules, MTBE, methanol, and ethanol, and
4 so what I did was, I looked at the characteristics,
5 physical and chemical characteristics of the three
6 molecules, the production processes, the
7 feedstocks, the technology used for them, and came
8 up with a basic comparison of the three.

9 And finally I was asked to provide an
10 opinion as to whether or not there is a choice
11 between use of ethanol and methanol as a fuel
12 oxygenate in the California marketplace.

13 Q. Okay. Mr. Burke, referring in particular
14 to paragraphs 13 through 15, could you highlight
15 the principal conclusions that you have presented
16 in your expert reports in this case.

17 A. Sure. I think the fundamental conclusion
18 is that methanol cannot be used as a fuel oxygenate
19 in California or in the U.S. That's the bottom
20 line conclusion of the work that I have done. The
21 report I presented provides a lot of support for

1 that and the basis for that conclusion.

2 I have also, to support that underlying
3 conclusion, looked at the production and physical
4 properties and concluded that these three chemicals
5 are quite different. In terms of a binary choice,
6 I do not think there is a binary choice between the
7 use of methanol and ethanol as a fuel oxygenate,
8 and that is supported both from a commercial point
9 of view as well as from a regulatory point of view.

10 Q. Mr. Burke, my final question: In your
11 view, does methanol compete with ethanol for sales
12 in the market for oxygenate additives?

13 A. No, it does not.

14 MR. PAWLAK: Thank you, Mr. President.

15 PRESIDENT VEEDER: Thank you.

16 Ms. Callaway.

17 CROSS-EXAMINATION

18 BY MS. CALLAWAY:

19 Q. Good morning, Mr. Burke. I know that we
20 had a chance to speak a little bit before your
21 testimony began, but I want to introduce myself for

1 the record. My name is Claudia Callaway, and I
2 represent Methanex in its action against the United
3 States under the NAFTA and UNCITRAL Rules.

4 MS. CALLAWAY: Before I begin, I want to
5 be sure that the United States was able to locate
6 the documents that were passed out. You were able
7 to? Okay. I just wanted to make sure.

8 THE WITNESS: Let me say good morning,
9 also.

10 BY MS. CALLAWAY:

11 Q. Mr. Burke, when Mr. Pawlak asked you to
12 expand or to summarize your conclusion, you
13 indicated that your fundamental conclusion is that
14 methanol cannot be used as a fuel oxygenate in the
15 United States or in California; is that correct?

16 A. That's correct.

17 Q. And you also stated that you have
18 concluded that there is no binary choice?

19 A. That's correct.

20 Q. And you've also indicated that it is your
21 conclusion that methanol does not compete with

1 ethanol in the fuel oxygenate arena; is that
2 correct?

3 A. That's correct.

4 Q. Now, in your first expert report, you
5 briefly addressed the toxicity of methanol and
6 MTBE; correct?

7 A. That's correct.

8 Q. Okay. And for the benefit of the witness,
9 the expert, the United States, and the Tribunal,
10 I'm specifically looking at paragraphs 40 and
11 paragraph 70. The information that you used on
12 methanol and on MTBE came from the Methanex and
13 Equistar Web sites; is that correct?

14 A. Yes, it is.

15 Q. Now, you relied on this information from
16 manufacturer Web sites because you don't have
17 independent knowledge of your own with regard to
18 the toxicity; is that correct?

19 A. I'm not an expert in toxicity, that's
20 correct.

21 Q. Now, if we were to look at the toxicity of

1 ethanol, whether it's fuel grade or it's the kind
2 that some use as a beverage on MSDS, and when I say
3 that, I mean material and data safety, we would
4 find just as you testified about methanol, ethanol
5 is also an eye and skin and mucous membrane
6 irritant; is that correct?

7 A. That is correct.

8 Q. And fuel grade ethanol is toxic by oral
9 ingestion, just as methanol is; is that correct?

10 MR. PAWLAK: Excuse me, Mr. President. I
11 would like to object to this line of questioning.
12 It is only a few sentences back when Mr. Burke made
13 it clear that he is not an expert in toxicity in
14 this case.

15 PRESIDENT VEEDER: He deals with toxicity
16 in respect to all three, doesn't he? Ethanol,
17 methanol, and MTBE, in his expert report?

18 MR. PAWLAK: I believe he does so, just as
19 a matter of comparison and provides the references
20 in his report, but I think it should be clear that
21 he's not an expert in the toxicity of chemicals.

1 PRESIDENT VEEDER: Let's see where it
2 goes. So far it looks like it's within the scope
3 of his report.

4 Ms. Callaway.

5 MS. CALLAWAY: Yes, and based on the
6 May 28th agreement of not going beyond the scope, I
7 worked hard to cull things that are specifically
8 going to credibility regarding analysis and
9 methods.

10 BY MS. CALLAWAY:

11 Q. In footnote 29 of your report, Mr. Burke,
12 you consider, and I believe it's footnote 29, you
13 talk--you look at a material safety data sheet from
14 Conoco Phillips called "Ethanol for Gasoline
15 Blending."

16 A. That's correct.

17 Q. And that would be found at tab one of the
18 materials that were handed to you, to the Tribunal,
19 and to the United States.

20 Now, the MSDS for ethanol indicates that
21 even the ethanol ingested as a beverage is

1 considered toxic; is that correct?

2 And just to clarify, this isn't a test on
3 how well you've memorized this or anything. I do
4 note you considered this, and in reviewing it
5 myself, I saw that that information was indicated.

6 A. Well, let me--let me specifically state
7 what I've put in my report, which is in paragraph
8 57 regarding toxicity of ethanol. Ethanol is
9 classified as a depressant drug, although it is
10 rapidly oxidized in the body, the carbon oxide in
11 water, and is noncumulative ingestion of even
12 moderate amounts causes lowering of inhibitions,
13 often followed by dizziness, headache, and nausea.
14 Larger intakes, I won't read the whole thing, but
15 cause--well, larger intake causes loss of motor
16 nerve control, shallow respiration, and in extreme
17 cases unconsciousness and even death.

18 This is really as far as I've gone in
19 terms of, again, the purpose of talking about the
20 characteristics of the three compounds was
21 basically to demonstrate that there are differences

1 between them.

2 Q. In your report, you specifically address
3 long-term effects of methanol exposure; is that
4 correct?

5 A. Let me check here. This is under the
6 characteristics?

7 Q. Yes.

8 A. That's correct, both short- and long-term
9 effects, yes.

10 Q. But you did not do so for ethanol; is that
11 correct?

12 A. That's correct.

13 Q. Would you agree with me that long-term
14 exposure to ethanol can cause weight loss,
15 nervousness, or memory loss?

16 A. I can't comment on that.

17 Q. If the material safety data sheet from
18 Conoco Phillips or if another similar--actually, if
19 the MSDS that is here, number one, indicated that
20 long-term exposure to ethanol caused the same
21 effects that long-term exposure to methanol caused,

1 would you deem that information as reliable?

2 A. I would. Does it actually do that?

3 Q. Let's turn to--this isn't my marked-up
4 copy, and I apologize. Under toxicological
5 information in target organs and then in for
6 ethanol talking about I think--let me go to page
7 three. Okay, here we go. I'm just going to zoom
8 in to the top of the page, under other comments.

9 You did not talk about these effects under
10 that that are included in the other comments
11 section in your report; is that correct?

12 A. That's correct.

13 Q. Would you agree that the long-term effects
14 of exposure to methanol are similar to the
15 long-term effects of exposure to ethanol?

16 A. Well, I don't think based on this
17 paragraph. This is, as I read it, talks about high
18 levels of ingestion of ethanol as opposed to
19 long-term effects.

20 So, again, I'm not an expert in this area,
21 but--

1 Q. Right, that I understand.

2 A. --so, I don't think they're comparable.

3 Q. But you have testified that it is common

4 to add chemicals to ethanol to denature it;

5 correct?

6 A. Oh, absolutely.

7 Q. So, in addition to the toxic effects of

8 the ethanol, you will also have toxic effects from

9 the chemical that is used to denature the ethanol;

10 is that correct?

11 A. I believe that's correct.

12 Q. Turning to paragraph 50, you testified

13 that there are two countries that dominate the

14 global ethanol market; is that correct?

15 A. That's correct.

16 Q. And according to your testimony, those two

17 countries are Brazil and the United States; is that

18 correct?

19 A. That's correct.

20 Q. Now, you testified that most of the

21 ethanol produced in the United States is also

1 consumed in the United States; correct?

2 A. That's correct.

3 Q. So, if the U.S. is the second largest
4 producer of ethanol, behind Brazil, and most of the
5 U.S. ethanol is consumed in the U.S., that makes
6 ethanol a domestic product; is that correct?

7 A. I mean, the facts are the facts. Is there
8 a meaning to the domestic product? It sounds like
9 a formal term, that's all.

10 Q. Well, as a market expert, and I know I
11 deemed you as a market expert here, would you
12 consider yourself an expert concerning the markets
13 for ethanol and methanol?

14 A. Yeah, I would, yes.

15 Q. And in using the term "domestic," to give
16 you context, I'm talking about that in the sense
17 that something that is manufactured in one's
18 country and consumed in that country, so in going
19 back to your testimony about the United States
20 being the second largest behind Brazil, producer of
21 ethanol, and your testimony that most of the

1 ethanol produced in the U.S. is consumed in the
2 U.S., you would agree, wouldn't you, that that
3 makes ethanol a domestic product for the United
4 States?

5 A. I certainly agree it's domestically
6 produced and most of what's consumed within the
7 U.S. is domestically--from domestic sources, yes.

8 Q. And are you uncomfortable calling that a
9 domestic product?

10 A. I'm just--I'm a little uncomfortable
11 because it sounds like that's a formal term which
12 I'm not familiar with, so I agree with the
13 fundamentals, that most of the ethanol--

14 Q. It's just what to call it?

15 A. It's what to call it, that's all.

16 Q. By contrast, you testified that, and this
17 is going to paragraph 66 of your report, only
18 47 percent of the methanol operating capacity in
19 the U.S. is domestically owned.

20 A. I'm sorry, that was 66?

21 Q. Yes.

1 A. Right, that's correct.

2 Q. So, if 47 percent of the methanol
3 operating capacity is domestically owned, that
4 would mean that the majority or 53 percent is
5 foreign owned; is that correct?

6 A. That's correct.

7 Q. Okay. I would like to turn to methanol's
8 properties as an oxygenate and your testimony with
9 regard to that.

10 Are you familiar with a trade association
11 in the United States called the Renewable Fuels
12 Association?

13 A. Yes, I am.

14 Q. Are you also familiar with a Canadian
15 trade association called the Canadian Renewable
16 Fuels Association?

17 A. Not really.

18 Q. Well, you testified that refiners do not
19 have a binary choice between methanol and ethanol.
20 This morning, you indicated that that was one of
21 your primary conclusions; is that correct?

1 A. That there is not a binary choice between
2 the use of methanol and ethanol as a fuel
3 oxygenate, correct.

4 Q. Yes.

5 And that's because methanol, in your
6 opinion, is not viable as an alternative oxygenate
7 to ethanol; is that correct?

8 A. That's correct.

9 Q. Did you know that contrary to your expert
10 report, the Canadian Renewable Fuel Association
11 considers methanol to be one of the alternatives to
12 ethanol as a fuel oxygenate?

13 A. No, I was not aware of that.

14 Q. Okay. Under Tab 2, questions and answers
15 on ethanol from the Canadian Renewable Fuels
16 Association, on page five of that document, what
17 are the alternatives to ethanol as an oxygenate?
18 How do they compare?

19 I recognize that you testified you weren't
20 familiar with the Canadian Renewable Fuels
21 Association. Were you generally aware that there

1 are opinions that differ from yours regarding the
2 viability of methanol as a fuel oxygenate?

3 A. I have not really come across much in the
4 way of opinions supporting the use of methanol as a
5 fuel oxygenate.

6 Q. But have you come across some opinions
7 that differ from yours on this issue; is that
8 correct?

9 A. No, I wouldn't say that. I think the only
10 place I have come across that is in this hearing,
11 from Methanex's point of view.

12 PRESIDENT VEEDER: Could you just pause.
13 We are looking at a paragraph under the heading
14 "What Are the Alternatives to Ethanol as an
15 Oxygenate? How Do They Compare?" And then we have
16 methanol, and then four others that follow.

17 Is that the passage you are putting to the
18 witness?

19 MS. CALLAWAY: Yes, it is.

20 PRESIDENT VEEDER: Is this fair to
21 describe that passage as suggesting that methanol

1 is an alternative to ethanol? It looks as though
2 from its context it's saying it is not. It may be
3 less expensive, but it's highly corrosive, more
4 volatile, more damaging, requires a co-solvent,
5 usually ethanol, and ethanol provides better water
6 tolerance than methanol.

7 MS. CALLAWAY: In fact, I do think it is
8 fair to submit that, because just as in the
9 gasoline blending, the RFG process, there are
10 chemical--I'm trying to think of the word. There
11 are things done to--there are accommodations made
12 and formulations changes made to accommodate
13 ethanol. The same can be done with methanol. And
14 this is being--we are offering this with no spin,
15 no opinion, just facts regarding methanol and why
16 the Renewable Fuels Association in Canada thinks
17 that ethanol might be better. It still recognizes
18 that methanol is something that can be used.

19 THE WITNESS: Did you want me to respond
20 to the specific paragraph?

21 BY MS. CALLAWAY:

1 Q. No. I just wondered--

2 PRESIDENT VEEDER: We do.

3 THE WITNESS: I mean, I don't disagree
4 with anything that's here. These are the same
5 findings that I have for the U.S., that methanol,
6 due to its properties is highly corrosive, causes
7 damage to plastic and rubber fuel systems, and as
8 can you see in my report, basically I've estimated
9 about 89 percent of the vehicle fleet in the U.S.
10 does not allow the use of methanol as a vehicle
11 fuel because of these corrosive and damaging
12 properties, and therefore, use of methanol as a
13 gasoline fuel oxygenate would void the warranties.

14 So I don't have any problem with that.

15 Also, the requirement to use a co-solvent,
16 as we have been through that in the U.S., and there
17 have been a number of combinations of methanol and
18 co-solvents which have been put forward in the U.S.
19 And again, as put forth in my report, none of those
20 are currently, by regulation, allowed to be used in
21 the U.S. at this point.

1 BY MS. CALLAWAY:

2 Q. Well, staying on binary choice and, I'm
3 going to ask you a question that goes to your
4 expert report, your original one at paragraph
5 117 A. One of the conclusions or one of the bases
6 for your conclusion regarding the lack of any
7 binary choice between ethanol and methanol as fuel
8 oxygenates is based on the fact that Federal
9 regulations prohibit the use of methanol at
10 concentrations greater than 2.7 percent or
11 3 percent; is that correct?

12 A. No, it's actually .3 percent.

13 Q. I'm sorry, .3 percent?

14 A. That's correct.

15 Q. And then although no manufacturer has
16 sought to obtain a waiver for a higher
17 concentration, they would be permitted to do so; is
18 that correct?

19 A. They certainly can seek a waiver,
20 absolutely.

21 Q. And you also argue that there is no binary

1 choice based on the facts that methanol cannot be
2 used in the majority of conventional vehicles. You
3 were talking about the corrosive nature. Again,
4 this is paragraph 117B.

5 A. That's correct.

6 Q. But in support of that claim, the evidence
7 you cite is using pure methanol. You can't use
8 pure methanol or an M85 blend; correct?

9 A. No, that's not correct.

10 Q. Okay.

11 A. What I did, if I could just explain what I
12 did is I reviewed the warranty statements for
13 essentially a hundred percent of the vehicle fleet
14 in the U.S., and they're very clear. In fact, if I
15 could find the reference, it looks like it's
16 paragraph 106, the warranties are fairly uniform,
17 and I've put forth an example from General Motors
18 for the entire General Motors fleet, which is only
19 at the page 32 of my report, so let me read this.
20 Your vehicle was not designed for fuel that
21 contains methanol. Don't use fuel containing

1 methanol. It can corrode metal parts in the fuel
2 system and also damage plastic and rubber parts.
3 That damage wouldn't be covered under your
4 warranty.

5 And that was just one example.

6 Now, that doesn't reference M85. It's
7 just saying the use of methanol.

8 Q. Would you agree that ethanol is also
9 highly corrosive?

10 A. Again, I'm not a corrosiveness expert.
11 It's certainly corrosive.

12 Q. I recognize you're not--I recognize you're
13 not an expert on that, but you did consider those
14 properties for your report; is that correct?

15 A. I did.

16 Q. And, in fact, in paragraph 57 on page 19,
17 you state corrosiveness, and this is on page 19 as
18 discussed in paragraph 40, the presence of highly
19 polar molecules in transportation infrastructure
20 systems can lead to the primary cause of corrosion,
21 which is when water containing gasoline separates

1 from the hydrocarbon mix and forms a separate
2 layer. Such separation potentially results in
3 severe corrosion in transport infrastructures.

4 So, you would agree that ethanol is also
5 highly corrosive; is that correct?

6 A. I actually spent some time trying to be
7 definitive about the relative corrosiveness, and
8 it's very difficult to do that. Both ethanol and
9 methanol are corrosive, and that's why you can't
10 transport them through the hydrocarbon system.
11 They pick up water, and, therefore, that
12 combination of the alcohol and the water results in
13 corrosion for both products.

14 Q. Now, based on your citation of the General
15 Motors warranty, and based on your conclusion
16 that--your absolute opinion that there is just no
17 binary choice, can you explain for the Tribunal how
18 methanol has been successfully used by thousands of
19 vehicles?

20 A. Yes, yes, I can. Methanol has been used
21 by a separate class of vehicles, and I cover this

1 in my report. I find this--basically, vehicles
2 designed to run on methanol or high concentrations
3 of methanol have to be specially designed with
4 special gaskets and fittings so that the properties
5 of methanol do not cause problems, and these are
6 referred to as flexible fuel vehicles, and there
7 have been thousands of those that have been built
8 to support test programs, a major one in
9 California, which basically has ended up not being
10 successful and, as I state in my report, no one is
11 making flexible fuel vehicles to run on any sort of
12 methanol mix.

13 Q. But--and this is going to your status as
14 an expert witness in asking you to consider a
15 hypothetical. If the State of California had
16 banned the use of ethanol and mandated the use of
17 methanol, General Motors could have used technology
18 to convert its engines being produced to tolerate
19 methanol as the fuel; isn't that correct?

20 A. I couldn't say for sure. It's a very
21 complex change.

1 Q. But you would admit that there are
2 vehicles today that can operate using methanol; is
3 that correct?

4 A. The flexible fuel vehicles, yes.

5 PRESIDENT VEEDER: Just one question of
6 clarification. When you say flexible fuel, is that
7 M85?

8 THE WITNESS: That is M85. The reference
9 is paragraph 105.

10 BY MS. CALLAWAY:

11 Q. Also going to paragraph 117 in your
12 original report, at footnote 72, this footnote,
13 with your footnote and in your report, and as an
14 expert who really is--you're a scientist first;
15 right?

16 A. Well, I'm an engineer.

17 Q. You're an engineer first.

18 A. It's a little bit of a difference.

19 Q. I also know you went to pen, and I went to
20 Bryn Mawr, so I will allow that you went through a
21 rigorous program.

1 A. Thank you.

2 Q. But as an engineer, you are looking at
3 data and distilling the data; is that correct?

4 A. That's correct.

5 Q. And as an engineer, you are looking for
6 the facts to establish your conclusion; is that
7 correct?

8 A. That's correct.

9 Q. But you also have to allow for the things
10 that you cannot conclusively opine regarding this;
11 is that correct? And by that, I mean in paragraph
12 72, because methanol is not legally allowed to be
13 used, splash blending systems do not appear to be
14 designed to blend methanol.

15 PRESIDENT VEEDER: Footnote 72?

16 MS. CALLAWAY: Yes.

17 THE WITNESS: That's correct.

18 BY MS. CALLAWAY:

19 Q. You state informal discussions with
20 refiners and suppliers of splash bending systems
21 did not produce a clear answer as to whether

1 methanol can be used in the same systems that have
2 been that have been installed for methanol splash
3 blending?

4 A. That's correct.

5 I actually ran into a problem there. I
6 talked to a number of firms, one that actually
7 built the splash blending systems and supplied them
8 to the industry, and a couple of refiners. They
9 basically couldn't give me an answer because they
10 weren't even considering methanol, so it was very
11 hard to get a clear answer on, could you--could
12 these systems be used for methanol blending. So,
13 that's why I said it's not clear in this footnote.

14 Q. Well, you argue in the same paragraph,
15 117D, that methanol cannot be combined with
16 gasoline-based stock intended for ethanol because,
17 in your opinion, the resulting mix would be out of
18 compliance with California's Reid vapor pressure or
19 RVP requirements; is that correct?

20 A. That's correct.

21 Q. But if the gasoline base stock was

1 adjusted to accommodate methanol's pure effect on
2 the RVP, the resulting gasoline would not be out of
3 compliance with the RFG provisions; is that
4 correct?

5 A. If refiners put in the extra investment
6 and changes needed to make the more difficult
7 underlying blend stock that I feel would be needed
8 to blend in methanol, that's correct. And they
9 could do it. There is no question about that.

10 Q. And would you say that gasoline sold at
11 retail--well, actually, let me just rephrase the
12 question so that you don't think I'm trying to put
13 words in your mouth.

14 Gasoline sold at a retail gasoline outlet
15 is usually blended from the gasoline blend stocks
16 produced by a refiner bearing the same name; is
17 that correct? If I go to Exxon, their blend stocks
18 or the gasoline that I buy was usually made from
19 Exxon's blend stocks. Would that be correct?

20 A. Actually I don't think that is correct.
21 Let me just explain why.

1 Refiners don't have refineries all over
2 the country, so traditionally what they do is they
3 will do swaps. So, refiners in, say, extreme
4 example refiner only has refineries on the East
5 Coast, say here, they have retail stations on the
6 West Coast. They will do the deal so that they
7 will find a refiner on the West Coast who can
8 provide them with gasoline and they'll take
9 ownership of that and sell that through their
10 retail distribution on the West Coast. At the same
11 time they will take their production on the East
12 Coast and supply that to that refiner if they have
13 resale stations on the East Coast but are not
14 producing on the East Coast. It's very common from
15 shifting of output from U.S. refineries amongst the
16 players to basically minimize the infrastructure
17 cost of transportation.

18 So, bottom line is, Shell doesn't always
19 sell just Shell gasoline.

20 Q. That's why I was trying to rephrase my
21 question so it wouldn't turn into that issue, but--

1 A. Okay.

2 Q. --would you agree that often, if I--and
3 let's say I was in Richmond, California, and I
4 pulled up to a Shell station, would you agree that
5 it is often the case that the gasoline that I buy
6 from a Shell station came from Shell's blend
7 stocks?

8 A. You know, I can't say for sure. I just
9 don't--it's a very complex distribution system out
10 there, and swapping is a very big part of the
11 system.

12 Q. Okay. In footnote 19, and that's to
13 paragraph 30 in your rejoinder report this time,
14 you mention that there are five California refiners
15 who, before MTBE was banned by the State of
16 California, produced MTBE.

17 A. That's correct.

18 MS. CALLAWAY: Footnote 19 to paragraph 30
19 in the rejoinder.

20 PRESIDENT VEEDER: Thank you. We got it
21 now.

1 BY MS. CALLAWAY:

2 Q. And those five refiners actually comprised
3 or they have six refineries that used the MTBE; is
4 that correct?

5 A. Well, there were five MTBE facilities
6 operating in California.

7 Now, some of those refineries have
8 multiple refineries--refiners have multiple
9 refineries, so maybe they move some of that MTBE
10 around.

11 Q. Do you recall who the five refiners are?

12 A. Yes. Take a look back in my December
13 report, Exhibit 9--sorry, Exhibit 4 on page nine,
14 BP at Carson, ChevronTexaco at both El Segundo and
15 Richmond, and then we have Tesoro in Martinez, and
16 Valero at Benecia.

17 Q. To your knowledge, does ChevronTexaco have
18 retail gasoline outlets?

19 A. Yes, they do.

20 Q. And to your knowledge, does BP have retail
21 gasoline outlets?

1 A. Yes, they do.

2 Q. Now, the difference between the California
3 RFG, reformulated fuel gasoline, from the
4 conventional nonoxygenated gasoline, is that
5 California's reformulated gasoline has a mandated
6 oxygen content; is that correct?

7 A. You state between the two--

8 Q. This is a difference between reformulated
9 gasoline and California reformulated gasoline, is
10 that California's gasoline has a mandated oxygen
11 content; is that correct?

12 A. Yes, it's 1.8 to 2.2 percent.

13 Q. Now, in the MTBE-blended RFG or the
14 California equivalent before MTBE was banned, from
15 where did the oxygen originate?

16 A. In California? The vast majority of the
17 oxygen--the oxygen molecule in the MTBE?

18 Q. Yes.

19 A. Came from imported MTBE.

20 Q. Now, what is MTBE manufactured from? Is
21 it isobutylene and methanol?

1 A. Yes, it is.

2 Q. Now, does isobutylene contain oxygen?

3 A. No, it doesn't.

4 Q. So, the oxygen would come from the
5 methanol used to make the MTBE; is that correct?

6 A. That's correct.

7 Q. Now, the five refiners that you identified
8 in your report and that we've discussed, do you
9 know if they manufactured or purchased the methanol
10 feedstock for manufacturing their MTBE?

11 A. Well, to my knowledge, there are no
12 manufacturing facilities for methanol in California
13 during this whole period, so I presume that they
14 purchased methanol.

15 Q. And you state that again in the rejoinder
16 at paragraph 30 in footnote 19; right?

17 A. That's correct.

18 Q. Now, these refiners don't still purchase
19 methanol for the manufacture of reformulated
20 gasoline, do they?

21 A. I presume not.

1 Q. Now, were you aware that of those five
2 refiners, ChevronTexaco, Valero, Tesoro,
3 ExxonMobil, BP, and Shell, all of them were
4 Methanex's customers?

5 A. I was not aware of it.

6 Well, I take that back. I read some of
7 the transcripts, and I'm aware that Valero was.

8 Q. Now, those refiners still produce gasoline
9 blend stocks to your knowledge; is that correct?

10 A. Oh, absolutely.

11 Q. And after blending to the specifications
12 that are required, that gasoline blend stock is
13 ultimately dispensed as finished gasoline in retail
14 outlets; is that your understanding?

15 A. That's correct.

16 Q. Now, in ethanol-blended reformulated
17 gasoline and its California reformulated gasoline
18 equivalent, from where does the oxygen originate?

19 A. From the ethanol.

20 Q. And the regulations banning MTBE do not
21 allow the use of any oxygenate other than ethanol

1 to provide the oxygen content in California's
2 version of reformulated gasoline; is that correct?

3 A. Well, that's true, though I guess other
4 fuel oxygenates could be used if they have the
5 proper study work done to support that.

6 Q. But at present, only ethanol is only
7 permitted; is that correct?

8 A. That's correct.

9 Q. Now, are you aware of whether the five
10 refineries we've discussed that used MTBE in making
11 their RFG in California, are you aware of whether
12 they are still operating?

13 A. To my knowledge, all five are operating.

14 Q. In your rejoinder, you assert that
15 refiners have incurred significant investment costs
16 to transition from MTBE to ethanol in California;
17 is that correct?

18 A. That's correct.

19 Q. Yeah, and just to point you to the--it's
20 the final bullet point of paragraph 24.

21 You also state that ethanol blending

1 equipment has been added to the terminals and that
2 ethanol storage is being added; is that correct?

3 A. That's correct.

4 Q. Now, your estimated cost or your cost
5 estimates have allocated the costs of blending
6 equipment and storage facilities for ethanol to the
7 refiners rather than the blenders; is that correct?

8 A. No, I don't think I have allocated costs
9 to either one.

10 Q. Okay. I guess I made that assumption
11 because you were talking about the refineries
12 adding the ethanol blending equipment being added
13 at the terminals and ethanol storage being added,
14 so these would be costs that the refiner would take
15 on; is that correct?

16 A. I wouldn't say that. I would say that
17 changes at the refinery to make the lower RVP blend
18 stock, the refineries, I'm pretty sure, would take
19 on those costs because there are changes to the
20 facilities at the refineries.

21 At the terminals, it's not clear to me who

1 takes that on. It depends on ownership, which we
2 haven't really looked at.

3 Q. Well, is it your testimony that the
4 gasoline supply chain is a continuous cycle rather
5 than divided among refiners and blenders?

6 A. Yeah, it's a continuous supply chain.

7 Q. So, as a continuous supply chain,
8 Methanex's contention that the precise point of the
9 addition of oxygen to gasoline is irrelevant when
10 considering the competitive relationship between
11 methanol and ethanol is valid, since the supply
12 chain is a continuous cycle. Would you agree?

13 A. That's Methanex's position?

14 Q. Yes.

15 A. I don't agree with it.

16 Q. Showing you two slides, and I believe
17 these were at Tab 4 in the hearing--the opening
18 statement binder.

19 MR. LEGUM: Mr. President, at some point
20 when it's convenient, we have an administrative
21 question which we would just like to raise in terms

1 of when we should bring the next witness in.

2 PRESIDENT VEEDER: In that case, we ask
3 the witness be given Tab 4.

4 THE WITNESS: Yes, I have it.

5 PRESIDENT VEEDER: Do you have a rough
6 estimate?

7 MS. CALLAWAY: I would say that I'm one
8 half to two-thirds of the way through, and I wasn't
9 looking at the clock. So are we breaking for lunch
10 at 12:30?

11 PRESIDENT VEEDER: You've have been 40
12 minutes so far. Does that mean--

13 MS. CALLAWAY: I would say I would be at
14 least another 40 minutes. I apologize. I don't
15 know if you want to just have them come after
16 lunch.

17 MR. LEGUM: Whatever is most convenient
18 for the Tribunal. I think we arranged for
19 Dr. Whitelaw to come in after lunch, but it seemed
20 as if you were going through this quite quickly, so
21 we didn't want to be stuck without a witness.

1 PRESIDENT VEEDER: We don't want to put
2 undue pressure on Ms. Callaway, so let's stick to
3 the existing arrangements.

4 MS. CALLAWAY: It's whatever the--I just
5 haven't been watching the clock. I apologize.

6 PRESIDENT VEEDER: There is nothing to
7 apologize for, but we might break slightly early,
8 and if you do, we'll start slightly early, so if
9 you could be ready to start at 2:00, we may be able
10 to start at 2:30. Is that convenient?

11 MR. LEGUM: It is, thank you.

12 PRESIDENT VEEDER: Ms. Callaway.

13 MR. PAWLAK: We have an extra one here--we
14 have one here, and I will share that with the
15 witness.

16 MS. CALLAWAY: Thank you.

17 BY MS. CALLAWAY:

18 Q. The United States has graciously shared
19 their one copy, and I'm sorry that--I wasn't really
20 considering using these.

21 If you look at these two oxygenated

1 gasoline manufacturing processes, one for ethanol
2 and one for methanol, is this fancy chart
3 consistent with your understanding of how ethanol,
4 oxygenated reformulated gasoline, and methanol
5 oxygenated or MTBE reformulated gasoline, how they
6 are blended or manufactured?

7 A. Well, not precisely, actually. I would
8 say--I have a couple of comments on each one, so we
9 have methanol up on the screen. I would say what
10 is presented in terms of the overall structure of
11 the refinery looks fine to me, all the processing
12 units, the production of isobutylene from a fluid
13 cat cracker, and then bringing in purchased
14 methanol to make MTBE and that then goes to
15 gasoline blending is fine. I think there is an
16 important missing stream here, in particular in
17 California, in that there is much larger flow of
18 MTBE which is being imported, which--there is a
19 much larger stream of MTBE which is imported into
20 California, which would be, I've estimated--well,
21 actually, I have not estimated. The California

1 Energy Commission estimates about 90 percent of the
2 MTBE consumed in California is imported. So, I
3 would adjust this chart to show a stream of
4 imported MTBE coming into that gasoline blending
5 mix.

6 BY MS. CALLAWAY:

7 Q. And that imported MTBE is also made from
8 isobutylene and methanol; correct?

9 A. Yes, it is.

10 So, that's for the methanol exhibit.

11 And then a comment on the ethanol exhibit
12 which maybe you want to put that up, but it sort of
13 implies here that ethanol is being blended at the
14 refinery, and that's not the way it's done. What
15 happens is the--I would take the ethanol out of
16 this graphic here, because basically the refinery
17 is making a gasoline blend stock CARBOB, which is
18 what it's referred to, which is suitable for then
19 blending with ethanol at blending terminals.

20 Q. At the terminals?

21 A. At the terminals, and from there, of

1 course, it goes on to the retail stations, so I
2 would make that adjustment, and perhaps show the
3 blending of the CARBOB and the ethanol as separate
4 from the refinery.

5 Q. Your testimony and your correction of this
6 would say that we removed ethanol here, and I drew
7 a nifty box here that said blending terminal. That
8 would be more accurate; is that correct?

9 A. Yes.

10 Q. And on--when I say "nifty," I don't mean
11 to denigrate at all these beautiful charts, but
12 it's funny; it would be much better if we took a
13 box here; in addition to MTBE plant, we said trucks
14 or ships carrying imported MTBE; is that correct?

15 A. That's correct.

16 Well, ships, basically.

17 Q. Or maybe really a big truck. Off the
18 record.

19 But Methanex--this goes back, Mr. Burke,
20 to Methanex's contention that the precise point of
21 the addition of oxygen to gasoline is really

1 irrelevant when considering a competitive
2 relationship between methanol and ethanol.

3 A. I disagree with that.

4 Q. Well, that's why we have a different
5 expert; isn't that correct?

6 A. Sure.

7 Q. Now, are you familiar--and I want to go to
8 a different area here. As an engineer and as
9 somebody who has worked within the petroleum or I
10 shouldn't just say petroleum, within the fuel
11 industry since 1976, are you familiar with the
12 ethanol production process?

13 A. Somewhat, somewhat. I'm not an expert in
14 ethanol production.

15 Q. You're aware that ethanol is typically
16 produced from renewable feedstock; is that correct?

17 A. That's correct.

18 Q. And you would agree that methanol can also
19 be made from a renewable feedstock; is that
20 correct?

21 A. I'm sorry, that methanol?

1 Q. Methanol can also be made from a renewable
2 feedstock.

3 A. I'm really familiar with methanol being
4 produced from natural gas.

5 Q. Well, are you aware that--

6 A. --which is not a renewable feedstock.

7 Q. Right. Even the lawyers probably know
8 that.

9 Now, are you aware that there is a
10 synthesis gas that can also be made from renewable
11 feedstocks?

12 A. Yes, I am.

13 Q. And you know that methanol is made from
14 synthesis gas; right?

15 A. Yes, I'm aware of that.

16 Q. Have you ever heard of the best biofuels
17 renewable methanol plant in Utah?

18 A. Perhaps I have. I don't really recall
19 specifics about that.

20 Q. Do you recall that the best biofuels
21 methanol plant produces methanol from digested hog

1 manure?

2 A. No, I don't know it that well. Sounds
3 fascinating.

4 PRESIDENT VEEDER: Is there a type of
5 manure that is not digested, Ms. Callaway?

6 MS. CALLAWAY: Your Honor, I will come
7 back with that answer after lunch, President
8 Veeder.

9 BY MS. CALLAWAY:

10 Q. But you would agree that if that is
11 correct?

12 PRESIDENT VEEDER: The transcript has not
13 properly recorded what I said.

14 MS. CALLAWAY: We'll definitely have that
15 fixed.

16 PRESIDENT VEEDER: Is it your hope that it
17 is not digested? I didn't say that.

18 MS. CALLAWAY: You said is there hog
19 manure that is not digested.

20 BY MS. CALLAWAY:

21 Q. But if that is correct, if the best bio

1 fuels--if the best biofuels plant, indeed, is
2 producing methanol from digested hog manure, you
3 would agree that methanol can be made from
4 renewable sources?

5 A. I'm not really comfortable stating it
6 because I don't know anything really about the
7 plant, and it sounds to me like it's somewhat
8 developmental, and I just took a look at my
9 exhibit--I'm sorry, I meant to be looking--yeah, my
10 Exhibit 12, which is the list of methanol
11 production facilities in the U.S., and I'm not
12 showing this plant, unless it's perhaps started up
13 recently.

14 Q. Well, you do know that methanol can be
15 made by hydrocarbons; correct?

16 A. Yes, I do.

17 Q. Such as ethylene or acetylaldehyde?

18 A. Yes, I do.

19 Q. So, it's true that--well, you know, I
20 can't ask you if it's true that methanol can be
21 made from renewable feedstocks because you're just

1 not aware of it being done; is that correct?

2 A. That's correct.

3 Q. Were you asked to look into whether that
4 was possible?

5 A. For methanol? No, I was not.

6 Q. In paragraph 26 of the rejoinder, you note
7 that California and Federal regulations prohibit
8 the mixing of ethanol and MTBE gasoline; correct?

9 A. That's correct.

10 Q. Do you know if these regulations discuss
11 how to effectively prevent the commingling of
12 ethanol-blended gasoline with nonethanol-blended
13 gasoline?

14 A. Not what I've seen. The only thing I
15 really saw was that there were warnings of fairly
16 stiff penalties if there is commingling which takes
17 place, but the actual mechanics of how you keep it
18 separate I have not looked at.

19 Q. Well, are there--do you know if there are
20 restrictions on commingling ethanol-blended
21 gasoline and MTBE-blended gasoline in the fuel

1 tanks of consumer vehicles?

2 A. I don't know.

3 Q. Well, there is a volatility allowance; is
4 that correct?

5 A. Volatility allowance in what context?

6 Q. Rather than a restriction on the
7 commingling, there is a volatility allowance built
8 into the ethanol-blended gasoline to allow for
9 possible commingling with an MTBE blend; is that
10 correct? I mean, the Reid vapor pressure was
11 adjusted for that purpose; is that correct?

12 A. I'm not specifically aware of that.

13 Q. Well, it can't be the case that regulators
14 categorically prohibit the commingling of the two
15 types of gasoline; correct?

16 A. No, I would disagree. I think regulators
17 mandate many things as black and white. I think my
18 understanding is that this is a black and white
19 situation and you cannot--you're not actually
20 supposed to commingle.

21 Q. Well, California reduced the RVP of

1 gasoline by .1 per square inch to accommodate the
2 fact that ethanol raises the RVP of gasoline;
3 right?

4 A. .1. I'm sorry? Could you give me a
5 little more background on that.

6 Q. Sure.

7 You're familiar with the Reid vapor
8 pressure parameter?

9 A. Specification.

10 Q. Specification; right?

11 A. Sure.

12 Q. And you're also aware that in order to
13 accommodate the oxygenation of gasoline with
14 ethanol rather than MTBE, the State of California
15 reduced its RVP for--

16 A. Absolutely.

17 Q. You're aware of that, okay.

18 So, it's the ethanol content in the
19 gasoline that causes any adverse effect from
20 commingling the ethanol and the
21 MTBE--correct?--because it increases the pressure?

1 A. Well, if you have--you're talking about
2 mixing MTBE blends of gasoline.

3 Q. Right.

4 A. And ethanol blends.

5 Q. Right.

6 A. They both contribute to RVP, but I would
7 agree. The concern is it's clearly stated here,
8 that the ethanol gasoline, because of its blending
9 characteristics, would potentially cause a problem
10 with putting the resulting mix out of specification
11 as far as RVP.

12 Q. Well, at the end of paragraph 30 in your
13 rejoinder, you implied there are other reasons why
14 regulators prohibit the commingling of the MTBE
15 reformulated gasoline and the ethanol reformulated
16 gasoline. What are those reasons?

17 A. In paragraph 30?

18 Q. At the end.

19 "Similarly, those differences are among
20 the reasons why regulators prohibit commingling of
21 the two types of gasoline."

1 When you state, "among the reasons,"

2 Mr. Burke, what are the other reasons?

3 A. I think maybe that's--I don't particularly
4 have other reasons.

5 Q. Okay. Going back to the manufacture of
6 methanol from digested hog manure, is it true that
7 another name for methanol is wood alcohol?

8 A. Yes.

9 Q. And that's because methanol used to be
10 made from wood; correct?

11 A. Yeah, that's right.

12 Q. So, that is a renewable source from which
13 methanol can be made; is that correct?

14 A. Yes, you can technically make methanol
15 from wood.

16 Q. And it was made that way for years;
17 correct?

18 A. What I recall, it was very early
19 technology, which is not--I suspect is not being
20 used anywhere for many, many years, but I don't
21 know the specifics.

1 Q. But you would agree that wood is a
2 renewable source; right?

3 A. Oh, sure. Absolutely.

4 Q. And you would also as an expert note that
5 methanol used to be made from wood?

6 A. As I recall. I haven't really looked at
7 that, but yes, I think that's correct.

8 Q. I'm sorry, I had just forgotten to ask
9 that, and I wanted to go back to that.

10 You, in your rejoinder, discuss benzene,
11 to some extent; is that correct?

12 A. Yes, I do.

13 Q. But you did not discuss benzene in your
14 first report, did you?

15 A. No, I don't believe I did.

16 Q. Are you aware that Methanex has
17 consistently asked the United States why California
18 banned MTBE in methanol but did not ban benzene,
19 even though it's a known human carcinogenic?

20 A. I only came across reading that in the
21 transcripts from last week.

1 Q. So, you did read the transcripts from last
2 week?

3 A. Some of them.

4 Q. That's permitted.

5 A. I assume it's okay.

6 Q. Now, you are also aware, having been in
7 this field and serving as an expert, that benzene
8 and ethanol share some similar characteristics?

9 A. Which characteristics are you talking
10 about? They're quite different.

11 Q. Well, they do share human carcinogenicity;
12 is that correct?

13 A. Methanol and benzene?

14 Q. No, actually benzene and ethanol.

15 A. I'm not aware that ethanol is
16 carcinogenic, but benzene I'm aware of from just
17 general knowledge is certainly highly carcinogenic.

18 Q. And there has been a steady decline in the
19 benzene content in gasoline specifications in U.S.
20 and elsewhere; is that correct?

21 A. Yes, it is.

1 Q. And you would agree that that's partly
2 because benzene content in gasoline is highly
3 regulated by California regulations because it's
4 carcinogenic; is that correct?

5 A. You mean California's regulations impact
6 the rest of the world?

7 Q. Yes.

8 A. I wouldn't draw that conclusion. I think
9 California is doing similar reductions as are
10 happening by the U.S. EPA, and in many other
11 countries around the world to reduce the use of
12 benzene in gasoline.

13 Q. You testified that the benzene content in
14 gasoline has been reduced from as high as 5 percent
15 before the Clean Air Act amendments to as low as
16 less than 1 percent; is that correct?

17 A. That's correct.

18 Q. And the achievement of these reduced
19 benzene content specifications by the refiners and
20 blenders demonstrates that it's possible to
21 systematically remove benzene from gasoline; is

1 that correct?

2 A. To reduce its level, yes.

3 Q. Now, are you aware, and this is again as
4 an expert who has discussed benzene and its content
5 in gasoline in his rejoinder report, are you aware
6 that the EPA has determined, contrary to your
7 conclusion, that reducing the benzene content of
8 gasoline can be achieved for as little as a
9 fraction of a penny per gallon?

10 A. No, I'm not aware of it.

11 Q. I would like to show you Tab 3, if I could
12 find my own tab. It's the staff white paper,
13 "Study of Unique Fuel Blends." And this is from
14 October of 2001.

15 A. I have it, yes.

16 MR. PAWLAK: Excuse me, Ms. Callaway, is
17 this document in the record?

18 MS. CALLAWAY: No, it is not. It is used
19 for credibility and goes directly to the conclusion
20 regarding the cost of reducing benzene content.

21 PRESIDENT VEEDER: Let's see where it

1 goes.

2 MS. CALLAWAY: Thank you.

3 BY MS. CALLAWAY:

4 Q. If you look at benzene control costs here,
5 and this is in cents per gallon, new refueled gas
6 to .7 percent volume averaged to meet the mobile
7 source air toxics. If you compare that--that's
8 Table IV-7, if you compare that to .42 cents to the
9 cost of Midwest or California and Northeast
10 ethanol, it costs less than the ethanol costs; is
11 that correct?

12 A. Well, I haven't really--there is not a lot
13 of context here.

14 Q. Right. And that is not--you know, that's
15 a fair point, and I apologize, but if you look at
16 this--have you relied on EPA studies and tests
17 previously?

18 A. Sure, sure.

19 Q. And you have no reason to doubt the
20 reliability of an EPA test; is that correct?

21 A. Well, let me just mention, for looking at

1 costs, I've actually stayed away from stating
2 specific costs from making changes because my
3 feeling is--and I think it's people in the industry
4 would tend to agree, it's very difficult to
5 actually quantify current operations in terms of
6 their costs of making changes because as the
7 previous graphic showing the complexity of refining
8 indicates, there is a lot of activities, there is a
9 lot of ways to make changes. Very hard to quantify
10 the cost, so I stayed away from doing that.

11 I think it's even harder when you're
12 looking--trying to forecast what the cost effects
13 will be.

14 So, again, I've stayed away. I have not
15 actually presented any specific cost estimates in
16 my submission, but certainly studies are done, and
17 you have to take a stab at it.

18 Q. Well, right, and in taking a stab at that,
19 it appears that that is what the EPA has done.

20 And this goes to paragraph 37 of your
21 report, Mr. Burke. You state that--and this is the

1 last sentence--"Because benzene is widely dispersed
2 throughout many processing streams in all
3 refineries, the removal of every benzene molecule
4 from gasoline would be cost-prohibitive."

5 Looking at the benzene control costs--

6 MR. LEGUM: Mr. President, this document
7 doesn't really provide sufficient context for fair
8 questioning of the witness about what it means.
9 There is no reference to what any of the items that
10 are mentioned in this table, what their
11 significance is and what the purpose of the study
12 was, even. So, we would object to this line of
13 questioning.

14 MS. CALLAWAY: Well, the witness has made
15 clear that he's not familiar with this study, and I
16 was frankly surprised that he wasn't familiar with
17 this study because of his comments on cost
18 prohibition in removing benzene. I would--I know
19 that I am permitted to ask the witness to assume
20 hypotheticals, so I will ask the witness this way.

21 BY MS. CALLAWAY:

1 Q. Would you say that removing benzene in
2 reformulated gasoline or reducing it to .7 volume
3 percent average to meet the MSAT, if that cost less
4 than one half of one cent per gallon, would that
5 qualify as cost-prohibitive?

6 PRESIDENT VEEDER: Before you answer, this
7 is another question going to the witness's
8 credibility.

9 MS. CALLAWAY: Yes, going to the
10 conclusion here and the credibility of--not
11 Mr. Burke's credibility as a human being, the
12 credibility of his conclusions. And really, it's
13 saying is half a penny per gallon where gasoline in
14 California right now costs above \$3 in some places,
15 but is half a penny gallon cost-prohibitive?

16 THE WITNESS: Well, what I stated here in
17 paragraph 37 is not the same as what you're
18 addressing here. I stated here that to remove
19 every benzene molecule from gasoline would be
20 cost-prohibitive, and I would stand by that
21 statement. What you're looking at here is, in the

1 case you referenced, leaving .7 volume percent
2 benzene in gasoline. That's a huge volume of
3 benzene that's left in the gasoline.

4 So, .42 cents per gallon in this context
5 is not a lot, I agree, but as you get down to much
6 lower levels to the point where we were talking
7 parts per billion or literally zero, the costs get
8 astronomically higher, and so I would stand by my
9 statement.

10 BY MS. CALLAWAY:

11 Q. I'm sorry. When you "say astronomically
12 higher," you also stated that you didn't actually
13 look at the costs; is that correct?

14 A. That's correct.

15 Q. Would you say that .3 percent volume
16 percent average of benzene in gasoline, would you
17 say that that is also a huge--I don't mean to
18 restate, but you indicated that .7 percent of
19 volume or .7 volume percentage was a very large
20 amount. Would you also say that .3 of a percent of
21 the volume is also a very large amount?

1 A. Compared to what I've stated, which is to
2 remove every benzene molecule from gasoline, .3 is
3 a very large amount, yes.

4 Q. Would five cents a gallon be
5 cost-prohibitive to remove all benzene, every
6 benzene molecule?

7 A. I haven't tried to speculate.

8 Let me explain this. To actually
9 physically remove any molecule from a hydrocarbon
10 mixture like this is probably technically
11 impossible, first off. And there is a good example
12 of what's going on right now. The U.S. refining
13 industry has to drastically reduce its sulfur
14 content in gasoline and diesel fuel. These changes
15 are happening as we speak. The costs to get down
16 to some parts per million of sulfur in both
17 gasoline and diesel are quite high. But it's still
18 leaving in either 15 or 30 parts per million of
19 sulfur.

20 Now, the EPA and everyone has not even
21 considered going after that last parts per million

1 because the cost, in my opinion, would be
2 prohibitive, and I think the EPA and industry
3 agrees with that. So, that was the thrust.

4 I didn't try to put cost on this, but it
5 was based on my chemical engineering background and
6 understanding of how things work. It's my opinion.

7 Q. So, you didn't actually look into the
8 cost, for example, of reducing it down to .3 volume
9 percent; correct?

10 A. No, I didn't.

11 Q. So, when you say it would be
12 cost-prohibitive, that's an assumption based on
13 your knowledge as an engineer in the industry; is
14 that correct?

15 A. That's correct.

16 Q. And you were comparing it to the cost of
17 producing sulphur in automobile gasoline and in
18 diesel; is that correct?

19 A. Well, I wasn't really--it's an example of,
20 from a technical point of view it really is quite
21 difficult to remove any molecule a hundred percent.

1 We are talking about with MTBE getting it down to,
2 I think, five parts per billion, and the only way
3 you can get it down that low is actually not to put
4 it in. Once it's in there, it's very hard to
5 extract those molecules a hundred percent. That's
6 my point.

7 Q. Is sulfur a known carcinogen? Do you
8 know?

9 A. I don't know.

10 Q. But the EPA can ask refiners to remove
11 sulphur, despite what you characterize as a very
12 high cost; is that correct?

13 A. The EPA has asked refiners to remove
14 sulphur, right.

15 Q. And you're saying that the cost is very
16 high?

17 A. Well, to get it down to the levels that
18 refiners have been asked to remove it, I think the
19 estimates are in the range of 5 to 7 percent, but
20 I'm not precise on that. There has been--again,
21 these cost estimates are basically someone's best

1 estimate across the industry, which covers a lot of
2 different refineries on average what those costs
3 would be, so in the context of removing sulfur,
4 which I haven't really looked at for this work,
5 it's an example of going partway, but not taking a
6 hundred percent of the sulfur out.

7 Q. But you would agree that if the EPA can
8 ask refiners to remove sulphur, it can ask refiners
9 to remove benzene; is that correct?

10 A. Well, the EPA has asked refiners to reduce
11 benzene content.

12 Q. They could ask them to remove it, too,
13 couldn't they?

14 A. I suppose they could.

15 Q. I want to clarify something. When I was
16 talking about digested hog manure, I think all of
17 us who understand that hog manure has been
18 digested, when I was talking about hog manure,
19 digested hog manure, it's something that has been
20 aerobically digested using microorganisms. So, I
21 just wanted to make this clear. I didn't really

1 set the stage for that very well.

2 PRESIDENT VEEDER: Just another question
3 before you move on. This passage you're reading
4 from, Tab 3, the new Federal CBG 20.3 percent
5 volume to meet MSAT, would you remind us what CBG
6 and MSAT stand for here.

7 MS. CALLAWAY: Yes. MSAT is the Mobile
8 Source Air Toxic Standard, and CBG is
9 conventional--it's regular gas, conventional blend
10 gasoline.

11 BY MS. CALLAWAY:

12 Q. You understand, Mr. Burke, that one of the
13 reasons or the reason that we are here is that--one
14 of the things that forms the basis for us being
15 here is that MTBE was banned as a fuel oxygenate in
16 California. You're aware that MTBE was banned as a
17 fuel oxygenate in California; right?

18 A. Yes, I am.

19 Q. And the use of methanol as a fuel
20 oxygenate has been banned in California; is that
21 correct?

1 A. I don't know if it was specifically
2 banned. It's not allowed based on the regulations,
3 as I understand it, in California.

4 Q. So, we can say not allowed or banned?

5 A. Right.

6 Q. Okay. Now, the five California refineries
7 that we were talking about earlier have stopped
8 producing any MTBE--is that correct?--to your
9 knowledge.

10 A. I presume they are, because otherwise, if
11 they were still producing, they would have to
12 presumably export it, which wouldn't make a lot of
13 sense, so I would agree.

14 You can never tell. These companies look
15 at things on a global basis, but I would tend to
16 agree that they're probably not producing MTBE.

17 Q. Well, if the refineries stopped purchasing
18 methanol for the manufacture of MTBE, are you aware
19 of that? Did you know that that's the case, that
20 they have stopped purchasing methanol?

21 A. Well, I haven't specifically talked to

1 them as to whether or not--I presume they were
2 purchasing, and I presume they have stopped
3 purchasing, but I don't know for sure.

4 Q. Well, if a company was previously
5 supplying methanol to one of those refineries and
6 that refinery stopped purchasing methanol for the
7 production of MTBE or anything else, that company
8 wouldn't be able to continue selling the methanol
9 to the refinery; is that correct?

10 A. Sorry, could you restate that, please.

11 Q. Sure.

12 I mean, if company A is selling--was
13 selling methanol to refinery X for the production
14 of MTBE, and after the MTBE ban went into effect or
15 was announced refinery X tells company A, hey, we
16 just don't need your methanol anymore, that would
17 result in the lost of a company--of a customer for
18 company A; is that correct?

19 A. Well, I think it depends on the contracts.
20 I mean, some contracts don't let you just stop
21 taking product. I haven't looked at the contracts

1 for those five refineries. I mean, it's
2 conceivable, it's happened with many other products
3 in the industry where you have take or pay. I
4 don't know what those contracts were. Which
5 means--take or pay means you have to take ownership
6 of in this case methanol, even if you don't have
7 use for it anymore.

8 Q. Are you aware that the demand for MTBE in
9 general in California has declined?

10 A. Oh, yes.

11 Q. In fact, it's been totally eliminated;
12 correct?

13 A. I haven't seen the very latest data, but I
14 presume it's a hundred percent eliminated at this
15 point, yes.

16 Q. And would you agree that the demand for
17 methanol to manufacture MTBE has been reduced?

18 A. Yes.

19 Q. And even if refiners wanted to use
20 methanol as an oxygenate for their reformulated
21 gasoline, they would not be able to do so because

1 of the California RFG Phase III
2 regulations--right?--banning methanol.

3 A. If refineries wanted--

4 Q. Even if they wanted to use methanol as an
5 oxygenate, they can't; right?

6 A. Because they're not producing MTBE,
7 correct.

8 Q. Well, methanol is a globally traded
9 commodity; would you agree with that statement?

10 A. Yes, I would.

11 Q. So, demand changes in one region
12 ultimately affect the global supply and demand
13 balance for methanol; would you agree with that?

14 A. Yes.

15 Q. Isn't it true that the supply and demand
16 balance impacts oil prices? Just supply and
17 demand--

18 A. Of crude oil?

19 Q. Of crude oil. Supply and demand like
20 OPEC, let's tear something from the pages today,
21 the newspaper. OPEC is going to--this week

1 apparently there was a drop in gasoline prices for
2 the first time in a while because OPEC has agreed
3 to produce more oil. When there is a higher supply
4 of oil, the cost of oil itself decreases; correct?

5 A. We could probably spend several hours on
6 this one. I think the price-setting mechanisms for
7 crude oil, nobody really understands. I have been
8 in this business a long time. If I could forecast
9 accurately the price of crude oil, I would be long
10 retired. The fact that OPEC makes pronouncements
11 doesn't necessarily translate into fundamental
12 changes, in spite of them.

13 Q. And that's a fair point.

14 Would you agree that an oversupply of oil
15 would cause the oil price to drop?

16 A. For crude oil--

17 Q. Yes.

18 A. --you're talking about?

19 It's a very murky area. There have been
20 pronouncements over time that production is up, and
21 yet the actual price doesn't seem to follow that.

1 I wouldn't want to state one way or the other.

2 Q. You would agree that if the demand for oil
3 increases above available supply, the price goes
4 up.

5 A. Let me step back to economic theory as
6 I've practiced it in my career, which is on a--for
7 any commodity product, given that it's basically
8 economic rules which are in place and not political
9 or other agendas, supply/demands ultimately sets
10 the price of the commodity. So people in a surplus
11 situation, the price will tend to go down, and if
12 you go into a shortfall situation, the price and
13 profitability will tend to go up.

14 Q. And these economic rules that you have
15 employed as you practiced in your career, you would
16 agree that methanol is a commodity; right?

17 A. Yes.

18 Q. And applying those economic rules that you
19 have employed throughout your career, a reduced
20 demand on methanol would cause its price to go
21 down, wouldn't it?

1 MR. PAWLAK: Excuse me, Mr. President. I
2 believe we've begun to stray beyond the scope of
3 Mr. Burke's expertise as offered in these reports.

4 PRESIDENT VEEDER: You have taken this as
5 far as I could take it.

6 MS. CALLAWAY: I have taken it as far as I
7 care to take it, yes President Veeder, thank you.

8 THE WITNESS: Is there any chance of
9 taking a short break?

10 PRESIDENT VEEDER: Of course. In fact,
11 our shorthand writer has struggled from 9:00.

12 Are we on time, Ms. Callaway, for 12:30?

13 MS. CALLAWAY: Yes.

14 PRESIDENT VEEDER: Let's take a 10-minute
15 break.

16 It's my fault, I should have reminded you
17 before we broke, the rules for all witnesses is
18 that when we break, you don't discuss your evidence
19 with anybody. You come back and discuss your
20 evidence in the face of the Tribunal, so please
21 talk about the weather, anything, but not this

1 case.

2 THE WITNESS: Okay.

3 (Brief recess.)

4 PRESIDENT VEEDER: Let's resume.

5 BY MS. CALLAWAY:

6 Q. Just want to ask a few more questions, and
7 again very much appreciate your time and your
8 travel here today.

9 Earlier, I asked you about--I asked you
10 several questions about methanol being used as an
11 oxygenate or MTBE being used as an oxygenate. You
12 would admit that both MTBE and methanol are
13 potential fuel oxygenates, not in California, but
14 they can be used as fuel oxygenates; is that
15 correct?

16 A. No, I would disagree. MTBE is a fuel
17 oxygenate and is used as a fuel oxygenate.
18 Methanol is not a fuel oxygenate and legally cannot
19 be used.

20 Q. But it has properties that--and this is
21 taking away any bans or any regulations that say it

1 can't be used. Scientifically, it could be used as
2 an oxygenate; is that correct?

3 A. I think it's because of its properties
4 that it cannot be used with the current regulatory
5 and vehicle fleet system that we have in place in
6 this country, so I would disagree that it cannot be
7 used, given the setup we currently have in the U.S.

8 Q. But when adjustments are made in the same
9 manner they were made for ethanol, methanol could
10 be used; is that correct?

11 A. Yes, if the refineries put in the
12 necessary investments and changes to produce lower
13 RVP, even lower RVP gasoline, if the vehicle fleet
14 was changed to allow for the use of methanol so the
15 warranties were not eliminated, all those things,
16 technically I suppose methanol could be used, sure.

17 Q. Ethanol is produced from ethylene and
18 acetaldehyde; right?

19 A. I think very small amounts of it. The
20 vast majority of it is from corn, in this country.

21 Q. But the corn makes the ethylene, and then

1 it's blended with the acetaldehyde; is that
2 correct?

3 A. No, no, that's not correct. There's two
4 basic routes. If you're going from corn--

5 Q. It goes straight to ethanol from corn?

6 A. Well, you go through a series of steps,
7 but you don't go through ethylene.

8 Q. Okay.

9 A. So, you go through and produce ethanol.
10 If you're going the other route, you start with
11 ethylene, I'm not sure the other chemical, and you
12 convert that through a totally different process to
13 ethanol.

14 Q. Ethylene is a hydrocarbon; correct?

15 A. Yes, it is.

16 Q. And acetaldehyde, that's a hydrocarbon?

17 A. You know, I would have to take a look at
18 that. For me that's a mouthfull.

19 Q. Right. Clearly it is for me as well.

20 And in your study or in your report, some
21 of the data you obtained on methanol came, in part,

1 from the Methanex Web site; correct?

2 A. Yes.

3 Q. And you deemed this information reliable;
4 is that correct?

5 A. Yes.

6 Q. In fact, you have no reason to doubt the
7 reliability of any information provided by
8 Methanex; is that correct?

9 A. Well--

10 MR. PAWLAK: Mr. President, I would like
11 to object to that. If the questioner could offer a
12 little bit more context.

13 PRESIDENT VEEDER: If you could just
14 clarify the question, please.

15 MS. CALLAWAY: Thank you. I will just
16 move on from that.

17 BY MS. CALLAWAY:

18 Q. I want to go back to what I deemed as the
19 fancy graphs, and just so you know, the graphs were
20 meant not to show the refining process, but just to
21 show the gasoline process.

1 When you look at the methanol plant here,
2 and we add the 90 percent imported MTBE box here,
3 and draw an arrow up here, and when you look at the
4 ethanol chart, we would take ethanol over here and
5 make a blending terminal.

6 From the consumer's standpoint, it doesn't
7 matter where the oxygenate is introduced. Would
8 you agree with that statement?

9 A. The consumer, the actual car owner? Yeah,
10 I would agree with that.

11 MS. CALLAWAY: I don't have any more
12 questions, and I very much appreciate your time
13 today. Thank you very much.

14 THE WITNESS: My pleasure.

15 PRESIDENT VEEDER: Thank you very much,
16 Ms. Callaway.

17 Any questions on redirect from the United
18 States?

19 MR. PAWLAK: No redirect, Mr. President.
20 Thank you.

21 PRESIDENT VEEDER: Mr. Burke, thank you

1 very much. There are no questions from the
2 Tribunal, and so we come to the end of your
3 evidence. Thank you very much for coming.

4 THE WITNESS: Thank you.

5 (Witness steps down.)

6 PRESIDENT VEEDER: 10 past 12, and I think
7 the best thing we can do is break now, and to
8 resume at the most convenient time for our next
9 witness.

10 MR. LEGUM: 10 past 2 would be fine.

11 Dr. Whitelaw is here, so if we wanted to try and
12 get more in before lunch, we could do that as well.
13 Whatever your pleasure is

14 PRESIDENT VEEDER: How long is your
15 cross-examination this afternoon?

16 MS. CALLAWAY: About an hour and 15
17 minutes. I'd prefer just to eat some lunch now
18 because those were some big words, and I'm actually
19 tired from pronouncing them.

20 PRESIDENT VEEDER: Should we come back at
21 10 past 2 or are you asking for a different time?

1 MS. CALLAWAY: 10 past 2 would be
2 wonderful.

3 PRESIDENT VEEDER: Let's come back at 10
4 past 2.

5 (Whereupon, at 12:07 p.m., the hearing
6 was adjourned until 2:10 p.m., the same day.)

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1 AFTERNOON SESSION

2 PRESIDENT VEEDER: Let's resume.

3 EDWARD WHITELAW, RESPONDENT/PARTY'S WITNESS, CALLED

4 PRESIDENT VEEDER: We have Professor

5 Whitelaw before us as an expert witness.

6 Professor Whitelaw, the Tribunal invites

7 you to make the declaration in the form of the

8 wording before you.

9 THE WITNESS: I solemnly declare upon my

10 honor and conscience that my statement will be in

11 accordance with my sincere belief.

12 PRESIDENT VEEDER: Thank you.

13 DIRECT EXAMINATION

14 BY MR. PAWLAK:

15 Q. Good afternoon, Dr. Whitelaw. As you

16 know, my name is David Pawlak, and I am with the

17 State Department, and I am going to be asking you

18 some questions about your reports this afternoon.

19 Why don't we begin with the document

20 placed before you, 13 JS tab K. Is this document

21 your expert record in this case?

1 A. It appears to be.

2 Q. Can you please turn to page 50 of this
3 document.

4 A. I am there.

5 Q. Is that your signature on this page of the
6 document?

7 A. It is.

8 Q. And what is the date of the document?

9 A. November 26, 2003.

10 Q. Can you please take the document labeled
11 in the bottom right-hand corner 24 JS tab E--

12 A. Got it.

13 Q. Is this the rejoinder report you offered
14 in this case?

15 A. It is.

16 Q. Would you please turn to page 3 of your
17 rejoinder report.

18 A. I am there.

19 Q. Could you take a moment and review
20 paragraph 2 on page 3.

21 A. I have.

1 Q. And there you acknowledge your independent
2 duty to this Tribunal above and beyond any duty
3 that you may have to the United States as the party
4 that retained you in this case; is that right?

5 A. Yes.

6 Q. And it is with that independent duty in
7 mind that you offer your testimony today?

8 A. Yes, it is.

9 Q. Dr. Whitelaw, you have with you in the
10 folder two errata sheets. Do you see those there?

11 A. I do.

12 Q. And one is entitled "Report of Ed
13 Whitelaw, Errata"; is that correct?

14 A. Yes.

15 Q. And the second is entitled "Rejoinder
16 Report of Ed Whitelaw Errata"; is that right?

17 A. Yes.

18 Q. Could you identify the nature of the
19 errors you identify in these errata sheet.

20 A. They are non-substantive. For example,
21 typographical errors.

1 MR. PAWLAK: Mr. President, is it
2 necessary to mark these?

3 PRESIDENT VEEDER: I don't suggest. We
4 will add them to our file. The one is marked
5 Report of Ed Whitelaw, and one is marked Ed
6 Whitelaw Rejoinder.

7 BY MR. PAWLAK:

8 Q. Subject to the items listed on the errata
9 sheets you provided, do you reaffirm that the
10 contents of your November report and rejoinder
11 reports--report are true and correct to the best of
12 your information, knowledge and belief?

13 A. I do.

14 Q. Dr. Whitelaw, could you tell me about your
15 educational background. And start with college,
16 that would be fine.

17 A. I got my undergraduate degree from the
18 University of Montana, majors in mathematics,
19 economics and political science.

20 Q. And where did you continue with your
21 education?

- 1 A. Did my doctoral work in MIT and Harvard
2 and got my Ph.D. from MIT.
- 3 Q. Where did you begin working?
- 4 A. University of Oregon.
- 5 Q. Are you a professor at the University of
6 Oregon?
- 7 A. I am now. I didn't start that way.
- 8 Q. Is your position a tenured position?
- 9 A. Yes.
- 10 Q. When did you receive tenure?
- 11 A. 1970.
- 12 Q. Have you received any awards for your
13 teaching at the University of Oregon?
- 14 A. Yes, over the years, I have.
- 15 Q. Could you describe the award that might
16 come to mind.
- 17 A. Well, the one listed is given an
18 individual I think almost each year for outstanding
19 teaching and then one doesn't qualify again after
20 that.
- 21 Q. And when did you receive the outstanding

1 teacher award?

2 A. 1970.

3 Q. What is your principal area of
4 specialization?

5 A. Applied microeconomics, and by that I mean
6 not theoretical and not macroeconomics.

7 Q. In addition to your academic post, you are
8 also president of a firm called Eco Northwest; is
9 that right?

10 A. Yes, I am.

11 Q. And how many employees are there at Eco
12 Northwest?

13 A. On the order of 35 or so, maybe 40.

14 Q. What type of services does Eco Northwest
15 provide?

16 A. Consulting services in economics,
17 financial planning and analysis.

18 Q. Could you perhaps explain for The Tribunal
19 a few of your representative engagements at Eco
20 Northwest?

21 A. Let me illustrate rather than represent by

1 listing a few of them. For a number of public
2 agencies we develop economic forecasts of revenues
3 and costs and the like. For a number of private
4 firms, we conduct market analyses, feasibility
5 analyses, pro formas on projects. In the matter at
6 hand, we are providing what we call litigation
7 support services, which we do primarily in
8 economics and finance in civil matters. Used to be
9 mostly in the Northwest, and it is spreading out a
10 little.

11 Q. Have you served on any national advisory
12 panels that are associated with the U.S.
13 Government?

14 A. Yes, I have.

15 The U.S. Environmental Protection Agency's
16 National Advisory Committee on Environmental Policy
17 and Technology, the National Science
18 Foundation--U.S. National Science Foundation--it
19 was a technical advisory group on offshore oil and
20 gas development.

21 Let's see, under President Carter I was on

1 the Domestic Council on Cities. I think that may
2 be it.

3 Q. Thanks.

4 Could you please go to your first report,
5 the November report. It is labeled 13A JS tab K.

6 A. I am there.

7 Q. Could you go to page 55 of that report.

8 A. I am there.

9 Q. One page after 55. Is that where your
10 resume begins?

11 A. It is.

12 Q. Could you refer to pages two through seven
13 of your resume.

14 A. I am there.

15 Q. Is that a list of your publications?

16 A. It is.

17 Q. And about how many publications have--how
18 many articles have you published?

19 A. I think on the order of 70, 75.

20 Q. How many--I believe you have presented
21 invited lectures?

1 A. I estimated these the other night. I
2 think it is on the order of 150 presentations of
3 one kind or another.

4 Q. Would you please go to pages two through
5 four of your first report. It is the November
6 report.

7 A. I am there.

8 Q. Dr. Whitelaw, you're familiar with the
9 principles of cost/benefit analysis; is that right?

10 A. I am.

11 Q. Could you briefly describe the principles
12 of cost/benefit analysis for the Tribunal?

13 A. Yes. I will be brief, perhaps cryptic.
14 With cost/benefit analysis, one tries to help
15 decision-making among alternative projects,
16 policies, actions, or the like, and if done well,
17 cost/benefit analysis considers not only those
18 plusses and minuses, strengths and weaknesses that
19 can be monetized, that is quantified and monetized,
20 but also those that cannot be monetized or
21 quantified, and one pays attention to all the

1 relevant factors and to the short run and long run.

2 I mean, that is sort of the technical part.

3 The intuitive part is--it is very

4 straightforward. You come out in the morning.

5 Should I take an umbrella today. You weigh the

6 alternative, costs and benefits and make a

7 decision. Intuitively or conceptually it is no

8 more complex than that. In application, it is at

9 least tedious.

10 Q. Thank you, Dr. Whitelaw. Are you familiar

11 with the UC report?

12 A. I am.

13 Q. And did the UC report contain a

14 cost/benefit analysis of a ban on MTBE?

15 A. The UC team used cost/benefit analysis to

16 try to identify the costs and benefits associated

17 with the various blends at issue and options they

18 had for gasoline in California.

19 Q. And who was the principal author of the

20 section of the UC report applying cost/benefit

21 analysis?

1 A. Well, there are actually two listed, at
2 least they speak of themselves as co-authors. One
3 is Arturo Keller--he has a Ph.D. in civil
4 engineering from Stanford--and the other is Linda
5 Fernandez, who has a Ph.D. in agricultural
6 economics out of UC Berkeley.

7 Q. Can you please identify the categories of
8 costs and benefits that were assessed by Dr. Keller
9 and his team in the UC report.

10 A. Yes. What they did was group the costs
11 and benefits they were examining into three major
12 categories: Air, or air toxics, water, water
13 quality and quantity, and fuel costs.

14 Q. Dr. Whitelaw, what are your views of the
15 work presented by Dr. Keller and his team in the UC
16 report?

17 A. They broke ground. They were pioneers in
18 developing the framework at this level on this
19 topic. There are strengths and weaknesses. They
20 have got some errors and they have got a number of
21 assumptions, coefficients, and the like that others

1 have used since then.

2 Q. And with regard to criticisms that might
3 have been directed at the UC report, are you aware
4 of any criticisms?

5 A. Yes. The one that received the most
6 attention in the cost/benefit analysis they
7 conducted was their inclusion of sunk costs among
8 the costs of using MTBE in the future, and then
9 they had a number of errors of omission, where they
10 did not extend the analysis as far as they could
11 have or should have, and--those are the major
12 errors.

13 Q. Dr. Whitelaw, what is the purpose of your
14 reports that have been offered in this case?

15 A. Well, briefly, here's the UC report
16 submitted in '98 November. Fast forward to the
17 Methanex matter before you folks. Methanex through
18 their attorneys retained, as I understand it,
19 Gordon Rausser, Dr. Gordon Rausser, to evaluate the
20 costs and benefits of this choice among alternative
21 fuels circa 1999/2000. That is, prior to the

1 decision, or in the context of the information that
2 was available. As a result, of course, then he is
3 commenting on the UC report as well. Then we were
4 retained--my colleagues and I were retained by the
5 State Department to then evaluate Gordon Rausser's
6 work.

7 Q. Could you please refer to page four of
8 your rejoinder report. For the record, that is
9 24 JS tab E. In particular I direct you to the
10 last paragraph on page four, on through to page six
11 of that report.

12 A. I am there.

13 Q. Could you highlight the principal
14 conclusions of your reports in this case.

15 A. Well, for clarity and brevity, let me just
16 read the principal conclusion from our work.
17 California's decision to ban MTBE is consistent
18 with the information on costs and benefits
19 available during 1999/2000. Two facts derived from
20 our evaluation of this information are as true
21 today as they were in 2000.

1 Over to the next page, I will just address
2 the two. First, the quantifiable, expected costs
3 of the MTBE/ethanol switch were trivial in the
4 context of the overall California economy. Those
5 quantifiable expected costs considered alone
6 suggested no clear policy direction.

7 The second, in the beginning of the topic
8 sentence of the last paragraph on page five,
9 "Second, the downside risk of the continued use of
10 MTBE was large."

11 Q. Thank you, Dr. Whitelaw. I have just a
12 couple more questions for you.

13 Could you please consider the indented
14 text at the bottom of page six of your rejoinder
15 report. The indented, italicized text.

16 A. Okay. I am there. This is the rejoinder?

17 Q. Yes, it is. And for the record, just to
18 be clear, that is 24 JS tab E. There, how have you
19 characterized the decision faced by the California
20 policymakers addressing the MTBE issue in 1998 and
21 1999?

1 A. Okay. In the context of the three
2 categories, air, water, and fuel, this question
3 boils it down to a choice between water and fuel.
4 Is the benefit of eliminating once and for all the
5 considerable uncertainties surrounding MTBE's
6 future ability to contaminate California's
7 groundwater assets and drinking water supplies
8 worth the risk of increasing gasoline prices by
9 about 3 cents per U.S. gallon.

10 Q. Dr. Whitelaw, in your view, was the
11 decision by California officials to ban MTBE an
12 economically sound one?

13 A. You bet.

14 MR. PAWLAK: That is all I have,
15 Mr. President.

16 PRESIDENT VEEDER: Thank you.

17 Ms. Callaway?

18 CROSS-EXAMINATION

19 MS. CALLAWAY:

20 Q. Good afternoon, Dr. Whitelaw. My name is
21 Claudia Callaway, and I am here on behalf of

1 Methanex in their action against the United States.

2 I would like to begin by asking you to
3 elaborate a little bit on the scope of your
4 expertise. You received your bachelor's in
5 mathematics, in political science, and in
6 economics; correct?

7 A. Yes.

8 Q. And you received your Ph.D. in economics
9 at the very renowned MIT, Massachusetts Institute
10 of Technology; correct?

11 A. That is where I got my degree, yes.

12 Q. And in which department do you teach
13 presently at the University of Oregon?

14 A. Economics.

15 Q. Now, you testified that your area of
16 expertise is applied microeconomics; correct?

17 A. Yes.

18 Q. And you also testified that the purpose of
19 your expert reports, your original report and your
20 rejoinder, are an evaluation of Dr. Rausser's work
21 in this case; is that correct?

1 A. Yes.

2 Q. Your work at--is it Econ Northwest or Eco
3 Northwest--does it matter?

4 A. Doesn't matter.

5 Q. At Econ Northwest focuses on the economics
6 of natural resource management; right? Is that a
7 fair statement?

8 A. I am sorry.

9 Q. That your work at Econ Northwest focuses
10 on the economics of natural resource management?

11 A. Are you talking about me personally, the
12 firm?

13 Q. I think you personally. In your original
14 report on pages one and two, it states that you
15 authored or co-authored more than 30 reports and
16 articles on topics like the trade-offs and economic
17 consequences of alternative resource management
18 policies and the economic development impacts of
19 resource management policy alternatives.

20 A. Okay. So, let me understand the question.
21 You want to know if I specialize professionally in

1 natural resource management or natural resource
2 economics?

3 Q. Focusing on the economics of natural
4 resource management.

5 A. That is a specialty of mine, yes.

6 Q. One of many--one of a few?

7 A. There are others that I specialize in.

8 Q. But you don't claim to have any expertise
9 in the health or environmental effects of MTBE, do
10 you?

11 A. If you are referring to the science, and I
12 am willing to exclude economics from science for
13 the moment--

14 Q. Only in this room. It won't go on your
15 permanent record.

16 A. That is fine. So to the extent that we
17 are talking about the science of--the biology, the
18 ecology, the hydrology, the epidemiology, and so on,
19 I do not claim expertise or specialization in those
20 areas.

21 Q. And you don't claim expertise or

1 specialization in those areas with regard to an
2 analysis of methanol or ethanol as well; right?

3 A. If we are talking about the science as
4 opposed to the economics post-science--now, I can't
5 remember how you set it up--I think the answer is,
6 yes, I do not have--I do not specialize in the
7 science of methanol, ethanol, MTBE, or the like.

8 Q. And in comparing them as an economist, you
9 don't purport to compare their oxygenate
10 adaptability or use as oxygenates; correct?

11 A. That is right.

12 Q. Well, I am glad to confirm this because at
13 several points in your reports there are statements
14 that I believe are outside of your economics
15 expertise, and--for example, on page eight of the
16 original report, you make a statement, quote,
17 MTBE's air quality benefits in car exhaust are
18 substantially similar to ethanol's; correct?

19 A. Page eight?

20 Q. Yes.

21 A. Throughout this report, and I am pretty

1 sure we have disclaimers to that effect, we are
2 taking the science as given, and in that context,
3 we are attributing values and probabilities of
4 risk, but not pretending at any point to speak to
5 the science except descriptively.

6 Q. So when you say that you are taking the
7 science as given, you are relying on expert reports
8 by Anne Happel; is that correct?

9 A. Among others, yes.

10 Q. And Graham Fogg?

11 A. Graham Fogg, among others.

12 Q. So on page 28 of your original report when
13 you say MTBE has a higher likelihood to affect
14 groundwater and drinking water than ethanol, you
15 are not saying that as a scientific expert.
16 Instead you are taking what Dr. Fogg and Dr. Happel
17 say about that; is that correct?

18 A. Not only them, but unless you are
19 referring to a particular one in which I cited
20 them. Assume that throughout each of these reports
21 wherever I have said something to the effect MTBE,

1 or ethanol does this or that, assume that those
2 sentences are preceded by a phrase, "as I
3 understand the science," or something to that
4 effect.

5 Q. Well, so on page seven of your rejoinder
6 where you state that MTBE would be more damaging
7 than ethanol to California's water quality, you are
8 not qualified as an expert on that issue; correct?

9 A. Okay, now, I think we have hit the
10 interface between science and economics. That is,
11 in cost/benefit analysis in environmental matters,
12 the economists accede to the scientists the
13 science, but for the valuation of the science, the
14 economists--that is their bailiwick or our
15 bailiwick, in the sense that the values, costs and
16 benefits, risks and so on, that is what we do as
17 economists. That is what Gordon Rausser has done.
18 That is what Arthur Keller has done and Linda
19 Fernandez did, that's what SRI did and the U.S. EPA
20 reports and so on.

21 There is a handoff, sometimes reluctant,

1 but there is a handoff that occurs from the
2 scientists to the economists when we move from the
3 underlying science to the assignment of values.

4 So I think, my interpretation of where you
5 are reading is we are at that boundary.

6 Q. But that boundary--you don't purport to
7 have any expertise regarding the effects that MTBE
8 has on groundwater, do you?

9 A. Again, I don't claim to know the science.
10 We have relied on Fogg, Happel and others
11 to--professional literature and so on, summarizing
12 that to take the next step of assigning value. So
13 if your question is are you a biophysical type or
14 physical scientist in these areas, the answer is
15 no, and I didn't intend to come across that way,
16 and if I did, I will correct those sentences.

17 Q. So, any other similar sentences that are
18 not related to economic analyses, we should put
19 that proviso in, and you would correct those as
20 well?

21 A. No. Actually--I have no trouble with the

1 sentences as they stand. If, for clarification as
2 you read them and interpret them, it helps to add
3 that phrase, "as I understand from the professional
4 literature, and the scientists who specialize in
5 these areas," blah, blah, blah, whatever the
6 factoid that follows, then you are welcome to do
7 it. That's fine.

8 Q. So the methodology as I understand it, is
9 that the economist accedes to the scientist the
10 science; correct?

11 A. Yes.

12 Q. And the scientist, to whom you are as
13 acceding the science, that scientist's conclusion
14 matters greatly in your cost/benefit analysis; is
15 that correct?

16 A. Well, it depends. If it meets
17 professional standards, where it falls in the range
18 of other complementary or substitutable opinions on
19 the science.

20 Q. For purposes of this report, in acceding
21 the science to Drs. Happel and Dr. Fogg and others,

1 if their science had been different, in other
2 words, if their assumptions or conclusions had been
3 different, your cost/benefit analysis would also be
4 different; is that correct?

5 A. You bet. Oh, yeah. The inputs matter.

6 Q. And when you talk about something falling
7 within accepted science, and I don't mean to
8 misstate what you said, you, as an economist,
9 cannot independently evaluate whether a
10 microbiological or hydrogeological study falls
11 within accepted science; is that correct?

12 A. Well, that is a good question, in the
13 sense that does a cost/benefit analyst have to
14 conduct complementary research on all the inputs to
15 a cost/benefit analysis before she can conduct a
16 cost/benefit analysis. To date, historically, with
17 the application of cost/benefit analysis and all of
18 those similar types of evaluative analyses that
19 economists do, the answer has been no.

20 Q. In your report, in your rejoinder on pages
21 24 and 25, you directly criticize Dr. Rausser for

1 failing to consider the possibility that an MTBE
2 plume could intersect with another plume.

3 A. Just a minute. Where are we? Page 24?

4 Q. In your rejoinder.

5 A. I am there.

6 Q. On pages 24 and 25.

7 A. Okay.

8 Q. There is a criticism of Dr. Rausser for
9 failing to consider the possibility that an MTBE
10 plume could intersect with another plume?

11 A. Yes. Actually what--have we got the
12 sentence?

13 Q. This is at the bottom--

14 PRESIDENT VEEDER: Is this the italicized
15 quotation?

16 MS. CALLAWAY: This is--a number of
17 reports available at the time of the ban emphasize
18 the complexity of MTBE's fate and transport
19 qualities and raise the possibility of intersecting
20 plumes over time. Anne Happel and others addressed
21 cumulative effects in her well circulated 1998 MTBE

1 evaluation. And that is at the beginning of page
2 25. There is a quote from Dr. Happel, "MTBE has
3 the potential to impact regional groundwater
4 resources." It goes down to talk about mass
5 dispersion.

6 I took this as a criticism of Dr. Rausser
7 for not considering the possibility of an
8 intersection of the plumes, and, again, the top
9 paragraph under Dr. Rausser ignores costs. In
10 short, quote, I contend that given MTBE's well
11 documented ability to migrate, two or more
12 individual plumes, which independently may not
13 warrant active remediation, could combine to
14 produce extensive damage to the groundwater
15 resource.

16 The reason I draw your attention to this
17 is I want to be clear. That is an assumption, an
18 economic assumption you are making--

19 THE WITNESS: Which is?

20 BY MS. CALLAWAY:

21 Q. Your contention that given MTBE's well

1 documented ability to migrate--you are not saying
2 that, again--you are not claiming to have any
3 expertise about the intersection of any plumes;
4 correct?

5 A. That is correct. Let me be clear so that
6 you know what I am saying. I am unequivocally
7 criticizing Gordon Rausser for not incorporating
8 this phenomenon into his cost/benefit analysis. At
9 the same time, I am not pretending to have any
10 independent knowledge or even the expertise to
11 really come at this independently, to know about
12 the complexities of these aquifers. I understand
13 from Graham Fogg and actually from previous work on
14 other projects, not litigation-related that
15 aquifers can be complex, and what prompted me to
16 think about this was reading Anne Happel's report.
17 And this was the one she did with--hold on a
18 minute--it wasn't with Fogg--she has got one in
19 2000 with Beckenbach. I think it might be in her
20 '98 piece then.

21 Would you like me to clarify and

1 distinguish between the science and the economics?

2 Q. No. I think I have an understanding, but
3 I just want to focus on one more thing. On page
4 25, just above the section break where you have a
5 new criticism of Dr. Rausser, there is a paragraph
6 in the second sentence that says, "While the early
7 findings and testimony of Happel and Fogg did not
8 offer specific evidence on the incidents or costs
9 of cumulative effects"--now, you are saying that
10 neither Happel nor Fogg provided evidence to
11 substantiate your concern about intersecting
12 plumes; right?

13 A. No. I am not saying that.

14 Q. But you are saying that they haven't given
15 you that specific evidence?

16 A. If this issue you are raising is important
17 enough to pursue, I will offer again to distinguish
18 between the economics and the science.

19 PRESIDENT VEEDER: Why don't you do that
20 because I think it would help us if you were to
21 develop that distinction.

1 THE WITNESS: So, I'm going to lay out a
2 couple of building blocks. First of all, the costs
3 of treatment, of remediation and the like, of water
4 supplies, whether it is per well or per whatever,
5 as I read the literature and the background
6 information, the costs were estimated one
7 contaminated thing at a time, and so the costs
8 associated with remediation were submitted for that
9 event. Say this is the contaminated water, whether
10 it is immediately under--I am referring to a water
11 bottle that I have in my hand, whether it is the
12 aquifer, a well, whatever. If all the plumes that
13 occur in California are alone, not intermingled,
14 then that estimate is okay.

15 However, as Graham Fogg and Anne Happel
16 have pointed out, as have others, these systems are
17 complex, and once the plumes intersect, I cannot
18 assume that the costs, in the jargon of economics,
19 that the marginal costs per unit of contaminant
20 removed remain constant. Evidence of contaminants
21 that are complex in other systems suggest that

1 those marginal costs increase as the complexity of
2 the contamination increases.

3 So at the least, the uncertainty
4 associated with this should have been addressed and
5 I believe, there would have been an opportunity to
6 suggest that there is a larger cost associated with
7 systems that are complex; the LA Basin, for
8 example, than in a system, I don't know,
9 Bakersfield, or out in the desert, where you have a
10 gas station where there is a single plume in an
11 otherwise uncontaminated system.

12 Gordon Rausser and I went around on this
13 in previous matters. I remain convinced that it is
14 at least a possibility of the uncertainty. Fogg's
15 work, Happel's work, reinforces my opinion, and I
16 am speaking to the economics of this; that is, the
17 marginal costs associated with remediation, as
18 opposed to the science of plumes intersecting or
19 not.

20 BY MS. CALLAWAY:

21 Q. So, as an expert in applied

1 microeconomics, you don't have the expertise to
2 state with authority that this intersecting plume
3 issue could arise; is that correct?

4 A. Oh. No. They said it for me, it has
5 already arisen.

6 Q. So if their work was not correct, then
7 your work incorporating these assumptions would not
8 be correct?

9 A. Oh, yes, the same answer that I gave
10 earlier. If the inputs are flawed, then the
11 analysis, the results of the analysis would change.

12 Q. Well, going to your expert report, I would
13 like you to discuss a few of the assumptions that
14 are implicit in the report. If you go to pages
15 eight and nine of the original report, you will see
16 one of the quotes that I read to you, and I will
17 give it to you in a larger context--if you go down
18 toward the bottom of the page, it is the first
19 paragraph that doesn't have an indentation, because
20 MTBE's air quality benefits and car exhaust are
21 substantially similar to ethanol's, the issue turns

1 on the lower fuel costs from MTBE as an oxygenate
2 relative to the higher risks of groundwater
3 contamination from MTBE. Is that correct?

4 A. That is my understanding.

5 MR. ROWLEY: Could you just help me,
6 Ms. Callaway, at what page are you?

7 MS. CALLAWAY: It's at the bottom of page
8 eight, in the last full paragraph.

9 MR. ROWLEY: Thank you. I thought we were
10 on page nine.

11 MS. CALLAWAY: I apologize.

12 BY MS. CALLAWAY:

13 Q. You then proceed, Dr. Whitelaw, to
14 summarize the hypothetical question facing
15 California lawmakers in '99, and this is in italics
16 beginning at the bottom of page eight and
17 continuing to page nine, is the benefit of
18 eliminating once and for all the considerable
19 uncertainty surrounding MTBE's future ability to
20 contaminate California's groundwater assets and
21 drinking water supplies worth the risk of

1 increasing gasoline prices by about three
2 percent--three cents per U.S. gallon; is that
3 correct?

4 A. Is your reading--I'm sorry, what is it
5 that you are asking for my opinion on whether it's
6 correct or not?

7 Q. That is exactly how you set that out;
8 right?

9 A. Yes. You read this accurately.

10 Q. I didn't read it very clearly, but I did
11 read it accurately.

12 A. I thought it was fine.

13 Q. Then if you go to page six of your
14 rejoinder, you restate that, and you cite your
15 original publication at pages eight and nine, you
16 restate the question whether the benefit of
17 eliminating once and for all MTBE is worth the risk
18 of increasing gas prices by up to three cents.

19 And I bring this up because as we
20 discussed, you do not have an expertise in the
21 comparative air quality benefits of MTBE; correct?

1 A. Just to make sure we are talking about the
2 same stuff, I do not pretend to have any
3 specialization in the science of air toxics, air
4 quality, the various volatile compounds, those
5 kinds of things.

6 Q. So going to page six of your rejoinder,
7 you also don't have the expertise to state with
8 authority that the only consequence of the MTBE ban
9 is a, quote, modest rise in gasoline prices
10 unquote.

11 A. Where is this?

12 Q. This is on page six.

13 A. Of?

14 Q. Of your rejoinder. It is in the bottom
15 paragraph, second sentence, "In this case, the
16 premium was a modest increase in gasoline prices."

17 You don't mean to indicate with authority
18 that is the only consequence of the MTBE ban, do
19 you?

20 A. In the context of the question that I have
21 just posed, characterized what the decision-makers

1 back then faced, yes.

2 Q. So in your mind, the California
3 lawmakers--this is in purely economic terms--the
4 only issue facing them was whether or not to ban
5 MTBE--I am sorry, let me restate that.

6 In your purely economic terms although
7 you've made several statements about air quality,
8 about plume length, really this is an economic
9 question about whether it is better to have MTBE in
10 or pay some more money for ethanol-oxygenated gas,
11 purely in economic terms?

12 A. Well, that's--yes. I mean, this is
13 cost/benefit analysis. I am an economist. That is
14 what I am addressing. So it clearly--I am not
15 pretending to address the science. What I am
16 trying to do here, rhetorically, remaining as
17 technically sound as possible, is reduce what is a
18 very complex analysis to what I regard as the
19 salient features of the trade-off. The air toxic
20 issue was largely a wash compared to the magnitudes
21 of the other two.

1 Q. When you say the air quality issue was
2 largely--I don't know if you said air quality or
3 air toxics. When you say issue that was largely a
4 wash, that is an assumption that you are making
5 based on somebody else's science that you have not
6 independently verified; is that correct?

7 A. That is not correct. Let me turn you to
8 Table 6 in the first report on page 38 of the
9 November 2003 report.

10 Q. And it is on Table 6 that you base this
11 statement that you MTBE's air quality benefits and
12 car exhaust are similar to ethanol's?

13 A. I'm sorry, what was the noun in the middle
14 of all of that, was that the air quality effects
15 did you say?

16 Q. Yes.

17 PRESIDENT VEEDER: Air quality benefits.

18 THE WITNESS: I meant this to be a
19 two-step answer, so let's deal only then with Table
20 6 and save Table 7 for a moment.

21 Again, stepping back from the minutiae,

1 and looking at this table, which is the estimate my
2 colleagues and I arrived at for this net cost
3 issue, so before we have taken into account
4 sensitivity analysis, the errors of omission and
5 the like, here are the numbers. So for air, you
6 have the expected quantified stuff at a negative
7 25, and, remember, that is a benefit from switching
8 because we kept the framework of Keller and Rausser
9 so that we are looking as they were for the net
10 costs of the switch. So on the expected it is a
11 negative 25 for air. It is a negative 137 for
12 water, and a positive 430, and these are millions
13 of annual dollars.

14 Then you go on the downside, and this
15 opens up that room of uncertainty, risk and risk
16 aversion. I will keep that door closed. Just
17 looking at these numbers, the numbers in the row
18 for air are small relative to the numbers for water
19 and fuel. So the sentence--this hypothetical
20 question I am posing is if you sort of step back
21 from this, as a decision maker and you are looking

1 at this evidence, I am characterizing the decision
2 as boiling down to a trade-off between the costs of
3 water contamination and the costs of fuel at the
4 pump.

5 Q. Let me turn to your analysis of the UC
6 report, and the errors you attribute to it.

7 On page 3 of your original report, you
8 concede that the authors of the UC report erred by
9 including so-called sunk costs in the water quality
10 analysis; correct?

11 A. I concede?

12 Q. You contend.

13 A. I observed. Everybody else had observed
14 that before I got to the report--well, not
15 everybody, but I mean a number of people. We are
16 in the original report, page 3?

17 Q. Yes.

18 A. So, page 3, yes, they erred by including
19 so-called sunk costs in the water quality analysis.

20 Q. And you go on to state on page four that
21 these errors of omission--I'm sorry, you go on to

1 state that the UC report omitted a number of
2 different costs such as the effect of MTBE plumes
3 on property values, commercial and residential
4 development, the intrinsic value of California's
5 groundwater resources; correct?

6 A. Yes.

7 Q. Then you go on to state on page four that,
8 quote, These errors of omission contributed to an
9 underestimate of MTBE's water quality costs and
10 offset in whole or in--in part or in whole, the
11 inappropriately included sunk costs; correct?

12 A. Yes.

13 Q. Again, on page four, you conclude that,
14 quote, The UC report arrived at an appropriate
15 conclusion, unquote, because the costs they should
16 have included balanced out the costs that they
17 mistakenly included; correct, the sunk costs?

18 A. Where is that sentence?

19 Q. It is on page four, "In the end, because
20 of these offsetting errors, the UC report arrived
21 at an appropriate conclusion while erring in some

1 of the details of its estimate." Right above that?

2 A. Yes.

3 Q. "These errors of omission contributed to
4 an underestimate of MTBE's water quality costs, and
5 offset, in part or whole, the inappropriately
6 included sunk costs."

7 A. I am there.

8 Q. If you go to page 42 of your original
9 report, and there is a paragraph that begins,
10 "Panel C shows," and this is where you criticize
11 Dr. Rausser for his omission of certain costs such
12 as costs that could degrade the natural asset,
13 depress property values, retard developments--

14 A. We are on page 42?

15 Q. Yes.

16 A. Third paragraph?

17 Q. Yes.

18 A. Okay. I am there.

19 Q. Based on the original report, it appears
20 that the costs you cite as being inappropriately
21 excluded from the UC report, were essentially the

1 same costs you criticized Rausser for excluding;
2 correct?

3 A. Yes.

4 Q. And if you look on page 41, you list those
5 costs as being nonmonetized costs; correct?

6 A. That is right.

7 Q. So that means that no monetary value was
8 assigned to those costs; right?

9 A. That is right.

10 Q. So, going back to your statement on page
11 four of the original report that the omitted costs
12 offset in part or whole the inappropriately
13 included sunk costs, do you cite any figures in
14 your reports in support of that statement?

15 A. Try the second one again?

16 Q. Sure. These are the same costs, these
17 nonmonetized costs, that you contend offset the
18 inappropriately included sunk costs; correct?

19 A. Yes.

20 Q. Where are the monetary figures that you
21 have for them?

1 A. Okay. If you would turn to--

2 (Pause.)

3 A. What I am looking for is the section on

4 the asset, intrinsic value of the groundwater

5 asset--

6 Q. Is it page 15 of the rejoinder?

7 A. Well, it is page 26 in the original report

8 and then--and then page 17 of the rejoinder. So

9 how would you like to proceed?

10 Q. Well, your calculation of the value of

11 these nonmonetized costs, there is ambiguous nature

12 in the language that you use when you talk about

13 what you perceive to be an offset. You talk about

14 in part or in whole that the failure to take into

15 consideration these nonmonetized costs offsets in

16 part or in whole the inclusion of the sunk costs?

17 A. Okay.

18 Q. But you really don't know if it does or

19 not?

20 A. Well, actually, I do know. I do know that

21 they are greater than zero, the value of the

1 natural asset, the impact on property values, and
2 so on down the list. Each of them exceeds zero.
3 By definition, then, they offset in part. So that
4 part of it, I think, is meant to be unambiguous,
5 and I believe it to be unambiguous.

6 Q. But you can't state with authority that
7 they offset in whole; correct?

8 A. Well, my purpose was not to evaluate the
9 UC report, so that statement is accurate as it
10 stands. What I did was focus on Rausser and in my
11 opinion, it pushes Rausser from a conclusion of
12 opposing the ban, or concluding that the ban was
13 economically irrational, to favoring it in a
14 cost/benefit framework. These are big numbers.
15 These are not trivial numbers.

16 Q. But you have not shown me a number for
17 these nonmonetized costs. You have just said that
18 it is above zero. You do--you admit because you
19 criticize that the State of California that the UC
20 study did not take those nonmonetized costs into
21 consideration; correct?

1 A. That is right, right. So if they
2 corrected that part of it, as others had requested
3 or wished they had corrected the sunk cost part of
4 it, they would have compensated, at least in part,
5 for the error contributed by including sunk costs.
6 That is as far as that goes. Then in my treatment
7 of Rausser, Table 7 says, as I correct his errors
8 of commission, I come down to a number of roughly
9 260 million. Then if one completes, as one should,
10 the other steps in a cost/benefit analysis, one
11 includes those values that while not monetized, are
12 still greater than zero or perceived to be greater
13 than zero, and finally, one deals with uncertainty
14 and risk, and so what I did was set up, here is
15 Gordon Rausser's conclusion, 268 to the good if
16 you--net cost--to the bad, if you switch or if you
17 bank MTBE. So here is this number.

18 Now, that is before we dealt with any of
19 the other errors in his analysis or by implication
20 in the UC analysis. If those are then corrected,
21 in my opinion, it shifts, and not by a small

1 amount, from regarding the ban as a bad decision,
2 to regarding the ban as a good decision
3 economically, and on one of the pages, I don't have
4 it on the tip of my tongue, but I set up the
5 conditions--just a minute, let me find it for you.

6 (Pause.)

7 A. Page 44. So on page 44--here is the
8 logic. Yeah we can't monetized those. Can we
9 still get a handle on them? This is what
10 cost/benefit analysts do. And so what I set up
11 was, in short, I am reading from page 44, that
12 California policymakers supported the MTBE ban
13 would be considered rational if one or more--that
14 is, one is sufficient, of the following four
15 conditions were met, and so this is in the context
16 of Table 7 and Table 6. They are not taken
17 independently. The sensitivity analysis alone
18 erases that 269 or 268 million without even going
19 to the nonmonetized stuff. You go to the
20 nonmonetized stuff, and it takes a very little
21 amount to push it over, and not by a small number,

1 by a large number. And finally, you kick in on
2 uncertainty, if it is risk averse, as these folks
3 presumably are, and you back up and say, look,
4 expected value does not mean what most people think
5 it means, it has implications on behavior and
6 decision making and perceptions of risk, and so on,
7 and as you take that into account and you see the
8 huge water quality cost and the three cent per
9 gallon increase, it is very understandable that
10 sort of normal folks making this decision would
11 say, whoa, it is an insurance premium we are
12 willing to pay.

13 Q. On page 3 of your original report, in the
14 last full paragraph, when talking about the
15 inclusion of sunk costs, the last sentence in your
16 paragraph says, quote, The error--and that is the
17 inclusion of the sunk costs--was well documented in
18 the public record at the time policymakers
19 considered the MTBE ban and was explicitly
20 mentioned in the public hearing considering the UC
21 report.

1 Turning to the so-called error of
2 omission, your criticism that the UC report omitted
3 nonmonetized costs, was this purported error also
4 well documented?

5 A. I am sorry, what page--what is the second
6 part?

7 Q. I will re-ask it. On page 3 your
8 statement, the error was well documented, and that
9 is the error of including the sunk costs?

10 A. Yes.

11 Q. With regard to your--the error that you
12 contend was made in not including these
13 nonmonetized costs, and again it is the state not
14 including them in its report, was that error also
15 well documented?

16 A. Let me make sure we are talking about the
17 same thing. In the UC analysis, those errors of
18 omission, I don't know that they were well
19 documented or not, but I believe, in--perhaps as I
20 scan over the two reports, I have illustrated or
21 cited evidence that decision-makers writ large were

1 aware of these problems. I mean, Senator Mountjoy
2 when he sponsored Senate Bill 521, he talked about
3 property values before the U.S. Senate. He talked
4 about the water supplies as very valuable.

5 Gordon Rausser in 1995 spoke about these
6 intrinsic values as considerable. I quote him in
7 the report.

8 So whether as a part of the
9 decision-making process--excuse me. Whether as a
10 part of the UC analysis people pointed out and said
11 Dr. Keller, Dr. Fernandez, you failed to include X,
12 Y or Z, I don't know that, but the knowledge of
13 these other values was out there. It was in the
14 record, at least according to what we read.

15 If I may, I need a break, just to get
16 something.

17 PRESIDENT VEEDER: Let's have a ten-minute
18 break. Please don't discuss your testimony away
19 from the Tribunal.

20 (Brief recess.)

21 PRESIDENT VEEDER: Let's resume.

1 MS. CALLAWAY: Thank you, President
2 Veeder.

3 BY MS. CALLAWAY:

4 Q. Going back to my question regarding
5 documentation of the error that you allege of the
6 non-inclusion of non-monetized costs, was that well
7 documented that the inclusion of the sunk costs
8 was?

9 A. We are talking about the UC report?

10 Q. Yes.

11 A. I didn't come across any reviews of the
12 report itself, in professional exchanges, of
13 identifying those omissions.

14 Q. Going to page eight of your original
15 report, you list conditions that would justify the
16 MTBE ban on economic grounds, and you say that one
17 of the conditions is if California concluded that
18 the costs associated with the omitted categories
19 exceeded the expected value of the monetized costs
20 and benefits. That is the first one; correct?

21 A. Yes.

1 Q. So you just said that California was not
2 aware of these omitted costs at the time of the
3 MTBE ban; correct?

4 A. No.

5 Q. Is there anything that--

6 A. Excuse me, no, I did not say that.

7 Q. Okay. Well, there was no criticism of the
8 omission in the same way that there was the
9 criticism of the inclusion of the sunk costs;
10 correct?

11 A. Correct. In the exchange, you know, the
12 formal exchanges that I have read and my colleagues
13 have read over the UC report itself.

14 Q. You have nothing in the UC report to
15 indicate that--I am sorry.

16 You have nothing in the record to indicate
17 that Governor Davis considered any of these
18 so-called non-monetized costs in issuing the
19 Executive Order banning MTBE; correct?

20 A. Beyond his concluding that the
21 environmental risk was sufficient?

1 Q. Do you have anything beyond just that
2 statement of environmental risk?

3 A. That Governor Davis himself considered the
4 non-monetized categories?

5 Q. Yes.

6 A. I do not.

7 Q. So, it doesn't seem possible, based on a
8 lack of this evidence, that the State of California
9 could justify the MTBE ban on those grounds;
10 correct?

11 A. Which grounds are those?

12 Q. The non-monetized grounds. It's the first
13 on page eight where you say California concluded
14 that the costs associated with the omitted
15 categories exceeded the expected value of the
16 monetized costs and benefits.

17 A. Right.

18 Q. That is one of the things that you say the
19 California decision to ban MTBE in gasoline would
20 be justified on an economic ground if that was the
21 basis, but it doesn't seem to be--it doesn't seem

1 possible that this basis could justify the MTBE ban
2 if there is no evidence of these omitted costs
3 being considered; correct?

4 A. It seems imminently possible to me that
5 the decision makers could be looking at this,
6 considering the numbers, and then concluding, as
7 they are looking at--remember, the cost/benefit
8 analysis does not make the decision. It informs
9 the decision making. It doesn't control the
10 outcome. It is simply an input in the
11 decision-making process. So this is part of the
12 input. There were other inputs. There was
13 thinking, reflecting. Seems imminently possible.
14 I have seen other decision makers in other states
15 make similar decisions.

16 Q. Those other decision makers in the other
17 states, have they listed or mentioned the
18 non-monetized costs?

19 A. I have advised the last six or seven
20 Governors in Oregon, economic advisor,
21 environmental advisor and the like. I can rattle

1 off two or three, John Kitsopber, Barbara Roberts,
2 Neil Goldschmidt who made similar decisions were
3 aware of these things. Now, whether they based
4 it--I really doubt that they had a cost/benefit
5 analysis that was lurking around in some report
6 form, but they were informed by any number of
7 pieces of information.

8 Q. Are you aware that the Senate Bill--are
9 you aware that the California decision makers were
10 required to rely upon the UC report where
11 non-monetized costs were not considered?

12 PRESIDENT VEEDER: Well, that is a little
13 bit of a complicated question. If you are talking
14 about the certification by the government under
15 Section 3(2)(E), that may be right. If you are
16 talking about the appropriate action under Section
17 3(2)(F), that might not be right.

18 MS. CALLAWAY: I certainly don't want to
19 misstate either the requirements under the Senate
20 Bill or what was considered and what was not
21 considered.

1 BY MS. CALLAWAY:

2 Q. When you were talking about the Oregon
3 lawmakers who you have advised, you have evidence
4 that these lawmakers considered these non-monetized
5 costs because you discussed them with them, didn't
6 you.

7 A. Yes.

8 Q. But you don't have that evidence with
9 regard to non-monetized costs and the decision that
10 was made by Governor Gray Davis, do you?

11 A. I do not know of those conversations that
12 he may or may not have had.

13 Q. Going to page nine of your original
14 report, you state that California could justify its
15 MTBE on economic grounds if California was
16 risk-averse; correct?

17 A. I am sorry--we are on page nine?

18 Q. Actually, I'm sorry, it is page eight. I
19 am sorry. It is the second--

20 A. Okay.

21 Q. --it's the second of the following--one or

1 more of the following conditions. If California
2 were risk-averse, you say that that would
3 indicate--that would be justification for the MTBE
4 ban?

5 A. Yes.

6 Q. Now, to your knowledge, did California
7 conduct any significant studies of ethanol prior to
8 banning MTBE?

9 A. Outside of the UC report, other studies
10 that examined ethanol or even mentioned ethanol,
11 while I may have cited some in these two reports,
12 none leap to my mind at the moment.

13 Q. Wouldn't a risk-averse actor hesitate to
14 adopt an oxygenate, here ethanol, which had never
15 been thoroughly studied for its health and
16 environmental effects?

17 A. I am sorry, the bullet I am looking at
18 addresses water quality costs, and the
19 uncertainties on water quality costs, and the leaks
20 of USTs was explicitly expressed in the Couch and
21 Young 1998 piece in the UC report.

1 How does that--I don't know the connection
2 that you are making.

3 Q. Well, let me give you the connection. You
4 are here as an expert with regard to cost--I'm
5 sorry, applied microeconomics; correct?

6 A. I actually don't know if that is the
7 reason I was retained for this, but that is what
8 I do.

9 Q. You say that is your expertise; correct?

10 A. Yes.

11 Q. And you are looking at a cost/benefit
12 analysis, and you have talked about risk aversion.

13 A. Yes.

14 Q. Do you feel that as somebody who
15 specializes in applied microeconomics and someone
16 who specializes in applying cost/benefit analysis
17 to decisions such as the decision to ban MTBE, do
18 you feel that you are qualified to determine
19 whether an actor displays characteristics of being
20 risk-averse or non-risk-averse?

21 A. Okay, let me make it clear, I am not a

1 psychologist. I have not specialized in decision
2 theory. What I have done in graduate school and in
3 the--whatever it is, nearly 40 years since, is I
4 have conducted on and off over the years analyses
5 of costs and benefits or as it is frequently
6 characterized, of risks and benefits. In fact,
7 that is how that phrase is frequently posed in
8 textbooks.

9 So, I don't know if the sum of these folks
10 in the California decision-making process were
11 risk-averse or not. What I do know though, and
12 which I think I have stated, is the considerable
13 literature on why expected--the jargon is sort of
14 an expected benefit maximizer, but the
15 inappropriateness of concentrating on only expected
16 costs, and not taking into account uncertainty and
17 thereby risk. I do know that the California,
18 whatever it is, Finance Office regularly considers
19 that in the decision making. I know that Pete
20 Wilson as Governor did that because I have
21 interviewed--in fact, I know personally the chief

1 economist for the Governor, for the eight years
2 Wilson was in there. I know that they take those
3 things into consideration.

4 You are right, I don't know directly if
5 the term risk aversion ever emerged in this
6 decision making, and while they may not have ever
7 read a textbook on risk/benefit analysis or risk
8 aversion, I am betting that they behaved as if they
9 had.

10 So in that context--I mean, again, to me,
11 in my professional opinion, that second bullet
12 would be enough to carry the day, and I think,
13 again in my professional opinion, the first bullet
14 is enough to carry the day, and it takes only one
15 of these to do it.

16 Q. Focusing on the second bullet, and
17 focusing on your decision in that bullet of the
18 potential downside risk in water quality, you
19 talked about leaking underground storage tanks when
20 you were explaining your rationale to me. Faced
21 with the situation wherein leaking underground

1 storage tanks were contaminating groundwater,
2 wouldn't a risk-averse actor take action to avoid
3 further contamination by repairing these leaking
4 underground storage tanks?

5 A. By repairing, do you mean meeting the--I
6 think they were EPA standards for the new tanks.
7 Is that what you mean?

8 Q. I mean repairing--I mean putting in the
9 best tanks that you can. What would a risk-averse
10 actor do?

11 A. Well, I think they were trying that.
12 Couch and Young addressed that directly. I mean,
13 one of the--see, the virtually leak-proof .07
14 percent that Couch and Young came up with?

15 In the paragraph in which they discuss it,
16 and Rausser hasn't mentioned this, but it is on
17 page two of the Couch and Young paper, they
18 explicitly talk about that these are the brand-new
19 tanks and that we can expect the leak rates to
20 increase as these tanks age, and I believe Couch
21 and Young--I know the SRI report that came out

1 before a decision on banning was made, I know the
2 SRI report, and Couch and Young, almost certain, I
3 can get the paper, argued for monitoring of those
4 new tanks. So, even in the context of them meeting
5 what they thought were the new tank standards, they
6 were observing or acknowledging that they were
7 uncertain about it, and remember, this is also in
8 the context of Santa Clara, with a 50 percent
9 possible failure rate in the new tanks.

10 So, again, if you are doing sensitivity
11 analysis and any kind of risk analysis, bullet
12 three is sufficient to push it over the edge.

13 Q. Are you aware that in the Santa Clara
14 study, they didn't know whether the leakage
15 occurred before or after?

16 A. That is right, and that is exactly my
17 point. That lack of clarity is in itself
18 uncertainty. Uncertainty begets risks and the rest
19 follows.

20 Q. Now, in your report on page 10 of your
21 original expert report, you heavily criticize

1 Gordon Rausser for allegedly violating the
2 principles of cost/benefit analysis.

3 A. I don't think I said allegedly.

4 Q. Then I think it is accurate to say you
5 heavily criticized Rausser for violating the
6 principles of cost/benefit analysis; correct?

7 A. I did.

8 Q. Let's go to the very first principle of
9 cost/benefit analysis that you set forth in your
10 report on page 10, identify the alternatives. Now,
11 to clarify that, we are talking about identifying
12 alternative oxygenates to MTBE; correct?

13 A. Actually, I think we are talking about all
14 the alternatives, including non-oxygenates.

15 Q. Okay, including non-oxygenates. We are
16 also talking about alternative measures to achieve
17 the desired objective?

18 A. If I recall, the drive behind the UC
19 analysis was Senate Bill 521, and a charge for them
20 to evaluate these alternatives for the fuels, and
21 in that were tanks and whatever else that goes into

1 that whole system.

2 Q. But the only oxygenate that was studied in
3 the UC report was MTBE; correct?

4 A. I don't know that to be correct as I am
5 sitting here. I am trying to remember if they had
6 ethanol, and they had, I think, some of the other
7 additives as part of the analysis.

8 Q. It is not a test. I know they had--that
9 is fine. I will move on from that then.

10 In considering alternatives, and in this
11 cost, you know, in the first rule of identifying
12 the alternatives, in your original report, do you
13 identify and evaluate the alternative option of
14 repairing the leaking underground storage tanks as
15 an alternative measure that California could have
16 taken?

17 A. What do you mean by repairing? Again, it
18 is the question I posed earlier. If by repairing
19 the leaking tanks, you mean replacing them with new
20 ones, yes.

21 If by repairing the leaking tanks you mean

1 fill in the holes or whatever, no, I did not
2 consider that, and I don't recall anybody else
3 regarding that as a viable alternative; that is,
4 anybody else by the literature we have read.

5 Q. So you didn't examine this alternative
6 option; correct?

7 A. You mean repairing the existing tanks?

8 Q. Yes.

9 A. That is correct.

10 Q. You reviewed Methanex's Second Amended
11 Claim and some of the related pleadings when you
12 were preparing the report; right?

13 A. I don't know. Perhaps.

14 Q. Okay. The reason I ask that is--well,
15 prior to writing your report you spoke to the State
16 Department generally about the case and the
17 arguments of each party; is that correct?

18 A. Yes. I am not saying--I may very well
19 have read it. I just don't recall the Second
20 Amended compared to any other complaint.

21 Q. I don't know then if you were aware or

1 not--I'll just say were you aware that Methanex
2 claims that repairing these leaking underground
3 storage tanks was a less costly alternative to
4 banning MTBE?

5 A. I don't recall that.

6 Q. Okay. That might explain why you didn't
7 challenge that argument in your expert report?

8 A. I don't recall Rausser addressing the
9 repairing of the tanks. I don't recall the UC
10 report addressing repairing the tanks. It is true
11 I didn't challenge it, but I don't recall it being
12 there to challenge.

13 Q. Well, on page 27 of the original report,
14 you state that no property value declines occurred
15 when the tanks did not leak; correct?

16 A. Where are you now?

17 Q. Page 27. It is in your original report,
18 in the second paragraph, specifically, Simons,
19 et al., estimated that residences within 300 feet
20 of either registered non-leaking tanks or
21 unregistered leaking tanks experienced no change in

1 property value.

2 A. Yes.

3 Q. So, taking into consideration your
4 discussion of non-monetized costs, repairing and
5 upgrading these leaking tanks to ensure that they
6 do not contaminate groundwater supplies would be a
7 good idea; right?

8 A. I can't offer my opinion on whether that
9 is a good idea or not. What I do know is I don't
10 recall anybody even facetiously suggesting, let
11 alone seriously suggesting that a solution, a
12 feasible solution to MTBE-contaminated water
13 supplies and aquifers in California was repairing
14 the tanks that were in there, but you are right. I
15 didn't consider it. Gordon Rausser didn't consider
16 it, and as I recall, the UC report didn't consider
17 it.

18 Q. The UC report also didn't consider
19 non-monetized costs; right?

20 A. They didn't--they certainly didn't have a
21 formal category in it. I can't remember--I don't

1 know if they considered them or not, but in the
2 reports I read, those were not listed.

3 Q. Well, in talking about water supplies and
4 aquifers, as you just did, given that ethanol will
5 call a BTEX plume to extend, wouldn't ethanol usage
6 have an impact on the non-monetized costs?

7 A. A couple of things. One is in our
8 analysis we formally included in the monetized
9 portion the impacts of ethanol on BTEX plumes. It
10 is explicitly in the stochastic functions that we
11 used.

12 Having said that--I can't recall the
13 second part of your question.

14 Q. I can't either, but we can certainly have
15 it read back. I will move on.

16 If the sources of gasoline leaks to the
17 environment were eliminated, like the two-stroke
18 engine band on Lake Tahoe, so there were no new
19 leaks, wouldn't all of the non-monetized costs also
20 be considered sunk costs?

21 A. You are eliminating--you say from, say,

1 from today, there are no new leaks or releases of
2 any kind of MTBE?

3 Q. Yes.

4 A. Is that--and then are you saying would
5 there be any costs?

6 Q. Of ethanol, benzene, anything that is in
7 the reformulated gasoline. If you eliminated all
8 sources of leakage--

9 A. Okay.

10 Q. --wouldn't those become sunk costs, those
11 non-monetized costs associated with that, wouldn't
12 they become sunk costs?

13 A. If we eliminated all leaks from this point
14 forward, have we only to bear the burden of the
15 sins of our father's?

16 Q. Yes.

17 A. Yes.

18 Q. Now, in your original report on page 31--

19 A. Now, just to make sure that I am speaking
20 clearly enough, that is not what we face, and I am
21 going to step into this ever so cautiously. Arturo

1 Keller, from the conversations I had with him,
2 appeared to understand intuitively the problem of
3 cumulative effects, and yet, he almost aggressively
4 stuck with lumping all of that under sunk costs.
5 So if we assume away all leaks from this time
6 forward, and nothing in our behavior, whether it is
7 Bubba dropping a wrench in the bottom of the tank
8 or any of that, that is simply eliminated from our
9 society, then you are right, everything is spilt
10 milk and we deal with it. But that seems so idle
11 as a policy question.

12 Q. Sunk costs are, in your analysis,
13 irrelevant to the cost/benefit analysis; correct?

14 A. Sunk costs as sunk costs in the economic
15 sense are irrelevant to decisions to--to
16 forward-looking decisions in this analysis. That
17 is correct.

18 Q. Well, moving on to page 31 of your
19 original report, you state that you disagree with
20 the range that Rausser gave for the leakage rate of
21 underground storage tanks that meet the EPA's 98

1 standards; right?

2 A. Which sentence are you looking at?

3 Q. Page 31. It is in the first full
4 paragraph, perhaps the single most important
5 assumption in Rausser's analysis relates to the
6 leak rate of underground storage rates that meet
7 the U.S. EPA's 1998 standards.

8 A. Okay. I have read it.

9 Q. But on page 41 of your report, you concede
10 that Rausser based this range on figures produced
11 by two other studies, neither of which are
12 challenged or criticized in your original report;
13 correct?

14 A. You are talking about Couch and Young?

15 Q. I'm sorry, it is still on page 31, and I
16 said 41. I'm sorry. Yes, I am, I am talking about
17 Couch and Young?

18 A. As the lower bound and Keller as the upper
19 bound? Those two studies?

20 Q. Yes.

21 A. Okay. I am with you.

1 Q. But you don't criticize the Couch and
2 Young study; right?

3 A. No. They reported what they did.

4 Q. And you don't criticize the Keller study;
5 right?

6 A. Not on that point.

7 Q. The basis of your criticism, and the
8 origin of your assertion there was a high degree of
9 uncertainty is a study conducted by Santa Clara in
10 '99; correct?

11 A. Wrong.

12 Q. What is the basis of your criticism or the
13 origin of your assertion of a high degree of
14 uncertainty?

15 A. Okay, let's go to Couch and Young, page
16 two. In it, I am going to paraphrase because I
17 don't have it in front of me, in addition to
18 speaking--let me back up a minute. This may be the
19 source--this may help us get through this next
20 paragraph, between you and me, quickly.

21 Couch and Young, and Keller each arrives

1 at what is called a point estimate; that is, we are
2 going to come up with a point estimate based on
3 this sample, at this time, under these conditions
4 and so on.

5 Now, they didn't have enough
6 information--it is a little like the expected value
7 in the middle of that table where you have--whether
8 Rausser or I am doing it, you will have an expected
9 value in the middle and then you have a range. A
10 point estimate is that thing in the middle. What
11 Couch and Young are doing in the next sentence or
12 two is pointing out there is a degree of
13 uncertainty around that point estimate; and,
14 therefore, they advise it should be monitored or
15 whatever, and we can also expect this point
16 estimate, if we take a sample five years from now,
17 to have a higher--it will be higher by some amount.

18 The SRI study, to my knowledge, as I
19 recall--the U.S. EPA study, each of these studies,
20 in my recollection, and we can go to the documents,
21 advise monitoring of the new tanks, of the tank

1 systems, not only the containment systems, but the
2 process. This is Marcel Moreau's point about it is
3 not just whether the fittings are tight, it is also
4 if Bubba hasn't reported the drips at the pump or
5 all of that stuff.

6 So, what they were advising was monitoring
7 that. That, in any policy analysis I have been
8 associated with over however many decades, that
9 means we are uncertain about the point estimate, so
10 pay attention to what happens with this system. It
11 is not a code word or anything, it just says, look,
12 we are not 100 percent certain about this point
13 estimate. So in addition to the number in the
14 middle, we have got a range of concerns.

15 Now, in that context, the Santa Clara
16 report is relevant, because these are not
17 statisticians making these decisions. They are
18 listening to this stuff. There is Couch and Young
19 on the record, you better monitor this. The SRI
20 paper is out there. Folks are saying let's be
21 cautious about this. So, even the lower bound of

1 Rausser's range, the authors are saying, let's be
2 cautious about this because this rate very likely
3 will increase. You get terms like very likely, you
4 get monitor the tanks, and so on in stochastic, in,
5 what, risk analysis, that is equivalent to saying
6 we are uncertain, there are downside risks, let's
7 be cautious.

8 So that is why in Table 7, at the bottom,
9 on page 41, we have illustrated a sensitivity
10 analysis. It says, okay, so we are uncertain about
11 this--this is Table 7, panel D, down at the bottom.
12 So just to illustrate, and I do this in the text
13 somewhere, step through the arithmetic, but the
14 sensitivity analysis down at the bottom says, okay,
15 what Rausser has is a range that goes from .07,
16 which is effectively zero, to two. So, let's
17 assume a uniform distribution between those two
18 points, which means the expected value would be
19 one.

20 Okay, now, let's watch what happens if in
21 instead of that one we add another percentage leak

1 rate; say, another two or three years from now,
2 which Couch and Young allow or implicitly say is
3 possible. That would shift \$84 million in favor of
4 the ban. Now, remember, we have--just looking at
5 this variable alone, we are looking at that 268
6 million.

7 So, go to Santa Clara. You have a
8 possible 50 percent leak rate. Spread over ten
9 years at 5 percent a year. So, we go from 1
10 percent to 5 percent, just as an illustration of
11 the possible outcome, that eliminates that 268
12 million.

13 So, again, and I am not arguing that the
14 decision makers are sitting there going through
15 these kinds of analyses. These are the statistical
16 or quantitative interpretations of individuals
17 making their decisions. These are not risk
18 analysts, but they are cautious folks, and that is
19 all this argues or illustrates.

20 Q. Going back to what you identify as the
21 first principle of cost/benefit analysis, the

1 identification of alternatives, you criticize
2 Dr. Rausser on page 25 of your original report for
3 failing to consider the possibility of
4 non-oxygenated gasoline; correct?

5 A. Yes.

6 Q. Are you aware that Federal law required,
7 and still requires, the use of oxygenated gasoline?

8 A. Yes.

9 Q. So in light of that requirement, using
10 non-oxygenated gasoline is not a real option for
11 California, at least without a waiver from the
12 Federal Government; correct?

13 A. Which, as I understand it, California was
14 and still is actively seeking.

15 Q. Do you know that that was denied?

16 A. Yes.

17 Q. Okay. So it is not a real alternative,
18 is it?

19 A. Well, now, wait a minute. I can't speak
20 to the probability that California, if it continues
21 to seek it, might not get it someday, but we are

1 making long run decisions here, so I don't
2 think--at least I am not willing to bet that that
3 probability is zero.

4 Q. Going back to--

5 A. Having said that, let me make the point
6 that Gordon Rausser states that he has conducted
7 a--I have it somewhere in here, a comprehensive
8 cost/benefit analysis. Well, he did not. He did
9 not include one of the alternatives. It bothers me
10 when someone gets into cost/benefit analysis and
11 speaks to--with such confidence that he has covered
12 all the bases, when nobody, to my knowledge, has
13 ever conducted a complete cost/benefit analysis. I
14 sure as hell don't claim to have ever done it, and
15 I know Gordon Rausser hasn't. That may be the
16 goal, but it wasn't the outcome.

17 Q. Well, with regard to your criticisms of
18 Dr. Rausser for not including--you talk about
19 errors of omission. Did you include in your
20 calculations the costs of increased ethanol usage,
21 such as increased air pollution?

1 A. Um-hum.

2 Q. You did?

3 A. Yes, formaldehyde is in there exclusively.

4 Q. Did you include in your calculations the
5 costs of ethanol contamination of groundwater?

6 A. Well, I included what the estimates to
7 that point had been--by the way, the study you
8 cited earlier, the Simon study, was in Ohio, and in
9 that area there is ethanol, and they were
10 addressing BTEX plumes. There were not--the 300
11 feet speaks to BTEX plumes, not ethanol-enhanced
12 BTEX plumes.

13 The evidence as you scan the Midwest for
14 lawsuits, as you look at the literature over the
15 ban in California up to the decision, there is no
16 discussion. There is no evidence that I found, and
17 apparently the UC report and Rausser found, that
18 would address that issue, that would include that
19 variable.

20 Q. Include ethanol?

21 A. As a water contaminant.

1 Q. And as somebody who is criticizing
2 omissions in somebody else's report, don't you
3 think that University of California at Davis should
4 have considered ethanol as a possible water
5 contaminant when looking at MTBE?

6 A. The categories I have included in, say,
7 Table 7, under errors of omission, are not
8 whimsical. There is evidence that each one of
9 those is--that there are big numbers associated
10 with them. To my knowledge, in our search of the
11 literature, we found no evidence that there were
12 large numbers associated with ethanol-contaminated
13 water.

14 Q. You would agree, wouldn't you, that a ban
15 on MTBE is not going to prevent storage tanks from
16 leaking; correct?

17 A. Right.

18 Q. So if ethanol is substituted for MTBE, it
19 would follow that if there is a leak, ethanol would
20 leak; correct?

21 A. Let's assume the chemistry and fate and

1 transmission characteristics are equivalent, which,
2 as I understand they are not, but let's assume for
3 the moment they are, yes.

4 Q. You will also agree with me that ethanol
5 is a known human carcinogenic; correct?

6 A. Are you speaking to formaldehyde?

7 Q. I am speaking to the components of ethanol
8 as a known carcinogenic, and benzene as a known
9 carcinogenic?

10 A. I know about benzene.

11 Q. Do you also know that MTBE is not a known
12 carcinogenic?

13 A. What I do know that at the time--I don't
14 know this stuff personally anyway. I am not a
15 chemist or an epidemiologist or whatever other
16 ologist applies to knowing this stuff. What I do
17 know is that the U.S. EPA report prior to the
18 decision urged caution on the human health effects
19 of MTBE. I am distinguishing that from the air to
20 toxics issue.

21 Q. As somebody who is very interested in

1 making sure that there is a complete cost/benefit
2 analysis done, wouldn't you agree that in a proper
3 cost/benefit analysis the effect of ethanol on
4 groundwater should have been considered in the same
5 way that the effect of MTBE on groundwater would be
6 considered?

7 A. I am assuming that they relied on the
8 scientists, on the team, to advise them on that.

9 Q. You are assuming that the State of
10 California did or UC Davis?

11 A. UC Davis.

12 Q. Are you aware there is no such analysis of
13 the effects of ethanol being released into the
14 groundwater?

15 A. I don't recall any.

16 Q. Okay. In assuming that they relied on the
17 scientists on the team, you are also
18 assuming--well, you also concede that that is an
19 important consideration, the effect of the ethanol
20 in the water?

21 A. I have no idea if it is important or not.

1 I have a good idea that these are important, in
2 Table 7, but I don't have any idea that that is
3 important.

4 Q. As somebody who is looking at costs and
5 benefits, you would want to know what the costs of
6 cleaning ethanol out of groundwater would be;
7 correct?

8 A. If scientists tell me that it is important
9 to get it out, and it is costly to get out, then
10 that is important to me as a cost/benefit analyst.

11 Q. If the scientists said it was an important
12 thing to get out, and somebody overlooked that in
13 the cost/benefit analysis, that would not be a
14 complete cost/benefit analysis, would it?

15 A. Oh, I am not arguing that I have a
16 complete cost/benefit analysis.

17 Q. Okay.

18 A. And furthermore, I don't know the answer.
19 I can't grant you those sort of nested
20 hypotheticals. That is a little more complex than
21 I can handle right now.

1 Q. Did you consider the costs of remediating
2 groundwater supplies to clean up other contaminants
3 between MTBE or ethanol, such as benzene?

4 A. Yes.

5 Q. But you didn't consider ethanol?

6 A. It is not in the analysis. Only in the
7 air toxics. Not in the water.

8 Q. On page 29 of your cost/benefit
9 analysis--sorry, your report, you criticize
10 Dr. Rausser--

11 A. Are we talking about the first report?

12 Q. The first report. You criticize
13 Dr. Rausser for not omitting the costs of
14 monitoring and enforcing underground storage tanks
15 to ensure that they do not leak; right?

16 A. You bet I did.

17 Q. Now, you are aware that leaking
18 underground storage tanks don't just result in MTBE
19 contaminating the groundwater supply; right?

20 A. I need that clarified.

21 Q. You're aware that--this plays on something

1 I asked you earlier--banning MTBE doesn't stop the
2 underground storage tank from leaking; right?

3 A. That is right.

4 Q. So there are other things, when gasoline
5 leaks from an underground storage tank, all of the
6 components of the gasoline leak out; correct?

7 A. Are we moving into sunk costs now? Isn't
8 that the same issue?

9 Q. No.

10 A. Then help me.

11 Q. You are aware that leaking underground
12 storage tanks cause other contaminants to appear in
13 the groundwater; correct?

14 A. If a tank that leaks contains a
15 contaminant and the contaminant can get through the
16 whole, then we have got contamination. Assuming
17 that the contaminant is mobile enough to get beyond
18 the hole, get into the ground, into the water and
19 so on, and assuming that bugs don't eat it up as
20 they apparently do BTEX to keep it at roughly 300
21 feet.

1 Q. And that is an assumption you are making
2 on the BTEX; right?

3 A. Well, it is not an assumption. I am
4 taking as given what I under--my understanding of
5 what I have read that the scientists wrote.

6 Q. I call that an assumption, and you call
7 that taking it as--

8 A. I just want to make sure it is not my sort
9 of assumption that I fabricated. I based it on
10 having read this stuff.

11 Q. I don't think anybody here thinks you made
12 any of the science up?

13 A. If we go much longer, I may suspect that,
14 though.

15 Q. Of the scientific evidence.

16 Given the fact that leaking gasoline will
17 continue from these underground storage tanks, the
18 cost of monitoring and enforcing the California
19 laws on underground storage tanks should not be
20 considered a cost attributable solely to preventing
21 remediating contamination by MTBE; right?

1 A. Oh, I see. Okay, a couple of quick
2 points. First of all, as I understand the science,
3 MTBE plumes almost invariably exceed the plumes of
4 other contaminants from tanks, from the
5 gasoline-related contaminants from underground
6 storage tanks.

7 Q. And this is part of the science that you
8 are taking as given; correct?

9 A. Yes. I have two points. The second point
10 is that the--I am going to use some econ jargon
11 just for a moment, but the marginal costs, the
12 incremental costs, although that is not technically
13 correct, the marginal costs of taking a unit of
14 contaminant out of the water increases as the
15 detect levels decrease.

16 So, and this is going to--let me see if I
17 can articulate this intelligibly. So if we
18 combine, as Couch and Young posit, increasing leak
19 rates, even from new tanks, setting Santa Clara
20 aside, just focusing on Couch and Young, and if we
21 also acknowledge as Happel and Fogg did, of the

1 complexity of the plumes in complex systems, and I
2 know I am murdering the jargon or the terms
3 that they--but by complex, by multiple plumes in
4 aquifers that are complex, that have these--I don't
5 know what metaphors you folks have used, but the
6 little closet in the basement of the building that
7 has been sunk and now has water and is gradually
8 leaking stuff. If those conditions are met, then
9 the marginal costs of cleaning up this stuff
10 increases, and so you haven't got a linear
11 relationship, you haven't got a proportional
12 relationship. So the leak rate goes from one to
13 two. Well, it could be that the associated
14 marginal costs combined with these other conditions
15 mean that the unit cost of cleaning up contaminants
16 don't just double, they may triple.

17 So it is in that context that--I mean,
18 granted, as I dealt with these, I deal with
19 them--here's one section, Rausser fails to
20 incorporate monitoring and enforcement policies
21 associated with USD upgrades, as if that is a

1 stand-alone issue. It isn't. These are
2 interactive, simultaneous concerns for the
3 cost/benefit analysis, and as I understand Happel
4 and Couch and Young for that matter, and Fogg,
5 there is similar simultaneous complexity that
6 visits the physical systems.

7 MR. PAWLAK: Excuse me, Ms. Callaway,
8 pardon me for interrupting, but I just want to know
9 how much longer you might go because I think
10 Dr. Whitelaw might need a break. I have been asked
11 to keep an eye on him in that regard.

12 MS. CALLAWAY: I'm about two-thirds of the
13 way through.

14 PRESIDENT VEEDER: I think we should take
15 a break, then. Let's take another ten-minute
16 break.

17 MS. CALLAWAY: I would ask for a reminder
18 not to discuss this.

19 PRESIDENT VEEDER: Don't talk about it.

20 (Recess.)

21 PRESIDENT VEEDER: Let's resume.

1 BY MS. CALLAWAY:

2 Q. I would like to ask you a little bit about
3 sunk costs. Have you done a calculation on how
4 much those sunk costs that were improperly put into
5 the report, how much in dollars those sunk costs
6 represent?

7 A. I can't recall. I think we may have, but
8 I can't recall.

9 Q. I am going to check to see if it is in one
10 of your charts--

11 A. You are talking about the UC report?

12 Q. Yes.

13 A. I can save you time. It is not in any of
14 our reports.

15 Q. To your knowledge is it a larger number
16 than the 268 million that you--that is estimated as
17 the quantifiable net costs of the MTBE ban--do you
18 think the sunk costs would exceed 268 million?

19 A. I don't know the answer to that. I have
20 never made that comparison.

21 Q. Well, in your rejoinder report on page

1 five.

2 A. Yes.

3 Q. One thing you emphasize is that the
4 quantifiable net costs of the MTBE ban is
5 negligible at 268 million because it is two
6 one-hundredths of a percent when compared to the
7 total size of California's economy; is that
8 correct?

9 A. That is the gist of it, yes.

10 Q. To give me some perspective, what about in
11 the context of a one billion dollar company like
12 Methanex, would you say that \$268 million is
13 significant?

14 A. Is one billion the present discounted
15 value of a stream of profits?

16 Q. I would say that--one to 2 billion, I
17 would say, and that is my third base coach over
18 there?

19 A. That is the net revenues present
20 discounted value--

21 Q. Yes, assuming that is, yes.

1 A. Now, what is the next question--what is
2 the setup?

3 Q. Taking that number, 268 million, would you
4 agree that \$268 million is significant to a company
5 the size of Methanex?

6 A. This is so apples and oranges I don't know
7 how to respond to that.

8 BY MS. CALLAWAY: I have no further
9 questions. Thank you very much for coming today.

10 PRESIDENT VEEDER: Does the United States
11 have any further questions?

12 MR. PAWLAK: No redirect. Thank you.

13 PRESIDENT VEEDER: Thank you very much,
14 Professor. The Tribunal has no questions for you.
15 I know you don't feel well and I hope you are
16 better soon. Thank you for coming.

17 (Witness steps down.)

18 PRESIDENT VEEDER: As we understand it,
19 that brings us to the end of our testimony today
20 and we have testimony tomorrow morning beginning at
21 10:00. The arrangements have been successfully

1 negotiated for the videolink between here and Los
2 Angeles, and the question is what would be the best
3 time for us to resume tomorrow--we should come here
4 before 10:00 because no doubt there will be
5 something we have to consider, but we wonder
6 whether it should be 9:30 or 9:45 or some other
7 time.

8 MS. CALLAWAY: 9:30 is fine with us, as is
9 any time that the Tribunal tells to be here. I
10 know there was a strategic decision that Mr. Legum
11 has in picking up supplies for tomorrow morning,
12 but I don't know if 9:30 will allow him.

13 MR. LEGUM: I would prefer 9:45, but
14 certainly 9:30 is acceptable.

15 PRESIDENT VEEDER: Let's do 9:45. I can't
16 think of anything, but we ought to be here if there
17 is anything to be sorted out.

18 MR. LEGUM: The plan for tomorrow is first
19 witness testimony and then what is to happen after
20 that--what else do we have listed?

21 MS. CALLAWAY: Is the motion for

1 reconsideration to be heard tomorrow?

2 PRESIDENT VEEDER: We were going to raise
3 that as a potential query.

4 This morning we heard Mr. Dugan, and after
5 the two, potentially three witnesses, we would like
6 to hear Mr. Dugan conclude. The United States
7 technically has a reply and we invite that to
8 follow immediately after Mr. Dugan and he will
9 follow immediately after the two or three
10 witnesses. We will then have to make a decision,
11 if we can, or some form of decision, because we
12 envision Mr. Vind being subject to
13 cross-examination tomorrow afternoon. Has that
14 been arranged?

15 MR. LEGUM: I have spoken with Mr. Vind.
16 He is available. He would prefer to, if he needs
17 to testify, to do it by telephone, and to do it
18 before 3:00 our time.

19 PRESIDENT VEEDER: Is 3:00 his cut off
20 time or--

21 MR. LEGUM: I think 3:30 is his cut off

1 time. He has an appointment.

2 PRESIDENT VEEDER: Would it be safe to
3 schedule him for 2:00 tomorrow afternoon? He is
4 unlikely to take more than an hour and a half.

5 MS. CALLAWAY: On behalf of Methanex, 2:00
6 is fine. We would request that the testimony be
7 given by video. We would state that request for
8 the record. I gather that Mr. Vind prefers to
9 testify by telephone. However, I think that for
10 the benefit of Methanex, and for the benefit of the
11 Tribunal, the availability of the video technology,
12 if it is not an undue hardship, for Mr. Vind, is
13 critical to the analyses in this case.

14 PRESIDENT VEEDER: Methanex may not be in
15 the best position to press this request very hard,
16 but is there a choice for Mr. Vind?

17 MR. LEGUM: I did raise the prospect with
18 him about giving testimony by video, and his
19 reaction was that it was trouble for him to have to
20 go to a facility and arrange for video testimony.
21 The Tribunal has already had an opportunity to see

1 what he looks like and to observe him testifying,
2 so he would much prefer to do it by telephone.

3 PRESIDENT VEEDER: There would have to be
4 an arrangement before him, about the documents --
5 does he have access to a fax machine where he will
6 be by the telephone?

7 MR. LEGUM: I believe he does have access
8 to a fax machine, but the only documents are the
9 documents that are subject to the motion.

10 PRESIDENT VEEDER: He may be referred to
11 some of the more recent witness statements. Does
12 he have those?

13 MR. LEGUM: I believe so.

14 PRESIDENT VEEDER: In the circumstances,
15 the Tribunal considers that it would be appropriate
16 to allow Mr. Vind to give evidence by telephone.

17 MS. CALLAWAY: Thank you.

18 PRESIDENT VEEDER: If, however, there were
19 any special documentation that Methanex wanted to
20 place before him during this potential
21 cross-examination, we haven't made a decision about

1 this yet, it would be important to get it before
2 him before 3:00 and arrangements will have to be
3 made to do that.

4 MS. CALLAWAY: I will let Mr. Dugan know
5 that so that any documents that we reasonably --
6 that we know we will need to put before him that
7 are not already before him, we will provide those
8 to him.

9 PRESIDENT VEEDER: Turning to Methanex,
10 what is the position with regard to the third
11 potential witness, Mr. Puglisi's associate?

12 MS. CALLAWAY: I apologize this is outside
13 of my bailiwick, as others have said during
14 testimony. Just a moment.

15 (Pause.)

16 I--we don't know if they have been able to
17 locate the third person, but I can find out when we
18 contact--

19 PRESIDENT VEEDER: I think we are going to
20 break for five minutes and have you do that right
21 now. It is a factor we would like to know

1 immediately.

2 (Brief recess.)

3 PRESIDENT VEEDER: Ms. Callaway, we
4 understand that Methanex needs another half hour,
5 but the window is closing, and we need to know the
6 position so we are going to stay here in the
7 position. I don't think everybody needs to stay.
8 There are other things that can be done but we will
9 come back here at half past five and we would like
10 to know one way or the other.

11 Subject to that, there is good news in
12 that we are allowed to be in this room Thursday so
13 we don't have to move our papers and books. We
14 give thanks to ICSID for having achieved that.

15 Going through tomorrow's events, we start
16 9:30, 9:45. 10:00 with the videolink with two
17 witnesses, potentially three, potentially depending
18 on what we hear. Then we will allow Mr. Dugan to
19 conclude his comments on the U.S. motion and we
20 will invite the U.S. to reply to everything he
21 said.

1 We hope we will be finished before 2:00,
2 because we have to make some form of decision, and
3 depending on that decision, and we have to assume
4 that this will be taking place for logistical
5 reasons, Mr. Vind would come on the telephone at
6 2:00 or 1400, but that would have to be concluded
7 by 1530, and I hope that is understood. I don't
8 know whether you are cross-examining, or Mr. Dugan,
9 but we understand that no more than an hour will be
10 required in cross-examination.

11 MS. CALLAWAY: I will relay that to
12 Mr. Dugan. I am retiring from cross-examination
13 this afternoon and I will let Mr. Dugan know that.

14 PRESIDENT VEEDER: He spoke earlier of
15 needing 15 minutes. It occurs to us that is a
16 general amount of time by anybody's estimate.

17 MS. CALLAWAY: I would agree.

18 PRESIDENT VEEDER: There is nothing else
19 we can usefully include for tomorrow, is there?

20 MS. CALLAWAY: Not that I am aware of.

21 PRESIDENT VEEDER: Mr. Legum?

1 MS. CALLAWAY: There is the motion for
2 reconsideration that I had brought up earlier.

3 PRESIDENT VEEDER: The motion for
4 reconsideration, we really understood that
5 Mr. Dugan wanted a little bit more time to put his
6 closing arguments together, which he was going to
7 start on Wednesday morning as a package, which
8 would include the motion for reconsideration. But
9 if we misunderstood him, please say so.

10 MS. CALLAWAY: I don't believe you did. I
11 wasn't here for that. I understand. Thank you.

12 PRESIDENT VEEDER: Mr. Legum?

13 MR. LEGUM: Nothing else we would list for
14 tomorrow. I would simply take this opportunity to
15 note that we have as of now not received the
16 license numbers for the private investigators that
17 Methanex represented to us they would have this
18 morning so it would be nice to have that in half an
19 hour.

20 PRESIDENT VEEDER: It looks as if we would
21 move on to Wednesday, 2:00, for the closing oral

1 argument by Methanex and then we would go on to
2 when that finished Wednesday evening. We would
3 then move on to Thursday 2:00 for the United States
4 reply.

5 MR. LEGUM: Very good.

6 PRESIDENT VEEDER: Now, Ms. Callaway, the
7 clock is really ticking. We need to know about
8 this third witness and we need to know by 5:30, and
9 that will be it. There will be no further
10 opportunity to introduce this third witness unless
11 we know the position at 5:30.

12 Secondly, we asked Methanex to answer the
13 United States queries regarding these registrations
14 numbers for the two individuals. It was explained
15 to us they were registered in the firms' names, but
16 we want those queries answered in the next 30
17 minutes and we would like to know in the next 30
18 minutes if that has not been done, why it has not
19 been done. So, we will come back in 30 minutes.

20 Thank you.

21 (Brief recess.)

1 PRESIDENT VEEDER: Let's resume. As
2 regards the possibility of Mr. Dunne testifying to
3 the Tribunal, we received a few moments ago a
4 letter dated the 14th of June, 2004, from Paul
5 Hastings which I shall read into the record:

6 "Dear members of the Tribunal, We finally
7 made contact with Mr. Terry Dunne this afternoon.
8 He confirmed that he was a DEA Agent for 30 years
9 and he had conducted the document recovery at
10 Regent International. Mr. Dunne retired in 1999
11 and he now lives in Colorado. He no longer has any
12 records concerning that assignment. However, Mr.
13 Dunne does not want to be involved in this
14 proceeding. Accordingly, he declined to produce a
15 witness statement or to testify."

16 That is the end of the letter. So, Ms.
17 Callaway, we take it there is no application by
18 Methanex for Mr. Dunne to be a witness tomorrow
19 morning?

20 MS. CALLAWAY: That is correct.

21 I have also obtained the private

1 investigator license numbers for Mr. McGanish and
2 Mr. Stirwalt--I don't know if it is Mr. or Mrs.--it
3 is Mr.

4 PRESIDENT VEEDER: Have these been
5 produced to the United States?

6 MS. CALLAWAY: They were just e-mailed to
7 me.

8 PRESIDENT VEEDER: Why don't you read them
9 into the record.

10 MS. CALLAWAY: For Pat McGanish, it is
11 California private investigator number 20074 under
12 the business name Beach Investigations.
13 For Jim Stirwalt, California private investigator
14 number 19114 under the business name "Bonanza
15 Investigation, Incorporated."

16 MR. LEGUM: Could you spell, please,
17 beach.

18 MS. CALLAWAY: B-E-A-C-H.

19 MR. LEGUM: Do you have the number for Mr.
20 Dunne? Or the business name of Mr. Dunne's
21 business or former business?

1 MS. CALLAWAY: I don't have it on this
2 E-mail. Was that requested by the Tribunal?

3 PRESIDENT VEEDER: It was requested
4 because it was requested in the United States
5 letter of 13th of June. They asked for the record
6 of private investigators licensed in California
7 with the names Terry Dunne, James Stirwalt, and
8 Patrick McGanish.

9 MS. CALLAWAY: I apologize for my lack of
10 familiarity with this issue, but I will send the
11 E-mail and make the telephone call about that. It
12 sounds to me from that letter that Mr. Dunne did
13 not want any involvement here. That does not mean
14 we won't look for his license number.

15 MR. LEGUM: Or, as I said, even if he
16 doesn't remember what his license number was, which
17 strikes me as a possibility, given the letter that
18 you have just read into the record, he certainly
19 does remember what the name of his business was,
20 and assuming Mr. Puglisi could also provide that
21 information.

1 MS. CALLAWAY: Yes, and I will make sure
2 we search for that information.

3 PRESIDENT VEEDER: We ask you to do that
4 as rapidly as possible. This information has to be
5 gotten to the United States this evening.

6 MS. CALLAWAY: And this Mr. Dunne made a
7 telephone call to that Mr. Dunne regarding that
8 information and they are getting it right now.

9 PRESIDENT VEEDER: Mr. Legum, if it all
10 works, you will get that information we hope in a
11 very short while. I think there is nothing else we
12 can do tonight so we will see you tomorrow 9:30 for
13 9:45.

14 Thank you very much.

15 (Whereupon, at 5:30 p.m., the hearing was
16 adjourned until 9:30 a.m., the following day.)

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CERTIFICATE OF REPORTER

I, David A. Kasdan, RDR-CRR, Court Reporter, do hereby testify that the foregoing proceedings were stenographically recorded by me and thereafter reduced to typewritten form by computer-assisted transcription under my direction and supervision; and that the foregoing transcript is a true record and accurate record of the proceedings.

I further certify that I am neither counsel for, related to, nor employed by any of the parties to this action in this proceeding, nor financially or otherwise interested in the outcome of this litigation.

DAVID A. KASDAN, RDR-CRR

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I, Cathy Jardim, RPR, Court Reporter, do hereby testify that the foregoing proceedings were stenographically recorded by me and thereafter reduced to typewritten form by computer-assisted transcription under my direction and supervision; and that the foregoing transcript is a true record and accurate record of the proceedings.

I further certify that I am neither counsel for, related to, nor employed by any of the parties to this action in this proceeding, nor financially or otherwise interested in the outcome of this litigation.

CATHY JARDIM, RPR

