

RED HILL VALLEY PARKWAY INQUIRY

TRANSCRIPT OF PROCEEDINGS
HEARD BEFORE THE HONOURABLE J. WILTON-SIEGEL
held via Arbitration Place Virtual
on Tuesday, May 17, 2022 at 9:29 a.m.

VOLUME 14

REVISED TRANSCRIPT

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1 Arbitration Place Virtual

2 --- Upon resuming on Tuesday, May 17, 2022

3 at 9:29 a.m.

4 MR. LEWIS: Good morning,
5 Commissioner. May we proceed?

6 JUSTICE WILTON-SIEGEL: Please
7 do.

8 MR. LEWIS: Thank you.

9 BECCA LANE; RESUMED

10 CONTINUED EXAMINATION BY MR. LEWIS:

11 Q. Ms. Lane, I want to start
12 off by revisiting an issue from yesterday. And if
13 we could, to begin with, Registrar, go to image 90
14 of overview document 4. And you'll recall that
15 late in the day yesterday I was asking you about
16 the communications you had with Mr. Marciello on
17 November 15, 2010, in paragraph 212 and 213, and
18 your reference to indicating that you may call
19 Ludomir Uzarowski for a City of Hamilton contact
20 and then your recollections on that.

21 So, after your testimony
22 yesterday, Commissioner, to advise you as well,
23 counsel for Golder advised us that Dr. Uzarowski
24 had checked his notes again after hearing the
25 testimony and that he did find a note of his dated

1 November 15, 2010. Counsel sent that to us and we
2 circulated it to participants' counsel.

3 Registrar, if you could call
4 it up. It's the document that was sent to you
5 either last evening or this morning. Yes. So,
6 and this is just the cover of what we understand
7 to be Dr. Uzarowski's notebook. And if you could
8 go to the second image, please.

9 And I'm told that this will be
10 assigned a doc ID of GOL0007502 but given it was
11 last night, we haven't had that assigned yes. So,
12 this note dated Monday, November 15, 2010
13 indicates, number 5, Becca Lane, 2005 friction on
14 RHVP. And you told us yesterday that you didn't
15 have a specific recollection of calling
16 Dr. Uzarowski, but you thought it was quite likely
17 that you would have, given your e-mail that day
18 that we just discussed or just looked at on
19 November 15, 2010. So, this does seem to suggest
20 that you did in fact call him on that day.

21 And just because we did not
22 have the benefit of this note yesterday, does this
23 note assist you at all in recollecting any
24 specifics of what you did discuss with him that
25 day?

1 A. Not really, other than it
2 shows that I discussed -- I talked to him about
3 the Red Hill Valley Parkway and friction, you
4 know. It could be anything that was said, but if
5 you see what I had said to Frank, what I said to
6 Frank was I would call Ludomir to get a City of
7 Hamilton contact, so, you know, that's what I did,
8 is I called him and asked for a City of Hamilton
9 contact.

10 Q. Okay. In the note it
11 talks about 2005 friction on RHVP and you
12 indicated what prompted the call was the results
13 that you had received from Frank in his e-mail on
14 November 15 about the 2010 results specifically,
15 so do you think it is likely or whether that you
16 would have told him that the MTO had done testing,
17 not just in 2010 but also in 2008 and 2009?

18 A. So, I really don't
19 remember the call but all I know is I was calling
20 him for a City of Hamilton contact and obviously
21 we discussed friction. I mean, they could be
22 anything. Right? It could be me saying, you
23 know, I want to talk to them about friction and he
24 thinks, therefore, it's about the 2007 friction
25 results. Or it could be I asked him, hey, can you

1 give me the contact that knew about the 2007 --
2 like, honestly, I really don't remember the
3 conversation, but this shows that I did, from
4 Frank's information he provided me, I said I would
5 contact Ludomir for a contact at Hamilton and I
6 did do that.

7 Q. Right.

8 A. And it was so long ago I
9 really couldn't even recall it. I just felt that
10 I would have done that.

11 Q. I understand that. But
12 if you had gone so far, as you indicated, then to
13 call Dr. Uzarowski for a contact, presumably on
14 the same logic then you would have followed
15 through and contacted the city based upon the
16 practices you have as you described it. Is that
17 fair?

18 A. That's fair, yes.

19 Q. Okay. But alternatively,
20 is it also possible, then, that you discussed
21 specifics of it with Dr. Uzarowski at that time?

22 A. It's possible, but I
23 really don't have a recollection.

24 Q. Okay. And just to
25 clarify, you do not have a recollection of whether

1 you got a city contact from Dr. Uzarowski at that
2 time?

3 A. That's true. I really
4 don't.

5 Q. And whether you called
6 him?

7 A. But it seems likely that
8 I did, since that's what I was calling him for.

9 Q. Right. And do you recall
10 at that time, late 2010, who at the City with
11 involvement in the Red Hill you knew, or did you
12 have any prior contacts at the City of Hamilton?

13 A. So, no. I really
14 couldn't remember. And, I mean, that's why I was
15 calling Ludomir. Ludomir is the person that I
16 knew and, of course, I wasn't involved in the
17 original, like, liaison with the City or with
18 Ludomir even for the original 2007 test, so I
19 really -- the only person out of this whole group
20 that I knew was Ludomir, so that's why I was
21 calling him for a contact.

22 Q. Okay. If you could take
23 that down, Registrar. Thank you.

24 And I think from your CV you
25 indicated -- sorry, could we make that an exhibit?

1 Dr. Uzarowski can identify it later on, but if we
2 could make this Exhibit 44, Commissioner?

3 JUSTICE WILTON-SIEGEL: Yes.

4 EXHIBIT NO. 44: Note
5 dated Monday,
6 November 15, 2010,
7 GOL0007502.

8 MR. LEWIS: As I said, the
9 anticipated doc ID for that is going to be
10 GOL7502. I think that's 44.

11 THE REGISTRAR: Noted. Thank
12 you, counsel.

13 BY MR. LEWIS:

14 Q. So, from your CV, I think
15 it was April 2013 that you moved into your
16 position as manager of MERO. Is that right?

17 A. Yes.

18 Q. Okay. And after having
19 been in the analytics and so on role since
20 December 2011?

21 A. Yes, correct.

22 Q. Okay. And so, at that
23 point, as manager of MERO, both pavements and
24 foundations, the head of pavements and foundations
25 and the head of soils and aggregates, amongst

1 others, reported to you. Right?

2 A. Yes, they did.

3 Q. And then Stephen Lee had

4 become the head of pavements and materials.

5 Right?

6 A. Pavements and

7 foundations.

8 Q. Sorry, pavements and

9 foundations. I'm mashing up soils and aggregates

10 and pavements and foundations. Pavements and

11 foundations, yes.

12 And did you have any awareness

13 in late 2013 that Golder contacted Mr. Lee to

14 request skid testing but declined due to capacity

15 issues? Did you know it at that time? Do you

16 recall?

17 A. No, I didn't.

18 Q. You were not aware of it

19 at that time?

20 A. I was not aware.

21 Q. Okay. Thank you. Now,

22 if we could go, Registrar, to overview document 4,

23 image 96. And, as indicated in paragraph 229,

24 Mr. Marciello conducted friction testing on one

25 northbound lane of the Red Hill on July 12 and

1 then on remaining lanes on July 23. And then in
2 paragraph 230, Mr. Marciello, on July 25, 2014,
3 e-mailed Mr. Senior, copying Mr. Gorman and
4 Mr. Lee, attaching those results, and then you'll
5 see he gives a brief e-mail and gives a summary of
6 the results comparing the averages from 2008 and
7 2014.

8 Now, you weren't copied on
9 this e-mail and I guess it's fair to say that at
10 this point, as the manager of MERO, that typically
11 you weren't copied on e-mails about specific
12 friction testing results by Mr. Marciello. Is
13 that fair?

14 A. That's correct, yes.

15 Q. And did you nevertheless
16 be made aware of and see the 2014 results at some
17 point?

18 A. Yes. I recall being
19 shown the results.

20 Q. Okay. And do you recall
21 when that was and the circumstances?

22 A. So, I don't recall when
23 it was. I assume it was in this particular year.
24 And I remember the circumstances because
25 Mr. Marciello and Mr. Gorman came into my office

1 and they wanted to talk to me about the DSM list
2 and, you know, a discussion around the Demix
3 aggregate itself and, you know, were we satisfied
4 with its performance. It's on the DSM list as a
5 premium aggregate source. So, you know, one of
6 the things they had with them was the friction
7 testing data. That's what I recall.

8 Q. Okay. So, just a couple
9 of things there. So, you recall it being
10 Mr. Marciello and Mr. Gorman who came to see you.
11 Is that right?

12 A. Yes.

13 Q. Okay. And was it just
14 the two of them or was there anyone else?

15 A. No, it was just the two
16 of them. And then, if you want the whole story, I
17 walked over to see Mr. Senior in the soils and
18 aggregates section because the discussion is
19 around the DSM and Mr. Senior is the head of this
20 soils and aggregates section, and so, you know, we
21 wanted to have a discussion about the DSM listing
22 and were we satisfied with the performance of this
23 aggregate, so we went over to talk to Mr. Senior.

24 Q. Okay. And did you review
25 the results at that time from the 2014 testing?

1 A. Well, not in detail, no.

2 Q. Okay. What did you look
3 at? Do you recall what you looked at
4 specifically? I think you said they brought the
5 results to you. Do you recall what you looked at?

6 A. Well, I would have
7 glanced at the results, yes.

8 Q. Okay. But not an
9 in-depth review. Is that fair?

10 A. I didn't sit down with a
11 spreadsheet, so yeah.

12 Q. Okay. And do you think
13 you would have looked at the -- and we can go to
14 these if we're at the next -- if we go to the next
15 image. We know there's different tabs on these
16 results. Would you have looked at the historical
17 results in comparison, like we see on image 97
18 here?

19 A. I really can't remember
20 what exactly they showed me.

21 Q. Okay. So, you went over
22 with them and you spoke to Mr. Senior. Can you
23 just describe that conversation?

24 A. Yes. So, we were talking
25 about this is a DSM product and then we were

1 talking about, you know, the issues we have with
2 this particular situation, because we have an
3 aggregate that's on the DSM for Superpave FC2, but
4 our test section is in an SMA. You know, it's one
5 of those things where, like, if we're evaluating
6 how is this aggregate -- is this aggregate
7 satisfactory for our premium aggregates list, but
8 there's all these other complications to it. It's
9 not cut and dry. You know, it's a different mix
10 type than it's approved for. It was a municipal
11 pavement. Like, there's a few other things that
12 sort of factors that you have to weigh when you're
13 thinking, you know, is this aggregate still
14 acceptable for our Designated Sources for
15 Materials list.

16 I could list a number of
17 things right now, but I can't remember exactly
18 what we talked about, but, you know, the fact
19 that, you know, it was an SMA where the aggregates
20 are rolled flat, it's different than a Superpave
21 FC2 where you've got, you know, the angular faces
22 pointing up. Like, aggregates perform differently
23 in different mixes.

24 And then, you know, it's when
25 you have an aggregate that's on an approved list,

1 you know, the reason they would involve me in the
2 first place would be kind of like a political
3 angle to it. Like, you know, if you're going to
4 actually delist a product, it's not as simple as
5 just take them off the list. It has to be done
6 with careful consideration because of course it
7 would impact their business. So, you know, we
8 couldn't just randomly make a decision about the
9 quality without assessing all these other factors.

10 Q. Okay. And before we get
11 to that, you mentioned that it was approved for,
12 if I heard you correctly, that it's on the DSM for
13 Superpave FC2 but it's an SMA. It wasn't until
14 the end of 2014 that the SMA pause was listed, but
15 my understanding is once an aggregate is approved
16 for use in surface course, it's approved for use
17 in all surface courses, not just one. Is that
18 correct?

19 A. That's not correct.

20 Q. Okay.

21 A. We had -- well, we had a
22 separate list that was for SMAs. We had a list
23 that was for Superpave FC1, a list that was for
24 Superpave FC2, I think, so --

25 Q. But at that point in

1 time, there was a list of sources for SMA that's
2 outside, I think, if I'm remembering correctly, of
3 the DSM which, given that the pause had been
4 placed on SMA.

5 As a general practice, though,
6 am I incorrect that once approved for the DSM,
7 it's approved for all purposes for surface course
8 use?

9 A. You would have to ask --
10 this was an aggregate section. I just remember
11 that there's a bunch of different DSM lists.
12 Right? So, I hadn't really thought of it that
13 way, but, you know, I thought there was one for
14 SMA and then one for FC2 and one for FC1, but
15 you'll have to get them to clarify.

16 Q. We'll follow that up.
17 That's fine. So, coming back, you said there were
18 a number of things to consider and you said what
19 you thought you probably discussed, if I
20 understood you correctly?

21 A. Yeah.

22 Q. And then what was the
23 result -- I'm sorry, have you covered everything
24 that you think you discussed about the
25 considerations for it?

1 A. Yes.

2 Q. Okay. And you finished
3 off by saying that, you know, it's not a simple
4 matter of just delisting. There are political
5 considerations. It's the business of the producer
6 and so forth.

7 So, where did the discussion
8 go after that? What was the result or the
9 conclusion?

10 A. I think we concluded that
11 we couldn't delist it because there were too many
12 other factors. I mean, a good thing to do would
13 be to place another test section of the mix and
14 evaluate that, too. And then it would be our own
15 test section on our own roadway with our own eyes
16 on it and things like that.

17 Q. Okay. And so, then a
18 good thing to do would be to place another test
19 section. Was that something that was decided to
20 do?

21 A. No.

22 Q. So, was that just
23 something that was discussed but --

24 A. No, no, no. That's what
25 I, in hindsight, that's what I feel, like okay.

1 At the time, what we decided was to leave it on
2 the list because, you know -- okay, a number of
3 things. First of all, we knew it was a high
4 quality aggregate. It was, you know, approved,
5 the lab tests, you know, so we knew it was a good
6 quality aggregate, so it's not a limestone or dol
7 stone that polishes very quickly. It's a trap
8 rock. We know that our trap rocks are not our
9 best performers, but they are very good performers
10 still for us. I mean, for a long time, trap rock
11 was the gold standard of friction resistant
12 aggregate. Right? So, if you look back over all
13 the old research, you'll see trap rock was the
14 favoured aggregate for giving you good long-term
15 performance.

16 If you look at the data, yeah,
17 it was gradually, the friction had dropped over
18 time, but, you know, our expectation would be that
19 it doesn't plummet. Like, it's showing that it's,
20 sort of, holding on or levelling off or, you know
21 what I mean, stabilizing. It's not -- I mentioned
22 aggregates that polish very readily, very quickly.
23 It's none of those things. So, you know, is it a
24 fantastic performer? No, but that would have been
25 the discussion.

1 Q. Okay. So, a few things.
2 I asked about the test section, about the doing
3 another test section, is that something that was
4 decided to do, and you indicated no. And then I
5 asked you was that something that was discussed,
6 and you said no, no, that's what in hindsight I
7 feel like, so I just want to be clear.

8 Are you saying that now you're
9 thinking that that would have been something good
10 to do or are you saying that that was discussed at
11 the time in this meeting --

12 A. No, it was not -- sorry,
13 to be very clear, it was not discussed at the
14 meeting. What I was thinking is we had this
15 discussion about all these other factors and,
16 therefore, you know, decided to leave it on the
17 list. And so, you know, I guess we could have,
18 one of the options we could have thought of, is if
19 we're not happy with the test section that we have
20 because of all these other factors, it was a
21 municipal pavement, it was an SMA, it was City of
22 Hamilton's first time doing an SMA, all of these
23 factors. Right? Then in hindsight, you know,
24 maybe we could have, if we were still wanting to,
25 like, evaluate further the quality of this

1 aggregate, we could have used it in a different
2 test section or looked for other projects perhaps
3 where they had used it and evaluate those.

4 Q. Okay. But you're saying
5 that that wasn't what then was discussed at the
6 time. You're saying it now?

7 A. Correct.

8 Q. So, the decision, I think
9 what you just said, that the decision at the
10 meeting was to not delist it?

11 A. Right.

12 Q. And that was the decision
13 that was reached. Is that right?

14 A. That's right.

15 Q. Okay. So, the friction
16 had dropped, as you indicate, over time, and we
17 can see, if we go back to the prior image,
18 Registrar, there's Mr. Marciello's summary of the
19 averages. Image 96, please. Thank you. In
20 paragraph 230 in the comparison between 2008 and
21 2014, and we see that the friction number has
22 dropped an average of a friction number of,
23 depending on the lane, seven or eight between 2008
24 and 2014. Those are actually rounded numbers, but
25 taking into account the rounding, it's seven or

1 eight between that time.

2 So, you indicated it was, I
3 think you said, a gradual decrease over that
4 period, but I just want to unpack what you said
5 about it being a -- you know, the other
6 considerations and so forth about delisting.

7 And so, I just want to be
8 clear. What are the other factors? Are you
9 saying that absent those other factors, it would
10 have been delisted?

11 A. No. I mean, I'm saying
12 we would look at the other factors. I mean, so,
13 for example, as I mentioned, the way the aggregate
14 unrolled, all of those other factors that
15 contribute to how it performs in the roadway. So,
16 you can have the same kind of aggregate in a
17 different mix, in a different contract, that
18 performs differently, so is it fair to, you
19 know -- like, we're looking for our premium
20 aggregate sources. Here is a high quality rock
21 we've evaluated. Is it fair to delist it based
22 on, you know, being gradually, a bit, gradually
23 reduced to what is still acceptable numbers, but,
24 you know, they're not the best numbers that we
25 have out there. That's for sure.

1 Q. Okay. And when you say
2 to the acceptable numbers, you're saying that, if
3 I've understood your evidence from yesterday, does
4 that mean that the averages are still above FN30,
5 FN30 or above?

6 A. Yeah. That's generally
7 what we would, you know, consider satisfactory or
8 acceptable numbers, yes.

9 Q. All right. So, if we go
10 to a couple of the actual test reports, if we
11 could go first to the native, please, in MTO22944,
12 this should be northbound lane 2. Okay. So, this
13 is northbound lane 2 and we can see that the
14 average in 2008 was 39, and then in subsequent
15 years, 37, 34, 34, 33 and then 31 in 2014, as the
16 average, and then the minimums and maximums are
17 shown below there, including the low of 27 in
18 2014.

19 If we go to the first tab,
20 Registrar, the detailed, are you able to read
21 that, Ms. Lane? Is that okay?

22 A. Yes, I am. Thank you.

23 Q. And in here there are
24 five readings under 30. There's starting the
25 fifth one down, it's 29.7, and then there's two

1 27.7s, and then further down in the fourth and
2 third last, 27.9 and 27.4. And do you recall if
3 you got down to this level of detail in the
4 meeting?

5 A. I don't recall getting
6 down to this level of detail, but I would say that
7 looking at that data, that, you know, it's showing
8 that the average is 31 and, you know, we look at
9 the average number and the thing about an average
10 is, like, half the data is going to be lower than
11 the average and half the data is going to be
12 higher than the average. That's what an average
13 is. So, it's not surprising, if your average is
14 31, to have numbers that are below that. That's
15 just what an average is. And the standard
16 deviation is 2, so it's not like the data set is
17 all over the place. It's showing a consistent
18 data and the average is 31.

19 And so, I know that those
20 numbers are under that, but that's what an average
21 means. It means that half the numbers are going
22 to be below that number.

23 Q. Right. Not everyone can
24 be above average. I understand that. But, you
25 know, here you're getting numbers, of course, that

1 aren't just, you know, marginally under, 29.8 or
2 just could be rounded up. You have got some that
3 are, really four of them, that are in the 27s.

4 And appreciating that
5 everything -- actually, before we get on to that,
6 why don't we look at one other, southbound lane 2.

7 A. So, by the way, those 27s
8 are really 28 because it's 27.7, which you would
9 round up to 28.

10 Q. Which you round up,
11 right. If we could go, Registrar, to the native
12 of MTO22946.

13 And while he's pulling that
14 up, as a general matter, is it usually the case
15 that lane 2, being the outside lanes, would have a
16 lower value than lane 1, the inside lanes, due to
17 the amount of traffic? Is that a typical pattern?

18 A. Yes. And also typically
19 if there's heavy vehicles, like trucks, they would
20 also use the outside lane.

21 Q. Right. So, this is
22 southbound lane 2 and it's showing -- this, of
23 course, was tested in 2007 as well, so it shows a
24 34 to begin with in 2007 going up to 38 in the
25 average in 2008, and then 35 in 2009, 34 in 2010,

1 32 in 2011, 31 in 2012 and again 31 in 2014.

2 And, Registrar, can you go to
3 the first tab, the detailed chart. And as well in
4 this one, there's five readings, individual
5 readings, under FN30 and one of them is 26.1. And
6 appreciating what you said about averages again
7 and the average here is 30.5, which rounded up to
8 31, I appreciate, but, again, are your comments
9 the same with respect to your views of this as for
10 the previous lane we looked at?

11 A. Yeah, so a couple of
12 things. Yes, again, so with a mean, we're
13 expecting to have values below the mean. There
14 are values there that are below the mean. If you
15 go back to the first set of data, the one you just
16 showed, the chart maybe --

17 Q. Yeah. Do you want us to
18 go back to that?

19 A. Yeah. So, if you look at
20 the data, you know, to me this looks like that the
21 data is stabilizing. So, you know, it went 38,
22 35, 34, 32, 31, and then missed a year and then
23 still 31. So, you know, one of the things about
24 the aggregate, recognizing that it's a trap rock
25 and that it's not our top performer but it

1 certainly is an excellent performer, then to me
2 this looks like the data is stabilizing.

3 Q. Okay. Now, if I
4 understand the purpose of this meeting, you're
5 looking at it with the others for DSM purposes?

6 A. Correct.

7 Q. And would you be looking
8 at it in the same way or through a different lens
9 if a request to evaluate these results or the
10 request for the testing had come in from a region
11 because of a concern they had identified, whatever
12 that concern would be, about the particular
13 stretch of road?

14 So, say, if this was an MTO
15 road and it wasn't for DSM purposes but a request
16 had come in and these are the results, would you
17 have a different view or the same view as to
18 import of the results?

19 A. Well, a bit of both. So,
20 on the one hand, I would say, you know, the
21 number is still 31. It looks like the data has
22 stabilized. On the other hand, you know, these
23 are not the best of all results. And then any
24 time somebody makes a specific inquiry for a
25 specific reason about the road, now we're talking

1 about the engineering analysis that you would have
2 to do. So, you would have to know about the road
3 itself, all of those things we previously
4 discussed, like what are the geometrics, what are
5 the sight lines, you know, what's the traffic
6 pattern, what's the traffic volumes, what's the
7 speed? Like, if you're coming to us with
8 collisions, what type of collisions are they?
9 Where are those collisions occurring? Suddenly
10 you would leap into a whole analysis of the
11 roadway. That's not what we were doing here. We
12 were just looking at the aggregate itself and how
13 it was holding up in terms of friction performance
14 under traffic.

15 So, you're right that if
16 somebody came to us, we would -- you know, again,
17 this is actually not the -- this is not the level
18 where we would say, oh, yeah, look we got to do
19 something, but if somebody came to us with an
20 issue, obviously we would do that sort of
21 engineering analysis.

22 Q. Right. So, if I've got
23 it correctly, if they came and said, hey, maybe we
24 have an issue with this, could you please do the
25 skid testing, these results came back on the skid

1 testing. Do I understand you correctly at that
2 point I appreciate it's not, oh, my god, we have
3 to repave, but at that point when you refer to the
4 engineering analysis, then it is an investigation
5 of some sort to see whether there is an effect of
6 the friction levels that have been identified and
7 looking at the geometry and all the other factors
8 that you have described. Is that right?

9 A. Yeah. So, typically what
10 we would say is these numbers are not an
11 indication that friction is the cause of your
12 concern, so let's do an engineering analysis of
13 the roadway to find out what other factors to
14 consider, because these are not the numbers that
15 would flag us immediately that there was a
16 concern. You know, so let's look at all the other
17 factors to determine what else could be
18 contributing to this issue.

19 So, these are the kind of
20 numbers where you can't say, a-ha, it's the
21 friction. Instead, you say, okay, you know, this
22 is still, you know, acceptable. It's on the low
23 end of what we consider to be satisfactory, but
24 let's look at the roadway to see what other
25 causative factors there are in this issue and what

1 could be done to address it. And I think you've
2 seen all of the things that can be done, like
3 reducing the posted speed or putting up bigger
4 speed signs to remind people of the speed or, you
5 know, improving the sight lines or putting up
6 guide rail, putting up median barrier, like those
7 kind of engineering analysis of what can be done
8 to address the issue.

9 But these kind of numbers on
10 their own wouldn't be like a sole, a-ha, you know,
11 eureka moment for why they were having any
12 incidents. It would be one of the things that we
13 looked at if they had come to us with concerns.

14 Q. Right. And is one of the
15 things that you would look at in that analysis,
16 would it be to see, okay, here is where the low
17 readings are and do they, given all of the factors
18 that you have described, whether it's the geometry
19 and collision rates and so forth, whether there's
20 a correlation between those? Is that something
21 that would be looked at?

22 A. So, one of the things
23 that you would look at would be, number one, where
24 are all the collisions occurring? So, I mean, is
25 it on a downhill? Approaching a decision point?

1 You know, you would look at all of those factors.
2 You would have to know, you know, there's a grade
3 here, there's a curve here. Like, those are all
4 the things that you would have to tie together.

5 Q. Right. Okay. And, I
6 mean, I appreciate what you're saying about in and
7 of themselves, you've described in depth that the
8 number is just a number. There's more to it. We
9 have to look at other things. I take it you would
10 distinguish that, for example, from the results
11 that we talked about, you know, near Woodstock in
12 2007, where you were already dealing with the
13 early age SMA issue and you get results back that
14 are in the low 20s and, at that point, there's,
15 you know, immediate thought is to, well, let's
16 post the signs about the speed limit and so forth
17 in order to deal with it. That's sort of the
18 distinction that you're drawing about taking
19 immediate action versus conducting an
20 investigation to see whether any action is in fact
21 needed?

22 A. Yeah. I mean, for
23 example, if we had been doing, which we don't, but
24 if we had been doing network level data and these
25 results came back, that wouldn't cause us to

1 investigate further.

2 Q. Okay. And why is that?

3 A. Because it's still
4 considered acceptable. Right? So, you know,
5 yeah.

6 Q. And because of --

7 A. Without somebody coming
8 to you asking you questions about something, we
9 wouldn't have even blinked.

10 Q. Right, because in that
11 case if you're doing the network testing and you
12 get those results, the region hasn't come to you
13 with a concern about it?

14 A. Correct.

15 Q. Okay. Thank you. Okay.
16 So, you described the meeting and what happened.
17 Was that the end of it, from your perspective, or
18 was there any followup that you recall?

19 A. Well, that's the end of
20 it from what I recall, yeah.

21 Q. Okay.

22 A. I just happened to recall
23 that meeting.

24 Q. I understand. I think
25 you indicated you didn't know exactly when it

1 occurred, but you think it would have occurred in
2 that year. Right? I think you mean in 2014?

3 A. Yeah, because it was
4 still Bob, Mr. Gorman, and Mr. Marciello, and they
5 were no longer with the Ministry in 2015, so it
6 must have been in 2014.

7 Q. I think Mr. Senior might
8 have left in 2016, but certainly Mr. Marciello
9 left in 2015?

10 A. Mr. Gorman and
11 Mr. Marciello both left in 2015.

12 Q. Yeah, Mr. Gorman as well.

13 A. Yeah. Mr. Senior was
14 still there. We went over to meet in their little
15 boardroom, lunchroom.

16 Q. Okay. And do you recall
17 if you considered contacting Dr. Uzarowski or the
18 City of Hamilton with respect to these results
19 after having them being brought to your attention?

20 A. No, I don't recall that.

21 Q. And just to close the
22 loop on something we discussed yesterday but I may
23 not have followed it to its end, am I correct,
24 though, that you would have had the authority to
25 provide the results to Hamilton or Dr. Uzarowski,

1 had you decided to do so?

2 A. Yeah, I guess I would
3 have. Yes.

4 Q. And what about --

5 A. There's no, like, law
6 against it.

7 Q. There's no written policy
8 on these things either. Right?

9 A. Correct.

10 Q. And what about those
11 reporting to you, Mr. Senior or Mr. Lee? Is that
12 something that they could have done, had they
13 chosen to do so?

14 A. Well, they could have
15 done it. I don't know if they did. You would
16 have to speak to them.

17 Q. Yes. We have and we
18 will. But I'm just wondering about their
19 authority to do so, whether there's anything that
20 would have prevented them from doing so?

21 A. No.

22 Q. Okay. And at this point,
23 I'm wondering why it wouldn't have occurred to you
24 to provide it, if you don't recall even
25 considering it, given you had had that thought

1 obviously in 2010 and you were aware of the
2 interest in 2007? Can you give us any insight
3 into that?

4 A. Well, I can't recall
5 specifically, but it seems to me that if I had
6 already alerted them in 2010 that we had seen the
7 friction numbers decline, you know, then I would
8 have already alerted them. You know, these
9 numbers are still acceptable to us, so I'm not --
10 it's kind of challenging. Do you call someone and
11 say, hey, they're still acceptable? Like, I'm not
12 sure what I would do. You know, like, they're
13 responsible for monitoring and maintaining their
14 own highway and from what I can see from all the
15 reports, they were doing that. They had their own
16 experts, their own safety reviews, their own
17 consultants. Everybody was, you know, working
18 away on managing the Red Hill Valley Parkway.
19 It's not our highway. And even if I got these
20 results from our own roadway if we were just
21 gathering data, they're still considered
22 acceptable.

23 Q. I understand, but
24 thinking about the results that sparked you to
25 contact Dr. Uzarowski in 2010 versus these

1 results, and we can go through them but they're
2 all significantly lower than in 2010, with the
3 uncorrected results. They're lower than the
4 corrected results as well, as you can see from
5 this page, but I think the averages were corrected
6 by FN2 up in 2011 once Mr. Marciello recognized
7 the testing speed discrepancy.

8 But, you know, on northbound
9 lane 1 in 2010, the uncorrected results were 35.1
10 and now they're 33.2. In northbound lane 2, the
11 uncorrected 2010 results were 31.7. Now they're
12 30.7. The southbound lane 1 -- so, they've
13 decreased. Southbound lane 1 has decreased more
14 from 34.9 to 31.7, so I'm just wondering what the
15 difference is between those two time periods,
16 because you did have some concern back in 2010 and
17 contacted Dr. Uzarowski as a result. What's the
18 difference here?

19 A. The difference is that
20 back then, we saw what we thought was a rapid
21 decline and we didn't have a lot of data, so when
22 you see a rapid decline, you think, oh, you know,
23 we're getting a rapid decline in this data. That
24 was something that I thought I should alert them
25 to.

1 Now, if you look by year,
2 2014, it looks like the data has stabilized, so
3 it's, sort of, like 35, 34, 32, 31, probably 31,
4 then 31 again. Is it now stable at 31? In which
5 case, what am I going to alert them to? So, I
6 alerted them when I thought that the data was
7 showing a rapid decline, as I mentioned, and when
8 we get the next year's date and, first of all,
9 correct the previous year but also get the next
10 year and see that it's actually not this rapid
11 decline that we were concerned about.

12 So, while I did alert them
13 when I saw a rapid decline in the data and not
14 knowing where it's going to go, that's why I
15 alerted them, this data shows that, as we
16 expected, aggregate polishes under traffic, so you
17 expect a decline over time, but then knowing it's
18 a good quality aggregate, you know, that we've
19 have used for decades as, you know, a great source
20 of friction resistant aggregate, looking that it's
21 this data here especially, it's showing that it's
22 levelling off.

23 Q. Okay. I understand that
24 and that's on this lane. If we could go back just
25 for a moment to, Registrar, the native of

1 MT022944. Actually, maybe we don't have to. No.

2 Okay, we've got it. And the chart. Thank you.

3 So, northbound lane 2, and I
4 just want to talk about the stabilizing issue
5 because it's lane by lane, in this particular
6 lane, northbound lane 2, it's, you know, as I
7 said, 2008, in 39 and then 37, 34, 34, 33 and 31.
8 So, is it fair to say it has not stabilized in
9 this lane?

10 A. So, this is interesting
11 because, again, you know, you've got 31 there, so,
12 you know, it's all the same aggregate type.
13 Right? So, it's just that there's different lanes
14 performing differently under different traffic
15 conditions. Right? So, you know, whether
16 northbound is uphill or downhill or I don't know,
17 but whether there's more traffic northbound than
18 southbound, I don't know. Like, I don't know any
19 of those factors, which is something that, you
20 know, we would analysis if we had been asked to
21 analyze data. So, this is the data. This is 31.
22 The data in the previous chart stabilized at 31.

23 So, you know, again, this is
24 not, to me, this is not this rapid early concern
25 that caused me to make that phone call in 2010.

1 Q. And after 2014, we know
2 that the Red Hill wasn't skid tested again by the
3 MTO. Do you know why that was?

4 A. After 2014?

5 Q. Yeah.

6 A. Frank Marciello and Bob
7 Gorman both left the Ministry, and so we didn't
8 actually have a friction operator, you know, until
9 we hired somebody again in 2016.

10 I don't know whether the
11 transition of lists of things to do from the first
12 person to the last person, I don't know, I really
13 can't say. I can just tell you that it was
14 Mr. Gorman and Mr. Marciello who were -- this was
15 their project and they both ended up retiring in
16 early 2015.

17 Q. And both 2015. Right?

18 A. Both of them in early
19 2015, yes.

20 Q. And Mr. Marciello, he had
21 been doing the skid testing for decades?

22 A. 30 years.

23 Q. Right. And these are not
24 in the OD, but if we could pull up, Registrar, two
25 documents, MTO38713 and 38714.

1 While he's doing that, you had
2 referenced, kind of, finding the replacement and
3 these are just the job competition documents.
4 There we go. So, in the first one, we have an
5 e-mail, I think it's March 4, 2016 about pavement
6 evaluation supervisor, and then the attachment is
7 the staffing approval form.

8 And is this what you were
9 referring to with respect to replacing
10 Mr. Marciello's position?

11 A. Exactly, yes.

12 Q. Okay.

13 A. This is the standard
14 procedure for trying to hire a new person. It's
15 challenging to hire.

16 Q. I understand. Are we
17 able to make it one exhibit, since we put them up
18 together, or do we need to make these two
19 exhibits? We probably have to do it as two. I
20 believe this is 45 and 46, so MT038713 would be
21 Exhibit 45 and 38714 would be Exhibit 46.

22 EXHIBIT NO. 45: E-mail
23 dated March 4, 2016 about
24 pavement evaluation
25 supervisor, MT038713.

1 EXHIBIT NO. 46: Staffing
2 approval form, MTO38714.

3 MR. LEWIS: You can take those
4 down, Registrar. Thank you.

5 BY MR. LEWIS:

6 Q. If we could go to
7 overview document 4, image 99. And paragraph 234
8 indicates that in August 2013, Demix, which had
9 been listed on the DSM, was removed and the
10 Varennes Quarry was removed from the DSM since
11 Dufferin and Varennes didn't pay the yearly fee
12 for 2015 and opted to be removed from the list in
13 2016.

14 Can you describe when you
15 became aware of this?

16 A. Yes. I became aware in
17 2019, so it was when the news about the Red Hill
18 parkway was in the news and we were asked, like,
19 did we have any friction testing, and we said yes,
20 we did and we had used it to pre-qualify this mix
21 for posting on our DSM. And then we went to show
22 the DSM and they weren't there. That's when I
23 found out about it.

24 Q. Okay. And we will talk
25 about your activities in early 2019 --

1 A. Sure.

2 Q. -- in a few minutes, but
3 that's what you're talking about, after the news
4 of the Red Hill and the issues that the inquiry
5 were convened for hit the public?

6 A. Right.

7 Q. Sorry, give me one
8 second. And if we could go to --

9 A. I just want to clarify
10 just for people's understanding that, like, the
11 DSM, although the Ministry is responsible for the
12 actual technical part of the DSM, the road
13 authority is an organization that maintains the
14 DSM and that's a separate organization and you
15 have to pay a yearly fee to maintain your product
16 on the DSM. You pay that fee to the road
17 authority. So, they didn't pay their fee, the
18 road authority would remove them.

19 I think earlier when I
20 mentioned, like, is there would be a lot of
21 consideration from a Ministry's perspective about
22 removing a product from the DSM, we would look at
23 all the aggregates, we would do all the analysis.
24 The road authority goes, you don't pay, we're
25 removing you from the DSM. So, I just want to

1 clarify that that's a different --

2 Q. You have to pay a fee

3 or --

4 A. You have to pay a fee

5 or --

6 Q. -- you would be removed?

7 A. Yes.

8 Q. If we could go to

9 MT038646, this is an e-mail exchange we just
10 referenced in the paragraph we were just looking
11 at from February 14, 2019 and you're communicating
12 with Joel Magnan?

13 A. Yes. Joel is the head of
14 the soils and aggregates section.

15 Q. Did he replace Mr. Senior
16 after Mr. Senior left?

17 A. Yes, he did.

18 Q. Okay. And we see below
19 there is some communication in French between
20 Mr. Magnan and a Marie-Josée Gohier talking about
21 Demix aggregates and she's at Demix, as you can
22 see from her signature line there.

23 And then in the middle there,
24 Mr. Magnan, on February 14, explains to you:

25 "Just received the

1 response from Demix
2 Varennes. They removed
3 themselves from the DSM
4 as a business decision,
5 since they never sell
6 aggregate originating
7 from Montreal and other
8 areas to Ontario."

9 Am I correct you asked him to
10 look into this, Mr. Magnan, in February 2019 and
11 that's what he did and that's what he reported
12 back?

13 A. Yeah, because he's the
14 head of soils and aggregates section in this time
15 frame, so it was about testing of the aggregate,
16 you know, the DSM list and, lo and behold, I went
17 over to ask them, like, you know, for the DSM list
18 so that we could show it was on the DSM list, and
19 when it went there I asked him, like, why isn't it
20 there? And, you know, nobody knew, so that's why
21 he followed up with them and that's the answer we
22 got back.

23 Q. I see.

24 A. They didn't want to pay,
25 they didn't pay, and therefore they were removed

1 from the list.

2 Q. Right. Okay. Sorry,
3 when you were conducting your enquiries as to
4 these events in February 2019, you had assumed
5 that they were still on the DSM because they had
6 been previously --

7 A. I --

8 Q. And you made your
9 enquiries and found out, oh, they're not?

10 A. Right.

11 Q. Okay. Thank you. Okay.
12 If we could go to overview document 7 now,
13 different overview document, different topic, and
14 if we could go to image 107 and 108. And so, I
15 just want to take a couple of communications here
16 and then we'll ask you some questions to place it
17 first.

18 Beginning at paragraph 337 in
19 overview document 7, the first thing is on
20 January 22, 2016, so now we're in 2016, we've
21 jumped back and forth through time and now we're
22 in 2016, at 2:13 p.m., Matthew Van Dongen,
23 reporter from the Hamilton Spectator, e-mailed
24 Astrid Poesi, communications coordinator,
25 communications branch at the MTO, and he wrote:

1 "So, here is an odd
2 question: Has the MTO
3 ever conducted friction
4 testing on the Red Hill
5 Valley Parkway? I know
6 it is owned by the City
7 of Hamilton. But I was
8 contacted recently by a
9 self-identified retired
10 engineer who suggested
11 the Ministry has always
12 been interested in the
13 parkway's performance; he
14 believed the MTO has
15 conducted friction tests
16 periodically over the
17 years."

18 So, that's the first thing. I
19 want to skip over 338 for a second because that's
20 a few days later.

21 If we go to paragraph 339, and
22 so on January 22 still, the same day as
23 Mr. Van Dongen's enquiry, at 10:55 p.m. you
24 e-mailed Dr. Uzarowski under the subject line "Red
25 Hill Valley Parkway" and wrote:

1 "I received a strange
2 media request about
3 performance of the Red
4 Hill Valley Parkway. Do
5 you keep in touch with
6 Hamilton on that project?
7 Are you aware of any
8 performance issues?
9 Perhaps there was an
10 asphalt cement cracking
11 issue. I am in the dark
12 on this one."

13 And then at 3:40, the next
14 one, you can see that on January 25, so three days
15 later, at 12:26 p.m., Dr. Uzarowski forwarded your
16 e-mail to Mr. Moore indicating that he had
17 received it the previous Friday, so I guess that
18 was late in the night on Friday when you sent your
19 e-mail, 10:55 p.m. And it says:

20 "It was onsite and was
21 not able to pass it to
22 you immediately.
23 Obviously she does not
24 know anything about any
25 issues."

1 And so, then do you recall
2 whether, when you e-mailed Dr. Uzarowski, whether
3 you were responding to the same media request as
4 had come in earlier that day from Mr. Van Dongen?
5 Do you know?

6 A. So, that seems likely. I
7 have to admit that seems likely.

8 Q. Okay. And you say seems
9 likely but you don't specifically recall. Is that
10 right?

11 A. Well --

12 Q. Or you do?

13 A. No. I mean, it seems
14 like this would be the same request, yes.

15 Q. Okay. And we do see that
16 in paragraph 338 on January 25 there are
17 communications about the response to the
18 Spectator's enquiry indicating:

19 "FYI, we will provide to
20 Hamilton Spec on friction
21 testing. Thanks."

22 Then at the top of image 108
23 there's the proposed response. And you were
24 actually sent that. If we could go to the
25 reference document there, MT038342, you'll see

1 that it gets that draft response to the Spectator
2 is sent to you by Claudette Miscione on -- well,
3 that's in 2020 actually.

4 So, at the time, the lower
5 e-mail, you weren't -- in 2016, March 25, I don't
6 think you were copied on that e-mail?

7 A. So, this 2020 one was
8 when we were gathering the data to send in, like,
9 for the inquiry and that's how I submitted this to
10 you. Claudette sent it to me and I submitted it
11 to you.

12 Q. But at the time, it
13 appears that you weren't, but nonetheless, you
14 think that it was the same request?

15 A. Yes.

16 Q. Okay. Did you get a
17 phone call or was it actually the e-mail request
18 that you were contacting Dr. Uzarowski over?

19 A. Oh, no. I wouldn't get
20 the phone call.

21 Q. Okay.

22 A. They go straight through
23 our media people.

24 Q. Okay. Right. That just
25 is a matter of course?

1 A. Oh, yeah. That's the
2 protocol.

3 Q. Okay.

4 A. If somebody called me
5 directly, I would direct them to our media people.
6 That's the normal protocol.

7 Q. All right. Now, if you
8 could take that down and go back to the overview
9 documents there, Registrar, that 107 and 108.
10 Thank you.

11 Now, in your e-mail to
12 Dr. Uzarowski, though, in paragraph 339, you refer
13 to it as a strange media request about performance
14 of the Red Hill Valley Parkway and you say, "I
15 received it." And you ask that he keeps in touch
16 with Hamilton:

17 "Are you aware of any
18 performance issues?

19 Perhaps there's an
20 asphalt cement issue.

21 I'm in the dark on this
22 one."

23 So, first of all, do you
24 recall why you referred to it as strange?

25 A. So, I have to admit it's

1 not a very well written e-mail, but it was Friday
2 night at 10:55 p.m., so you have to cut me a bit
3 of slack.

4 So, what I would say is, I
5 mean, looking at the request now, so it is kind of
6 a strange e-mail because it's saying that a
7 self-identified retired engineer has contacted
8 Matthew Van Dongen to say MTO has always been
9 interested in the parkway's performance, so, you
10 know, it is kind of a strange question. Right?

11 So, then asking about the
12 friction testing, which we did do. Right? So,
13 you know, in light of the fact that, as you know,
14 it's not like we broadly share friction data.
15 It's something that we don't broadly share. From
16 that perspective, it's kind of an odd question.
17 Like, who is this self-identified retired engineer
18 and what are they getting at? You know what I
19 mean? I don't know. I still think it's strange.

20 So then, like I said, my
21 contact is Dr. Uzarowski. I reached out to him,
22 granted, with this somewhat incoherent e-mail at
23 10:55 p.m. --

24 Q. I wonder -- sorry, go
25 ahead.

1 A. No. I was going to say,
2 I mean, this looks like I'm fishing to know if
3 there's any concerns. Right?

4 Q. Okay.

5 A. Do you know of any
6 concerns?

7 Q. Okay.

8 A. Are you keeping in touch
9 with them?

10 Q. I'm wondering is it
11 possible you were out of the -- I'm just looking
12 at it now because Dr. Uzarowski's response, he
13 refers to it coming from you on Friday afternoon,
14 so I'm wondering if there was a time change issue
15 there. Were you maybe -- I'm just thinking about
16 the time, now that we see that.

17 A. I don't know.

18 Q. Okay. That's fine. And
19 then it's not in the overview document. If we
20 could go to Golder 2915, which is Exhibit 25. I
21 believe it's Exhibit 25. There we go. So, this
22 is a little small. Could you go to the second --
23 pull up this image and the second image, please,
24 and then we'll expand. There we go.

25 So, on the second image there,

1 we see your original e-mail on January 22 to
2 Dr. Uzarowski. And then Dr. Uzarowski responds.
3 If you could expand the bottom e-mail on image 1,
4 so he responds:

5 "Thanks for your e-mail.
6 I will talk to the City.
7 There are short deeps and
8 surface cracking."

9 And then he goes on to discuss
10 whether the cracking is related to asphalt cement
11 and where the asphalt cement came from.

12 And then if you take that down
13 and maybe just expand all the e-mails, the rest of
14 the e-mails. No, on image 1. Yes, from there
15 down to just before the one we were looking at.
16 Yeah.

17 So, you respond to him:

18 "Do you have Gary Moore's
19 phone number? I think I
20 should give him a call."

21 And he gives you Gary's phone
22 number but says he's already passed your e-mail to
23 Gary and will call him after lunch.

24 A couple of things. Do you
25 recall if you contacted Gary Moore?

1 A. I don't recall. I don't
2 think I did. And the reason I say that is because
3 Ludomir says he's going to call him. Like I said,
4 this is Hamilton's roadway, Gary Moore and Ludomir
5 working together. Like, I feel like I would be,
6 like, overstepping. If he's saying he'll call
7 him, then he's going to follow up.

8 Q. Okay. And what were you
9 thinking that you would contact Mr. Moore about?

10 A. To ask him if there's
11 anything going on on the parkway, you know. Is
12 there any performance issues?

13 Q. Okay. And what's the
14 discussion about asphalt cracking and so forth?
15 Is it something that you --

16 A. So, Ludomir and I were
17 working very closely together with a number of
18 other people on an asphalt cement cracking issue,
19 which had to do with a lot of the asphalt that was
20 performing badly was 64 minus 28 graded asphalt.
21 And, you know, at the time, that's what we were
22 talking about and --

23 Q. That's the asphalt
24 cement. Right? That's the asphalt cement?

25 A. Yeah. The short story is

1 we had a perpetual pavement, too, that was built
2 at about the same time, so the Red Hill Valley
3 Parkway was a perpetual pavement. We also had a
4 perpetual pavement built on the 406 around the
5 same time and, you know, we're expecting all these
6 great things and then unfortunately hadn't been
7 thinking about the early asphalt cracking issue,
8 which was happening about that time, where there
9 were asphalt cements that were being modified.
10 This is a whole other story. But anyway, the
11 asphalt cements were being modified with recycled
12 engine oils and it was causing them to become
13 brittle and crack, and so there's a whole huge
14 chapter of my career which was all about trying to
15 address that early asphalt cracking problem.

16 And so, that was part of why I
17 stuck in there about is there an early asphalt
18 cracking issue, because, you know -- and then his
19 reply suggests that there was. Right?

20 Q. I see. Because you had,
21 amongst others, been working with him on that
22 issue about the MTO?

23 A. Very closely and for
24 several years exclusively on this very important
25 issue, so yeah, it was very consuming.

1 Q. Okay. And, at that
2 point, because you mentioned contacting Gary
3 Moore, how did you know Mr. Moore? Had you dealt
4 with him directly?

5 A. So, you know, I would
6 know of him, you know. Like, I didn't have a
7 relationship with him like I had with Ludomir, so
8 I would know of him, I would see him at a
9 conference, like, the Hot Mix Producers
10 conference. I don't know. Something like that.
11 Like, I just knew of him more than anything else.

12 Q. Okay. And I'm wondering
13 is it possible that this relates back to the
14 November 15 e-mails, the 2010 e-mails, and your
15 communication with Dr. Uzarowski at the time about
16 getting a City of Hamilton contact? Is there any
17 relationship to that?

18 A. Anything is possible.

19 Q. Okay, but you don't have
20 any recollection of that being the case one way or
21 the other. Is that fair?

22 A. Exactly. I mean, I
23 really don't remember.

24 Q. All right. If we go to
25 Golder 2912, and this e-mail isn't in the overview

1 document but if you could just, Registrar, expand
2 the top two e-mails. And this is another response
3 from Dr. Uzarowski -- actually, sorry. Can you
4 take that down for a second? I might have missed
5 what it's responding to. Yeah, it's just your --
6 again, he's responding at a later point to your
7 original e-mail from the 22nd about the strange
8 media request. Okay, thank you. If you could
9 bring that up again, Registrar. He indicates that
10 he will talk to the City as we just discussed that
11 part. And then you respond:

12 "I don't know what the
13 media are fishing for,
14 but certainly MTO is not
15 aware of any issues."

16 And I think before you
17 referred to fishing, but I took you as meaning --
18 in your testimony a few minutes ago you talked
19 about fishing, but I think you were talking about
20 fishing with the City. Is that why you would want
21 to talk to Mr. Moore? Is that right?

22 A. Well, yes, but I was
23 actually referring to fishing with Ludomir from
24 the e-mail that I sent to Ludomir looks like I was
25 fishing, like not wanting to gossip or spread

1 rumours or anything like that. Right? If we he
2 had any information to offer up to me, I was
3 fishing for that. That's what it looks like.
4 Again, the word "fishing" is used there, but I
5 guess everybody feels that when they get a call
6 from the media, it's because the media are looking
7 for a story. I mean, they don't call you for no
8 other reason other than they're looking for a
9 story, so --

10 Q. Of course. And at this
11 point, given that the request we were talking
12 about was specifically around friction test
13 issues, did you consider talking to Dr. Uzarowski
14 about the skid testing that the MTO had done?

15 A. So, I remember that we
16 didn't discuss the skid testing. And, again, the
17 reason is, you know, I know that we ended up
18 talking about the asphalt cement. Right? So --

19 Q. Did you have an actual
20 discussion on the phone with him or is it just the
21 e-mails?

22 A. Well, I mean, I can
23 remember talking with him about the asphalt
24 cement. Whether it was precisely the same chain
25 of events or whether it was this triggered me to

1 follow up with him about asphalt cement later, you
2 know, I know we were writing a paper about how our
3 perpetual pavement performed, so I can't tie it
4 specifically to this, but I know I did follow up
5 with him to talk about the asphalt cement.

6 Q. Okay. Right. But
7 potentially not in relation to the media request.
8 Is that right?

9 A. Right.

10 Q. Okay. Just give me one
11 moment. Could we make that an exhibit,
12 Commissioner? It would be 47. This is the e-mail
13 that we have up on the screen, GOL2912. That
14 would be 47.

15 THE REGISTRAR: Noted,
16 counsel.

17 MR. LEWIS: Thank you,
18 Registrar.

19 EXHIBIT NO. 47: E-mail
20 response from
21 Dr. Uzarowski to Becca
22 Lane, GOL2912.

23 MR. LEWIS: You can take that
24 down, please.

25 BY MR. LEWIS:

1 Q. And the last area I would
2 like to cover with you is the communications and
3 involvement with the City of Hamilton in 2019 that
4 you have already -- the purpose of the Demix not
5 paying their fee and being delisted from the DSM
6 you already alluded to.

7 So, as I understand it, once
8 news about the matters giving rise to this inquiry
9 came out, that you became involved in working with
10 and communicating with the City of Hamilton at
11 that time. Is that correct?

12 A. Yes.

13 Q. Okay. And could you just
14 describe how and why you became involved at that
15 time?

16 A. I think the item, the
17 news item, of interest was MTO had done friction
18 testing, so they contacted us to say, have you
19 done friction testing? So, we said, yes, we have,
20 and we shared the results with them. They had a
21 copy of the friction report from 2007.

22 Q. So, if we could go to
23 overview document 10 and images 87 and 88, please.
24 So, just to place it in time, in paragraph 218,
25 February 1, 2019, Edward Soldo of the City

1 e-mailed Kevin Bentley, who was the executive
2 director and chief engineer of the highway
3 standards branch and under the subject line
4 "Pavement Friction" copying Mr. McGuire at the
5 City. And he asks, you see at the top of 88 in
6 the second paragraph:

7 "Do you have a person the
8 City can contact
9 regarding pavement
10 friction testing and
11 anticipated values for
12 SMA pavements and we
13 would like to see what
14 data the MTO has in this
15 area."

16 And then there's a followup in
17 the next paragraph. Mr. Soldo e-mails Mr. Bentley
18 again on February 11:

19 "Just following up on my
20 earlier e-mail. Was
21 wondering if you could
22 give me a call."

23 And so, Mr. Bentley -- at that
24 point in time you're the manager of MERO. Right?

25 A. Yeah.

1 Q. And still in that role at
2 the time. And what was your relationship and
3 reporting to Mr. Bentley. Did you report to him?

4 A. Not directly but
5 indirectly, yes. So, I reported to the director
6 and he was the executive director chief engineer,
7 so I reported to the director and then the
8 director reports to the executive director.

9 Q. And sorry, your direct
10 report was who?

11 A. Dino Bagnariol.

12 Q. Okay.

13 A. Actually, I'm sorry. I
14 just read the e-mail. It was Dan Remollino.

15 Q. Dan Remollino, okay.

16 A. Sorry, yes. Dino had
17 retired and it was Dan Remollino.

18 Q. Okay. And if we keep
19 image 88 and pull up 89 as well, please. We see
20 in paragraph 220 you were involved in developing a
21 response to a press enquiry from CHCH News in
22 Hamilton. Do you recall that?

23 A. Yeah.

24 Q. Okay. And then if we
25 keep up 89 and go to image 90, this is in

1 paragraph 225, still on February 12, Mr. Bentley
2 replied to Mr. Soldo's e-mail from the prior day
3 and he sends him the MTO's skid test results and
4 copying you and indicates that he CC'd Becca Lane
5 if you have any questions about the testing.

6 And then a number of things
7 happen after that. But generally speaking, what
8 was going on at that point and how did you get
9 involved?

10 A. Well, I got involved
11 because the initial question was had MTO done any
12 testing and Stephen Lee was the head of pavements
13 and foundations section and he said, no, we had
14 never done any testing on the Red Hill Valley
15 Parkway. And I said yes, we have, so it's my own
16 fault for having a good memory.

17 So, the short story is as the
18 manager of MERO, I sort of became that, you know,
19 everything goes up through the chain of command,
20 so, you know, Stephen Lee to Becca to Dan to
21 Kevin. That's normal. That's the normal
22 procedure.

23 Q. And then if we could go
24 to image 94 and paragraph 236, on February 13,
25 Mr. Bentley e-mailed Mr. Soldo again attaching the

1 underlying data for the friction testing, graphs
2 that he had previously sent before and the SMA,
3 one page for the SMA mix design.

4 So, was this information that
5 you had obtained from your enquiries?

6 A. So, you mean my enquiries
7 of staff?

8 Q. Yeah, internally at the
9 MTO.

10 A. Yeah. Yeah, exactly.

11 Q. Okay.

12 A. So, for example, you
13 know, we started to look for information. They
14 were asking specifically what else do you have? I
15 can't remember what the question is. Anyway, and
16 so I went to the bituminous section because they
17 were asking about the SMA mix and they had --
18 Heather pulled up Anil Virani's old files from
19 when he retired and in that they found the SMA mix
20 design.

21 Q. Okay, so is that Heather
22 Bell?

23 A. Yes, it is.

24 Q. Okay. And so, if we
25 could go to that. It's the second attachment to

1 Mr. Bentley's e-mail. It's HAM54586. Sorry, it's
2 the wrong one. Bear with me. That's the test
3 results. One moment. Try 54587. I'm pretty sure
4 that's the right one. Yes.

5 So, that's the mix design.

6 So, you talked to Heather Bell in the bituminous
7 section and Heather then went and looked at both
8 files and found this in Anil Virani's file. Is
9 that right?

10 A. Yeah. I went over to the
11 bituminous section, like, not just Heather, I
12 asked everybody, to see what they could dig up and
13 then they still had -- Heather had taken on Anil's
14 role, so when Anil retired, Heather got Anil's job
15 and he had given her his files on a stick. Right?
16 And so, she was able to go through it and find
17 this mix design and she sent it to me and I sent
18 it in.

19 Q. I see. And was
20 Mr. Virani, was he on the SMA task group back
21 then?

22 A. Yes, he was.

23 Q. Do you know how
24 Mr. Virani got this? Do you have any insight into
25 that at all?

1 A. No, I don't.

2 Q. Okay. Thank you. And
3 then if we could take that down, Registrar, and
4 pull up the native of the other attachment to
5 Mr. Bentley's February 13 e-mail, which is
6 HAM54586, the native.

7 And so, this is the detailed
8 underlying data from the Red Hill testing, as I
9 understand it, from 2008 through to 2014. Is that
10 right? Except 2013 when it wasn't conducted, of
11 course.

12 A. Yes.

13 Q. Okay. And if we could go
14 to the second tab, I just have a couple questions
15 on these, second tab, Test Data. And this appears
16 to -- if we could go up to the top. Thank you.
17 No, they're all there. Sorry, this has the
18 location, speed, all the underlying data. If
19 appears though, if you scroll down, Registrar,
20 that there's only GPS data for that 2014 results.
21 Scroll up a little bit. Do you see that 2012
22 doesn't have the GPS information. Do you have any
23 idea why that is?

24 A. It's likely that we got a
25 new trailer and it had a GPS on it. I couldn't

1 100 percent say that, but I remember we did get a
2 new friction trailer and I remember that we were
3 obviously trying to get a GPS. It's a new
4 technology, ha-ha, so obviously we wanted to be
5 able to have GPS data. So, I can remember a
6 discussion around making sure we had GPS data.
7 That's the only thing.

8 Q. Okay. So, that may have
9 been the time --

10 A. Yeah.

11 Q. I think we'll hear it's
12 the same trailer, but it may be that GPS was
13 affixed to it at that point, is I guess the
14 possibility?

15 A. Probably.

16 Q. Okay. Thank you. And
17 then the next tab is the report. I just have one
18 question. I mean, the date on this, you'll see,
19 is on the top part, is 7/23/2014, so that's the
20 date three of the lanes were tested in 2014 on the
21 Red Hill. At the top, it says "Pavement Friction
22 Survey 2018," which do you have any knowledge of
23 how that date came to be there?

24 A. No. I mean, that's a
25 typo.

1 Q. All right. If we could
2 go back to overview document 10 and image 94 and
3 image 95, please. And, in paragraph 237, which
4 runs on to the following image, Mr. Bentley
5 e-mailed Mr. Soldo again on February 13
6 describing, as he said:

7 "From what we have been
8 able to determine so
9 far..."

10 And indicates:

11 "In 2007 some concerns
12 had been identified in
13 the province with the
14 initial friction
15 qualities of the SMA mix
16 given the higher levels
17 of AC. As a result, at
18 the request of City, the
19 2007 testing of a
20 four-kilometre section
21 that was constructed, SMA
22 was completed by the MTO
23 and results shared with
24 the City. No concerns
25 were identified with the

1 initial friction
2 qualities. The 2008 to
3 2014 testing for the same
4 four kilometre section
5 was completed to evaluate
6 the acceptability of the
7 stone used and the
8 asphalt potentially used
9 on provincial highways.
10 Based on a preliminary
11 review of the MTO's
12 records and based upon
13 the intend purpose of
14 this testing, it would
15 appear that these results
16 were not shared with the
17 City."

18 And am I correct again this is
19 sort of the product of what you had been making
20 enquiries about up until that point? Is that
21 correct?

22 A. I'm not sure what you
23 mean by product. The 2008 to --

24 Q. No. Mr. Bentley's
25 e-mail, that's based upon the information from you

1 as a result of your enquiries with staff. Yes?

2 A. Yes.

3 Q. Okay. And did you, at
4 that time, consider or even think about your
5 discussion you had had with Dr. Uzarowski back in
6 November of 2010?

7 A. No.

8 Q. Did you even recall that
9 at the time?

10 A. No.

11 Q. Okay. Then just to loop
12 it out, we see that in paragraph 238 is the
13 reference to the e-mail of you reporting on
14 Mr. Magnan's enquiries about -- sorry, Mr. Magnan
15 e-mailing you about his enquiries about Demix that
16 we already talked about, just to place that in
17 time.

18 A. Right.

19 Q. Okay. And there's also
20 at paragraph -- if we could go to image 97 and
21 paragraph 243, on February 25, Mr. Bentley e-mails
22 Mr. Soldo and he copies you writing:

23 "I've CC'd Becca to allow
24 you to arrange a meeting
25 with her and her staff."

1 And then, if we go to
2 image 100, in paragraphs 252 to 255, first in 252,
3 Mr. McGuire, on February 26, e-mails Mr. Bentley
4 about the friction test data and he is looking to
5 understand the information and asks for the limits
6 of the testing and you reply, if you look at
7 tab 2, it's labelled Test Data and then he asked
8 to call you for a bit of clarity and you arrange a
9 call with him.

10 A. Is that all I said, if
11 you look at tab 2, it's test data?

12 Q. That's what -- we can go
13 to that, 272. If we could go to HAM29030.

14 A. Okay, so thank you. I
15 was a little worried there that I hadn't explained
16 it better than that.

17 Q. Yeah, and that's a fair
18 point. If we could pull up both images or the
19 first two images. There we go it's labelled Test
20 Data and you give him an example of it?

21 A. Yeah.

22 Q. And you're showing the
23 data from --

24 A. Northbound, from the CNR
25 structure to Greenhill, exactly like that. And

1 where the data is and where it starts from, so
2 basically explaining to him how to read the data.

3 Q. No, that's absolutely --

4 A. I just didn't want you to
5 think that I just said, look it up, it's labelled
6 test data.

7 Q. I wasn't suggesting that,
8 but it's perfectly appropriate for you to point
9 out that you provided more detail, so thank you
10 for doing that.

11 And if we could go back, then,
12 to image 100, and so it indicates that you arrange
13 a call for 3:15 on that day, on March 1. Do you
14 recall that discussion with Mr. McGuire?

15 A. I do recall a discussion.
16 I think it was with Mr. McGuire, yes.

17 Q. Okay. And can you
18 explain what you discussed in that call?

19 A. So, Mr. McGuire was
20 asking about the numbers and what they meant and,
21 you know, I was explaining to him exactly all of
22 the things that I've been explaining the past day,
23 like, that, you know, it's not just about the
24 number, that they need to know from an engineering
25 perspective what the friction demand on their

1 roadway is and it's about all the other things,
2 like the traffic volumes and the speed and the
3 geometry and the grade and the sight lines and all
4 of those other things. I explained that and I
5 said, you know, so there isn't a number that goes
6 from good to bad. It's about the whole picture
7 and how it contributes. And I know it's
8 frustrating because people are looking for this
9 magic number and I explained to him that there is
10 no magic number that goes from the road is
11 excellent to the road is terrible. It's all of
12 these different factors. That's what I explained
13 to him.

14 Q. Okay. So, a couple of
15 things. Was it the results throughout that you
16 were discussing with him, all of the testing?

17 A. We weren't actually
18 looking at the data, so I just remember that he
19 was looking for is there some kind of number that,
20 you know, triggers something. Right? That's what
21 he was asking for and that's why I was giving that
22 explanation.

23 Q. Sorry, did he
24 specifically raise FN30 or did you raise that?

25 A. We talked about FN30,

1 yes.

2 Q. Do you recall who raised
3 that?

4 A. I believe it was probably
5 me, yeah.

6 Q. Okay. Because you're
7 talking about, as you said, there's no magic
8 number, but nonetheless, there is a number?

9 A. No, no. Actually, no. I
10 remember specifically saying there isn't a number.
11 I said, people will like to float this number 30
12 out there, but let me explain to you why you can't
13 do that. So, I specifically remember saying it's
14 not 30. That's what I -- you know, that that
15 number is out there floating in the air, I don't
16 know what to say, but that we don't rely on that
17 number and that it's just all of those other
18 things and it's not the number 30. That is
19 specifically what I remember telling him.

20 Q. Okay. But I want to be
21 fair about your evidence. You've been very clear
22 in explaining that it's not just about FN30 and
23 that there are all these other factors, but at the
24 same time, I think you've been clear that FN30 is
25 used by the MTO as a -- whether it's a guide or a

1 desirable number or so forth, at which point an
2 investigation, as you described, can be triggered.

3 So, are those things that you
4 discussed with him or no?

5 A. No. I specifically said
6 it wasn't a number that would automatically
7 trigger anything.

8 Q. Not automatic -- okay,
9 not automatically trigger. Did you say that it is
10 a number that may, depending on the circumstances,
11 trigger an investigation?

12 A. No, I didn't. I
13 specifically remember saying to him that it wasn't
14 that. So, you know, he was asking me, like, is
15 there a number that, you know -- and I was saying,
16 well, there's a number out there that everybody
17 wants to talk about, the number 30, but that is
18 not -- there is no golden number for us. Like, we
19 have, as I've been trying to say, we've been very
20 clear that we -- there are so many other factors
21 and aspects to this that there is no magical
22 number that changes the pavement from being good
23 to being fair or whatever. Right? There is no
24 magical number.

25 So, I explained that to him,

1 that it would be all dependent on the actual
2 frictional demand and needs of the highway and
3 that I understood that that's frustrating but
4 that's the way it really was, and that is the way
5 it really is, even though you're right, we see the
6 number 30 all over the place, but I'm just
7 explaining how it's really used.

8 Q. Okay. And you had said
9 earlier about it being frustrating and I was going
10 to ask you were you saying that people generally
11 think that but do I understand you now to be
12 saying you expressed that to Mr. McGuire?

13 A. Yeah.

14 Q. That you understand it's
15 frustrating but?

16 A. Well, you know, people
17 are looking for a simple answer. Right? That's
18 not a simple answer.

19 Q. Okay. And, sorry, was it
20 your sense that he was aware of FN30, whatever it
21 meant, prior to the call or no?

22 A. No. I think he was
23 asking me if there was a number like that.

24 Q. Okay. And had you, at
25 that point in time, ever driven on the Red Hill

1 Valley Parkway?

2 A. No, I haven't. I've
3 never driven on it.

4 Q. Sorry, is that still the
5 case?

6 A. It's still the case.

7 Q. Okay.

8 A. I just Googled it two
9 days ago to try and see if I could see it with
10 Google, the little Google man.

11 Q. Okay. And did you have
12 any discussion in this call about the MTO doing
13 further skid testing on the Red Hill?

14 A. I don't remember if it
15 was in this call. I don't think it was, but it
16 could have been. I know that we did have
17 discussions with the City about could we go and do
18 some friction testing and we said we could, so I
19 don't know if it was specifically in this call or
20 in a later call, but I know that the Ministry was
21 willing to do friction testing and, in fact, I
22 believe we had a Minister statement out in the
23 world where the Minister said we would do anything
24 we could to assist, so definitely we were willing
25 to provide friction testing.

1 Q. Okay. And then if we
2 could go to images 169 and 170 and paragraph 44,
3 which straddles the two pages. On March 20,
4 Mr. McGuire e-mailed you under the subject line
5 "Follow Up With the City of Hamilton." He wrote:
6 "We talked last month on
7 the RHVP issue and I
8 wanted to say thanks. I
9 wondered if we could have
10 a conversation about the
11 potential to test our
12 facility again prior to
13 our resurfacing works."

14 Did you understand that as
15 reference to conducting the skid testing again?

16 A. Yes, yes.

17 Q. Okay. So, whether or not
18 you discussed it in that conversation on March 1,
19 it had been discussed obviously by this point.
20 Fair?

21 A. Yeah. I think this is
22 him bringing it up for the first time, so just
23 guessing, because he says I wonder if we could
24 have a conversation about the potential --

25 Q. So, this might have been

1 the first time it was brought up?

2 A. This might have been the
3 first time, yeah.

4 Q. Okay. He also then in
5 the next paragraph talks about the setting of LDs
6 for paving contracts. Do you know what that was
7 about?

8 A. So, he's talking about
9 liquidated damages and that is not my area of
10 expertise, so I sent him off to Doug Pateman, the
11 manager of the contract management office because
12 that's not my area of expertise, so I don't know
13 what --

14 Q. Does it have anything to
15 do with the Red Hill and the issues we've been
16 talking about?

17 A. I actually don't think it
18 does. I mean, I think it might have been
19 separately at the same time there was some kind of
20 audit going on at the City of Hamilton of their
21 paving practices and things like that, their
22 contracting practices, so I'm imagining that it
23 has something to do with that. It seems like
24 asking about liquidated damages for a paving
25 contract 12 years later wouldn't be appropriate.

1 Q. Right. Fair enough. And
2 then he asked to arrange a call in the next week
3 and, in paragraph 445, that's what you're
4 referring to. You indicate that you put him in
5 contact with Mr. Pateman and then you'll check
6 with staff about the friction testing because you
7 need some warmer weather?

8 A. Right.

9 Q. And then if we could keep
10 up 170, we can see in 446 and 447 there is a
11 meeting scheduled for April 2, which seems to have
12 been intended to involve Mr. Bentley, Mr. Soldo,
13 Mr. McGuire and you. And in the first paragraph
14 at 446 of Felicia Horinga's e-mail to Mr. Soldo,
15 she says:

16 "Kevin Bentley and Becca
17 Lane from the Ministry of
18 Transportation have asked
19 that I schedule a
20 30-minute meeting with
21 you about MTO undertaking
22 friction testing."

23 And asking for that next week
24 and it's scheduled for April 2. Do you recall
25 that meeting on April 2?

1 A. I don't specifically
2 recall the meeting, but, I mean, I expect that the
3 meeting was to offer up that we do friction
4 testing for them, because they had asked us to do
5 friction testing and we were willing to do it, so
6 I think that meeting was just to sit down and
7 offer up, coordinate, how we could do the friction
8 testing for them.

9 Q. Do you know that you
10 attended the meeting and you just don't recall it
11 or you don't even recall if you attended the
12 meeting?

13 A. Yeah. I mean, it's a
14 blur. I don't remember if I attended or not. I
15 do know that we didn't have reservations about
16 doing the friction testing. We had offered it up.
17 We had support from the Minister saying that we
18 could provide assistance, so, I mean, we were
19 willing to do the friction testing. I don't
20 recall the meeting specifically.

21 Q. Okay.

22 A. It couldn't have been
23 very long. A 30-minute meeting, yeah.

24 Q. Okay. And we know the
25 MTO did not conduct the testing. Do you recall

1 why that was? Was there a specific communication
2 where you were told that the MTO wasn't going to
3 be doing it or that the offer was declined?

4 A. I don't recall why. I
5 mean, maybe Mr. Soldo and Mr. McGuire can advise
6 why, but from my perspective we were ready and
7 willing to do that friction testing. We just had
8 to wait for the warmer weather because we didn't
9 want to -- like, our friction trailer goes into
10 storage over the winter because we don't want to
11 expose it to ice. Well, you can't test in the
12 cold anyway, but we don't expose it to winter
13 elements and salt and those kind of things, so it
14 would have been a matter of just getting it out of
15 storage so that we could do the testing for them,
16 possibly getting it calibrated, you know, I don't
17 know, something along those lines. That's what I
18 would think would be the only preconditions.

19 Q. Okay. But other than the
20 fact that you believe that the MTO was ready,
21 willing and able to conduct it, once the friction
22 trailer was ready to go, you don't recall anything
23 about why that didn't happen specifically?

24 A. I don't, no.

25 Q. Okay. Just give me one

1 moment, please. I went a little longer than I
2 thought, but I don't have any further questions.
3 It is 11:22, so I wonder, Commissioner, would this
4 be a good time for our morning break and I can
5 have just a discussion with participants' counsel
6 about their time estimates and Mr. Raymond?

7 JUSTICE WILTON-SIEGEL: That
8 will be fine. We'll take a little over 15 minutes
9 and come back at 20 to 12:00. We stand adjourned
10 until that time.

11 --- Recess taken at 11:22 a.m.

12 --- Upon resuming at 11:41 a.m.

13 MR. LEWIS: We're back
14 Commissioner. May we proceed?

15 JUSTICE WILTON-SIEGEL: Yes,
16 proceed.

17 MR. LEWIS: I consulted with
18 counsel for the participants about their
19 examinations and Mr. Chen will go first for the
20 City, followed by Ms. Roberts for Golder and then
21 I'm advised Dufferin does not have any questions
22 and then Ms. McIvor for the MTO will go last.

23 JUSTICE WILTON-SIEGEL: Okay.

24 MR. CHEN: Thank you,
25 Mr. Lewis. Good morning, Mr. Commissioner.

1 EXAMINATION BY MR. CHEN:

2 Q. Ms. Lane, I'm counsel for
3 the City of Hamilton and I just have a couple
4 questions for you.

5 So, to start, yesterday
6 Mr. Lewis asked you about, and I think maybe even
7 today, the circumstances where the MTO may conduct
8 friction testing for municipalities upon request.
9 Do you recall that discussion?

10 A. Yes.

11 Q. Perfect. And I
12 understand that the MTO doesn't have a written
13 policy on how to manage that type of request by
14 municipalities. You know, it depends on various
15 factors, like capacity. Is that right?

16 A. Correct.

17 Q. Mr. Registrar, if we
18 could bring up MTO7, images 2 and 3. So, it
19 starts just at the bottom left, which is MTO7,
20 image 2. There's an e-mail from Chris Raymond to
21 you on September 27, 2007 and then it kind of
22 spills over to the next page. And that's the
23 e-mail I just had a couple of questions for you.

24 And you can see the first
25 line:

1 "Can we please discuss
2 friction testing for the
3 City of Hamilton's
4 perpetual pavement?"

5 It goes on to say:

6 "Ludomir is requesting
7 friction testing..."

8 And we'll come back to that.

9 The third paragraph, and this is where I want to
10 start, says:

11 "The pros to conducting
12 the testing..."

13 And then you list three of
14 them. Can you just have a look at that? I just
15 want to take those one at a time and get your
16 view.

17 A. Okay. Sorry. The pros
18 to conducting the contesting are supporting
19 perpetual pavement research, so --

20 Q. So, the first one, I take
21 it you agree, Ms. Lane --

22 A. Sorry.

23 Q. -- that was one of the
24 pros, being to support perpetual pavement
25 research. Is that fair?

1 A. Yeah. So, perpetual
2 pavement was a brand new technology and, in fact,
3 we only have a handful of perpetual pavements in
4 the province and this was one of the very, very
5 first trials of perpetual pavement. So, yes, that
6 would be a pro.

7 Q. And then the second, if I
8 can paraphrase, they're going to build on the
9 MTO's SMA friction knowledge base. That's another
10 pro in favour of testing?

11 A. Yeah.

12 Q. Okay. And then the
13 third, which you raised yesterday, is general
14 public safety. I take it you agree that that's,
15 you know, another reason in favour of testing?

16 A. Yeah. There's a concern
17 about the early age friction on SMA pavements and
18 this was going to be an SMA pavement.

19 Q. Okay. More generally, is
20 the third reason, I'm just trying to understand
21 your evidence, that's consistent with your view
22 that if the friction test results come back and
23 they show any concerns, you would have relayed
24 those concerns to the City. Does that kind of
25 inform the aspect of general public safety?

1 A. Yeah. I'm sure if the
2 results had come back where there was a big
3 concern, that it would have been relayed to the
4 City, yes.

5 Q. And then next paragraph,
6 the cons, Chris says that, Chris Raymond says,
7 that there is no official request, which, again,
8 I'll come back to. And then the last one is, it
9 says, limited -- my video is blocking the words,
10 "limited resources," which you raised before, and
11 I take it you agree with that?

12 A. Yes, exactly. We have
13 only one friction trailer and one operator.

14 Q. Perfect. So, if we can
15 move now to the 2007 test results which, you know,
16 you discussed yesterday and I think may have come
17 up today again, do you recall that discussion?

18 A. Yes.

19 Q. And I think I have it
20 right, but your view on those results -- we can
21 take this, Mr. Registrar, document down. Your
22 evidence yesterday was that the 2007 results were
23 good results and that you were pleased with them.
24 Is that right?

25 A. Correct.

1 Q. And just applying what
2 you said before about the reasons we test, which
3 include I think the word "public safety," I take
4 it that if the results were concerning from a
5 safety perspective, you or someone else on behalf
6 of you at the MTO would have reached out to the
7 City at that time to express that concern?

8 A. That's right. So, we had
9 been seeing numbers in the less than 20 and in the
10 low 20s, and so these numbers were good.

11 Q. And just on those
12 numbers, you mentioned yesterday that you saw some
13 numbers in the teens?

14 A. Yes.

15 Q. And do you recall where
16 that was?

17 A. I don't recall where, but
18 I know that's what led to our initial results --
19 sorry. Our initial reaction to the SMA task
20 group, et cetera, so we got some numbers in the
21 teens and that's what led us to start up the SMA
22 task group in the first place.

23 Q. In terms of if there were
24 concerns and you would have reached out to the
25 City, in terms of what would be expressed to the

1 City, would the conversation have been something
2 like you explain the friction data and what it may
3 mean going forward?

4 A. I didn't have that
5 conversation with the City, so I don't know what
6 was said, and, you know, so I can't really
7 comment.

8 Q. Okay. I was trying to
9 get your view on if that is a conversation that
10 were to take place, what would be discussed?
11 Would there be recommendations or any of that sort
12 if there were, in fact, concerns?

13 A. So, if there had been
14 concerns, we would have relayed that those
15 friction numbers are typically something that are
16 of concern to the Ministry, if they had been very
17 low numbers.

18 Q. Okay. Would there be
19 anything more than that? Perhaps an explanation
20 of, you know, why it's concerning?

21 A. I can't speculate on what
22 it would be really.

23 Q. Okay. No, fair enough.
24 To your knowledge, just with respect to the 2007
25 results, no one else at the MTO who received these

1 results had any concern either, safety or
2 otherwise. Is that fair?

3 A. Yeah. It looks like, you
4 know, we were concerned about very low numbers and
5 these numbers came in and we thought they were
6 good. I can't -- you know.

7 Q. Okay. Thank you.

8 A. I think one of the
9 things -- I mean, one of the things, if you look
10 at all of the documentation from the SMA task
11 group, it was all about what can we do to bring
12 those numbers up to 30? So, it was, like, you
13 know, we're concerned about the early age
14 friction, you know, we're going to, you know,
15 check what that early age number is, you know, and
16 then if we find it's low, we're going to, you
17 know, reduce the speed limit or we're going to
18 post slippery when wet signs and we'll take them
19 down when it achieves a number of 30. So, 30 was
20 sort of the target of acceptability that everybody
21 was aiming for with the SMA task group and it's in
22 all of the documentation for that.

23 Q. Right. And you kind of
24 jumped ahead of where I wanted to go, but since
25 you brought it up, let me ask you now. So, we

1 know that the 2007 Red Hill numbers, you know, had
2 an average, you know, above 30 and the early age
3 low friction numbers that the task group looked at
4 were in the low 20s.

5 So, is it fair to say that
6 when we think of the early age low friction issue,
7 what we're really talking about are roadways that,
8 you know, are in the low 20s, maybe even the
9 teens? That's kind of the focus of how we would
10 define, you know, the early age low friction
11 issue?

12 A. Yes, it is.

13 Q. Okay. And just so I
14 understand, if a road had, you know, early age
15 friction figures in the high 40s, for example,
16 which might be, I don't know, an extreme example,
17 that's not, you know, it wouldn't be associated
18 with early age low friction?

19 A. Correct.

20 Q. Okay. Just going back to
21 our discussion before we veered off into what
22 early age low friction is. After you discussed
23 the 2007 results with Mr. Lewis, at some point you
24 went on to look at or talk about the friction
25 testing that took place in 2008 to 2014.

1 And, again, I think the answer
2 is implied from your action in response to the
3 2010 testing, but if any of the testing results
4 from after 2007 were concerning to you and raised
5 potential issues, safety or otherwise, you again
6 would have told or advised the City or its
7 representatives of the concerns that you had. Is
8 that fair?

9 A. Yeah. So, that's why in
10 2010 I reached out to get a number to contact the
11 City to let them know that we had seen the
12 pavement numbers, friction numbers, dropping.

13 Q. Right. Okay. And the
14 2010 numbers that triggered you to call Ludomir, I
15 think we've established that had you actually seen
16 the correct numbers, you would not have called
17 because the dip or the big drop that triggered you
18 to call Ludomir, you know, wouldn't have been
19 there. Is that fair?

20 A. Right. What triggered me
21 and the concern was that it was quite a large
22 drop. I thought it was 6.6, quite a large drop in
23 the friction value, and that made me concerned.
24 So, because we didn't have a lot of data and we
25 saw this sort of rapid drop, I was concerned about

1 where those numbers were going, so, you know,
2 that's why I thought it would be important to
3 contact the City.

4 Q. Okay. And so, outside of
5 the erroneous 2010 numbers, looking at the results
6 from 2008 to 2014, I take it there was no concern
7 or no need to call the City about those results
8 because they were acceptable?

9 A. Well, I'm imagining we've
10 already called the City about the 2010 results,
11 you know, so I'm not going to call them every
12 year. But the numbers are still falling in our
13 acceptable range and look to me to be levelling
14 off. And we were, you know, like I mentioned, we
15 were confident in the aggregate itself as being a
16 good quality aggregate and although they weren't
17 ideal numbers, they were still considered
18 acceptable.

19 Q. Right. And just with
20 respect to the call to Ludomir asking for a
21 contact at the City, am I correct that your
22 evidence was you have no recollection of actually
23 calling someone at the City?

24 A. Yeah. So, my
25 recollection is -- I don't have a memory of

1 calling them, but I guess what I would say is that
2 that was my intent to do and, you know, knowing my
3 own professional work ethic or whatever, I feel
4 certain that I would have done it. And then I was
5 pleased to see that I did have that confirmation
6 that I reached out to Ludomir. So, to me, that's,
7 you know, showing that I did in fact reach out and
8 let them know about the declining friction
9 numbers.

10 Q. So, I appreciate this was
11 a long time and assuming you did call the City and
12 you raised the concern, would it also make sense
13 to you, based on your work ethic, that you would
14 have, you know, after learning about the error in
15 2010, corrected what you may have said to the City
16 afterwards?

17 A. No, I don't think so.

18 Q. So, if you have no
19 recollection of, you know, correcting the
20 information that you gave, would that suggest to
21 you, you know, given your diligence, that you
22 would not have initially called the City with that
23 information?

24 A. Oh, no. I'm sure I would
25 have called them with the original information,

1 but, you know, the follow-up information, I don't
2 think I would have followed up on.

3 Q. Mr. Registrar, can you
4 bring up MTO7 again, images 2 and 3.

5 Ms. Lane, I would like to go
6 back to the conversation you had with Mr. Lewis,
7 again, about the 2007 request for friction testing
8 and whether the City had specifically made a
9 request for it.

10 So, based on your evidence
11 yesterday, I think you were under the belief that
12 the City, for some reason, did not want to provide
13 a written request. Is that correct?

14 A. Yeah. And, again, of
15 course that was just me speculating on the City
16 not putting a request in writing. I don't --

17 Q. Sorry. Did I cut you off
18 there? I didn't mean to do that.

19 A. Well, I can't really put
20 myself in their shoes. I'm just guessing that
21 they didn't want to put it in writing, but it
22 could just be that they were busy. I don't know.

23 Q. I think, just looking at
24 the e-mails, the only person that you talked to
25 about that issue was Mr. Raymond. Is that

1 correct?

2 A. Correct, yes.

3 Q. And so, you didn't speak
4 to anyone at the City to confirm whether that was
5 the case?

6 A. That's true.

7 Q. Right. And it's fair to
8 say you don't know whether the City was actually
9 even asked to make a formal request to the MTO?

10 A. Well, that's true. I
11 wouldn't have been party to that. I did know from
12 Tom Kazmierowski, who was my boss, I was the
13 senior pavement engineer when I remember that Tom
14 had mentioned that we could do friction testing
15 for them, so I assumed that it had come up in the
16 past. Right?

17 So, you're right. Normally I
18 would have been saying, no, we need this letter.
19 Like, we're not going to go and test without their
20 letter. But because there had already been a
21 previous discussion about doing this friction
22 testing for them, I assumed that they were aware.
23 And then Chris is saying they don't have an
24 objection to it. They're just not putting in a
25 formal request.

1 So, you know, I think it was a
2 combination of having previously heard that they
3 may want to do friction testing. Having Chris say
4 that they have no objection to it, I think that's
5 why I didn't push for a written letter.

6 Q. Okay. Fair enough. And
7 Chris tells you that the information is coming
8 from Ludomir, Ludomir Uzarowski. I take it you
9 didn't speak to Ludomir about this issue either?

10 A. No, I didn't.

11 Q. So, the testing that took
12 place -- sorry, we can take this document down.

13 Ms. Lane, the testing that
14 took place in 2007, that was in the context of the
15 municipality making a request for friction
16 testing, and so we had just discussed you would
17 ideally, I guess, prefer approval from the City
18 doing that testing. Is that right?

19 A. Correct.

20 Q. And then in 2008, 2014,
21 that testing was done in the context of aggregate
22 approval for, you know, DSM purposes?

23 A. Yes.

24 Q. In that case, am I right
25 that the MTO does not seek permission from the

1 municipality, even though testing is taking place
2 on a municipal road?

3 A. So, that is a bit of an
4 interesting one because I wasn't there at the
5 time. So, what happened is the request came in in
6 the late fall or December of 20, whatever it was,
7 and then I left that job and went downtown, to
8 work downtown. So, in that meantime I don't know
9 how they settled on using the Red Hill Valley
10 Parkway as the trial section.

11 What I do know is, like,
12 typically when we're pre-qualifying an aggregate,
13 like, there's all these requirements. Right? So,
14 we do all this lab testing, we investigate the
15 quarry and we place a test section. What I do
16 know is if there's already constructed a suitable
17 pavement that used that aggregate, that, you know,
18 it would be strongly suggested that that's the
19 test section that we use.

20 And the reason is otherwise
21 we're saying to the quarry, you have to go and
22 build us a 500-metre test section somewhere, and
23 then they're saying, well, we just built this
24 pavement right here. Right? So, I believe that
25 that is how they landed on the Red Hill Valley

1 Parkway as the test section, because it had just
2 been built with that aggregate and it was right
3 there and out of that came this. But I wasn't
4 actually there for those deliberations because I
5 was in another role at the time.

6 Q. Okay. No, thank you for
7 that information, but what I was trying to get an
8 understanding of is in the context of that
9 testing, I take it the MTO doesn't think there's a
10 need to, you know, seek permission from the
11 municipality to do the testing. Is that what that
12 appeared to be, a concern in the context of, you
13 know, the 2007 testing where you mentioned we at
14 least need approval before we go ahead?

15 A. Yeah. I would have
16 thought it would be a professional courtesy to do
17 that, to be honest, but it wasn't my decision.

18 Q. Okay. And you're not
19 aware of, you know, the City being provided notice
20 that this testing was going on, you know, outside
21 of what we've discussed about the 2010 results?

22 A. I'm not specifically
23 aware of it, but it may have happened. And the
24 reason I say that is because we usually let others
25 know if we're testing their facility, but that

1 would have been -- but, you know, if nobody has
2 any evidence of that, it wouldn't have been me
3 doing it. Right? So...

4 Q. Yeah. We'll see
5 obviously if there are other MTO, but I was trying
6 to get your evidence on what the practice --

7 A. Clearly I can confirm
8 that I did not do that, yes.

9 Q. Okay. Mr. Commissioner,
10 those are my questions. Thank you, Ms. Lane.

11 JUSTICE WILTON-SIEGEL: Thank
12 you.

13 THE WITNESS: Thank you.

14 MR. LEWIS: And so, I believe
15 it is Ms. Roberts, counsel for Golder, next.

16 EXAMINATION BY MS. JENNIFER ROBERTS:

17 Q. Good morning, Ms. Lane.

18 A. Good morning.

19 Q. I'm Jennifer Roberts,
20 counsel for Golder.

21 Mr. Commissioner, may I please
22 begin?

23 JUSTICE WILTON-SIEGEL: Please
24 do.

25 BY MS. JENNIFER ROBERTS:

1 Q. Okay. Ms. Lane, I want
2 to go to a particular piece of evidence and I'm
3 hoping you can help us. I want to explore the
4 question of whether friction levelled off, as you
5 said it appeared to from the test data that went
6 into 2012 and into 2014.

7 We know that MTO didn't
8 conduct testing in the spring of 2019, but the
9 evidence in the documents is that an entity called
10 ARA actually did, and I would like to go to that.
11 Registrar, can you please pull up Hamilton 9628.

12 THE REGISTRAR: Sorry,
13 counsel, would you like it in the native version
14 or the OnCue version?

15 MS. JENNIFER ROBERTS: Let's
16 look at it in native. Hopefully that looks like
17 what I've got.

18 BY MS. JENNIFER ROBERTS:

19 Q. Okay. This is a truly
20 horrible looking spreadsheet. Ms. Lane, first of
21 all, just a general question. In the course of
22 preparing to give testimony in this hearing, have
23 you had an opportunity to look at the ARA data?

24 A. Yes. This was shared
25 with me recently.

1 Q. Thank you. Okay.
2 Registrar, I think the easiest way to do this is
3 if I can ask you to highlight some -- highlight on
4 part of it. And if you can go to column P, all
5 right, and then down to -- wait a second. No, I
6 need the first one, the northbound lane. That's
7 it. Go to that one. Thank you. Go to P and if
8 you can highlight lines 105 to 130. Move down.
9 There we go. Okay.

10 THE REGISTRAR: Sorry, it only
11 goes to 41.

12 MS. JENNIFER ROBERTS: 130 is
13 all I need highlighted.

14 THE REGISTRAR: From where to
15 130?

16 MS. JENNIFER ROBERTS: 105 to
17 130, but just P. Thank you. Just the P column.
18 There we go. Sorry, I'm trying to make it easier
19 for everyone to see what it is that I'm looking
20 at, because this is a very detailed Excel
21 spreadsheet. Okay.

22 BY MS. JENNIFER ROBERTS:

23 Q. So, first of all, if I
24 can just deal in generalities, Ms. Lane, I
25 understand that this is -- well, let me ask you.

1 Is this machinery that's referenced in the columns
2 F, G, H, similar equipment to that used by the
3 MTO?

4 A. So, my understanding is
5 they also use the ASTM E274 friction trailer with
6 a ribbed tire, yes.

7 Q. Thank you. And when I
8 look at -- and this part of this test is also run
9 at 90 kilometres per hour and we can see that by
10 look at speed average, which is column S. Have I
11 read that right?

12 A. Yes. So, column S is the
13 speed and the data is, for the most part, at 90.
14 Yes.

15 Q. Okay. And when I've
16 looked at this, and the reason I've highlighted
17 those particular lines in P is because when I
18 cross-reference the latitude there with the
19 latitude in the 2014 testing, I think there's
20 overlap. So, if you look on the Y column, there's
21 latitude readings. Do you see that?

22 A. Yes.

23 Q. Okay. And I'll go to it
24 in a second, but in the MTO document in the
25 testing from 2014, you also have latitudes because

1 then, as you said, you've actually got a GPS
2 that's doing the readings?

3 A. Yeah. I was looking
4 actually at the column AG and it's showing, like,
5 the original data would have been just calling out
6 the locationing like that, Greenhill, King Street,
7 Queenston, Barton, like that.

8 Q. Sorry, because in MTO
9 you've got the test section that's tested is
10 Greenhill, basically the CN structure close to the
11 QEW?

12 A. Yes. Before we had the
13 GPS, we used to just identify -- you know, we
14 started at the CN structure and then it would
15 identify certain, you know, Queenston Road, King
16 Street, et cetera. That's how it would be
17 identified. But yes, the latitudes are there now.

18 Q. Okay. So, I just want to
19 do the cross-reference to make sure we're dealing
20 with an apples-to-apples comparison, because you
21 can see from ARA I think at least they've tested
22 the whole Red Hill Valley Parkway. Is that what
23 you think?

24 A. Yes.

25 Q. Okay. So, in order to

1 compare what MTO did with ARA, I want to make sure
2 that we've matched up the same areas tested. So,
3 Registrar, can you please keep this but if you can
4 also go to MTO22943.

5 THE REGISTRAR: Sorry,
6 counsel, 228943?

7 MS. JENNIFER ROBERTS: No,
8 22943. Okay. Can we go to the chart? Sorry, the
9 detailed, first one. There we go. Okay.

10 BY MS. JENNIFER ROBERTS:

11 Q. And so, in the second
12 column here, we've got latitudes, Greenhill, and
13 then down to the CN structure?

14 A. Yeah.

15 Q. Okay. And I think we
16 begin at 43218 and we go to 432439. Okay.
17 Registrar, can we go back, please, to Hamilton
18 9628. There we go. And, Registrar, is it
19 possible, the sections you've highlighted, can you
20 highlight that in yellow just to make it easier to
21 see? 105 to 130. There we go. Okay.

22 And I think if you
23 cross-reference to the right, to that latitude,
24 that's 43219 down to 43243, so that will overlap
25 or that corresponds with the areas tested by MTO,

1 does it not?

2 A. Yes, it does.

3 Q. Okay. And, Registrar, is
4 it possible to put up the MTO22943 as an adjacent
5 document so we keep the yellow highlight and then
6 also have the MTO document so we can look at the
7 numbers for the SN average? Look at that. Thank
8 you.

9 Okay. So, Ms. Lane, can you
10 see that well enough to look at the numbers in
11 comparison?

12 A. I can see it, yes. I can
13 see it.

14 Q. Okay. And so, when you
15 look at these FN numbers in comparison, one of the
16 last ones from MTO done in 2014, and then the ARA
17 testing using the locked wheel in 2019, does that
18 support your conclusion that the friction has
19 levelled off?

20 A. Yes. So, those numbers,
21 if you were to calculate the mean of that data, it
22 would be, you know, maybe a little bit higher than
23 what we had calculated in 2014. So, I think what
24 it's showing is that the -- well, if you were to
25 extrapolate the data, this is showing that the

1 numbers did not go down any further, so they did
2 not decrease, and in fact those were slightly
3 better than the numbers that we have in 2014.

4 Q. Okay. And the numbers do
5 appear to be slightly better than what the MTO
6 read in 2014, and why would that be? Is that
7 because of the time of year or is there some other
8 reason for that?

9 A. Yeah, it could be the
10 time of year. It could be, you know, that it's
11 five years later. You know, one of the things
12 that can happen, for example, if the pavement is
13 getting older, it may also be improving slightly
14 in friction and that would be because of some, you
15 know, surface distresses that may be occurring as
16 well. But definitely it looks like the friction
17 did not decline beyond what we took in 2014. So,
18 my thought that it was stabilized is borne out by
19 this data here.

20 Q. Okay. Thank you. I just
21 want to cover off if we can look at the southbound
22 lanes, too, just to have a comparison to see
23 whether that theory is borne out by some other
24 tests.

25 And I promise, Commissioner, I

1 won't go through all of this because I think that
2 would be very laborious.

3 If we could please pull up
4 Hamilton 9629 and then put beside it MTO22945.

5 THE REGISTRAR: What was the
6 MTO spreadsheet?

7 MS. JENNIFER ROBERTS: 22945.

8 THE REGISTRAR: Sorry, I just
9 brought this one up first because there's multiple
10 tabs for the southbound lanes.

11 MS. JENNIFER ROBERTS: Right.
12 Okay. So, let's go to southbound lane 1. And,
13 again, if I can just, for convenience, ask you to
14 highlight lines 106 to 132. Go down. Keep going.
15 And, again, you're just going to highlight column
16 P.

17 THE REGISTRAR: To 132?

18 MS. JENNIFER ROBERTS: Yes,
19 please. There we go. Thank you. And then if you
20 could also pull up the MTO22945. Great. Thank
21 you.

22 THE REGISTRAR: That was 3. I
23 now have 5. One second.

24 MS. JENNIFER ROBERTS: Thank
25 you. And then the detail, please. There we go.

1 Okay.

2 BY MS. JENNIFER ROBERTS:

3 Q. Ms. Lane, if I can please
4 ask you, again, what I've done here is we've
5 cross-referenced the locations tested by MTO
6 across the latitudes that are identified in the
7 ARA testing, and then can you please have a look
8 at those friction numbers and tell us whether you
9 think that the friction has levelled off?

10 A. Yeah. I mean, again, the
11 data looks, you know, slightly better than our
12 data, so it certainly does look like the friction
13 did not deteriorate any further than what we
14 collected in 2014 and this data is actually an
15 improvement on the data that we had, so it's
16 showing better friction numbers than we had in
17 2014.

18 Q. Thank you.

19 A. It's showing that the
20 pavement did not decline any further in friction.

21 Q. Okay. Thank you. And
22 just to cover the point, with these numbers all
23 sort of over 30 and low, you know, 33, 34,
24 basically between 35 and 30, a little bit over
25 occasionally, that that would not be in a range

1 that, by itself, would cause any concern to MTO in
2 reviewing them?

3 A. Correct. Those numbers
4 would be considered acceptable.

5 Q. Okay. Thank you. Thank
6 you, Ms. Lane. Those are my questions. Thank
7 you, Commissioner.

8 MR. LEWIS: Ms. McIvor now for
9 the MTO.

10 MS. MCIVOR: Thank you,
11 Mr. Lewis.

12 EXAMINATION BY MS. MCIVOR:

13 Q. Hi, Ms. Lane. I just
14 have a few questions for you today.

15 Registrar, if you could please
16 pull up MTO document 18621.

17 THE REGISTRAR: Sorry,
18 counsel. Can you repeat that for me?

19 MS. MCIVOR: Yes. It's
20 MTO18621.

21 THE REGISTRAR: Sorry, I was
22 looking for a native file. My apologies.

23 MS. MCIVOR: Okay.

24 BY MS. MCIVOR:

25 Q. And, Ms. Lane, you

1 recognized this paper. Mr. Lewis took you to it
2 yesterday?

3 A. Yes.

4 Q. Okay. Registrar, could
5 we go to image 7, please. And, Registrar, if you
6 can pull out the bottom third of the page, I would
7 appreciate that. Possibly up a little higher,
8 actually. That's great. Thank you.

9 Okay. So, Ms. Lane, you spoke
10 yesterday about the parameters for qualifying for
11 the DSM list and Mr. Lewis brought you to this.
12 Starting at the bottom of this first paragraph
13 here, it says:

14 "Since the early 1990s,
15 it has been a condition
16 of approval of new
17 sources that the
18 aggregate maintain an
19 average PSV of less than
20 50, no value less than 48
21 and an AAV of 6 or less."

22 The next paragraph goes on to
23 say:

24 "MTO normally requires a
25 500-metre pavement test

1 section using the new
2 aggregate."

3 Now, I note the word
4 "normally" there. Is there circumstances in which
5 a new test section may not be required?

6 A. Yes. So, if there's
7 already been use of this aggregate in a suitable
8 application, so, for example, if the quarry has
9 already been used to pave a roadway in a similar
10 application, like a freeway or a, you know,
11 high-speed roadway type of pavement and if was the
12 exact same source and quarry and if it was a
13 recent placement of the material, then that would
14 be suggested for use.

15 So, you know, going out and
16 paving an independent 500-metre test section is
17 ideal, but if you have already just placed a
18 pavement section or a pavement using that
19 aggregate and it's the same aggregate, then that's
20 also a suitable substitution.

21 Q. Okay. Thank you,
22 Ms. Lane. Registrar, if we could please pull up
23 MTO document 34021. And, sorry, is there a native
24 for this document? Thank you, Registrar. If you
25 could please go to the chart sheet. Okay.

1 Ms. Lane, these are the 2010
2 testing results before the adjustment, so these
3 are the 2010 test results taken at 100 kilometres
4 per hour. Mr. Lewis took you to them yesterday
5 and you've told us that your concern was grounded
6 in the fact that there was a rapid decline. Do
7 you see what you would consider a rapid decline
8 here in this test results between 2009 and 2010?

9 A. Yes, I do. So, I see
10 that it dropped in the five points. Okay, I've
11 been corrected. I thought it was six. But
12 anyway, yes, I can see that it dropped between --
13 from one year to the next.

14 Q. Okay.

15 A. So, that would be a
16 change that, you know, was worthy of thinking
17 about. Right?

18 Q. Okay. And as compared to
19 the initial year, the 2008 to the 2009, which only
20 dropped two friction points, would that cause
21 concern, the comparative drop in year two versus
22 year one?

23 A. No. So, that would be
24 expected. So, when you place a new pavement, you
25 would expect that it starts to -- under the wear

1 of pavement tires, that it would start to wear and
2 you would see a drop in friction numbers, so I
3 think that would be, you know, something expected.
4 And then the 2010 results suddenly looks like a
5 much bigger drop.

6 Q. Okay. And so, am I
7 understanding you correctly between 2008 and 2009,
8 that would be more consistent with normal wear and
9 tear for a relatively newly opened road?

10 A. Yes.

11 Q. Okay.

12 A. Yeah, I think I mentioned
13 with this, with only the three points, so, you
14 know, you're looking from 2009 to 2010, a five
15 point drop, so where is it going to go in 2011?
16 That was my concern. You know, is it going to be
17 another five point drop? Is it going to be more?
18 Is it going to accelerate in its polishing?
19 Which, you know, without having the benefit of
20 years of data collection, I was going with the I
21 wonder where this is going, question mark, and
22 maybe we better alert the City to this.

23 Q. Okay. Thank you,
24 Ms. Lane. Mr. Lewis also mentioned or referred to
25 you knowing of the City's interest in friction on

1 the Red Hill Valley Parkway and then referred to
2 your knowledge of the 2007 request for friction
3 testing. Do you recall that?

4 A. I -- go ahead.

5 Q. What did you understand
6 the City's concern to be in 2007, when that
7 request for testing came in?

8 A. So, our concern in 2007
9 was with the early age friction on SMA mixes, so
10 the City was placing an SMA mix. They had heard
11 that we had early friction concerns with SMA
12 mixes. There was an additional factor there that
13 they had heard that we were looking at different
14 aggregates and, you know, the suggestion that only
15 certain types of aggregates would be successful in
16 an SMA and that others wouldn't.

17 And then on top of that, they
18 had an aggregate that wasn't an approved
19 aggregate, so it was kind of a bunch of things,
20 but the concern was always with the early age
21 friction of the SMA. That's what the concern was.

22 Q. Okay. And after the
23 friction testing was conducted and the results
24 were provided back to Dr. Uzarowski to forward on
25 to relevant individuals, what did you understand

1 about any continuing concern with early age
2 friction on the City's behalf?

3 A. I was never contacted
4 again by the City about the early age friction.

5 Q. Okay. And so, you
6 understood that that concern was at an end after
7 those test results went back?

8 A. Yes.

9 Q. Okay. And you mentioned
10 that you were never contacted again about early
11 age friction by anyone at the City. Do you recall
12 anyone at the City contacting you to express any
13 general friction concerns with the Red Hill Valley
14 Parkway after 2007?

15 A. No, I don't recall that.

16 Q. Okay. Thank you,
17 Ms. Lane. Those are my questions.

18 JUSTICE WILTON-SIEGEL: Okay.

19 MR. LEWIS: I just have a
20 couple of questions to follow up, if that's all
21 right, Commissioner.

22 JUSTICE WILTON-SIEGEL:

23 Mm-hmm.

24 FURTHER EXAMINATION BY MR. LEWIS:

25 Q. Just with respect to the

1 ARA results, Ms. Lane, which were from May of
2 2019, did you review all of the results or just
3 the ones that Ms. Roberts took you to?

4 A. So, I was given them at
5 the, sort of, eleventh hour, so I didn't have a
6 lot of time. So, what I looked at was the testing
7 that was done in the same locations that we would
8 have tested and at the same speed that we would
9 have tested, because that was, you know, what I
10 was interested in. Like, to see how their test
11 results compared to our test results. The rest of
12 the data set is kind of irrelevant to me.

13 Q. Right, because the
14 testing was also done at 60 kilometres an hour and
15 80 as well, so it was the testing around 90 that
16 you were looking at?

17 A. That's right.

18 Q. Right. At the eleventh
19 hour, I assume in the last few days before your
20 testimony?

21 A. Over the weekend.

22 Q. That's what I thought.
23 And so, these test results, and we can go to them,
24 they're testing in more than one wheel path in
25 each lane as well. Correct?

1 A. Yes.

2 Q. Whereas the MTO's testing
3 was just in one wheel path. Is that right?

4 A. I guess so. I don't
5 recall.

6 Q. Okay. And --

7 A. Maybe it was combined
8 data.

9 Q. All right.

10 A. Because --

11 Q. And this is broken down
12 into wheel paths?

13 A. Right.

14 Q. So, you know, we can look
15 at HAM9628, Registrar, in the native, same as
16 before, please.

17 While he's doing that, when
18 Ms. Roberts was speaking with you, there was one
19 brief reference to temperature or time of the --
20 season of the testing. Are you familiar with
21 directionally the effect temperature can have on
22 friction testing?

23 A. Yes. My understanding is
24 if the pavement is -- well, actually, okay, I
25 don't know. I'm going out on a limb, so I

1 shouldn't say anything, but yeah, I mean, I think
2 there would be a difference between the testing.

3 Q. And here it's in May and
4 we can see on here under column W the temperature
5 is 8.5 degrees, is the air temperature. Do you
6 see that? Sorry, it varies but it's in 8.5, 8.8,
7 all of that sort of throughout. Do you see that?
8 And then there's -- I appreciate this isn't your
9 report, but then it reports surface temperature at
10 the next column, which is, I think, if it's
11 reporting in Celsius, somewhat lower temperature
12 as well, whereas the MTO testing was conducted in
13 July and --

14 A. But that was unusual in
15 terms of all the other testing was done early
16 spring, too. Right?

17 Q. That may be. I just want
18 to clarify that. We have the temperature and
19 that, but I think that the temperature was listed
20 at around 20, 21 degrees for the 2014 testing.
21 Okay.

22 And I appreciate your
23 hesitance, but what's your understanding, to the
24 extent you have any, about the effect of
25 temperature on friction test results?

1 A. So, I'm sure there is an
2 effect, but I can't remember what it is.
3 Honestly --

4 Q. That's fine.

5 A. I haven't worked there
6 since 2011. Right? So...

7 Q. I understand. Okay.

8 A. I do know that the other
9 friction testing that we did was in the early
10 spring and would have similar temperatures to this
11 data.

12 Q. Okay. We won't go
13 through that with you now, but we can check that
14 out. I think certainly most of them were earlier
15 on for sure.

16 And without necessarily going
17 to them, although we can, the ones that you looked
18 at, I think, were northbound lane 1, I think left
19 wheel path for both of them. Sorry, northbound
20 lane 1 and southbound lane 1 were the ones that
21 Ms. Roberts took you to and I think all the
22 results for those were above 30.

23 I take it you did note that
24 there were results below 30 in the ARA results in
25 the other tabs of the test results. Correct?

1 A. Yes, I did. Again, we're
2 looking at the average, though, for the section.
3 So, I did look at all four wheel paths. What I
4 did was I looked at all four independently. I
5 averaged the left and right wheel path on all the
6 them except the lane 3. I didn't even know there
7 was a lane 3. I didn't look at that one. We have
8 never tested it. And all of the numbers, whether
9 it was a single wheel path, a wheel path combined,
10 whether it was lane 1, lane 2, northbound,
11 southbound, it didn't matter, all of the ARA data
12 was similar or better than our data from 2014.

13 Q. Right. So, certainly not
14 worse, but similar to or better depending on the
15 path?

16 A. Exactly.

17 Q. The lane and the wheel
18 path, okay. Thank you. I don't have any other
19 questions. Thank you very much for your time.

20 A. Thank you.

21 JUSTICE WILTON-SIEGEL: Okay.
22 It's not quite 20 to 1:00. First of all,
23 Ms. Lane, thank you for attending and spending
24 about a day and a half with us. You're excused,
25 if you want to go.

1 And then for the rest of us, I
2 think we should probably take our lunch hour now
3 rather than start with the next witness, who is
4 Mr. Raymond, I understand?

5 MR. LEWIS: That's correct.

6 JUSTICE WILTON-SIEGEL: So,
7 why don't we take our lunch now. We'll come back
8 at 2:00, if Mr. Raymond can be made available for
9 2:00? Okay. So, we'll stand adjourned until that
10 time. Thank you.

11 --- Luncheon recess taken at 12:38 p.m.

12 --- Upon resuming at 2:00 p.m.

13 MR. LEWIS: We're back. Good
14 afternoon, everyone, Mr. Raymond. Commissioner,
15 we have Mr. Chris Raymond to testify this
16 afternoon. Could we begin?

17 JUSTICE WILTON-SIEGEL: Please
18 begin.

19 MR. LEWIS: Thank you. And
20 could I ask the court reporter to please affirm
21 Mr. Raymond?

22 CHRIS RAYMOND; AFFIRMED.

23 EXAMINATION BY MR. LEWIS:

24 Q. So, Mr. Raymond, just to
25 begin, I would like to go just to cover your

1 background, educational background, job history at
2 the MTO and so forth. And so, to do that, could
3 we go to MTO38645, Registrar, which is
4 Mr. Raymond's CV. There we go.

5 This is your CV, Mr. Raymond?

6 A. That's correct.

7 Q. Registrar, could we mark
8 that as an exhibit, before I forget to do so.
9 Commissioner, I believe that is number 48.

10 JUSTICE WILTON-SIEGEL: Okay.

11 Thank you.

12 THE REGISTRAR: Noted,
13 counsel. Thank you. Exhibit 48.

14 EXHIBIT NO. 48:

15 Chris Raymond's CV,
16 MTO38645.

17 BY MR. LEWIS:

18 Q. I'll just start off with
19 your education. Going back to 1988, you have a
20 civil engineering degree from Queen's. Is that
21 right?

22 A. That's correct.

23 Q. And then you're a
24 Master's in civil engineering from the University
25 of Florida?

1 A. Yes.

2 Q. And then your Ph.D. with
3 a thesis in pavement roughness in 2002 at
4 Waterloo?

5 A. That's correct.

6 Q. And you've been a
7 registered professional engineer in Ontario since
8 1990 and in Queensland, Australia since 2015?

9 A. Only for 2015.

10 Q. Is that on a particular
11 project?

12 A. Yeah. I took a year and
13 went to Queensland and registered as a
14 professional engineer and had a great time working
15 there for a year.

16 Q. Okay. And then you've
17 been at the MTO from 1988 through to the present.
18 Is that right?

19 A. That is correct. I took
20 a year off to do my Master's and took a year off
21 to do my Ph.D., I took a year off to go to
22 Queensland and I took two parental leaves as well,
23 but I've always maintained my employment status at
24 MTO.

25 Q. Okay. So some leaves,

1 but otherwise continuously employed by the MTO
2 since 1988?

3 A. Yes.

4 Q. And I won't go through
5 your entire history at the MTO, but I want to just
6 cover a few positions that cover the areas we're
7 particularly -- the time periods we're
8 particularly concerned with.

9 If we could go to image 3 to
10 begin with, I see that towards the bottom there
11 from the second entry from the bottom,
12 September 2004 to June 2007 is senior bituminous
13 engineer. And what did that position entail, just
14 briefly?

15 A. Really being a technical
16 expert in asphalt and asphalt materials. You
17 know, it included involvement with SMA and, in
18 particular at the time, early age friction of SMA.

19 Q. Right. And we'll get
20 into talking about that. You were involved in the
21 SMA task group as well, the joint task group
22 between the MTO and industry and that was during
23 that time period as well. Correct?

24 A. The second SMA task
25 group.

1 Q. Task group, yeah,
2 beginning in 2007. Does that sound right?

3 A. Yes.

4 Q. All right. And then if
5 you could take that down and the next one in the
6 middle, senior pavement design engineer, June 2007
7 to July 2009, what was that position about?

8 A. In contrast to the
9 asphalt engineer position that was asphalt
10 materials focused, this is related to pavement
11 design, the structural design of pavements. It
12 did involve some pavement materials as well as
13 involvement with specifications related to
14 pavement warranties and, to some degree as well --
15 sorry, I lost my train of thought. Oh,
16 specifications that relate to more
17 pavement-focused items. And then in there as
18 well, there's reference to the Ministry's surface
19 course directive that may be of interest.

20 Q. Okay. And then take that
21 down and pull up the next one, which is Head
22 Bituminous section. And that position, you
23 occupied July 2009 to December 2011. Could you
24 describe that position?

25 A. I guess similar. It's

1 looking at the asphalt materials and, you know,
2 it's the section head, so it's managing a group of
3 engineers and technical people related to asphalt
4 and, you know, working and liaising with various
5 groups, including our industry partners, whether
6 that be the Ontario Hot Mix Producers Association
7 or, to some degree, the Ontario Road Builders'
8 Association.

9 Q. Okay. And I guess in
10 your two prior positions as senior bituminous
11 engineer and senior pavement design engineer, were
12 those positions that reported to the head of the
13 bituminous section prior to your occupying it?

14 A. No. The senior
15 bituminous engineer reported to the head of the
16 bituminous section, but the senior pavement design
17 engineer reported to the head of pavements and
18 foundations.

19 Q. Right. Okay. Right.
20 And that point, at least for part of that time,
21 that would have been Becca Lane for part of that
22 time?

23 A. That's correct. And then
24 Kai Tam was the head of bituminous section at the
25 time I was the senior bituminous engineer.

1 Q. Okay. And then in
2 January 2012 with, at the top there, you moved to
3 position of executive assistant to the deputy
4 minister for about nine months until September
5 2012, and I understand that's something that
6 people in the Ministry do for a fairly short
7 period of time, like this, if they can?

8 A. So, for -- it's not that
9 common, but yes, myself and Becca Lane also did a
10 stint as an executive assistant and someone that
11 would come from, sort of, the working area to
12 bridge the, sort of, connection to our senior
13 executive, the assistant deputy minister, and to
14 provide really some career development.

15 And, typically, there was one
16 to two executive assistants that were of that sort
17 of technical nature and one executive assistant
18 that was a full-time, sort of, non-technical
19 person.

20 Q. Okay. And you can take
21 that down. And am I correct in understanding --
22 if you could go to image 1 now, Registrar -- that
23 from that point when you were in the executive
24 assistant to the ADM's position -- sorry, image 1.
25 It's a long CV. Sorry, image 2. That's my

1 mistake. There we go.

2 So, from when you were in the
3 ADM office to and forward, when I see after that
4 you were the head of construction contracts
5 section from December 2012 to January 2015 and
6 occupied a number of other positions after that,
7 but from the point when you went to the ADM's
8 office, were you sort of out of the asphalt
9 bituminous side of things from that point forward?

10 A. Yes, with the exception
11 of I believe that I came back after the stint as
12 executive assistant. I came back to the
13 bituminous section as the head for -- and we would
14 have to look at the dates, but it was, like, two
15 months or three months. And then I went to the
16 head of construction contracts section where I
17 would not have been directly involved with the
18 asphalt technical stuff, but that being said, I'm
19 still liaising with the Ontario Road Builders'
20 regarding specification changes that our asphalt
21 folks would be looking to make.

22 Q. When you're in the
23 construction contract section?

24 A. When I was in the head of
25 construction contract section, because one of the

1 responsibilities there is to be a liaison with the
2 Ontario Road Builders' Association.

3 Q. Okay. And, actually, you
4 don't have to go back to it, Registrar, but you've
5 indicated in your CV, Mr. Raymond, that you were
6 in the ADM's office until September 2012, so for
7 that, the remainder of 2012, you were back as the
8 head of bituminous section. Is that right?

9 A. That's correct.

10 Q. Okay. You can take that
11 down, Registrar. Thank you. And I would like to
12 discuss with you a few things involving the MTO's
13 approach to friction management and use of
14 friction numbers and your involvement in the joint
15 SMA task group, you said the second group. And I
16 know, as you said, you weren't involved in the
17 original task group formed in January 2006, but
18 I'm correct you did have some involvement in the
19 early age SMA issues prior to that time. Is that
20 fair?

21 A. I believe that is correct
22 and I believe that I would have assisted in
23 compiling certain information related to SMA and
24 early age friction for members of that first task
25 group.

1 Q. Okay. And we've already
2 heard some stuff about it from Ms. Lane, but if
3 you could just, from your perspective, describe
4 the SMA issue that the original joint task group
5 was formed to address and then your becoming
6 actually involved in the task group. I can take
7 you to some specific presentations and so forth,
8 but if we could just get a general overview from
9 you.

10 A. Yeah. And I wasn't
11 involved when the initial task group was set up.
12 There were terms of reference, I believe, for that
13 first group. I know for the second task group
14 that I was a project manager for that we had terms
15 of reference for. And there were a number of
16 things that the task group was responsible for
17 looking at. Certainly the topic that filled our
18 time the most and was our primary focus was early
19 age friction with SMA, which is, sort of, a new
20 phenomenon to the Ministry in that most hot mixes
21 don't have any concern with early age friction.

22 However, the nature of stone
23 mastic asphalt is that it has quite a rich bitumen
24 or the black glue, as it's sometimes known to
25 non-technical folks, and that creates a thick film

1 on the surface of -- well, on all the aggregates,
2 but is noted on the surface of the mix and that
3 thick film can then sort of mask some of the
4 microtexture of the aggregate until it's worn off
5 and, as a result, you can have friction that can
6 be lower than expected.

7 Q. Black glue, that's a good
8 way to remember it.

9 A. Mr. Lewis, you're
10 freezing on my screen. I can still hear you fine,
11 but you're freezing on my screen, so I thought I
12 would bring it to your attention.

13 Q. That's okay. Thank you.
14 We've been pretty free of technical glitches, so
15 hopefully that will resolve itself. Is it better
16 now?

17 A. No, I can hear you fine,
18 but it's a bit distracting, but not that
19 distracting.

20 Q. Is anyone else having
21 issues? In particular, it's important for the
22 witness, so I -- no? No one else? Okay.

23 All right. Well, Mr. Raymond,
24 if it continues to be a problem and if you find
25 that you can't hear me or it's a problem, please

1 let us know and maybe we'll have the registrar
2 restart the feed. Just let me know. Did you hear
3 what I just said?

4 A. I did. Sorry.

5 Q. Why don't we just take a
6 moment.

7 --- (Off-record discussion)

8 MS. MCIVOR: Counsel and
9 Commissioner, if we could take a brief five-minute
10 break, we can set up Mr. Raymond in another
11 location and hopefully that will resolve the
12 issues.

13 JUSTICE WILTON-SIEGEL: That
14 would be fine. I was going to ask, is he in the
15 same location as Ms. Lane was earlier today?

16 MS. MCIVOR: He is, yes.

17 JUSTICE WILTON-SIEGEL: That's
18 what I thought, and she didn't seem to be
19 experiencing any problems.

20 MS. MCIVOR: No.

21 JUSTICE WILTON-SIEGEL: So, I
22 wonder if it would make sense to just have him
23 leave and then return and see whether that fixes
24 the problem, failing which we could take a
25 five-minute break and relocate him.

1 MS. MCIVOR: Okay. That would
2 be perfect. Thank you, Commissioner.

3 MR. LEWIS: I think,
4 Mr. Raymond, the idea is if you would log out and
5 then try to come back in and see if that resolves
6 it.

7 THE WITNESS: All right. I'm
8 hoping Heather comes over and walks me through
9 this.

10 THE REGISTRAR: So, I'm going
11 to move everybody to breakout rooms and we'll try
12 and resolve this.

13 MR. LEWIS: Thank you.

14 --- Recess taken at 2:18 p.m.

15 --- Upon resuming at 2:30 p.m.

16 BY MR. LEWIS:

17 Q. We're back. Mr. Raymond,
18 can you hear me all right now?

19 A. I can, yes. Thanks.

20 Q. Great. May we proceed,
21 Commissioner?

22 JUSTICE WILTON-SIEGEL: Please
23 proceed.

24 MR. LEWIS: Thank you.

25 BY MR. LEWIS:

1 Q. Just give me one moment.
2 All right. I think where we left off and you
3 mentioned that you were having trouble hearing me
4 was when I just indicated that I thought that
5 black glue was an evocative way of describing the
6 tarry stuff, so that's where we, for the most
7 part, left off.

8 So, if I could take you to a
9 presentation that you had a part in putting
10 together or authoring. Registrar, it's MTO15403.
11 And this is a presentation to Ray Mantha,
12 January 2007, and I think from the correspondence
13 around it, it indicates that you were one of the
14 authors, along with Kai Tam and Guy Cautillo.
15 Does that ring a bell for you?

16 A. Yes.

17 Q. Okay. And I'll come back
18 to this a couple of times. There's just one
19 thing, just sort of a summary that I would like to
20 go on early life friction, which is at image 8,
21 Registrar. And this slide, and appreciating the
22 timing of your involvement, but does this slide
23 provide a good summary as of that date,
24 January 2007, as the origin and discovery of the
25 SMA early age friction issue?

1 A. That's correct. I don't
2 remember when I came to the bituminous section,
3 and I say that in reference to the 2004 summer IRF
4 conference. That predates me a little bit and
5 then maybe even some of the exploratory ASGM
6 testing where MTO was validating whether or not it
7 extended to our situation. But certainly, you
8 know, this does explain the Ministry and where we
9 were in terms of understanding early age or early
10 life friction of our asphalts.

11 Q. In your CV, it indicates
12 you became the senior bituminous engineer in
13 September 2004, so it was in the later part of the
14 year you were describing.

15 A. Okay.

16 Q. Okay. And you referred
17 to the terms of reference for the initial task
18 group and then the second task group that you were
19 part of or perhaps it was a continuation of the
20 first one. If we could go to the terms of
21 reference. It's at -- take that down, Registrar.
22 It's overview document 4, image 19. Actually, I
23 guess we need to go -- it's paragraph 34, but I
24 guess we should go to the document itself for the
25 terms of reference. Registrar, it's MTO221.

1 And are these the terms of
2 reference you were talking about for the first
3 one?

4 A. I'm not sure that I saw
5 the terms of reference for the first group, but I
6 was aware that they did have a terms of reference
7 and then I am aware and I believe I helped author,
8 create, the terms of reference for the second
9 group.

10 Q. And point 2 there in
11 "Specific goals of the group" are:

12 "1) Resolve issues of
13 poor friction performance
14 of SMA mixes, especially
15 newly paved mixes.

16 2) Resolve construction
17 and performance issues
18 (flushing, rutting,
19 segregation, pop-outs,
20 poor joints, et cetera)of
21 SMA."

22 Does that reflect your
23 understanding of, generally speaking, what they
24 were doing?

25 A. I don't know that I was

1 that connected to the actual group to what their
2 terms of reference or marching orders were. It is
3 consistent with the sort of work that was
4 happening in the office. And then obviously those
5 two aspects carried over to the second task group
6 and are consistent with the work there. I do
7 believe that the second task group at some point
8 adopted some additional goals.

9 And that said, you know,
10 that's what's on paper. Obviously the main focus
11 tended to be the early age friction aspect of SMA.

12 Q. Okay. And if we could
13 then go to -- take that down, Registrar --
14 overview document 4, page 31, so this is the task
15 group two that you were a part of? It's
16 referenced at paragraph 62 and 63 there.

17 A. That's correct.

18 Q. All right. And the MTO
19 representatives in paragraph 62 are indicated.
20 You're the second one listed as the task group
21 project manager and then Kai Tam at the time is
22 task group co-chair and then Tom Kazmierowski and
23 Dennis Billings.

24 And then below there, the
25 terms of reference of the group, does this

1 accurately describe what the group's goals were,
2 the main goal and the specific goals?

3 A. That's correct.

4 Q. Okay. And am I correct
5 that although it's called a task group two, this
6 was a continuation, including some of the members
7 from the first group. Is that right?

8 A. Yeah. I believe I was
9 one of the -- I believe that the majority of the
10 group carried over and I was one of the new
11 replacements.

12 Q. And we'll talk about the
13 pause on SMA use that was put into place later in
14 2007, but thinking back to your involvement in
15 2007 throughout and prior to the pause, did you
16 have any sense of, within the industry, how widely
17 known the SMA early age low friction issue was?

18 A. I don't know. I
19 wasn't -- obviously the people on the task group
20 would be aware. I could only reasonably assume
21 that the industry people on that task group are
22 reporting back through their association, which
23 they're there representing, and that being the
24 Ontario Hot Mix Producers Association. They have
25 some overlap with Ontario Road Builders'

1 Association, but I can't speak to what, sort of,
2 the industry perspective was.

3 You know, it would have been
4 Kai Tam's role, as the head of the bituminous
5 section, to be liaising with the industry, the
6 greater industry, with the Ontario Hot Mix
7 Producers Association. Although, that being said,
8 obviously having one full-time member, Sandy
9 Brown, as well as four other representatives from
10 that organization, they've got to be having
11 discussion within their group.

12 That being said, I don't know
13 if it extends out to communicating that to its
14 general membership.

15 Q. And appreciating you
16 weren't on the first iteration of the task group,
17 I just want to take you to a couple of their
18 meeting minutes and just use that as a springboard
19 to talk about friction numbers so we just have
20 something to anchor it in.

21 So, Registrar, if we could go
22 to image 19. And then in paragraph 35, this
23 refers to a slide show presented at the very first
24 SMA task group meeting on January 17, 2006 and it
25 referred to the FN or friction number desirable

1 value of 30. It also referred to the 30 threshold
2 and then short-term remedial action where FN falls
3 below 30.

4 And so, I just want to flag
5 that for you and then take you to the second task
6 group meeting minutes. And go to the actual
7 document. This is MTO223. If we could expand the
8 first paragraph, paragraph 1. Thank you.

9 It says:

10 "Kai reviewed the minutes
11 of the previous minutes,
12 discussion during this
13 review."

14 And then there's a number of
15 points and then in the third bullet, third and
16 fourth, you reference:

17 "Sandy is not convinced
18 that there is a skid
19 issue and questioned if
20 any action is really
21 warranted, noting that
22 other jurisdictions don't
23 appear to be reacting.
24 MTO's measurements are at
25 a faster speed and MTO's

1 early age friction or early age SMA friction
2 where, you know, your friction number is
3 increasing versus the traditional pavement
4 polishing where, you know, your friction number is
5 decreasing. Right? And different perspectives of
6 it.

7 But to come back to your
8 question, I would say that if you have a number of
9 30 or above, then you have no concerns for a
10 typical highway application. If your number is
11 29, I would argue that's essentially 30. As you
12 start dropping significantly below 30, then you
13 have a number or a friction condition that you
14 want to look at more closely. And if you get down
15 sort of below 25, you want to look at it very
16 closely.

17 Q. Okay. And so, when --
18 and first of all, we're talking about measuring
19 typically at the posted speed using the MTO's
20 lock-wheel tester. Right?

21 A. That is correct.

22 Q. And when you talk about
23 numbers being whatever it is, whether it's below
24 30, significantly below 30 and so forth, are you,
25 from your perspective, looking at the average

1 across the entire pavement area tested or
2 individual numbers or a combination of the two?

3 A. I think it all depends on
4 the situation and what -- you know and, again, if
5 you're in, you know, below that 25 number per se,
6 you know what I'm saying, you're looking at it
7 very closely, well then you're looking at a lot
8 more than just the average.

9 You know, if it's 30 or close
10 to 30, if your situation or your numbers -- sorry,
11 your test results are fairly consistent, then
12 you're typically looking at the average. And I
13 think you've probably seen a number of friction
14 plots over time and you can see particularly as it
15 relates to some of SMA projects where, if you had
16 within your section that you tested something that
17 was maybe done the year before versus paving that
18 done a month ago, you're not going to average
19 those that have going to be very different in
20 nature.

21 Also, too, I think in some of
22 the plots or the results, you can see that the
23 interior lane, the lane 1, can have a
24 significantly different number than your lanes 2
25 and 3, you know, because of the different traffic

1 characteristics that are in your lane 1. You
2 typically get less traffic there and you don't get
3 the trucks.

4 Q. Right. Lane 1 being the
5 inside lane and lane 2 being the outside, unless
6 there's a lane 3, in which case that's outside
7 lane. Right?

8 A. Yeah. And for most of
9 the MTO projects, we did have a lane 2 and a land
10 3. And then you have the restriction, I believe,
11 on trucks not being permitted in lane 1.

12 Q. All right. And, you
13 know, I think that you described, you know, if
14 it's significantly below 30, that you want to look
15 at it more closely, and if you get down below 25,
16 you want to look at it very closely.

17 Is it fair if you're talking
18 under 30, whether you say 29 or whatever it is
19 below there, is that sort of an investigatory
20 level, not a level or a number that suggests that
21 some remedial action must be taken, but rather
22 that some investigations ought to take place in
23 order to determine whether or not there is an
24 issue that needs to be addressed?

25 A. I think for the early age

1 friction side of it -- actually, could I get you
2 to repeat the question? Sorry.

3 Q. No, that's fair enough.

4 A. I got lost in my train of
5 thought and then I lost your question.

6 Q. It was a long question,
7 but if it's dropping below 30 -- I'll try to
8 simplify -- is it fair to say that that's, at that
9 stage, that it's an investigatory situation where
10 you are not necessarily going to take any remedial
11 action, but rather it's to look at various factors
12 to determine whether there is an issue which
13 requires remedial action be taken?

14 A. And in your question,
15 when you say dropping below 30, then are you
16 talking about the long-term -- you're talking
17 about polishing long term on a pavement?

18 Q. Sure, let's start with
19 that.

20 A. Yeah, that's not my area
21 of focus in the Ministry, but, you know, again it
22 comes back to the general understanding that I
23 have and that understanding that I have of others
24 that if you're 30 and above, you're good, and if
25 you are below 30, then that's something that you

1 want to look at and, again, you know, start
2 exploring -- I guess take a closer look at, take a
3 look at more than just the friction, but, you
4 know, geometrics and if you're looking at -- if
5 you've got collision information, other things
6 going on that come into the picture.

7 Q. Okay. And then in the
8 early age SMA context, as you indicated, there's
9 an expectation that it's going to increase after
10 the short term. That's the distinction that
11 you're drawing there, and so could you address my
12 question in that context?

13 A. Yeah. So, and again,
14 it's more than an expectation. That's certainly
15 the trend that we always saw that, you know, if we
16 tested something that had been down for a week or
17 a month, you know, those numbers were still rising
18 and depending on, you know, how long it -- you
19 know, if your number was 27, 28, you know, it's
20 probably two or three friction numbers higher a
21 week later or by the time you've looked at it and
22 actioned anything out.

23 So, again, you know, time is
24 on your side very much in terms of the early age
25 friction side of things. That being said, if you

1 have a number well below 30, you may not have that
2 luxury of time and you may want to intervene and
3 do something. And, again, we had some severe or
4 lower numbers than -- like, low below 25 and, you
5 know, our response there was to keep the lower
6 speed limit in effect until those friction numbers
7 came up and then we had what we were looking for
8 that we could then bring the speed up to the
9 proper posted, the 100 kilometres an hour, for the
10 MTO projects.

11 Q. Right. And I think you
12 may be referring specifically in that instance to
13 the project near Woodstock on the 401 when you
14 were talking about posting the speed limit, which
15 I was going to talk to you about, but is that the
16 specific one that's in your head right now?

17 A. That's the one that comes
18 to mind where we had numbers, low numbers that
19 were lower than -- sorry, numbers below 30 that
20 were lower than our typical early age friction
21 numbers below 30, and we felt that we had to take
22 additional measures to respond and that measure
23 was keeping the reduced construction speed limits
24 in effect.

25 There was another situation

1 where -- and I can't remember off the top of my
2 head what the friction numbers were, other than I
3 believe they were under 30, and that was related
4 to the Highway 404 project where we had some
5 unique conditions that I believe that, in the end,
6 we diamond ground the surface of the pavement to
7 give us friction numbers that fit with the
8 conditions of the highway.

9 Q. In this presentation in
10 the first bullet, in the first sentence, after
11 indicating there's no specified minimum pavement
12 prediction level, however, geometric standards are
13 based on a minimum friction of approximately 30,
14 what's your understanding of the relationship
15 between the geometric design standards and the
16 assumed friction value of 30 and then the MTO's
17 approach to the use of FN30 that you have
18 described?

19 A. Well, and I don't have
20 the geometric design in front of me, but, you
21 know, the geometric design standards are based on
22 a certain design speed, which is typically 20
23 kilometres an hour above your posted speed.
24 That's very typical for highway situations. And,
25 you know, those are based on a certain friction

1 number, which is approximately 30 in the sense
2 that I think it varies from 28 to 31 and it
3 changes slightly depending on that design speed.
4 And I have forgotten your question again. Sorry.

5 Q. I was wondering what your
6 understanding was, then, as between what you've
7 just described as the geometric design assumed
8 friction and the number, then, that's applied, as
9 you've described, by the MTO when it's doing --

10 A. And so, that's one piece
11 of published documentation that really, you know,
12 gives justification to that 30 number. That being
13 said, I think it's an unwritten number that people
14 within the Ministry that are more experienced with
15 friction information use as a guide or use as a
16 guide on things.

17 I think it also can tie into
18 some of the historical, sort of, friction numbers
19 that the Ministry has found over time, although I
20 can't say that for certain. I'm not -- I've never
21 been exposed to that sort of side of friction
22 monitoring within the Ministry.

23 Q. Okay. So, if I could
24 just unpack that a bit, it's the use of FN30,
25 aside from in the design standard, but in

1 practice, in the field, in testing, if I
2 understand you correctly, that it's something that
3 is used as a guideline but not something that's
4 formally put out in writing, but it's understood
5 by those people who are involved in the testing
6 and making assessments of pavement. Is that fair?

7 A. It's an actual friction,
8 sort of, design component in the geometric design
9 guide, so that is documented and it factors into a
10 lot of the geometric, sort of, engineering around,
11 you know, curvatures and stopping distances, and
12 appreciating that there's a lot of stuff going
13 into those calculations related to, you know,
14 reaction times, you know, standard vehicles,
15 standard tires, standard, sort of, wet conditions
16 and stuff.

17 So, that, you can, sort of,
18 put into a documented aspect. I've never seen the
19 rule of thumb of 30 actually documented anywhere,
20 other than some of the minutes of meetings and
21 stuff like that here.

22 Q. Right. And, sorry, I'm
23 drawing -- I was intending to draw the
24 distinction. You have the geometric design
25 standard on the one hand, which is of course in

1 writing and it's in the design guide, as you
2 described, but then the testing, and I was
3 referring to the testing in the field and the use
4 of FN30, you've just described as being not --
5 it's in writing some places, but it's not in a
6 policy or anything of that sort?

7 A. It's not. I mean, the
8 last part of that first bullet does make reference
9 to bringing in a friction number of 30 for our
10 area term contract, so that was under discussion
11 at the time and later came into practice as a
12 requirement for our pavement warranties.

13 Q. Right. And we have heard
14 some about that in the performance standards,
15 warranties, within contracts as well. Okay.

16 If we could go to overview
17 document 4 at images 27 and 28, Registrar. And
18 this is a little earlier than in January 2007 and
19 on January 9, 2007 you presented recommendations
20 around the SMA issue to Mr. Gerry Chaput and,
21 again, this is before your joining the second
22 iteration of the SMA task group, and you provide,
23 as you can see from this excerpt, a description of
24 the issues and I think some of the things that you
25 have just been discussing in that first paragraph

1 indicated there.

2 There's one thing that I want
3 to go, and it's in -- if you could highlight the
4 first or call out the first paragraph, Registrar.
5 And I think it's about eight lines from the
6 bottom, the sentence that starts with, "Another
7 concern with SMA pavements." Do you see that? It
8 says:

9 "Another concern with SMA
10 pavements is that under
11 compaction, the
12 aggregates are rolled
13 flat but do not provide
14 coarse aggregate
15 projection to develop
16 good macrotexture."

17 Could you elaborate on that
18 statement a little bit?

19 A. I can. You know, so our
20 typical surface course, particularly for -- and
21 I'll speak specifically to the 400 series
22 highways, is a dense -- it was a dense friction
23 course. It would then later became a Superpave
24 12.5 FC2, which is similar in nature, different,
25 sort of, design. Actually, it's right there in

1 the bottom part.

2 So, those are our premium
3 surface courses that we've used throughout Ontario
4 for quite a while and those have a different type
5 of macrotexture in the sense that the aggregate is
6 kind of protruded out from your plane versus with
7 your SMA where it's hard to describe. It's
8 probably better in a diagram. That would probably
9 be referred to in one of the documents. But, you
10 know, your aggregates are kind of a flatter
11 surface and you've got macrotexture through voids
12 between those aggregates. And noting that your
13 SMA has a very different gradation to it and I
14 think that's what forms that different
15 macrotexture.

16 And, you know, it's important
17 to note because, you know, the SMA is different
18 from not only our traditional dense friction
19 courses and Superpave 12.5 FC2s, but all of our
20 surface courses which are essentially dense graded
21 mixes, so I guess there is an exception that --
22 and I think it was during the 1980s and 1990s
23 where they did these open friction courses, but
24 they were a completely different type of hot mix
25 and they're kind of like a popcorn mix. Again,

1 I'm not aware of any frictional issues, but they
2 just have a very open nature to them, which is
3 what's intended through them, and those were used
4 through some of the very high volume sections of
5 Toronto.

6 Q. Just with respect to this
7 comment on SMA, is that something that was
8 addressed and resolved, explored and resolved, in
9 the context of the SMA task group?

10 A. Well, I think it's more
11 of noting a difference from our traditional mixes
12 that, you know, needs to be taken into
13 consideration when looking at stone mastic
14 asphalt, you know. And the early age friction
15 aspect, again, a lot of that focus was around that
16 rich asphalt binder on top of the aggregates.

17 But, you know, I think it's
18 noted that we did find that the stone mastic
19 asphalt did not have the same -- did not achieve
20 the same friction as our dense or, sorry, our
21 Superpave or dense friction courses after the
22 early age friction had, you know -- after we were
23 no longer in that early age friction period.

24 Q. Okay. And if we could go
25 then to overview document 4, image 33.

1 Paragraph 66 refers to the minutes of the first
2 SMA task group two meeting, which is, I think, the
3 first one that you attended, if we look at the
4 minutes. And the minutes record about the
5 discussions that:

6 "Chris Raymond presented
7 MTO's use of SMA. The
8 presentation provided
9 background on MTO's use
10 of SMA, the Ministry's
11 concerns and the
12 Ministry's position that
13 SMA is a viable
14 technology, provided
15 performance and value for
16 money can be assured."

17 And then:

18 "Methods to resolve
19 frictional issues were
20 discussed with the focus
21 being already awarded
22 contracts with paving
23 remaining. Sandy
24 Brown -- "

25 He's, again, the OHMPA

1 representative on the task force:
2 " -- expressed concern
3 about a Ministry
4 moratorium or interim
5 moratorium on the use of
6 SMA because the Ministry
7 has made investment in
8 plant modifications to
9 accommodate SMA
10 technology and any
11 moratorium would cause
12 the return on these
13 investments to be lost or
14 delayed. As a result of
15 this concern, industry
16 was not prepared to agree
17 to switch any SMA
18 contracts to Superpave
19 12.5 FC2 at this time."

20 Although we know that there
21 wasn't a pause or a full moratorium placed until
22 much later in the year of 2007, but it was being
23 at least discussed at this point. Is that right?

24 A. I'm having trouble
25 recalling all the timelines, but I believe --

1 Q. I mean, it talks about it
2 here. It says he's expressed concern about it --

3 A. Yeah, I know, I'm just
4 trying to -- yeah. I mean, we were -- can I get
5 you to repeat the question?

6 Q. Well, yeah, it was just
7 as simple as that. It appears that there was at
8 least the discussion for a potential for a
9 moratorium on SMA use at that point and there was
10 some pushback from one of the industry reps on it.
11 Is that fair?

12 A. And that's very fair. I
13 don't think we landed on, you know, some sort of
14 pause or moratorium at that time, you know, but
15 certainly startup of that SMA task group two was
16 that we've got concerns with early age friction
17 and there were some other concerns out there with
18 SMA, but the main one being related to the early
19 age friction and, you know, that we wanted, you
20 know, we needed to resolve it or discontinue the
21 use of SMA.

22 I think it -- well, early in
23 the discussions, we certainly thought we could
24 engineer it out one way or another through the
25 aggregates and such. And then in the end, we

1 found out that that wasn't as effective as
2 anticipated and eventually we did move to that
3 pause or moratorium.

4 Q. Okay. And you see in the
5 next paragraph there's another -- in the next task
6 group meeting on March 20, 2007 there's another
7 concern expressed. It says:

8 "Sandy Brown expressed
9 concern about a friction
10 requirement for SMA as
11 this is a new requirement
12 and it affects SMA's
13 competitiveness with PCC
14 pavement. If a friction
15 requirement is applied,
16 it needs to be applied to
17 both pavement types.
18 Sandy referenced a paper
19 entitled 'Pavement
20 Surface Friction on
21 Ontario Highways' by
22 Chris Rogers et. al as an
23 example of less than
24 optimum pavement friction
25 in a PCC pavement."

1 So, I'm just wondering, can
2 you just describe the industry concerns around the
3 SMA issue at the time?

4 A. I'll give you my answer
5 and if that's not what you're looking for, let me
6 know. But, you know, the Ontario Hot Mix
7 Producers Association, and again it was pre my
8 time and I wasn't connected at the senior levels,
9 but it's my understanding that they had approached
10 the Ministry and basically encouraged MTO to be
11 responsive to innovation and new technologies of
12 which SMA is a technology that the industry saw as
13 their most competitive solution or competition to
14 their competition, which is cement concrete
15 pavements. Because SMA and your high volume
16 facilities are the ones that are really having to
17 compete with the Portland cement concrete. It's
18 not the low volume roads. So, they were looking
19 for SMA and promoting that as a technology. They
20 wanted obviously MTO to specify that so they could
21 be competitive.

22 At this point, in that message
23 above, in point 3 there, Sandy Brown is entirely
24 correct and correct in that industry had made an
25 investment in plant modifications as well as

1 did actually answer the things. You asked me the
2 question at the outset hopefully that will be what
3 I'm looking for, and yes, that answered my
4 question, so thank you.

5 And so, you referred to
6 Portland cement concrete. Just to be clear,
7 that's the reference in the second excerpt there
8 at paragraph 67 to PCC pavement. Is that right?

9 A. That's correct. And,
10 again, you know, that's the asphalt industry's
11 competition. Right? If you can build Portland
12 cement concrete, they're not making a lot of
13 asphalt cement sales.

14 Q. Right. And Dennis
15 Billings, he's listed as a member of the task
16 group both in the first iteration of it and this
17 task group as well, and I understand he was the
18 head of geotechnical engineering in the central
19 region. Is that right?

20 A. That's correct.

21 Q. And did he have a
22 particular role on the task group? I mean, he was
23 one of the members from a MTO. Did he have a
24 particular approach or job on the task group
25 that's distinct from anyone else?

1 A. I mean, I wasn't there
2 when they set up the first task group, but --

3 Q. So, let's talk about on
4 the second one, in your experience.

5 A. So, he had -- he brought
6 to the group a regional perspective. Right? In
7 that the other people were provincial office or
8 head office people where he was in the region and
9 he was responsible for specifying which pavement
10 should be -- he was responsible for the pavement
11 designs, which included what the surface course
12 would be, which would mean would it be SMA or not.

13 He also had a connection there
14 as to how many projects there were in his region,
15 the issues that are going through design. He had
16 that, sort of, that regional or actually program
17 delivery input into the group which otherwise was
18 provincial office representatives.

19 Q. Okay.

20 A. And, you know, I think,
21 too, I mean, him being from centre region, I think
22 centre region would have essentially half of the
23 SMA pavements, the southwest region, the other
24 half, and then the odd one in eastern region and
25 the very odd one that happened in North Bay.

1 Q. Commissioner, it's
2 21 minutes after 3:00. We did have a bit of a
3 break during the technical issues, but typically
4 the afternoon break would be around now, if you
5 would like to take one.

6 JUSTICE WILTON-SIEGEL: Why
7 don't we take 15 minutes. We'll return at 25 to
8 4:00.

9 MR. LEWIS: And I can advise
10 I'll definitely be the remainder of the day, just
11 so counsel are aware of our timing. And when we
12 reach the end of the day, we can just have a
13 discussion about timing going forward. Thank you.

14 JUSTICE WILTON-SIEGEL: Thank
15 you.

16 --- Recess taken at 3:21 p.m.

17 --- Upon resuming at 3:35 p.m.

18 MR. LEWIS: We're back. Good
19 afternoon. And may I proceed, Commissioner?

20 JUSTICE WILTON-SIEGEL: Please
21 proceed.

22 MR. LEWIS: Thank you.

23 BY MR. LEWIS:

24 Q. Just one thing I want to
25 ask you about the presentation that you made at

1 the March 8, 2007 task group meeting. If we could
2 go to image 32, Registrar.

3 THE REGISTRAR: Sorry,
4 counsel. The overview document?

5 MR. LEWIS: Yes, sorry.
6 Overview document 4, image 32.

7 THE REGISTRAR: Sorry, I went
8 back to the PowerPoint.

9 BY MR. LEWIS:

10 Q. And it's paragraph 64 and
11 it's about the presentation that you made at that
12 meeting and it's the first -- we've already heard
13 your comments about really the subject in the
14 first bullet about the Ministry not having a
15 specified minimum pavement friction level and the
16 relationship to geometric standards. But the
17 point next bullet says:

18 "MTO's expectation for
19 freeway pavement friction
20 is above a value of 40."

21 Can you just describe what
22 you're talking about there in light of what we
23 already talked about in terms of FN30?

24 A. So -- and, again, this is
25 in the sense of not early age, but, you know,

1 typical freeway pavement friction -- typical
2 friction of our freeway pavements is expected to
3 be around 40 because we've been doing a lot of
4 talk about 30 or under 30; however, 30 is not,
5 sort of, the typical expectation for our freeway
6 pavements. And this would come, I suspect, from
7 our aggregates people, who do a lot of that
8 monitoring. It wouldn't be something that I
9 directly researched as such.

10 Q. Okay. But that's your
11 understanding?

12 A. That's the understanding.
13 And, again, I guess I authored the presentation,
14 but I authored it collecting information from
15 various people.

16 Q. Okay. Thank you. If we
17 could go to, again, overview document 4,
18 image 128, please. It's 128 and 129. Pull that
19 up as well.

20 And in paragraphs 308 and 309
21 here, there's an enquiry in relation to -- it
22 specifically asks:

23 "I would like to know if
24 there are any
25 publications that cover

1 hot rolled asphalt
2 compositions and friction
3 coefficients for the hot
4 rolled asphalts used in
5 highways and roads in
6 Ontario."

7 You have a discussion by
8 e-mail with Mr. Kazmierowski and Ms. Lane and you
9 indicate that you will prepare a response and work
10 with Ms. Lane on it. And you note that:

11 "A concern with this type
12 of judicial inquiry -- "

13 Appreciating it's not this
14 judicial inquiry, but with this kind of judicial
15 inquiry:

16 " -- regarding frictional
17 resistance and safety of
18 our highway surfaces, I
19 would prefer we avoid any
20 discussion of actual skid
21 numbers/values/thresholds
22 and keep the conversation
23 on a more generic level.
24 The sensitivity
25 associated with this

1 issue is high."

2 And this is in 2011, June 23.

3 And then there is a response that is sent and it
4 doesn't specifically deal with friction numbers,
5 friction coefficients and so forth. It is more
6 generalized, as you indicated that it would be, in
7 bringing his attention to a number of
8 publications.

9 And so, is this indicative of,
10 in your experience, the MTO's approach to external
11 communication about friction numbers, friction
12 coefficients, MTO's use of those concepts?

13 A. Yeah, and this would be
14 in line with our response to enquiries from the
15 media or the public or, in this case, it was the
16 police.

17 Q. Right. It's actually
18 torontopolice.on.ca. It's in response to
19 something else. Okay.

20 And so, generally, the
21 preference is to not talk about or specifically
22 refer to the use of friction numbers by the MTO.
23 That's fair?

24 A. That's correct. You
25 know, we don't speak to specific friction numbers

1 on individual pavements and, you know, we don't
2 speak to that 30 number within the geometric
3 design guide.

4 That being said, the document
5 "Skid Resistant Aggregates in Ontario" does have
6 friction numbers and all kinds of numbers there,
7 not just the friction numbers but polished stone
8 values and other numbers within it. But, again,
9 it's in a very generic sense.

10 Q. Okay. And then if we
11 could go to image 37 in OD4, going back in time
12 now. Actually, image 38 as well. It straddles
13 the pages.

14 So, May 1, this is
15 paragraph 79, May 1, 2007, Mr. Chaput approved
16 recommendations by the SMA task group in dealing
17 with SMA awarded contracts, including a list of
18 approved aggregates and a decision tree. And then
19 there is this information note drafted by you,
20 Mr. Tam and Mr. Kazmierowski containing the
21 recommendation approved by Mr. Chaput. And the
22 briefing -- sorry, the information note is
23 excerpted there and the revised list of premium
24 aggregates for use in SMA is discussed.

25 And we've heard evidence about

1 Ontario Trap Rock, that particular source, being
2 restricted from use in SMA, and so you recall that
3 happening? This is before there's the pause
4 happening, but sort of the -- I don't know if it's
5 the first step, but a step along the way was the
6 restriction on the use of Ontario Trap Rock.

7 Correct?

8 A. That's correct. This was
9 what our first response and we thought this would
10 solve the problem because of the early age SMAs
11 that we had looked at, you know, the lower numbers
12 were associated with the Ontario Trap Rock,
13 which -- and, again, I'm not the soils and
14 aggregates person. That's your Bob Gorman and
15 your Chris Rogers who can tell you all the
16 geological properties within those aggregates that
17 make them superior or less superior from a
18 frictional point of view, but the Ontario Trap
19 Rock is a premium aggregate, but it's not as
20 premium an aggregate for friction as some of the
21 nices or dolomitic sandstones. So, it's still
22 good, but it's not as good as some of the other
23 geological formations for friction.

24 And, again, in some ways,
25 there's other properties within it that, from a

1 durability, you know, make it as good, if not
2 better, than some of those, but from a friction
3 point of view, Ontario Trap Rock does not have the
4 same properties as some of the others in terms
5 of -- and, again, that's outside of the early age
6 friction, but also was being seen within the early
7 age friction component of it.

8 So, we thought we were solving
9 the majority of the problem by taking the Ontario
10 Trap Rock aggregate source off the list of
11 available aggregates and -- yeah. But in the end,
12 that was not as successful as we had envisioned at
13 the time.

14 Q. Okay. And I'll get to
15 that actually shortly. We'll jump ahead to it.
16 There's one more thing from this period of time I
17 wanted to cover. Registrar, if you could go to
18 image 39 and 40.

19 And in paragraph 81, on May 2,
20 2007, you e-mailed Mr. Rogers and Mr. Tam
21 regarding the new listing not having Ontario Trap
22 Rock in it.

23 And then in the next
24 paragraph, 82, in the overview document I think
25 may be incorrect and I wanted to get your insight

1 on it. In 81, you were talking about the changes
2 to the special provision and so forth, and then it
3 refers in 82(a) that both coarse and fine
4 aggregates for SMA had to be obtained from the
5 same source.

6 Was that a new requirement or
7 had that been previously the case?

8 A. My understanding is that
9 it was always a requirement that both for the
10 Superpave 12.5 FC2 and the stone mastic asphalt,
11 that the coarse and fine aggregate needed to be
12 the same. And, sorry, I think there was more to
13 your question than that, wasn't there?

14 Q. No. It was simply that.
15 I think it may be that that particular paragraph
16 indicating that that was a change might be
17 incorrect because it's referring to the changes.

18 A. Sorry. I'm just reading
19 it. I think the change was in terms of
20 restricting the available sources that could be
21 used for SMA.

22 Q. Okay. That's what I
23 thought. And do you know why or is that outside
24 of your area, but do you know why the coarse and
25 fine aggregates for those surface courses were to

1 be from the same source? Do you know what the
2 reason for that is?

3 A. I don't know the specific
4 reason. That would be a good question for
5 Bob Gorman or Chris Rogers. I do know that that
6 had been there previously with the Superpave FC2.
7 I didn't -- I suspect it may have something to do
8 with -- well, I shouldn't speculate on why it is
9 the case, but it's more of a carryover aspect and
10 not something that I implemented.

11 Q. Okay. And then to go
12 forward to, I think, what you were alluding to, if
13 we go to overview document 4, image 58, 58 and 59,
14 please. So, this is October 16, 2007 and this
15 pertains to Highway 401 at Woodstock contract,
16 2005-3030. You're sending a fairly lengthy e-mail
17 to Mr. Tam, Ms. Lane, Mr. Rogers and
18 Mr. Kazmierowski and you're referring to the skid
19 testing that took place the prior day.

20 And if you could just describe
21 what happened, what the issue was and the concern?

22 A. If I could just take a
23 minute to --

24 Q. Yes, please do.

25 A. All right. So, Frank had

1 just completed testing on this project in
2 Woodstock and this project was a project where we
3 had had a trial with the use of blended
4 aggregates, so, you know, all stone mastic and
5 FC2, as we mentioned previously, that not only did
6 the coarse and fine aggregate, they have to be the
7 same and you can't, you know, blend different
8 aggregates in.

9 What we had set up as a trial
10 on this project is a 50/50 blend of that OTR,
11 which is Ontario Trap Rock, and the Aecon
12 dolomitic sandstone. Again, you know, the
13 perspective at the time was that, you know, the
14 aggregates were one of the key, sort of,
15 contributors or properties of the mix that was
16 influencing their friction, yet in this blended
17 trial as well as the blended trial with the OTR
18 and dolomitic sandstone, dolomitic sandstone
19 being, again, quite a very good aggregate for
20 friction from its traditional perspective, that
21 was only getting the high 20s in the blend. And
22 then the Aecon trap rock was in the low 20s,
23 which, again, was quite a surprise and maybe a
24 disappointment for us in that we had definitely
25 not solved the problem and that blending didn't

1 seem to be a possible solution.

2 And just for a little bit of
3 perspective, that Ontario Trap Rock, which is the
4 aggregate that had previously been taken off the
5 list, that was -- that's probably the primary
6 aggregate that would be used in the Windsor to
7 Woodstock to Kitchener area of the 401. We
8 wouldn't necessarily be using SMA going west of
9 London, but from London to Kitchener, that's where
10 you would potentially be using SMA and your most
11 competitive aggregate for cost is going to be
12 Ontario Trap Rock because, you know, you can
13 imagine bringing aggregate from Eastern Ontario,
14 your trucking costs really add up. So, that we
15 couldn't blend really impacted, you know, how we
16 were going to approach aggregates -- sorry, SMA
17 aggregate in the southwest region as well.

18 Q. Okay. And I think, then,
19 there's a reference to something you were
20 discussing earlier about signing and going
21 forward, so posting advisory slippery when wet
22 signing and advisory speed tabs, you referred to.

23 So, this would be an example,
24 I think as you were talking about, that it was low
25 enough that it was decided that there should be

1 some short-term action taken. Is that fair?

2 A. That's correct. And I
3 suspect that was more related to the Aecon trap
4 rock section in the low 20s, not the blended in
5 the high 20s. But, again, yes, we wanted to do
6 something. You know, those, you know, whether it
7 be -- included advisory, reduced signing,
8 regulatory reduced signing or slippery, were some
9 of the options that were discussed. And I believe
10 in the end we kept the regulatory reduced
11 construction speed signing, which traditionally we
12 only posted when the contractor was working, but
13 because of our concerns, we kept that 80 kilometre
14 an hour speed limit posted for even when they were
15 not working.

16 Q. Okay. And then if we
17 could go to overview document 4, image 72, and so
18 this is jumping ahead to -- I guess it's 72 and 73
19 perhaps. That's fine.

20 On November 6, in
21 paragraph 162, you e-mailed an information note,
22 briefing note, with the title "Pausing the Use of
23 Stone Mastic Asphalt Pavement" to Mr. Tam and
24 Ms. Lane and there's the recommendation in there
25 that the ADM should be aware of the decision to

1 pause the use of SMA and the low pavement friction
2 concerns encountered on Highway 401 at Woodstock,
3 is the recommendation.

4 And above that, it refers to:
5 "The Ministry is pausing
6 the use of stone mastic
7 asphalt pavement due to
8 concerns with low
9 pavement friction
10 immediately after
11 construction and that the
12 decision to pause the use
13 of SMA is related in part
14 to low pavement friction
15 on construction contract
16 on Highway 401 at
17 Woodstock."

18 And so, you say that it's in
19 part Woodstock. What else are you referring to?
20 Is that the prior investigations and issues that
21 the MTO had conducted in relation to this low SMA
22 early friction?

23 A. Yeah. I mean, MTO was
24 certainly having concerns with low early age
25 friction on our SMAs on multiple jobs and, you

1 know, certainly any thoughts that we had solved
2 the problem were set back and, you know, so it was
3 not just this one -- I mean, this one job was very
4 important in highlighting that we didn't have a
5 solution, but, you know, that at the end of having
6 a number of projects where, again, we weren't
7 meeting and realizing all our expectations on what
8 early age friction should ideally be.

9 Q. We'll get into the
10 specifics of the Red Hill Valley Parkway skid test
11 results in a bit. But did the pause implemented
12 in November of 2007, did that have any relation
13 with the friction test results obtained by the MTO
14 on the Red Hill Valley Parkway?

15 A. It did not.

16 Q. We'll get into the
17 individual results. I just wanted to get your
18 overall perspective on this since we're talking
19 about the pause itself.

20 A. There was -- I don't
21 think there was anything specific to the Red Hill
22 and in fact the Red Hill, it used a different
23 aggregate from ours. And further to that, it had
24 a friction number that wasn't concerning, but
25 let's hold that until we get into that.

1 Q. Yeah. If we could, I
2 just want to talk about the pause and how it
3 proceeded and then we'll get back to the Red Hill.

4 If we could go to image 122,
5 it jumps ahead to late 2009 and you are
6 communicating with Gerry Chaput and you provide a
7 description and you refer to it as a cautious
8 approach over the last two years being taken with
9 respect to SMA and the SMA committee, as you call
10 it, and you describe a number of activities that
11 were taken.

12 And does that sort of give a
13 summary of the activities in a brief way of what
14 would have been undertaken to try to address the
15 issue?

16 A. So, this is November 2009
17 and I think this is -- the pause had been in place
18 for --

19 Q. For two years?

20 A. Pardon me?

21 Q. For two years, yes.

22 A. Yeah. And then we had
23 worked during the pause to try and, you know, find
24 out how we could make modifications to address the
25 issue and we were now looking to, I think it was,

1 trial some of that stuff and I think Mr. Chaput
2 was asking, you know, why don't you just -- why
3 don't we just reimplement stone mastic asphalt and
4 it was, well, you know, let's take a cautious
5 approach.

6 Q. And we know that the
7 pause was ultimately lifted in late 2014. And at
8 that point, you were the head of construction
9 contracts, if I understand it correctly, but you
10 were doing some communicating of it with the ORBA
11 at that point, just to close it off.

12 Why did you remain involved at
13 that point in time, given what your role was?

14 A. Yeah. That's a great
15 question. So, I was not involved in SMA in the
16 traditional -- in terms of the role as I was
17 previously. I didn't -- I wasn't involved in
18 coming up with a solution, which, in the end, was
19 to apply a grit into the stone mastic asphalt.

20 My role in terms of sending
21 that e-mail was that in my role as head of
22 construction contracts, I was the liaison with the
23 Ontario Road Builders' Association or ORBA, and so
24 any specification change related to our
25 construction contracts would be circulated within

1 correct that means July 31?

2 A. It does.

3 Q. Okay. That's fine. So,
4 the first thing, you knew Dr. Uzarowski prior to
5 this call. How long had you known him for?

6 A. It would be several
7 years. I wouldn't know a date when I specifically
8 met him, but certainly, you know, it's a small
9 industry and I would have seen him at industry
10 events and probably some technical conferences and
11 stuff.

12 Q. Okay. And had you worked
13 with him directly prior to this?

14 A. Not at this time, no.

15 Q. All right. And does this
16 note accurately reflect your conversation with
17 Dr. Uzarowski on July 31?

18 A. It does. I'm just
19 reading it to see if there's any stuff that --

20 Q. Please do.

21 A. -- we talked about in
22 this that I didn't include in this. He called me.
23 We had the conversation. Obviously the part that
24 I was reaching out to related to was, you know,
25 where he was with the Red Hill and where we were

1 with early age SMA. So, yeah, this does reflect
2 the conversation about SMA and early age friction.

3 You know, I did have -- the
4 discussion did also speak to -- I think it was
5 this conversation because this was, I believe, the
6 one main conversation I had with him. And, you
7 know, I think I made a request in this
8 conversation or certainly in the conversations
9 that came out of this related to the rich bottom
10 mix that they had used, because MTO was just
11 interested to see what mix design had come up and
12 what their specification had been for a rich
13 bottom mix, which doesn't relate to friction or
14 SMA in any such way.

15 And I think in this discussion
16 as well when I was discussing early age SMA
17 friction and, you know, some of the techniques or
18 things that we looked at, Ludomir Uzarowski had
19 brought up and mentioned Blastrac device as
20 something that we may want to look at.

21 Q. Okay. So, you think in
22 this discussion he might have mentioned Blastrac.
23 We know there are references later on when we get
24 into October and November 2007 about the company
25 called Blastrac and we know that in

1 September 2007, which we'll get to, there's
2 references in e-mails to the rich bottom mix
3 issue, so are you saying you had conversations --

4 A. I apologize. I think I'm
5 mistaken. I don't think that happened at this
6 discussion. It was at a later discussion, my
7 apologies, for both the rich bottom and the
8 Blastrac.

9 And, actually, I can say that
10 at this time, I'm pretty sure I was in the
11 pavements and foundations section and it was only
12 after going over as the head of -- I think I was
13 connected in with the bituminous section and they
14 were the ones that were interested in knowing
15 about the rich bottom mix.

16 Q. So, at this point, I'm
17 looking at your CV, June 2007 was when you became
18 the senior pavement design engineer, so you had
19 been in that position for a month or two at this
20 point, if your CV is correct on that. Okay.

21 So, if I can just, then, come
22 back to this call rather than the later stuff. If
23 I'm reading your e-mail correctly, and you tell me
24 if I'm wrong, he called for two reasons. First,
25 respecting a rumour he heard about the MTO no

1 longer allowing Ontario Trap Rock in SMA. That's
2 the first thing, it appears to me, from your note.
3 Is that fair?

4 A. Yeah.

5 Q. Okay. And then the
6 second thing as reflected in the second paragraph
7 is then he's expressing concern about the proposed
8 use of, as he says, SMA on a City of Hamilton
9 project, the Red Hill Valley Parkway, where the
10 contractor has submitted a mix design using a
11 Quebec source, Demix Varennes, that is not on the
12 DSM.

13 So, are those the two topics
14 of his concern? Is that fair?

15 A. That's fair to say, yeah.

16 Q. Okay. And in response to
17 his first concern, am I correct, then, that you
18 then referred -- in answering that, you talked
19 about the early life friction concerns and
20 described that and what had happened with Ontario
21 Trap Rock and so forth. Is that right?

22 A. That's correct.

23 Q. Okay. And then on the
24 second issue about the proposed use of SMA, was it
25 about the use of -- was his concern about the

1 proposed use of SMA or was it about the aggregate
2 used in it or both?

3 A. I can't remember
4 specifically, but I believe it's that, you know,
5 MTO, they had concerns with early age friction of
6 SMA and that we had addressed those concerns by
7 restricting certain aggregates. And so, then he
8 was using or he had recommended or was using SMA
9 on the Red Hill creek expressway and then he was
10 also using an aggregate that, again, was not on
11 the DSM but, you know, gives concern in the fact
12 that we had even restricted aggregates that were
13 on the DSM, and so it's not to say that he was
14 concerned specifically about its DSM. I don't
15 know and we didn't get into discussions on why
16 that aggregate was selected. I think the concern
17 was that we had, you know, restricted some of our
18 aggregates that were on the DSM.

19 Q. And he refers at the end
20 or, sorry, you refer at the end to -- I
21 apologize -- that you state that Ludomir indicated
22 he was going to follow up with Chris Rogers
23 regarding the background of this source, and so is
24 that referring to the background of the Demix
25 aggregates? Is that what you --

1 A. Yes.

2 Q. -- understood?

3 A. Yes.

4 Q. Okay. So, again, that
5 does, does it not, sound to you there that his
6 concern, at least in part, was about the aggregate
7 specifically or no, that he's going to follow up
8 with Chris Rogers about the source?

9 A. It does. It does. It
10 does lead me to believe that he's concerned about
11 the aggregate.

12 Q. And then you describe it
13 as a possible outcome, that the City of Hamilton
14 can make a request for friction testing. Do you
15 recall who suggested that as a possible outcome?

16 A. I think it was -- I think
17 it would have been him asking if that's something
18 that we could do. However, we didn't get into the
19 details of it. I don't think it's something I
20 would have necessarily offered -- it's not, sort
21 of, a service we offer up specifically.

22 But, again, you know, that
23 he's identified this concern depending on how his
24 discussions go with Chris Rogers, really, possibly
25 the only way to really be assured that he does not

1 have an early age SMA issue there would be to do
2 some sort of friction testing. And, again,
3 whether that would be requesting the MTO skid
4 trailer or whether he could find some other
5 mechanism that could be achieved, I don't know if
6 we had gotten into that at that time.

7 Q. Well, I mean, unless I'm
8 incorrect about it, here you're talking about that
9 they could make a request to the MTO for friction
10 testing and, with the MTO, that means using the
11 skid trailer, does it not?

12 A. If, in fact, yeah, the
13 possible outcome that they could make a request
14 for friction testing to MTO, which would be the
15 friction trailer, yes. Absolutely.

16 My point previously was, you
17 know, that was a possible outcome or he could
18 decide through Chris Rogers that, you know, in
19 discussing the aggregate, that -- I don't know. I
20 don't know, but perhaps his concerns are
21 alleviated or he decides to do some other sort of
22 testing that he doesn't need to reach out to MTO,
23 which, again, there's limited other options there.

24 Q. Okay. And you sent it, I
25 take it, to Mr. Rogers because of his indication

1 that he might follow up with Chris, the other
2 Chris, Chris Rogers?

3 A. Well, it's, A, that --
4 so, I think Ms. Lane, Ms. Becca Lane, was my boss,
5 so I'm letting her know. The other thing is
6 giving her the heads up about a possible request
7 for friction testing, which would be the trailer.
8 Mr. Tam and Chris Rogers, Chris Rogers because he
9 was going to be getting the call, as well as they
10 were on, sort of, part of the SMA task group.
11 Right? And they should know that the Red Hill
12 creek also has stone mastic asphalt out there,
13 which I don't know that I was necessarily aware of
14 at that time. However, I guess others -- or maybe
15 I did. But anyways, the concern with early age
16 friction was now possibly with Ludomir.

17 Q. Okay. And do you know if
18 Dr. Uzarowski contacted Mr. Rogers or not?

19 A. I do not know that, but I
20 would suspect that he was going to.

21 Q. Well, it's certainly what
22 you indicate, that he was going to, but you don't
23 know if he actually did. Okay. And you can take
24 that down, please, Registrar.

25 There's a response from

1 Mr. Rogers in paragraph 103 responding:

2 "What the City of
3 Hamilton does is not our
4 concern, providing we are
5 not putting in dollars."

6 And do you recall -- we know
7 there's discussion in September, but do you recall
8 any other discussions around this time, August 1,
9 with Mr. Rogers, Ms. Lane, Mr. Tam, about the Red
10 Hill and the issues raised by Dr. Uzarowski to
11 you?

12 A. I do not, no.

13 Q. Okay. All right. If we
14 could go to overview document 4, image 50. And in
15 paragraph 110, this is a note of Dr. Uzarowski.
16 It's not your document. This is an entry from
17 September 10 of 2007 and there's a reference there
18 to "Chris Raymond - SN, RBM spec." Do you see
19 that?

20 A. Yes.

21 Q. Okay. And then on the
22 next day, September 11, paragraph 111, you e-mail
23 Frank Marciello, copying Ms. Lane, about a
24 telephone call with Dr. Uzarowski about -- you
25 talk about the friction testing we discussed this

1 morning.

2 And to the best of your
3 recollection, are these the first discussions
4 following up on your call from him on July 31?
5 Are these the first discussions about the Red Hill
6 and friction testing? We don't see anything in
7 between.

8 A. Yeah. I can't remember
9 anything in between.

10 Q. Okay. And did you recall
11 who contacted who to resume the discussions? I
12 mean, it says there that "Ludomir called me this
13 afternoon." That on the 11th.

14 A. Yeah. I would suspect
15 that he called me, you know, and -- yeah, I
16 suspect he called me. I think from that earlier
17 conversation, he was going to take the information
18 that he had learned from me, he was going to
19 follow up with Chris Rogers and then he was going
20 to work through that and then, if necessary, he
21 would come back and I'm assuming this is when he
22 came back.

23 Q. All right. And you
24 indicate in that e-mail at 111 that:

25 "We may not get the

1 request for a few days."

2 Because you indicate that the
3 project manager at the City of Hamilton isn't
4 around. So, is this indicating an expectation
5 you're going to get a request from the City
6 itself?

7 A. That is correct. And I
8 think that he had asked for the friction testing
9 or if it would be available and had mentioned that
10 we would want the request to come from the City of
11 Hamilton.

12 Q. Okay. And if we could go
13 to 52 and 53, please, images 52 and 53. He's
14 pulling that up. And there's e-mails on
15 September 27 and 28 about that, but why, up until
16 then, did you and the MTO want a request from the
17 City itself?

18 A. Well, it is the City's
19 highway, not Golder Associates. The other thing
20 is, you know, we want to be cautious not to be
21 providing a service for consulting engineers, you
22 know, and, again, we want to be cautious not to
23 take work away from consulting engineers such that
24 even if a city were to ask us to do some, you
25 know, generic-type asphalt testing, we would say,

1 you know, you should contact a consulting engineer
2 firm that can do this.

3 Now, the situation with the
4 friction testing trailer is that that is not a
5 device that you can contact the consulting
6 industry to readily become available. I mean,
7 there are some outside of Ontario, but, you know,
8 that's hard to bring in for a single test. So,
9 that's something where MTO is -- and, again, I'm
10 not the one that made those decisions, but my
11 understanding is that's something where MTO sees
12 value in supporting the municipalities in
13 providing that sort of specialized testing when
14 they see a need.

15 Q. Right. And then there's
16 a number of e-mails internally started on the 27th
17 at paragraph 116 where Dr. Uzarowski e-mails you
18 and he indicates he's attaching the specification
19 for the RBM mix developed for the Red Hill Valley
20 Parkway. Am I correct that's what you were
21 referring to earlier when there were discussions
22 about -- and you had some interest in that because
23 of the perpetual pavement aspect. Is that right?

24 A. That's right. We were
25 building a perpetual pavement and this is the

1 asphalt at the bottom of it and they had written a
2 specification. I think their specification was a
3 slightly different approach from ours on that rich
4 bottom mix, but we were interested to see what
5 they had asked for.

6 Q. Okay. So, they're
7 sharing information?

8 A. Yeah.

9 Q. So, in paragraph 117, in
10 the second paragraph, you write:

11 "Ludomir is requesting
12 friction testing and the
13 City does not have
14 objections to the
15 testing, but the City is
16 not making a request to
17 the Ministry."

18 And then there's further
19 e-mail from Ms. Lane and then some back and forth.

20 And Ms. Lane in 120 asks you:

21 "Chris, is the City of
22 Hamilton in agreement
23 with the testing? We
24 don't need a letter of
25 request, but we do need

1 in agreement, but number two, would not make the
2 request in writing to the MTO. Is that right?

3 A. Yeah.

4 Q. And did he tell you why
5 the City was not willing to make the request
6 directly?

7 A. He did not.

8 Q. Okay. And in
9 paragraph 117, back to that e-mail on the 27th, in
10 the last two paragraphs, you go through the pros
11 and cons: Three pros to conducting the friction
12 testing and two cons, if I can number them.

13 And am I correct in
14 understanding that these are all from the MTO's
15 perspective, the pros and cons? Is that a fair
16 reading? You're not talking about the City in
17 this respect; you're talking about, you know, this
18 is why the MTO might do it and the reasons why it
19 might not?

20 A. That's correct, or the
21 reasons for MTO to do it and for us not to do it,
22 because ultimately I was looking for direction on
23 whether or not we conduct the testing or tell them
24 we're not willing to do that, the testing.

25 Q. All right. And then

1 there's some other things and then you set in
2 motion, ultimately when it was decided to go ahead
3 with it, you brought in Mr. Marciello and set in
4 motion the logistics for the testing to occur. Is
5 that right?

6 A. That correct, and
7 eventually with a specific logistics for arriving
8 onsite and where to test. I then got rid of
9 myself as the middleman.

10 Q. Okay. Commissioner, it's
11 4:30. I think I would next move on to the testing
12 itself, which is a topic in itself, so this may be
13 a good time to break for the day.

14 JUSTICE WILTON-SIEGEL: Sure.
15 If that's a discreet topic, then let's take our
16 break or adjourn for the day and we'll return
17 tomorrow morning at 9:30. Thank you.

18 --- Whereupon the proceedings adjourned at
19 4:30 p.m. until Wednesday, May 18, 2022 at
20 9:30 a.m.

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