

**Joint Review Panel
Public Hearing**

**Commission d'examen conjoint
Audience publique**

**Frontier Oil Sands Mine
Project**

**Projet de mine de sables bitumineux
Frontier**

Joint Review Panel

Commission d'examen conjoint

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1 Fort McMurray, Alberta / Fort McMurray (Alberta)

2 --- Upon resuming on Thursday, October 4, 2018

3 at 0802 / L'audience reprend le jeudi

4 4 octobre 2018 à 0802

5 THE CHAIRPERSON: Thank you. Please
6 be seated.

7 Good morning, everyone. Just a couple
8 of items before we get started.

9 So again, a reminder that this
10 proceeding is being video and audio webcast, and
11 anybody in the room could be captured in those
12 webcasts, so if you have any concerns, please see Ms
13 LaCasse or Ms. Doebele at the secretariat's table.

14 In terms of schedule for this morning,
15 we're going to start with Stand.earth and Mr. Tom
16 Sanzillo, and then after that we have the Northwest
17 Territory Métis, followed by Keepers of the Athabasca.

18 And the plan is to be done before 6:00
19 p.m. or by 6:00 p.m. today.

20 Are there any other preliminary
21 matters?

22 Okay. Seeing none, Stand.earth,
23 please proceed.

24 PRESENTATION

25 MR. SANZILLO: Thank you.

1 Good morning, and thank you for
2 allowing me to speak this morning to all of you.

3 My name is Tom Sanzillo. I'm the
4 Director of Finance for an organization called the
5 Institute for Energy Economics and Financial Analysis.

6 We are out of -- our headquarters is
7 in Cleveland. I am out of New York State.

8 And prior -- I've been doing this work
9 for about 10 years. We are energy and finance
10 experts, and we work -- next slide.

11 Yeah, okay. And we work in the United
12 States and, in the next slide, and in Canada and
13 around the world on looking at ways to build
14 sustainable and profitable energy economy.

15 Prior to that, I spent a good part of
16 20 years in New York City and New York State
17 government finally as the First Deputy Comptroller for
18 the State of New York which is responsible for a large
19 portfolio, including \$150 billion pension fund that
20 invested money all over the world, including,
21 obviously, at the time in the fossil fuel sector where
22 we made an awful lot of money, in both our equities
23 and our private equity investments. Also, where the
24 comptroller of the State of New York is responsible
25 for the fiscal integrity of the local governments and

1 the State of New York as well.

2 I wanted -- I was asked to speak today
3 regarding the paper that we -- that we released
4 recently on what we call significant risks that
5 confront the Frontier Oil Sands Mine Project. We do
6 this frequently around the world as we -- as we're
7 looking at projects.

8 My discussion today is going to centre
9 on the commercial viability of the mine project and
10 the risks facing it, and we have concluded that the
11 project will face for its life cycle pretty severe
12 financial stresses. And we want to explain why we
13 reached that conclusion.

14 Next -- I'm sorry. I keep using this.
15 Okay. That's my main question. Next
16 one.

17 Okay. So we started out -- we
18 produced a prior report in 2015, and that report
19 relied somewhat on some research that was done through
20 Oil Change International, which is a group of
21 colleagues of ours using Rystad analysis.

22 And Rystad, we use because we find
23 them -- they're independent. They're fairly
24 conservative in their outlook, and they are usually
25 one of the few sources that are able to give us

1 that -- a fairly solid objective view of what we see
2 in the markets.

3 They found that -- in their 2015
4 modelling, they found that the project break-even
5 price for oil was about 140 for the first phase and
6 about \$118 a barrel for the second phase. Those are
7 real numbers. And that the project over the course of
8 the life never met the break-even point, as they could
9 see the markets going forward at that time.

10 Could you switch the slide?

11 So in 2018, we just took a look in
12 August. We had sort of a fairly tight deadline. I
13 probably would have run numbers more.

14 But anyway, the 2018 break-even price
15 reflects the decline in the price of oil, as does the
16 Teck application and the updates.

17 So they are seeing a break-even price,
18 effectively, of \$84 a barrel in the first phase and 86
19 in the second phase. And now current modelling looks
20 at the -- you know, the long-term view of oil prices
21 in the seventies and high sixties.

22 The Teck application has \$95 a barrel
23 nominal, which is about 78, 79 dollars a barrel you
24 would have in the real levels that sort of compare
25 apples to apples.

1 So to us, we don't -- we do not see a
2 whole lot of improvement in the -- in the pricing,
3 and -- next slide, please.

4 And so while we reviewed the
5 application and see that there is some claims of
6 robust economic health and the company's told its
7 shareholders the same, what we would look for in an
8 application of this nature is an actual break-even
9 price that the company believes the price of oil has
10 to be. And that that -- and that the composition of
11 that price would include not only operations, but the
12 return on capital and profit, which is -- we didn't
13 see in the application.

14 But it is a way for -- for the process
15 to better understand the financial and business
16 viability of the project.

17 So lacking that, we're concluding
18 based on our view of the use of the Rystad model which
19 we find, as I said, is in sort of an industry
20 recognized model, that we're looking at a long-term
21 financially distressed problem -- project.

22 And that what we then did is to look
23 at some of the risks, the circumstances around which
24 we think the environment will be for the project going
25 forward.

1 Next slide.

2 And here we're -- I'll run through
3 what we have, which is more than -- it's seven risks,
4 but there are a lot more than that, but -- next one,
5 please.

6 I think the application -- the updated
7 application and the -- and the discussion going on in
8 the industry generally in the country is that the --
9 the last downturn has caused a certain level of
10 discipline within the industry to bring down the costs
11 of producing oil in Canada, also around the world.

12 The question there when you're seeing
13 some Fort Hills numbers that look pretty good, the
14 question is all this sustainable. We don't really
15 know.

16 But the most -- more important part to
17 us is this -- does this elevate the project to a
18 potentially competitive project on the global market.

19 Next slide.

20 And here we took this chart again --
21 this is IEA data, and Rystad. And what they are
22 showing us is the Canadian cost curve. Nothing new to
23 anybody, I'm sure, is among the highest in the world
24 so that -- and most other countries and companies
25 around the world are also involved in a cost

1 discipline process.

2 So that while the cost disciplines
3 that are being undertaken by Canadian companies are
4 having an effect, will they have an effect relative to
5 the other countries that are already involved or
6 already entering the market at -- with a lower cost
7 basis.

8 We just don't know, and we just don't
9 find that in the application. You know, we see, you
10 know, quality issues, transport issues, and there's no
11 convincing rationale in there.

12 Next slide, please.

13 So we see that as a risk, the costs.

14 Again, the -- obviously during the
15 course of this proceeding the International Maritime
16 Organization has come out with new sulphur standards.
17 The -- we use a report from CIRI in there that points
18 out what some of the implications of that new -- those
19 new rules and regulations will be, particularly as
20 they affect the price that will be received for
21 Canadian oil sands.

22 Next slide, please.

23 This is a slide from their study that
24 sort of shows the typical discount between the West
25 Texas Intermediate and the Western Canada, and then

1 the impact of the -- of the sulphur regulations
2 driving down the price more, which would need to be
3 put into sort of a more robust business model in order
4 to understand the financial viability.

5 We see this as a downside on the
6 revenues.

7 Next the same report goes through the
8 kind of competitive intensity that will occur as the
9 regulations are implemented and as they kick in in the
10 2020 to 2025 period, with this particular slide
11 showing the competition that Canadian heavy oil has
12 with other heavy oil producers in Gulf.

13 And the report has a fairly
14 pessimistic view. I'm not as pessimistic, but what
15 it's showing is a very -- is a very tough competitive
16 environment and, similarly, the -- not only in the
17 refining part of the process, but also in the
18 marketing and export assumptions that are involved in
19 the project.

20 Next one, please.

21 Next one.

22 The -- there is an assumption that
23 the -- much of the oil will be sold in the
24 international markets. Currently most of the oil out
25 of Canada is sold into the United States, so we took a

1 look at the large suppliers to Asia, particularly, and
2 they are, some of them, allies of Canada, some of them
3 not allies of Canada.

4 And you -- we're seeing -- we took a
5 little bit of a look at the market for Japan and India
6 and China, and it's 300 billion being shipped in there
7 now by those large -- those large oil producing
8 countries and companies within those countries.

9 And then there are a group of swing
10 suppliers in Vietnam, Ecuador and Malaysia that are,
11 you know, where Canada might begin entering the
12 market.

13 So you have a fairly stiff competitive
14 market globally, and I'd be willing to get into this a
15 little bit more and more with you.

16 The -- you have one trade ally, the
17 United States. I'm from New York. That's --
18 sometimes I think that's different from the United
19 States.

20 Anyway, the product is known in the
21 United States and the transport routes are fairly much
22 established, although there's some problems with them.
23 That's not true for all of these other areas. And so
24 what we look for is what is the compelling competitive
25 advantage of the oil coming out of Frontier going into

1 this kind of market.

2 And the application, we found, didn't
3 provide the kind of rationale that we were comfortable
4 with.

5 Next.

6 I won't go into much detail here on
7 this. I think most of you know of the pipeline
8 controversies.

9 But again, the application doesn't
10 provide -- it acknowledges the impact of the pipeline
11 capacity shortfalls, but it doesn't show us why as --
12 why, if the condition will change, that will allow
13 Teck to move forward in the manner that they need
14 and -- to keep the prices competitive and to keep the
15 physical product capable of moving.

16 Next slide.

17 We took a look at the company, Teck
18 Resources, which is a company that has been
19 historically involved in metallurgical, copper and
20 other mining operations. The total capitalization is
21 13 billion. The project size is about 20 billion,
22 just one project, which would consume them at this
23 point.

24 I think as we go forward everybody in
25 this room would hope that Teck Resources was of the

1 size that it would be capable where this would not be
2 an issue and hope that their growth in their other
3 areas is substantial and productive over the next few
4 years, but you nevertheless see the permitting process
5 as being asked to make a decision I think before Teck
6 is actually in a position to make the investment.

7 So next slide, please.

8 And as we look through some of the
9 CAP-X plans going forward, the company is investing in
10 its core, historical core of copper, zinc, lead,
11 silver and metallurgical coal. And the Frontier
12 project is not yet on that list, and so our question
13 is, you know, how much of a priority is this for the
14 company.

15 And we took a little bit of an
16 analysis of what it would mean even on -- against
17 their annual backdrop of CAP-X spending, and it is a
18 substantial investment for the company.

19 And so what we look at there is, you
20 know, who then, really, is the sponsor for the project
21 because we recognize that there will have to be
22 changes in that, probably joint ventures or whatever.
23 Where will the sources of funding come from?

24 We're not sure that -- as we see,
25 there's some question as to whether or not the company

1 itself would be capable of meeting the capital needs.

2 And we -- and of course, we're looking
3 at an overall dramatic change in markets that would
4 have to take place, and none of that, I think, is
5 practically discussed in the application.

6 Next, please.

7 There's a discussion of the reduction
8 of economic benefits. This I don't need to talk to
9 you much about.

10 I think you all know oil prices are
11 volatile. That means the income and the -- the income
12 that will be coming in to the communities and the --
13 and the taxes that will come in to it will be
14 volatile.

15 I think most Canadian officials are
16 used to dealing with that volatility, but it
17 nevertheless is showing -- this recent reduction in
18 the economic benefit is showing that the oil price has
19 a, you know, substantial impact not only on the
20 finances of the company, but of course on the fiscal
21 position of the government and of the position of the
22 workers and communities where the investment's being
23 made.

24 Next.

25 The two remaining sort of macro forces

1 that I just want to mention, one is there's popular
2 opposition, and this is -- when I go back to the
3 worldwide view of our organization, this is happening
4 all over the world. You're not unique.

5 What is going on is a movement that
6 is, I think, confounding normal conceptions of
7 regulatory and political risk that I'm familiar with
8 that -- and pushing the regulatory sector to the point
9 not only where the normal response of regulators,
10 which is to try to find mitigation methods, to try to
11 find financial methods to achieve compliance, it's
12 sort of being pushed to its limit with the combination
13 of climate, environmental and financial risks
14 involved, and the answer that is being requested of
15 regulators is no, not amendments, as in no project.

16 That's very different, and it's
17 happening in -- as I said, it's happening globally.

18 And then the final point I want to
19 make is that the amount of investment into the Permian
20 Basin right now, I think, the two that you would
21 probably be the most familiar with is the Kinder
22 Morgan and Exxon investments 'cause they left some
23 Canadian investments and are picking it up there.

24 That is going to flood the market with
25 low sulphur oil, and that will add to both the

1 refinery headaches in the Gulf coast as well as the,
2 you know, competition on the world market for the oil
3 sands product.

4 Next.

5 So I just -- as a summary, the --
6 we're not seeing where the project would meet sort of
7 an industry test of commercial viability right now,
8 and we see sort of the cumulative impact of the risks,
9 the gap widening on the -- on the oil prices, probably
10 a diminished value for the project over time, which
11 will mean impairments and the like, and the negative
12 outlook driven mostly by lower than expected demand
13 that are more market -- that are market driven, not
14 policy driven.

15 Thanks.

16 THE CHAIRPERSON: Does Teck have any
17 questions?

18 --- Pause

19 MS CHU: Thank you, Mr. Chair, and
20 thank you, Ms McMahon and Mr. Sanzillo for that
21 presentation. I enjoyed listening to it. I just have
22 a few questions for you.

23 So my first question would be, would
24 it be a fair characterization that this report that
25 you have filed is an objective economic analysis of

1 the Frontier project?

2 MR. SANZILLO: It's an objective
3 analysis of the market conditions that the project
4 faces, yes, in my view.

5 MS CHU: Okay. Now, I have reviewed
6 your CV, your organization's web site, and I even took
7 a breeze through Wikipedia because it popped up on
8 Google. And I just wanted to clarify a few things
9 with you.

10 And don't worry; I'm not going to ask
11 you about your Wikipedia page.

12 I'd like to turn to your CV, which is
13 located in CEAA doc 486, which is Stand.earth's August
14 31st submission.

15 And the page that I would like to look
16 at is hard copy 24, and that's PDF 26. It'll be PDF
17 26 at the bottom of the page.

18 So under Education there, Mr.
19 Sanzillo, at the bottom of the page, you received your
20 Bachelor of Arts from the University of California;
21 correct?

22 MR. SANZILLO: Yes.

23 MS CHU: And your Arts degree was in
24 politics?

25 MR. SANZILLO: Yes.

1 MS CHU: And I see under this section
2 that there are no other listed degrees or other formal
3 education related to economics or economic analysis.

4 Am I reading that correctly?

5 MR. SANZILLO: Yes.

6 MS CHU: Now if I could turn to hard
7 copy page 22, PDF 24, lower down on the page, under
8 the Institute for Energy, you stated in your opening
9 statement that you are currently with the Institute
10 for Energy, Economics and Financial Analysis.

11 Is that right?

12 MR. SANZILLO: Yes, that's right.

13 MS CHU: And I see that you've been
14 with IEEFA since May 2013?

15 MR. SANZILLO: Right.

16 MS CHU: I would like to talk a little
17 bit more about the IEEFA.

18 Would you agree that the Institute's
19 stated mission is to accelerate the transition to a
20 diverse, sustainable and profitable energy economy and
21 to reduce dependence on coal and other non-renewable
22 energy sources?

23 MR. SANZILLO: Yeah, that's an old
24 mission statement. Actually, the second part of it
25 we've taken out of the mission statement.

1 But yes, that was generally the idea.

2 MS CHU: You say it's an old mission
3 statement. When was that changed?

4 MR. SANZILLO: I think a couple of
5 years ago.

6 But I'm not going to quibble with you.
7 That's a fair characterization.

8 MS CHU: That's a fair
9 characterization.

10 MR. SANZILLO: Yes.

11 MS CHU: Would you agree with me when
12 I say that was the mission statement as recent as
13 2017, July?

14 MR. SANZILLO: I don't know. There
15 was a change. I'm not going to - we can leave it as
16 it is.

17 MS CHU: So would you agree with me on
18 that?

19 MR. SANZILLO: Sure.

20 MS CHU: Okay, thank you, Mr.
21 Sanzillo.

22 Now if I could turn back to your CV
23 again, CEAA Doc 486, again PDF 24, which is hard copy
24 page 22, just at the top of the page this time, I'm
25 going to point to your first bullet of career

1 highlights.

2 It says that you are a co-founder of a
3 non-profit organization designed to provide economic
4 and financial analysis in support of renewable energy
5 and energy efficiency and to curtail the use of fossil
6 fuels in the energy sector.

7 Is that referring to the IEEFA?

8 MR. SANZILLO: Yes.

9 MS CHU: And this is your current CV.
10 Correct?

11 MR. SANZILLO: Yes.

12 MS CHU: So the statement that it is
13 to curtail the use of fossil fuels in the energy
14 sector is accurate to today?

15 MR. SANZILLO: Yes.

16 MS CHU: Okay, thank you, Mr.
17 Sanzillo.

18 Now I would like to turn to your
19 presentation today and I would like to pull up slide
20 No. 4, which would be PDF 5.

21 Slide 4, PDF 5. Perfect; thank you.

22 You said this was from the 2015 Oil
23 Change International Report. Correct?

24 MR. SANZILLO: Yes. I believe we
25 produced it in our 2015 report too.

1 MS CHU: Right. And you also said
2 that you did an updated August 2018 model.

3 Why was the 2018 model not included?

4 MR. SANZILLO: We basically were
5 looking at the -- we did a test of the financial
6 fundamentals. I didn't have the time and I didn't
7 have the resources to run the whole model again.

8 MS CHU: So you didn't run a 2018 full
9 model.

10 MR. SANZILLO: I didn't run the whole
11 model, no.

12 I'm working fundamentally from the
13 breakeven price, because you're really at a point in
14 this process where the government either asks you for
15 a more robust business analysis or it doesn't. So it
16 really is just a threshold discussion that I think is
17 useful for my work. Me trying to put together another
18 model would be suspect.

19 And the reason we use Rystad is
20 because it's an industry-wide and recognized model.

21 MS CHU: Okay. But didn't you say in
22 your presentation that the 2018 model did require
23 different values to be inputted?

24 MR. SANZILLO: It would be quite
25 different values, yes.

1 But for the discussion of this at a
2 threshold level, which is what I was talking about,
3 the breakeven price is a real conversation piece.

4 MS CHU: Okay. So would it be fair to
5 say that you didn't run a new full 2018 model and you
6 are relying still on the full 2015 model that was
7 done?

8 MR. SANZILLO: With the obvious
9 adjustment, with the adjustments of the oil price
10 changes and the breakeven prices and the forward
11 projection of oil, and assuming that those inputs are
12 more or less the same.

13 And we're also assuming that you've
14 made some changes in the costs of how the Project will
15 be managed. Those costs, of course, are not disclosed
16 in the application, which would have made my attempt
17 to do a model impossible.

18 MS CHU: Okay.

19 MR. SANZILLO: And also the other
20 thing that's not enclosed in the application is any
21 kind of internal rate of return assumptions had not
22 been disclosed to either the Canadian government or to
23 your investors to justify whether or not this Project
24 is a viable project for the allocation of capital in
25 your company.

1 MS CHU: Okay. So, Mr. Sanzillo, I'm
2 just asking about whether there is a full --

3 MR. SANZILLO: I'm trying to give you
4 a rationale as to why the report was put together in
5 the manner that it was.

6 MS CHU: Okay.

7 MR. SANZILLO: I recognize all the
8 things you are getting at and there was good reason
9 for it.

10 It's just one question: whether or not
11 the government will ask you for a more robust analysis
12 of your business plan.

13 MS CHU: Sure. But if I were to ask
14 you right now to provide the full 2018 model, you
15 wouldn't have anything to give us.

16 MR. SANZILLO: Would you?

17 MS CHU: It's your model, sir, that
18 you are basing your expert opinion on.

19 MR. SANZILLO: No, I'm asking you.

20 No, I would not. I didn't see it --
21 for the risk level that we're talking about here, the
22 threshold risk, you don't need that.

23 MS CHU: You don't need that. You
24 don't need the updated 2018 --

25 MR. SANZILLO: The question itself is

1 apparent from the numbers and the general knowledge of
2 the model. You don't have to run the whole model
3 again to ask the threshold question.

4 I'm not asking you to produce a more
5 robust business model for the Canadian government.
6 The Canadian government I'm presenting this to should
7 maybe see this as a potential set of questions.

8 For you to ask me, a non-profit
9 organization, to figure out how the modelling of your
10 company is going to be run when there's no
11 transparency in the application, is kind of absurd.

12 So I could have invested a lot of
13 money with Rystad and done that, but (a) I don't have
14 it and (b) it really isn't necessary to raise the
15 threshold question because the information that you
16 would provide to the government would be much more
17 important than anything I could possibly say.

18 MS CHU: Okay. So a general
19 understanding of the model is sufficient is what
20 you're telling me.

21 MR. SANZILLO: For the purposes of
22 raising a risk question in this proceeding, yes.

23 MS CHU: Okay. I understand that the
24 2015 version of this model was taken from a paper
25 written by Lorne Stockman, titled "Poster Child of Tar

1 Sands Folly", which was published by Oil Change
2 International.

3 Is that correct?

4 MR. SANZILLO: Yes.

5 MS CHU: That's the one that is
6 attached in Appendix II of your submission?

7 MR. SANZILLO: Yes.

8 MS CHU: You stated in your
9 presentation that Oil Price International are
10 colleagues of yours. How well do you know the
11 organization?

12 MR. SANZILLO: Not well but well
13 enough to know -- we're non-profits. We don't have
14 multi-billion dollar budgets.

15 They have a licence with Rystad; I
16 don't. So we share resources.

17 I have databases of other kinds that
18 we share from time to time.

19 MS CHU: Okay. And you also said in
20 your presentation that the Oil Price International
21 analysis is, and I quote, "solid and objective".

22 Is that still an accurate statement?

23 MR. SANZILLO: It's based on Rystad.

24 MS CHU: So it is solid and
25 objective --

1 MR. SANZILLO: It's based on an
2 industry-wide recognized modelling. I read it and
3 reviewed it myself and interviewed the organization
4 and people who read it and looked over the Rystad
5 model at the time, because we were producing a paper,
6 if you remember, at that same time.

7 So before we included it in our paper
8 I think I did appropriate diligence.

9 MS CHU: Okay. So we can agree that
10 your original statement that it's solid and objective,
11 it's a comment that you still want to stand by?

12 MR. SANZILLO: Yes.

13 MS CHU: We can agree with that.

14 So if you are familiar with the Oil
15 Price International organization, you are also aware
16 that their stated mandate is to be an advocacy
17 organization focused on exposing the true cost of
18 fossil fuels and facilitating the coming transition
19 towards clean energy.

20 You are familiar with that?

21 MR. SANZILLO: I'm familiar with that.
22 And the reason we see our -- you know, I also work for
23 business organizations that sometimes do the opposite
24 of that. But that's beside the point.

25 This particular organization is an

1 organization that is very much like I was trying to
2 describe in terms of the concepts of regulatory risk
3 that have emerged: (a) they are pretty much on target
4 on market forces regarding where the trouble spots are
5 in the fossil fuel sector.

6 So when they are on target on those
7 particular areas, we talk with them and involve
8 ourselves in their work.

9 Their vision, which I think is what
10 you are getting at -- you know, their vision is not
11 our vision. But we work with a lot of organizations,
12 as I'm sure you do in your corporation that you don't
13 share the same vision with but you share sort of
14 similar paths and sometimes a lie. Yes.

15 MS CHU: But your view is that it's a
16 solid and objective -- it was a solid and objective
17 organization, and you do agree that --

18 MR. SANZILLO: I said the use of the
19 Rystad modelling is what we are referring to in terms
20 of the solid thing. But I have no reason to question
21 the organization.

22 As I said to you, and maybe this is
23 part of the problem, the nature of the risks that you
24 face, the regulatory and political risks, have
25 profoundly changed in the past ten years. And these

1 are the kinds of organizations that are raising issues
2 that are confounding the way in which you are making
3 Capex decisions.

4 I'm not sure of your line of
5 questioning here. I think you're missing the point
6 maybe, not me.

7 MS CHU: My line of questioning was
8 simply to ask whether you acknowledge their mission
9 statement and whether you are aware of their mission
10 statement.

11 That's all I had to say, Mr. Sanzillo,
12 on that point.

13 Now you are aware then -- and I think
14 this is what I gleaned from your presentation -- that
15 you did rely on Stockman's Report in its entirety and
16 its modelling, as we said, its general understanding
17 of the model is required; that you relied entirely on
18 his modelling to base your understanding of the
19 Frontier Project's initial phase cashflow.

20 Is that correct?

21 MR. SANZILLO: I relied on the use of
22 Rystad. As I said to you, they have a licence and I
23 don't.

24 When they provide that, I then go back
25 in and dig as far as I can without breaching any of

1 their agreements and determine for ourselves that that
2 was a reasonably sound approach to modelling going
3 forward.

4 So yes. And as I said to you, the
5 reason we do that is because Rystad is an
6 industry-wide modelling tool that is recognized.
7 Whereas if I was to do that, which I'm perfectly
8 capable of doing, it's eminently suspect because of
9 the kinds of questions that you're raising.

10 But when we, as we always do, look at
11 the market forces and the underlying market issues and
12 trends, which we are obligated to do by our board and
13 our mission, and we apply our sense of the
14 professional standards, then we will come to the
15 determination that we would rely on another
16 organization.

17 I frequently rely on organizations.
18 You rely on the IEE, which we have criticisms of. You
19 rely on the United States Energy Information
20 Administration. I do too, but I do it with criticisms
21 and look to use other sources and the like.

22 In this instance the problem with the
23 use of other sources is that they think they're not
24 there. All I have is your self-declarations to the
25 Canadian government, which are useful and helpful, and

1 the work that you put out for your investors.

2 You're set up here somewhat with a
3 methodological dilemma.

4 MS CHU: I want to go back to a
5 statement that you made just a few moments ago.

6 You said we can agree that you relied
7 on the Rystad model and you did not do the modelling
8 yourself. Is that correct?

9 MR. SANZILLO: That's correct.

10 MS CHU: So Stockman's Report that is
11 included in your submissions, when it said "we
12 downloaded the data and modelled the Project's initial
13 first phase to illustrate the Project's cashflow", you
14 weren't actually involved in developing that model,
15 were you?

16 MR. SANZILLO: I was not involved in
17 developing the model. I reviewed it before I actually
18 --

19 MS CHU: Okay, thank you. That was my
20 question.

21 MR. SANZILLO: I reviewed that before
22 I put the -- that's how you do diligence.

23 MS CHU: So when you reviewed it were
24 you aware of what assumptions went into this model and
25 exactly how those parameters would affect the model?

1 MR. SANZILLO: I'm generally familiar
2 with the Rystad Model.

3 MS CHU: You are generally familiar
4 but you wouldn't have actively developed the model and
5 been actually familiar with the assumptions that went
6 into it.

7 MR. SANZILLO: I was familiar with the
8 assumptions that went into it. I didn't help develop
9 that but I did it after the fact, yes.

10 MS CHU: And Lorne Stockman, do you
11 know him personally?

12 MR. SANZILLO: He's a professional --
13 I know him from the profession, yes.

14 Personally, I don't know what you
15 mean.

16 MS CHU: You've worked with him before
17 in person.

18 MR. SANZILLO: Yes.

19 MS CHU: So you would be aware then,
20 for example, that prior to joining Oil Change
21 International on staff he worked as a consultant with
22 organizations such as Greenpeace U.K.?

23 MR. SANZILLO: Yes.

24 MS CHU: Okay, thank you.

25 I just have one last question before I

1 move off from your report.

2 At page 12, PDF 14, Footnote 54 -- and
3 that would be CEAA Doc 486 -- and it's PDF page 14.

4 I would like to go down to the bottom
5 of the page so we can see the Footnotes. PDF 14.

6 Mr. Sanzillo, I would like to draw
7 your attention to Footnote 54. You reference an S&P
8 Global Platts article titled "Interview: Canadian
9 crude oil exports to Asia could rise".

10 You will agree with me that S&P Global
11 Platts is a credible and reliable source?

12 MR. SANZILLO: Yes.

13 MS CHU: Okay, thank you.

14 Now I would like to take you back to
15 your Slide 10 from your presentation today. So that
16 would be PDF 11.

17 I would like to focus on your
18 discussion to the International Maritime Organization.
19 In that first bullet there you are referring to the
20 International Maritime Organization Regulations to
21 reduce sulphur oxides.

22 Is that correct?

23 MR. SANZILLO: Yes.

24 MS CHU: Just to reiterate, they are
25 published and put out by the International Maritime

1 Organization.

2 MR. SANZILLO: Yes.

3 MS CHU: What did you mean in the
4 slide when you have in brackets here 2020 to 2025?

5 MR. SANZILLO: That was the
6 implementation dates that I think were included in the
7 report. There would be a phase-in.

8 MS CHU: A phase-in. When did you
9 draft this PowerPoint?

10 MR. SANZILLO: Last week.

11 MS CHU: Last week. So this
12 information, to your knowledge, would be current?

13 MR. SANZILLO: I believe it's as
14 current as what was in the report, the CERI Report.

15 MS CHU: Okay. I just want to
16 double-check that I understand this right. When you
17 say 2020 to 2025, you are talking about a range of
18 dates when this could be applied.

19 MR. SANZILLO: I think the report is
20 talking about that there would be a phase-in market
21 effect over that period of time of the regulations,
22 based on a whole series of, you know, market actions
23 and reactions that would take place.

24 But you were generally looking at
25 probably full implementation around about the same

1 time as you're looking to going to market.

2 MS CHU: Okay.

3 MR. SANZILLO: Do you know what I
4 mean? That's what we're trying to do.

5 MS CHU: Sure, sure.

6 I would like to introduce into the
7 record an Aid to Cross. This would be titled Exhibit
8 D. It's the International Maritime Organization
9 document.

10 MS LaCASSE: And that has been
11 provided to the Registry.

12 That would be Document No. 588.

13 And Stand.earth's presentation this
14 morning will be Document 587.

15 EXHIBIT NO. 587: Presentation by
16 Stand.earth

17 EXHIBIT NO. 588: International
18 Maritime Organization document

19 MS CHU: So I will draw your attention
20 to the first page where it explicitly states that
21 these Regulations will definitively take place January
22 1st, 2020.

23 Do you see that?

24 MR. SANZILLO: Yes.

25 MS CHU: And now I would like to take

1 you to the third page, where it says: Could the .50
2 per cent limit be delayed? The first word is "no".

3 I would also like to get more of an
4 understanding of what you understand the Regulations
5 to be.

6 Could you explain to me a little bit
7 what the Regulations are actually requiring?

8 MR. SANZILLO: The Regulations are
9 requiring that there be lower sulphur content in
10 shipping fuel.

11 MS CHU: Okay. So if I'm
12 understanding that correctly, that means that the only
13 way to comply with the Regulations is for ships to
14 switch to low sulphur fuel.

15 Is that correct?

16 MR. SANZILLO: I'm not going to tell
17 you that I'm an expert in the micro workings of the
18 regulatory implementation of this intervention.

19 I would tell you that as a former
20 government official I would be foolish to say to you
21 that there is only one way in which a regulatory rule
22 could be implemented.

23 There will be many companies, many
24 issues and many appeals. I have no idea and I don't
25 think you do either.

1 There is a rule and that rule will be
2 implemented over a period of time after a process of
3 negotiation and back and forth with many companies in
4 many ways and therefore have a price effect over a
5 period of time, over a period of years.

6 MS CHU: Mr. Sanzillo --

7 MR. SANZILLO: I mean, I'm not a
8 lawyer, you know. I run money and I've done that my
9 whole life.

10 So the interaction of regulation and
11 business decisions has one thing to do with lawyers
12 litigating and another thing to do with business
13 people trying to read bottom lines.

14 MS CHU: So, Mr. Sanzillo, did I hear
15 that correctly? You have no idea what the Regulations
16 entail?

17 MR. SANZILLO: No, I didn't say that
18 at all.

19 I said the actual -- you asked me a
20 question: So the only way in which -- if I can
21 remember it correctly.

22 It is the only way in which compliance
23 can be achieved is by the lowering of sulphur in the
24 fuel?

25 I don't know how to answer that

1 question because it is a rule. It is a regulatory
2 rule that is being applied to an industry and
3 companies in an industry. How that rule then gets
4 interpreted I don't think you know either, because
5 there will be a dynamic process by which these rules
6 are implemented and that will have price implications
7 over a long period of time, price implications that
8 will be affected by business decisions, by your own
9 business decisions and the business decisions that are
10 involved with the shipping industry.

11 MS CHU: But your economic analysis,
12 if I'm understanding it correctly, is that the IMO
13 Regulations requirement that there will have to be low
14 sulphur oil will change the demand for the oil that we
15 produce.

16 Isn't that the crux of what you are
17 suggesting?

18 MR. SANZILLO: Change pricing for sure
19 and that will probably have an impact on the demand,
20 yes.

21 MS CHU: So wouldn't it be quite
22 material to your analysis to understand how and what
23 distribution of fuels will be used, be allowed under
24 the IMO in order to facilitate your economic analysis?

25 MR. SANZILLO: I think -- again I'm a

1 non-profit organization; I'm not your regulator

2 So I'm asking of the Canadian
3 government and raising to the Canadian government that
4 this issue is not included in your application in any
5 way, and the threshold indications are from the CERI
6 report, which I think you and I would agree is a
7 reputable industry organization, that the price impact
8 would probably be affecting the price assumptions that
9 are included in this application. That's all I'm
10 saying.

11 The understanding of -- trying to get
12 me involved in distribution or the various ways in
13 which fuel are produced and all that, that's not what
14 finance is necessarily about. It's about the rules
15 and the general impact of whether or not this project
16 is commercially viable.

17 Since it starts out in the red, as far
18 as I'm concerned, and it then faces a revenue risk of
19 substantial proportions, I think that's what you have
20 to -- it is incumbent then upon the government to ask
21 you for a more robust analysis, not for me to tell you
22 what that robust analysis is or how it should be
23 applied.

24 MS CHU: But, Sanzillo, you're --

25 MR. SANZILLO: That's all I'm asking.

1 It's the threshold questions, that's what I'm doing
2 here. I'm not telling you how to run your company or
3 how these rules are going to be done. I'm telling you
4 that there are risk factors here, and they are risk
5 factors that impair the profitability of your project.
6 It is true, that the price implications for the
7 regulations will have an impact on your proposal, and
8 it's not included in your application and it should
9 be.

10 MS CHU: But, Mr. Sanzillo, you're
11 talking about risks regarding price implications
12 regarding these IMO regulations. You can't even tell
13 me what the content of the regulations are.

14 Can you tell me whether it is focused
15 on the fuels or whether it's focused on the emissions?
16 Are you able to give me that answer?

17 MR. SANZILLO: It's focused on the
18 emissions, and of course it's focused on the content
19 of the fuel. The regulatory purpose is to deal with
20 emissions. You know, how it gets done, you know, I
21 don't have a full understanding of it because I'm not
22 a shipping expert and I'm not a fuels expert.

23 The financial implications, however,
24 are abundantly clear from the CERI report and from any
25 common sense approach that the difference in the

1 discount between the WTI and WCS will be larger to the
2 detriment of the project. That is a real financial
3 risk.

4 You can tell me I don't understand the
5 regulations and the rules, but that is a real
6 financial risk. I don't have to know every single jot
7 and tittle of the regulatory process. I can show you,
8 as a financial expert, that that is an implication and
9 a risk.

10 If you want to tell me no and then you
11 want to tell the Canadian Government that, and then
12 when the project, you know, can't go forward, because
13 when your board takes a look at it or somebody else
14 does, or your bankers, and tell you you can't do it,
15 fine, okay. But that's really what this is.

16 MS CHU: Okay. But, Mr. Sanzillo, as
17 a financial expert, shouldn't you understand how one
18 of your risks that you quote in your own report works
19 in order to change what the price of oil would be?

20 So, for example, if, as we've agreed,
21 that it's regarding emissions rather than fuels,
22 wouldn't you agree that companies could install
23 scrubbers in its place, rather than switching over to
24 other types of fuels, which is what your argument is?

25 MR. SANZILLO: I said to you, there

1 are an abundant -- that's why I didn't answer your
2 question in the way you asked it, there are an
3 abundant number of ways to meet an environmental rule
4 or regulation. So, yes, how the costs get passed
5 along, you know, is a matter also and there is a risk
6 there.

7 MS CHU: Okay. So you said there are
8 an abundant number of ways. So you would agree with
9 me that switching fuels is not the only way to meet
10 this IMO regulation?

11 MR. SANZILLO: I'm at a loss to answer
12 your question, because I'm looking at the financial
13 implications that are involved here. Whatever the
14 action that is taken to meet the regulation, there's
15 going to be a cost and that will be added to the
16 project, and that adds a risk to a project that
17 already has, you know, distress signals.

18 MS CHU: Okay. Mr. Sanzillo, I'm
19 going to introduce another document aid to cross, it
20 would be Document E, it's titled S&P Platts Scorpio
21 Group.

22 MS LACASSE: That document will, as
23 well, be part of Exhibit 588.

24 MS CHU: You'll read with me the first
25 line:

1 " Shipping company Scorpio Group
2 plans to fit scrubber equipment
3 to a majority of its vessels by
4 July 2020 to allow them to
5 continue burning fuel oil after
6 global sulfur emission limits are
7 cut."

8 That is what it says? That's what it
9 says?

10 MR. SANZILLO: Yes.

11 MS CHU: We agreed earlier that S&P
12 Platts is a reliable and credible source?

13 MR. SANZILLO: Excuse me?

14 MS CHU: We agreed earlier that --

15 MR. SANZILLO: Oh yes, m'hmm.

16 MS CHU: Yeah. So I'll ask you again.
17 Are there a number of ways, other than switching from
18 fuels in order to meet the IMO regulations?

19 MR. SANZILLO: I would answer your
20 question, which is this doesn't tell me what the cost
21 implications are and so, as a result, it becomes --
22 you know, that's a fact that there will be actions
23 taken by companies who are affected by the regulations
24 to find alternative compliance options. That would be
25 what I said to you initially, which is why I couldn't

1 answer your, you know, rather direct question in the
2 way...

3 That this is one of them and I would
4 say, yes, and then I would ask you -- ask the company,
5 what's the cost implication? If you can't tell me
6 what the cost implication is, I'm not sure what the
7 meaning of this piece of paper is. Because I'm
8 looking at money, I'm not looking at all of the
9 operational -- you have to do...

10 All I'm saying is that you have to
11 present to the Canadian Government a robust bottom
12 line and, to your investors, a break-even price that
13 sticks, and that can be a valid way by which you then
14 invest your shareholders' money.

15 MS CHU: Okay. All right, Mr.
16 Sanzillo, let's talk about money then. Let's go to
17 your Slide 16, PDF 17.

18 Your first point that Teck's current
19 market capitalization is \$13 billion. You said you
20 prepared this slide a week ago?

21 MR. SANZILLO: Yeah, it was taken out
22 of the report from whatever the records were that we
23 had from Teck.

24 MS CHU: So when you say current, what
25 do you mean?

1 MR. SANZILLO: In the last couple of
2 months.

3 MS CHU: Last couple of months.
4 Teck's market capitalization and share price is how
5 you based your analysis, correct?

6 MR. SANZILLO: Yes.

7 MS CHU: Could you -- I didn't catch
8 it earlier, where did you get this information?

9 MR. SANZILLO: I have to go back and
10 look at the report.

11 THE CHAIRPERSON: Mr. Sanzillo, sorry,
12 just a reminder to sit a little closer to the mic.
13 You're leaning back a little far.

14 MR. SANZILLO: Yeah, okay. Thank you.

15 MS CHU: Mr. Sanzillo, I'll save you
16 some flipping. You mentioned \$13 billion in your
17 report at page 9.

18 MR. SANZILLO: M'hmm.

19 MS CHU: But I do notice that there is
20 no citation.

21 MR. SANZILLO: Yeah. I tend to use
22 either your annual reports or market information like
23 Morningstar or something. I don't remember what I
24 did.

25 MS CHU: Okay. But this would be --

1 MR. SANZILLO: Okay, yeah.

2 MS CHU: -- this would be current?

3 Yeah. Are you aware of what Teck's current stock
4 price is?

5 MR. SANZILLO: No.

6 MS CHU: Are you aware of what Teck's
7 share outstandings are?

8 MR. SANZILLO: I don't have that in
9 front of me, no.

10 MS CHU: But you agreed earlier that
11 Teck's market capitalization and share price is how
12 you based your analysis?

13 MR. SANZILLO: Yeah.

14 MS CHU: All right. I'd like to
15 introduce another aid to cross. This is titled F,
16 Globe & Mail, Teck Stock Prices.

17 MS LACASSE: This will also be part of
18 Document 588.

19 MS CHU: So this is from yesterday and
20 it is from the Globe & Mail. You're familiar with the
21 Globe & Mail, correct, Mr. Sanzillo?

22 MR. SANZILLO: Yeah.

23 MS CHU: Now, if you flip to page 3,
24 and it discusses share outstanding in the second --
25 excuse me, market capitalization in the first row.

1 You see that it's actually \$18 billion, correct?

2 MR. SANZILLO: What page?

3 MS CHU: Page 3, it's the last page,
4 first row.

5 MR. SANZILLO: It's on page 1, right?
6 Oh, yeah. Yeah, it's the same number that's on page
7 1, right?

8 MS CHU: Yeah, that's correct.

9 MR. SANZILLO: Okay, m'hmm.

10 MS CHU: So you would agree with me
11 that your assessment of Teck's market capitalization
12 is \$5 billion off? Would you agree?

13 MR. SANZILLO: I would say it's
14 different from what I had. But I would raise the
15 question, if you think \$18 billion market
16 capitalization is sufficient to go into a \$20 billion
17 project, then I guess I'm glad I'm not a Teck
18 shareholder.

19 MS CHU: Now, if you turn to page 1 of
20 the document, you'll agree with me, that Teck's
21 current stock price is \$31.28 per share? Would you
22 agree, just based on the document?

23 MR. SANZILLO: I guess.

24 MS CHU: Just to confirm, you see that
25 the shares outstanding is 57 million?

1 MR. SANZILLO: M'hmm.

2 MS CHU: These were easily reachable
3 numbers that you could have Googled before today?

4 Okay, I'll move on.

5 Now, my understanding is that in 2015
6 you authored another report regarding Teck, again with
7 the IEEFA, which was entitled Rough Road on Oil Sands
8 Investments. Is that correct?

9 MR. SANZILLO: M'hmm.

10 MS CHU: This report was publish April
11 20, 2015, correct?

12 MR. SANZILLO: M'hmm.

13 MS CHU: Sorry, I need a yes or a no
14 for the record.

15 MR. SANZILLO: Yes, yes.

16 MS CHU: Okay. I'm going to introduce
17 another aid to cross, which is the report that I just
18 mentioned, it would be titled G, IEEFA Teck Resources.

19 MS LACASSE: This will also form part
20 of CEAA Registry Document 588.

21 MS CHU: So this is the report. In
22 the interest of saving time and paper I've only
23 reproduced the executive summary and conclusion. So
24 if I can draw your attention to the conclusion, which
25 is on the second page of the handout.

1 So you'll read with me that you
2 concluded that:

3 "Teck is in no position to afford
4 addition outlays for its Fort
5 Hills oil sands project given its
6 internal financial weaknesses and
7 the oil industry's current and
8 projected weak revenues."

9 (As Read)

10 That was what you concluded?

11 MR. SANZILLO: Yes.

12 MS CHU: If we can turn to the
13 executive summary, which is the page before, the
14 highlighted section, it says that your report was
15 based on the understanding that Teck's share in Fort
16 Hills was 20 per cent. Is that correct?

17 MR. SANZILLO: Yes.

18 MS CHU: Are you aware that Fort Hills
19 is currently in production?

20 MR. SANZILLO: Absolutely.

21 MS CHU: Are you aware of what Teck's
22 stock price was at the time that this April 2015
23 report was written?

24 MR. SANZILLO: I don't remember.

25 MS CHU: Okay. Well, luckily, the

1 Globe & Mail is very handy. On your second page of
2 the Globe & Mail stock price that I provided to you
3 there is a five-year chart for stocks. It gives us
4 the date we agreed that it was published, April 20th,
5 2015 --

6 MR. SANZILLO: M'hmm.

7 MS CHU: -- and it gives us the date
8 April 13th, 2015, and that stock price was \$15 per
9 share. Do you see that?

10 MR. SANZILLO: Yes.

11 MS CHU: Now, would you agree with me
12 that \$15 a share is half of Teck's current stock price
13 of \$31 a share?

14 MR. SANZILLO: Yes.

15 MS CHU: Mr. Sanzillo, were you
16 listening into this hearing when Mr. McFadyen gave
17 Teck's opening statement?

18 MR. SANZILLO: No.

19 MS CHU: So, Mr. Sanzillo, you aren't
20 aware that despite your conclusions and despite Teck's
21 stock being at half the stock price that it is at now,
22 Teck not only met its original 20 per cent capital
23 outlay, but increased its share to 21.3 per cent of
24 the project?

25 MR. SANZILLO: Yeah, I believe oil

1 prices have gone up maybe double since the time of the
2 production of our report. So my statement that it was
3 based on current and projected weak revenues, the
4 revenue's improved.

5 MS CHU: But you would agree --

6 MR. SANZILLO: Actually, the revenue's
7 improved. That is the statement -- when I qualify a
8 statement based on that, if the condition changes, if
9 the circumstance changes, the basic point changes. Of
10 course things are dynamic. You know, I fail to see
11 your point. This does not improve the financial
12 fundamentals of the project that we're looking at.
13 This proves nothing.

14 The project still -- you have not
15 provided this forum with a break-even price, nor have
16 you provided that for your investors. Until that's
17 done in some kind of a transparent fashion, there's
18 really not a whole lot that I can say to you or you
19 can say to me.

20 MS CHU: So your position is that the
21 reason Teck was able to increase its shares in Fort
22 Hills was because revenues increased? Am I
23 understanding that correctly?

24 MR. SANZILLO: The revenues increased
25 and the overall fortunes of the company improved, the

1 outlook improved.

2 MS CHU: You're aware that Fort Hills
3 was not producing in 2015 and only started producing
4 this year?

5 MR. SANZILLO: No, no, no, no,
6 you're -- you're --

7 MS CHU: Are you aware, Mr. Sanzillo?

8 MR. SANZILLO: I'm aware of your
9 company finances and the revenues improved across the
10 board for copper and for metallurgical coal, which
11 kicked up quite handsomely, which allows your company
12 to be in a better position to then, you know, take on
13 the kinds of risks that you're talking about.

14 But a 20 per cent position in a
15 project -- wait, I think you pay -- I don't know -- I
16 don't remember, it's in the single digit billions, is
17 different than a \$20 billion project when your capex
18 is 18, 13, doesn't matter, you can't cover it.

19 Your capital plans, which are in your
20 core businesses of copper and met coal and lead in
21 some other areas, are dedicated to that for a reason.
22 It's dedicated to that for a reason, because your
23 corporate officials basically see that's where your
24 profits are.

25 That you're not now putting more

1 investment into Frontier in your current capex plans
2 shows to me that you're hedging, and that's fine, but
3 you are hedging. But the rest of the operation is
4 what has improved and that's what we're talking about
5 here. You have a generalized enterprise-wide value
6 position and you have this project, which I think puts
7 that at risk quite frankly.

8 MS CHU: But you'll agree with me that
9 contrary to your conclusions that Teck could not even
10 meet its -- what did you write here -- its additional
11 outlays, that not only did it meet its outlays, but it
12 increased its share in Fort Hills? You would agree
13 with me on that statement?

14 MR. SANZILLO: Yes, because -- and the
15 conditions changed and your outlook changed. Of
16 course your outlook is going to change when the price
17 of oils is going up, whose wouldn't?

18 MS CHU: Okay, that's fine. Thank
19 you, Mr. Sanzillo.

20 Just a few final points. If I could
21 bring up Slide 16, which would be PDF 17.

22 I'm still having a little bit of
23 trouble with this slide. So the third bullet you said
24 revenues are tied to metallurgical, and I think I
25 heard you say earlier that it's metallurgical coal

1 that you're referring to?

2 MR. SANZILLO: Metallurgical copper,
3 it's your enterprise-wide revenues really that... I
4 mean --

5 MS CHU: Sorry, did you say
6 metallurgical copper?

7 MR. SANZILLO: I said, metallurgical
8 coal and copper.

9 MS CHU: Okay.

10 MR. SANZILLO: But what you have is --
11 I look at this from an investment standpoint, and I'm
12 looking at your enterprise-wide revenues and, of
13 course, you look somewhat at the various measures of
14 the different markets in which you're participating.

15 MS CHU: Okay. I'm not too concerned
16 about that. I just wanted to make sure that you meant
17 metallurgical coal and copper, because I see that
18 there's another typo there.

19 Now, this last bullet, when you say
20 that there should be a commitment, what type of
21 commitment do you have in mind?

22 MR. SANZILLO: Which bullet, I'm
23 sorry?

24 MS CHU: Sorry, the last bullet.

25 MR. SANZILLO: On the earlier report?

1 MS CHU: No, no. On that same slide,
2 last bullet.

3 MR. SANZILLO: Oh. Oh, have you made
4 a final investment decision on Frontier?

5 MS CHU: So that's what you mean, the
6 final investment would be the commitment, is that what
7 you mean?

8 MR. SANZILLO: M'hmm.

9 MS CHU: Now, if I understand that
10 correctly, would that be a commitment from Teck to NEB
11 or the NEB to Teck?

12 MR. SANZILLO: I think that's a
13 corporate term that you use.

14 MS CHU: So it would be NEB to Teck --
15 Teck to NEB?

16 MR. SANZILLO: Your corporate decision
17 to go forward with this, your board of directors and
18 your management giving an indication to both the
19 markets, your investors, and to the Canadian
20 Government that there is a commitment to move forward
21 with the project and a financial commitment.

22 MS CHU: Who would we be committing
23 that to?

24 MR. SANZILLO: Your investors and to
25 the Canadian Government.

1 MS CHU: Okay. I just wanted to point
2 out, Mr. Sanzillo, that you are aware that we're not
3 before the NEB today?

4 MR. SANZILLO: Yes, that's a mistake.

5 MS CHU: Okay. So you weren't
6 aware -- you did just draft these slides last week,
7 correct?

8 MR. SANZILLO: Yeah.

9 MS CHU: So you weren't aware that we
10 are before the AER and CEAA today and the NEB has
11 no --

12 MR. SANZILLO: Yes, I am aware of
13 that, yes I am.

14 MS CHU: -- jurisdiction?

15 MR. SANZILLO: That's a mistake, and I
16 should have fixed it.

17 MS CHU: Okay. Thank you, Mr.
18 Sanzillo.

19 Those are all my questions, Mr. Chair.

20 THE CHAIRPERSON: Thank you. Do Staff
21 have any questions?

22 MS LACASSE: We don't.

23 THE CHAIRPERSON: I have no questions
24 either. I did have a question about the NEB comment,
25 but that's been clarified.

1 So thank you, Mr. Sanzillo --

2 MR. SANZILLO: Thank you.

3 THE CHAIRPERSON: -- and Ms Mahon, for
4 your participation in this proceeding.

5 MS MAHON: Thank you.

6 THE CHAIRPERSON: I believe next up is
7 The Northwest Territory Métis. Maybe we'll take just
8 a 10-minute break so people can get situated, and then
9 we'll resume.

10 --- Upon recessing at 0910 / Reprise à 0910

11 --- Upon resuming at 0920 / Reprise à 0920

12 SWORN: RON YOWORSKY

13 SWORN: EARL EVANS

14 THE CHAIRPERSON: Thank you, please be
15 seated.

16 Okay, Northwest Territories Metis, you
17 may proceed.

18 EVIDENCE IN CHIEF

19 DR. YOWORSKY: Thank you, Mr. Chair.

20 If we could have our slides.

21 Mr. Chair, Panels, staff,
22 representatives from Teck, guests, good morning, and
23 thank you all for your time and attention for our
24 presentation.

25 Before I begin, I would like to also

1 acknowledge that we're on the shared traditional
2 territory of a number of Indigenous communities
3 including the Treaty 8 First Nations and the
4 Indigenous Metis. And I also would like to
5 acknowledge the other Indigenous communities that have
6 appeared before you yesterday when we were here, as
7 well as previous days.

8 My name is Dr. Ron Yoworsky, I'm a
9 technical adviser to the Northwest Territories Metis
10 Nation, and I'm fortunate to be accompanied by Mr.
11 Earl Evans who is a Metis Elder and trapper from Fort
12 Smith.

13 I have been a technical adviser for
14 the Metis for over 10 years.

15 I would also like to highlight that
16 our comments today supplement, of course, our written
17 submission provided to the Panel August 30th. So, I
18 would like to first like to introduce the Metis Nation
19 to you and give you a bit more detail about who we
20 are, where we are, and our shared traditional
21 territory in and around Wood Buffalo Park.

22 I would like to highlight some of our
23 concerns regarding the environmental impacts of the
24 Project.

25 I would like to highlight some of our

1 concerns regarding the process that has brought us
2 here today, including the impacts and concerns over
3 our Aboriginal rights.

4 I will then ask Mr. Evans to describe
5 the type of activities that the Indigenous members
6 have practised in Wood Buffalo National Park.

7 So, first of all, if I could have the
8 next slide please.

9 To introduce the NWT Metis Nation and
10 at some points I'll call it the Metis Nation, et
11 cetera, we represent approximately 3000 Indigenous
12 Metis members, and we are primarily in three
13 communities. We are in the communities of the South
14 Slave of the NWT.

15 I have pulled this map out of a Parks
16 Canada Strategic Environmental Assessment. We are --
17 our primary communities are identified on the map:
18 Fort Smith, which is number 4, which is right on the
19 Alberta/NWT border; we heard a little bit about that
20 yesterday.

21 Number 5 is Fort Resolution, and we
22 share that community with the Deninu Kue which were
23 here yesterday and Community Number 6, which is Hay
24 River. About two-thirds of our members are in Fort
25 Smith, so that's in and around Wood Buffalo. So, I

1 would highlight, as you can see on the map, that both
2 Fort Smith and Fort Resolution are directly downstream
3 of the PAD and the Project.

4 Our Metis way of life has been
5 interconnected with hunting, trapping and fishing as
6 well as gathering plant and timber resources for both
7 personal and community use. And together with those
8 activities we have social and family connections to
9 the neighbouring Indigenous communities including Fort
10 Chip.

11 Our shared traditional territory
12 encompasses the northern part of Alberta and it is
13 throughout Wood Buffalo National Park in the NWT.

14 Our Indigenous Metis members have the
15 Aboriginal right to hunt, trap, fish and harvest
16 throughout our traditional territory.

17 Our members have historically relied
18 on the resources within Wood Buffalo National Park for
19 both community and trading purposes. Our Metis
20 families, as I mentioned, have extensive cultural and
21 familial ties to the Indigenous communities of Fort
22 Chip. Our Metis ancestors have a long history and
23 lived as harvesters in the Park with their families
24 and exercised cultural practises throughout the Park
25 in a wide range of activities including, not only as I

1 mentioned, harvesting, trapping, hunting, but also
2 salt harvesting, harvesting of medicinal plants and
3 timber harvesting as required for construction of
4 cabins.

5 The next slide, please.

6 While there may be no historic maps
7 that show where Metis cabins were, and trappers'
8 cabins, a good proxy we can observe through looking at
9 historic locations of trading posts. Trading Posts
10 and Forts are located in the areas that our harvesters
11 were. Not only that, Metis were very often employed
12 as hunters and trappers at these posts.

13 From this map, it can be seen there
14 were a large number of such posts in around the Park.
15 The dots on the map represent all those historic posts
16 from about the late 1700s onward. So, I just put this
17 on as an example to illustrate the intensity of use of
18 Metis harvesters in the Park.

19 Our ancestors were amongst the first
20 stewards of the land and water in the Park well before
21 it was designated by government as Wood Buffalo
22 National Park in 1922. I think we heard yesterday that
23 that designation was without Indigenous approvals, and
24 it was certainly in the case of no approvals of the
25 Metis and there were some specific injustices suffered

1 by our ancestors at that time; so it pre-dates the
2 establishment of government, our activities there.

3 Our South Slave communities have also
4 depended upon the Slave River and the surrounding
5 ecosystem as part of our way of life. The Slave River
6 Basin including the Slave River Delta further
7 downstream, and the surrounding ecosystem is
8 inextricably linked to the PAD, the Peace-Athabasca
9 Delta. As a matter of fact, the definition of the
10 Peace-Athabasca Delta system includes the Slave River.
11 It is essential to our traditional practises of the
12 Metis. It is critically important for our cultural
13 and traditional uses including harvesting of wildlife,
14 fish and birds, summer and winter transportation, and
15 also as a source of drinking water. As I mentioned
16 before, Fort Smith and Fort Resolution are downstream.

17 This Panel should also be aware that
18 Wood Buffalo National Park is subject to Land and
19 Resource negotiations between Canada, Government of
20 the Northwest Territories, and the Metis Nation to
21 address Aboriginal rights, co-management land
22 interests within Wood Buffalo.

23 We have a signed Land and Resource
24 Agreement in principle and it includes a chapter on
25 Wood Buffalo. We are in final negotiations right now.

1 And, as an aside, it will be a historic agreement; it
2 will be the first Metis land claim agreement in Canada
3 and it will Constitutionally protected and it will
4 include rights and interests in Wood Buffalo. So, I
5 give you that background to indicate how strongly we
6 are, and how strongly we're anchored into that Park in
7 this area.

8 Some of our concerns about the
9 potential of the Project include the potential for
10 cumulative effects on the water of the outstanding
11 universal values of Wood Buffalo. Not only that, but
12 also on our Aboriginal rights.

13 We note that the Panel's terms of
14 reference were amended such that you must consider the
15 potential cumulative effects of the Project on the OUV
16 of the Park. And, in addition, we ask the Panel to
17 consider the potential effects of the Project on
18 socio-economic conditions related to our members,
19 harvesting and cultural aspects, all which will
20 comprise the impact on our Aboriginal rights.

21 I highlight that there was a little
22 discussion yesterday about socio-economic assessments,
23 so I highlight that the Panel provided an information
24 request of Teck, 5.7(b) that they undertake a
25 socio-economic impact assessment for,

1 "each Indigenous group that Teck
2 is engaged with and that may be
3 affected by the Project."

4 (As read)

5 I raise that because it is very
6 telling that in Teck's May 2017 response entitled
7 *Community Specific Socio-economic Assessments* the
8 Metis Nation communities are all ignored as are those
9 of other Indigenous groups that the Panel has heard
10 from earlier this week.

11 In our August 30th submission we noted
12 a number of areas also where Teck has concluded the
13 impacts of the Project. While they will affect the
14 Ronald Lake bison, the habitat, migratory birds,
15 flows, water levels, surface water quality, risk to
16 wildlife and human health, and predator prey, however,
17 they then go on to conclude that,

18 "The Project is not expected to
19 affect the integrity and
20 protection and management of the
21 Park." (As read)

22 As well, they said,

23 "The Project is predicted to have
24 a negligible effect on the
25 Outstanding Universal Values of

1 the park.” (As read)

2 However, we maintain that Teck's
3 findings can be read that the Project is anticipated
4 to affect species which will affect us. It will
5 affect the environment. It will affect us. And, the
6 natural phenomena that will contribute to the Park's
7 OUV.

8 We believe that while Teck has
9 considered the issues independently, its assessment is
10 predicted to cause negligible effect to the flows and
11 water levels of the Peace-Athabasca Delta; however, we
12 are concerned that not enough rigour has been applied
13 to consider the cumulative effects of not only past,
14 present and future developments. And these will all
15 be amplified and not result in a negligible effect in
16 our opinion.

17 We are very concerned about the
18 impacts from decades of massive industrial development
19 along the PAD, and they have also been further
20 aggravated by climate change.

21 We believe the PAD has a unique
22 topography, it is a wetland dominated landscape and it
23 makes it very vulnerable to climate change, as well as
24 the impact of projects such as this.

25 The hydrology of the PAD and the

1 downstream areas have already suffered degradation,
2 and this situation has been very well described in the
3 Parks Canada 2018 Strategic Environmental Assessment
4 which I am confident the Panel has been very familiar
5 with.

6 As an aside, the Metis Nation did also
7 indicate the level of involvement in the Park, has
8 been actively engaged with Parks Canada for a number
9 of years starting with our appearance in front of the
10 UNESCO World Heritage Committee meeting where the
11 action plan was called for. We are only one of two
12 Aboriginal groups that attended that meeting and made
13 a statement to the World Heritage Committee ourselves
14 and the Mikisew Cree. We've been involved and engaged
15 in providing comments in the preparation of the
16 strategic environmental assessment and we are also
17 engaged in developing the action plan. So, we have
18 played a high level of -- or, we displayed a high
19 level of concern and we have demonstrated our concern
20 by being very active given our resources.

21 In summary, the Metis Nation continues
22 to be impacted. We have seen drastic, dramatic
23 adverse effects from previous projects. We cannot be
24 comforted by the presumptive and dismissive statements
25 from Teck that there will be no cumulative impacts

1 from this Project.

2 We have seen concerns that the
3 potential for these impacts remain overlooked and
4 ignored and we believe that there is a need for a
5 better understanding of baseline conditions so that
6 all of us can better understand future changes. This
7 issue has been emphasized in the CEAA Strategic
8 Environmental Assessment.

9 In addition, if we're talking about
10 cumulative impacts and other projects, there has been
11 many other hydro electric projects proposed and
12 they -- some of them in the past, and some in the
13 future -- the past have resulted in significant
14 environmental impacts on the entire Peace-Athabasca
15 and Slave system.

16 We have heard about the Bennett Dam
17 and these have caused significant hydrological and
18 ecological impact. It is making the entire PAD system
19 more sensitive to development and to impacts from
20 large projects such as the Frontier.

21 In contrast to Teck's conclusions
22 about no cumulative impact, we wish to draw the
23 Panel's attention to some of the conclusions of the
24 previously mentioned CEAA.

25 Recommendation 4 states that there's

1 gaps in knowledge related to the impacts on the PAD
2 related to the waterflow framework for the Athabasca
3 River.

4 Recommendation 7 states that there is
5 a need to develop a hydrologic and hydraulic model of
6 the Athabasca and the PAD,

7 "That can be used to understand
8 the cumulative impacts of
9 upstream developments."

10 (As read)

11 And I state that includes the Project.

12 Recommendation 8 of the CEAA calls for
13 a water balance of the entire lower Athabasca River
14 Basin, including accounting for the water demands of
15 other projects as well as Frontier.

16 It is our opinion that in the absence
17 of this information called for in these
18 recommendations Teck's conclusions cannot be relied
19 upon as robust. We call upon the Panel to require
20 that Teck adequately address these significant gaps in
21 knowledge so as to properly evaluate the potential for
22 downstream effects and cumulative impacts on surface
23 water quality, environmental flows, and water levels.
24 And all this has been well documented in the CEAA.

25 We also note that Teck has not

1 adequately addressed, in our opinion, the potential
2 impact on the Wood Buffalo Outstanding Universal
3 Values through a rigorous tailings pond assessment --
4 tailings pond risk assessment, excuse me. And that
5 CEAA also included in recommendation 18 to do that
6 with the active involvement of Indigenous groups.
7 That was not done. So, more broadly, this points to
8 areas where downstream traditional knowledge has been
9 ignored and it is our position.

10 Now I'd like to move on to highlight a
11 number of observations that Teck's Aboriginal
12 consultation activities have been inadequate with us,
13 to meaningfully address our concerns.

14 We also further consider that there
15 are key indicators to assess the Project's potential
16 effects on the Park, on the Outstanding Universal
17 Values and otherwise, cannot take into account our
18 unique perspective because we have not been consulted.
19 They did not incorporate traditional knowledge held by
20 our members and our communities. They did not
21 understand our Aboriginal rights, how they are
22 exercised throughout the Park, and that's why I
23 emphasized them in our first part of the presentation.
24 So, they have not been developed through a thorough
25 consideration of an Aboriginal perspective.

1 The CEAA also states in Recommendation
2 14, that Indigenous traditional knowledge related to
3 Wood Buffalo National Park should be included in
4 Project assessments such as this.

5 So, we call upon the Panel to require
6 Teck to address this gap through the proper resourcing
7 of our communities to collect and protect this
8 Indigenous knowledge as it relates to the Park, as it
9 relates to the PAD and it relates to the downstream
10 ecosystem.

11 So, Canada related to this idea of
12 Aboriginal rights or the concept as stated in their
13 submission to the Panel August 31st, their submissions
14 entitled *Whole of Government Preliminary Assessment of*
15 *Potential Impacts on Aboriginal or Treaty Rights.*

16 So, while the government states they
17 are committed to consulting and where appropriate
18 accommodating all Indigenous groups potentially
19 impacted by the proposed Project, they go on in their
20 report to focus their comments only on the ACFN and
21 the MCFN. Canada has ignored its consultation
22 obligations to the NWTMN, except for facilitating the
23 participation in this process. It's the eleventh
24 hour, as I think we have heard that term used before.

25 Nevertheless, in that submission there

1 were a number of measures that they proposed and in
2 our view they should be implemented as a minimum.
3 However, in our view, they should be broadened to
4 embrace the Metis Nation communities, specifically the
5 monitoring and oversight committee that they proposed
6 should be expanded to include impacts downstream of
7 the PAD. We wish to ensure that any proposed Delta
8 Institute fully embraces Indigenous traditional
9 knowledge, and again addresses downstream and
10 cumulative impacts properly.

11 With respect to the issue of cultural
12 programming, the Metis Nation has also suffered
13 impacts from industrial development. It has affected,

14 "Our transmission of cultural and
15 knowledge across generation,"

16 (As read)

17 And that's particularly in and around Wood Buffalo
18 National Park, and I think we are going to hear much
19 more about that from Elder Evans. Therefore, we
20 believe appropriate programs should be put in place
21 for Indigenous Metis to address these issues through
22 the life of the Frontier Project.

23 Now, on the issue of consultation with
24 Teck we previously noted that Teck has failed to
25 adequately consult with the Metis Nation with respect

1 to this Project. On August 30th, the Metis Nation did
2 meet with Teck Frontier at their Vancouver offices,
3 two of their representatives. At that time we
4 emphasized our concerns regarding environmental
5 impacts, cumulative effects and the impact of the
6 Project on our Aboriginal rights. It seemed at that
7 time that we introduced almost of the first time the
8 Metis Nation to the Tech officials.

9 Through a subsequent letter they
10 offered, "to share information" with us, but they have
11 not provided specifics on how any impacts upon the NWT
12 Metis Nation will be addressed, nor accommodated.
13 And, they have not offered to share any type of
14 agreement they have completed with other Indigenous
15 governments that appear to be exclusively South of 60.
16 So, that, we find distressing because I wish to quote
17 Teck's own, "Indigenous Peoples Policy" and it states,

18 "Teck engages with Indigenous
19 peoples potentially affected by
20 our activities to:

- 21 1. Build respectful
22 relationships through early
23 inclusive dialogue and
24 collaborative processes;
- 25 2. Provide resources to build

1 capacity of both Indigenous
2 Peoples and Teck for meaningful
3 dialogue;

4 3. To integrate Indigenous
5 peoples' perspectives and
6 traditional knowledge in the
7 company decision-making through
8 the mining lifecycle to enhance
9 benefits and address impacts;

10 4. To work to achieve free prior
11 and informed consent of
12 Indigenous peoples when proposing
13 new or substantially modified
14 projects; and,

15 5. To work with Indigenous
16 peoples to achieve self-defined
17 community goals that provide
18 lasting benefits." (As read)

19 So, we submit to the Panel that Teck
20 is not engaged with us towards addressing any of these
21 stated objectives, which we fully support; those are
22 good objectives.

23 Considering how the Project will
24 adversely affect our Aboriginal rights of the Metis
25 Nation, Teck has not sought to negotiate a

1 participation agreement to address these adverse
2 impacts, and to confer benefits, and there's no
3 accommodation measure in place for the benefit of the
4 Metis Nation.

5 In our August 30th submission we
6 emphasized to the Panel that the precautionary
7 principle must be applied, and the Project should not
8 be approved while uncertainties and issues raised in
9 Part CEAA including potential for adverse
10 environmental effects at the larger PAD continue to
11 exist. And while the potential for adverse effects on
12 Aboriginal rights of the Metis Nation and on the
13 Outstanding Universal Values of Wood Buffalo Park are
14 still fully -- are still unknown.

15 We consider that there is a
16 significant impact for adverse effect on our rights,
17 on the Park and on the larger PAD. We're concerned of
18 the potential downstream impacts that may have on our
19 communities.

20 And, in closing, I'd just like to say
21 as part of the previously noted UNESCO World Heritage
22 Committee's scrutiny of Wood Buffalo National Park,
23 they require that this Panel's report should be
24 submitted for review to the International Union for
25 Conservation of Nature.

1 In that advice note governing that,
2 will require the Panel to,

3 "Select the option that is least
4 likely to damage the site's [and
5 in this case, the site being Wood
6 Buffalo] Outstanding Universal
7 Value, including consideration of
8 the no Project option."

9 (As read)

10 Such a decision would be consistent
11 with your legislative mandate to apply the
12 precautionary principle.

13 And we feel that until such time as
14 adequate consultation and accommodation measures are
15 offered by Teck and Canada to the Northwest
16 Territories Metis Nation members and communities we
17 cannot support the Project, and we urge the Panel to
18 identify this no project option.

19 So, with that I would like to ask to
20 move to the next slide, and I will ask Elder Earl
21 Evans to describe the type of activities that his
22 community members and himself have practised in the
23 Park.

24 Thank you.

25 ELDER EVANS: Good morning. He calls

1 me an Elder but I'm not really that old, I'm only 67.

2 Good morning, everyone, Mr. Chair,
3 Panel members, everybody here. Good morning.

4 I would like to thank you all for
5 coming and listening here and I think we have a lot of
6 good things to put on the table here for you today.

7 My name is Earl Evans, I'm 67 years
8 old, I'm an Indigenous Metis with Section 35 rights,
9 not asserted rights but Section 35 rights, and I have
10 hunted and lived in this Park and around this Park all
11 my life, ever since I was a kid.

12 I was eight, nine years old dragging
13 rabbits home behind my dad at this wood camp. These
14 Elders that were sitting here yesterday from Salt
15 River, a lot of those guys used to work with our
16 family cutting wood and stuff, and Lawrence's brother
17 Phillip, there, his wife used to see me coming when my
18 dad would come for wood; they'd say "Here comes
19 Kiishishut (ph), that means rabbit soup. That meant
20 they were going to get some rabbit soup when I came
21 because I had snares set. I was only eight years old
22 in Wood Buffalo Park at that time.

23 And I would like to thank all the
24 Indigenous Peoples that came before me here yesterday;
25 their presentations were very good, and we echo the

1 same sentiments they do. I mean, and we have the same
2 concerns and I don't want to repeat everything they
3 said, because their concerns are our concerns, and I'm
4 glad they have put a lot of stuff on the table there.

5 But, myself and our group, we have
6 concerns the same as them, but we also have different
7 concerns, more regarding the people and how the people
8 have lived and how their lives have been changed.

9 That picture there is a picture of my
10 father-in-law's cabin on the trapline 20 miles out of
11 Fort Chip, and like Teck was saying that they didn't
12 think we deserved a spot here because we weren't
13 affected, well, I'll tell you we are affected. That
14 project that's going on right now, last week 60 miles
15 from there my grandson killed a moose with his father.
16 That's their trapline. That's where they live; that's
17 their life, you know. There's not many trappers out
18 there; very, very few. But those trap lines are still
19 active and people try to use them and get out there as
20 much as they can.

21 There's no money in it at all,
22 trapping. That's gone. But they still practise that
23 lifestyle.

24 And for them to be able to go there,
25 have clean water, animals and fish that are safe to

1 eat is no longer viable just because of all the
2 projects that have went on here.

3 And like I said, I've trapped and
4 worked and hunted in that Park ever since I was a kid.
5 I was a highway foreman in the Park for over 30 years,
6 35 years.

7 I worked there from 1971 to 2011, two
8 months short. I couldn't take two more months of
9 computers, so I retired early, didn't make it a
10 40-year job.

11 But I've seen a lot of things happen
12 in that Park. I looked after 500 kilometres of road
13 in the territories, in the Park, and in Alberta
14 because all three jurisdictions are interconnected
15 there 'cause Fort Smith is right on the border.

16 Part of our town is in Alberta.
17 Border towns in Alberta. So we're right on the corner
18 of the Park there, so.

19 Anyway, like I said, I seen a lot of
20 changes happen over the -- over the years. My
21 parents -- my father's from Fort Chip. His mother was
22 Helen Jebutte (phon), and there's still some Jebutties
23 living on the Peace River up there at Peace Point
24 right now.

25 Gabe Jebutte, he's one of the last old

1 trappers hanging in there. And they have roots here
2 in the Birch River, Lake Clair area. That's their
3 line. That's where they came from.

4 My mother is from Mercadies (phon).
5 She's from up -- and my grandmother's from Fort
6 Resolution area.

7 So the Métis and the First Nations
8 were all connected. We have all family members.
9 We're all interbred, and there's a lot of good people
10 there.

11 There's a lot of people that are
12 Métis, they're -- half their brothers are First
13 Nations. They chose either side. But we're one big
14 family and we all have the same concerns.

15 And the concerns that we have are
16 valid. We see what's happening to the land, to the
17 rivers, to the animals. We see all that.

18 I have always said a hunter and
19 trapper's the best biologist out there. I don't need
20 to read no book and all the rest of that stuff that
21 goes with it. I can tell you what's going on in the
22 bush.

23 Just let me out there and I'll tell
24 you. I don't have to go to school for two or three
25 years and have this paper in my pocket says I'm a

1 biologist.

2 I challenge any biologist to come out
3 there with me and tell me what's going on in the bush.
4 I'll tell him. And I'm sure every one of these First
5 Nations people that were sitting here yesterday can do
6 the same thing, you know.

7 That's our land. We know it. We know
8 it inside out. We know the animals, we know the
9 birds. We know everything that we should know, and we
10 see what's happening.

11 We see all the negative effects out
12 there, and we don't like it. And now they're going to
13 bring in more.

14 I don't know. That's not right.

15 These pictures here, this is in the
16 seventies when I was trapping in the Park. That's my
17 wife there, kids. We're out trapping, hunting in the
18 springtime.

19 And at that time, you know, a person
20 can make a damn good living out there hunting and
21 trapping.

22 There we're using our skidoos in the
23 water like boats. You know, we didn't have boats. We
24 had a canoe we dragged behind, but now we got all
25 kinds of fancy stuff. You don't need to use your

1 skidoo as a boat. But we made do, you know. We did
2 what we can with what we had.

3 And like I said, you could make a good
4 living out there.

5 Nineteen seventy-seven (1977), my
6 father-in-law trapped 20 miles out of Fort Chip, and I
7 stayed with him. I lived with him. I hunted, I
8 trapped with him.

9 And one year, he took between eight
10 and 10,000 muskrats off his trap line. And at that
11 time, a muskrat was worth six bucks. You figure that
12 out, six bucks.

13 At that time, you could buy a brand
14 new Ford pick-up, fully loaded Ford, for \$9,600, you
15 know. Holy man. You just couldn't believe how -- how
16 good trapping was.

17 You can go out and trap for a month
18 and a half, you got 2,000 rats. That's 12,000 bucks.
19 In today's money, that's 8,500 bucks.

20 Where can you go right now, go to work
21 somewhere for a month and a half and make
22 \$80,000(sic)? You can't, you know.

23 And that way of life has gone. All
24 those people in Fort Chip are suffering because of
25 that.

1 You know, the dam came in, that big
2 project. Everything dried up. The whole delta dried
3 up. That -- right now, where those boats are right
4 now, there's willows 20 feet high where they're
5 paddling 'cause that whole country dried up because of
6 the dam.

7 And where's the compensation for those
8 people? Oh, they said, "Oh, no, nothing's gonna
9 happen. We're putting this dam in. Everything's
10 fine".

11 Yeah, look at them now, you know.
12 That way of life is gone. It's never coming back,
13 either. It's not coming back for the people in Fort
14 Chip and every hunter and trapper out there today.

15 That lifestyle is gone. That way of
16 teaching their children, their children's children,
17 it's all gone now because we don't have the
18 opportunity. The land is not there.

19 All that whole delta is gone where
20 these people made their living.

21 Slide, please.

22 And I mean, it's sad to see. Really
23 sad to see.

24 And like there's -- there's a pile of
25 muskrats right there. There's probably about 2,000

1 muskrats there, 12,000 bucks' worth of fur 40 years
2 ago. That's about \$80,000.

3 Now you couldn't catch five mice where
4 all those rats were because there's no fur in the
5 land. It's gone.

6 Who's compensating those people? Look
7 at them. They look like a ragtag bunch, right.

8 That's my family, but they were happy.
9 They had a life. Everything was there for them. They
10 had food, they had lots of fresh air, lots of
11 exercise, do what they want, make enough money to have
12 a good life. They were happy. But it's gone and it's
13 never coming back.

14 And I just don't understand how all
15 these projects can go ahead and nothing's done about
16 it. They see what's happened in the past.

17 All these people have been displaced,
18 there's -- all the trappers that used to live in those
19 areas are all gone. Their families are gone off.
20 They're a splintered people.

21 They're gone to different towns
22 looking for work, looking for jobs trying to find a
23 home. They had a home. Everybody had a home out in
24 the bush. Now all their homes are gone.

25 Who's going to replace that? Nobody.

1 From my father-in-law's place I can
2 get on my skidoo, in 10 minutes I can be at another
3 trapper's house. Off my hand right now I can think of
4 12 cabins around our place where families lived.

5 Trappers lived with their families out
6 on the line. Now you can't even get to those places
7 because the willows are so thick. There's no lakes to
8 travel on. The animals are gone.

9 You know, it's -- it's so -- people
10 can't see far enough down the road to really see what
11 a project can do, you know, and how it can affect
12 people and how it can affect those people's lives.

13 I see old-timers in Fort Chipewyan
14 sitting in the old folks' home looking out across the
15 window wishing they could be out trapping, wishing
16 they could be back on the land doing the things they
17 love, but they can't. The water's contaminated.

18 They gotta load their 10 gallons of
19 water in the boat just to go out for the weekend to
20 drink and use because they can't drink the water.
21 They don't trust it.

22 They're scared to eat the ducks
23 because the ducks are -- they figure it's
24 contaminated. Moose, my grandson -- they killed that
25 moose the other day, they didn't take the liver or

1 anything 'cause they're scared to eat it. It's 60
2 miles from this project right now.

3 Fish. People are scared to eat the
4 fish.

5 All these foods and stuff that was
6 available to them at one time was their livelihood.
7 That was their life blood. They took it. They drank
8 it. They ate it every day. They can't do that any
9 more.

10 They gotta go to the store and buy a
11 curled-up old pork chop or a package of wieners,
12 whereas before they had wild food at their table.

13 Same like yesterday. Henry was
14 saying, "We gotta buy water". Yeah, we gotta buy
15 water now because everything's polluted.

16 Why doesn't Suncor take a truckload of
17 water and put it at the dock at Fort Chip and tell the
18 people, "You're going hunting, you help yourself to
19 all the water you want"? Why can't they do that, you
20 know.

21 They polluted everything. Now the
22 people are paying for it. They gotta buy their own
23 water.

24 Next slide, please.

25 But you know, this is -- it's so hard

1 for people to see past what they're thinking, the big
2 picture.

3 There's my father-in-law, the big load
4 of rats in the bag there, you know.

5 Anyway, like I said, we trapped in the
6 delta there. It was a good life, and we can't do that
7 any more. And there was lots of trappers, lots of
8 people out there. And when you're -- when you're
9 trapping muskrats, you don't need a big line.

10 One lake could sustain three or four
11 families if it's a lake maybe three or four miles big
12 because muskrats are so dense and so thick. And if
13 you don't trap them, they'll overpopulate and they
14 die.

15 My father-in-law used to let people
16 come and trap on his line, whereas if you're trapping
17 fine fur such as lynx, martens, foxes, you have to
18 travel farther and longer, and people need longer
19 lines, bigger lines. You need a line maybe 25 miles
20 by 30 miles to make a living, maybe longer.

21 My trap line right now is 40 by 60,
22 you know. So people need bigger areas, where in Fort
23 Chip all those -- all those places were more
24 condensed. There's more people living, you know,
25 'cause the fur was there and people could live a good

1 life.

2 That's my wife and little kids there.
3 That's our spring hunt from 1977. Yeah.

4 You know, along -- in the seventies
5 and eighties when these people were out trapping, all
6 the kids there, man, they were just lean and mean and
7 good shape, boy, running around, cutting wood, setting
8 rat traps, having fun.

9 Now, you know 50 years from now that
10 kids are going to have great big fat thumbs, hump
11 backs and a big butt from sitting there playing TV and
12 games 'cause they don't go out. They don't do the
13 things they used to do. They sit home and do nothing
14 except play video games, you know.

15 The kids out 30, 40 years ago had a
16 good life. Not like today. Things are changing. And
17 it's up to us to get our youth out there, get our
18 youth out there and try to get them to -- back on the
19 land, enjoy things they do.

20 Myself, I do a lot of water monitoring
21 for the government. I go out and take water samples
22 and stuff, and I take my grandson with me.

23 I took my grandson with me ever since
24 he was a year and a half old. I used to pack him on a
25 pack board on my back, and I'd walk with him. And

1 when he got old enough, he'd walk with me.

2 When I couldn't pack him any more, he
3 struggled along behind me. Now he's six foot four,
4 383 pounds. I can't lift him, but he still comes with
5 me, you know.

6 And he comes with me in the boat.
7 Wherever I go, I take him. And he knows the land.
8 He's learning good.

9 His dad takes him out. His dad's
10 Mikisew Cree, takes him all over.

11 He took him down -- he was down in the
12 delta here last week and then last weekend he's up in
13 the mountains up the Mackenzie River hunting moose.

14 This summer he was at the East Arm
15 Great Slave Lake. He goes all over. He's a true
16 Métis. He travels the land. He likes the land. He
17 hunts, you know.

18 That's what we have to do more of.
19 But in order to do that, we have to have the land, we
20 have to have the water, and we have to have a healthy
21 ecosystem to do it.

22 And you know, there's no -- there's no
23 turning back, you know. Progress is coming. Projects
24 are going to go ahead. And we have to go with the
25 flow, you know.

1 There's no stopping stuff. People get
2 something in their mind, they're going to do it. But
3 if they're going to do it, they're going to have to do
4 it in a way that's eco friendly, you know.

5 You have to do the monitoring. You
6 have to do everything humanly possible to keep the
7 land and animals intact and healthy. But we still
8 need progress, we still need jobs, we still need --
9 people have to live.

10 And I know there's a lot of people
11 that -- in Fort Chip, sure, they complain about, you
12 know, the oil sands and all that, but it gives them
13 work. A lot of those people without that, they'd have
14 nothing.

15 The trapping industry is gone. It's
16 just the hobby trapper.

17 Actually, the guys that are trapping
18 are probably the guys that are working 'cause they're
19 the only guys that can afford skidoos and stuff to
20 trap. You pay 15 grand for a skidoo. You'll never
21 catch that much fur in a year unless you got a damn
22 good line.

23 So anyway, any -- I'm thinking more
24 like along the lines of we have involve the youth, but
25 how we're going to do it, I don't know. You know, we

1 could -- they could be monitoring programs that they
2 can engage in.

3 Like right now, the monitoring that's
4 done on the Slave and Peace River, it's ticks and
5 stuff where they put these little traps and they catch
6 all these little animals and they're supposed to be
7 the first line of defence when you see these certain
8 little bugs start dying, something's happening in the
9 water, that kind of stuff.

10 So my grandson's out there working
11 with these people, and they're showing him what to do,
12 showing him -- there's an interest there which I'm
13 glad there is, you know.

14 And I think we have to try to get --
15 bring that to the schools, bring that -- make it more
16 public, you know. Let the people know what's out
17 there, what's available, how we can help.

18 You know, everybody's got to help in
19 order for this ecosystem and the rivers and that to
20 survive 'cause they're not surviving right now.
21 They're having a real hard time.

22 And I think that Park should have been
23 more proactive, Wood Buffalo Park, when the oil sands
24 started up. Put a bigger buffer zone around Wood
25 Buffalo Park, number one.

1 When you're flying in here, as soon as
2 you get past the park line, that country is cut up.
3 It's cut up big time. As far as you can see, there's
4 seismic lines and pump stations and -- I looked out
5 the wing. I think I counted 23 sites as far as I can
6 see. My eyes are pretty good. And I seen the same
7 thing on that side.

8 I mean, holy shit, how much -- how
9 much is enough, you know. And they're still cutting
10 it up.

11 So you know, you gotta think about
12 tomorrow, too. You can't take everything out all at
13 once.

14 And we're having the same problem up
15 in Inuvik. I'm the chairman for the four provinces
16 for the caribou -- Beverly Qamanirjuag Management
17 Board, and then the chairs of those four provinces,
18 Manitoba, Saskatchewan, Territories and Inuvik.

19 And we're having the same problems
20 there with development in Inuvik.

21 And what the people want is they want
22 development, but they want it at a controlled pace.
23 It doesn't have to be a big glut of activity, mine
24 everything, take everything out and bang, they're
25 gone.

1 It's got to be controlled so there's
2 jobs for the people there that are living there. And
3 it's slowed down so things -- things are taken out
4 over a long period of time, not just overrun and left.

5 You know, I travelled all over, I seen
6 all kind of different sites. I travelled all over
7 Canada hunting.

8 I been to the Yukon. I been down
9 lands all over East Arm, all over the place, up in the
10 diamond mines hunting.

11 I been down south of Edmonton. I went
12 to this one park, and not one person challenged me on
13 my right to hunt. Not one.

14 I went to this provincial park and
15 that game warden said, "Sign this". I said, "What is
16 it? I'm a Métis. I don't have to sign nothing".

17 He said, "It's a discharge permit to
18 discharge a firearm in this park. I'm not challenging
19 your rights. You go hunt what you want".

20 And I did so, you know.

21 So it goes to show that us as Métis,
22 we have rights all over just as well as anybody else.
23 And I dare anybody to challenge me on that.

24 My friend, Kenny Hudson, challenged
25 Wood Buffalo Park on shooting moose in the Park. He

1 showed them who the boss is.

2 It cost Wood Buffalo Park a lot of
3 licences they had to issue they were hoping they
4 didn't have to, but he challenged them and he won, you
5 know.

6 So our rights are there, and I'd like
7 anybody to challenge us on any -- anything the Métis
8 have, they legally have it, legitimately, you know.

9 So when we have concerns, we like to
10 see them addressed, too.

11 But anyway, I'd just like to say a
12 couple quick things about -- I know the guys all
13 commented on animals and stuff in the Park. And like
14 I said, I did a lot of hunting. There's some rat
15 trapping in springtime.

16 And like they were talking about geese
17 yesterday. They said Lake Clair, how many geese there
18 was. They said there was millions.

19 Well, I don't know about millions, but
20 I'd say there was hundreds of thousands I've seen on
21 Lake Clair.

22 I know when I used to go off Lake
23 Clair, my father-in-law and all the guys in Chip would
24 wait till the ice cleared off enough and they'd go to
25 this -- this big Willow Point. It's called (native

1 language). It means "where the willows on the lake".

2 And they'd go there with their boats.

3 They'd sit there for an hour and a half, two hours.

4 They'd load their boats, gone. They got their geese
5 for the year.

6 I was out there two years ago. I took
7 the school kids out there. We're walking around on
8 mud flats.

9 No water. Straight mud on Lake Clair
10 where it used to be all those birds, you know.

11 In 1970, there was a sawmill. Last
12 sawmill in Wood Buffalo Park the camp sits. Six miles
13 above Carlson's Landing. There's about 150 people
14 living there, maybe 200.

15 There's houses there. People were
16 living there. Families are there. They were trapping
17 out of there, hunting out of there, and working at the
18 sawmill.

19 And you had two shifts, the night
20 shift and the morning. It was still dark. They'd get
21 off, they'd get in their boats, they'd go up the river
22 to the sand bars, about five miles up the river to the
23 sand bars.

24 And then the geese -- Lake Clair is
25 just over the -- just a mile and a half, two miles

1 over the -- Lake Clair. That's where all the geese
2 used to be.

3 They'd feed in the lake, come and land
4 on the sand bars in the morning for sand. And those
5 guys would get enough -- they'd hunt there a couple
6 days in the morning for a couple hours. They'd get
7 enough geese there to feed their families for years --
8 I mean for the year, you know.

9 Those geese would go back and forth,
10 thousands of them.

11 Now you go there, you can't even gauge
12 where those sand bars are. There's willows as high as
13 this room there. That whole river system has dried
14 up.

15 The Peace River, I can shoot across
16 the Peace River with a .3030. It's like from here to
17 that hill some places 'cause the rivers have so --
18 narrowed down so much from the low water, you know.

19 Islands where there used to be lots of
20 moose. There's no more moose there 'cause the islands
21 aren't there. The islands are part of the mainland.

22 The cow moose would take their calves
23 onto those islands 'cause there's safety. There's
24 water all around that island. They can get in
25 anywhere. Predators come, they take their calves in

1 the water.

2 Now, no more islands. Straight
3 mainland. No more moose, you know.

4 And it's things like this that people
5 don't see. These changes are so subtle over time you
6 don't see a little bit happen 'cause a little bit
7 happens.

8 After 40 years -- I been around long
9 enough -- I said I'm 67 years old. I seen a lot of
10 things. I've seen how rivers change. I've seen how
11 lakes have changed. Lakes where there used to be
12 lakes, there's none, you know.

13 And these changes are so subtle you
14 don't realize they're happening until you go back and
15 really look at it.

16 So if somebody comes along that
17 doesn't know the country, they say, "Well, what's
18 wrong? I don't see nothing wrong".

19 Yeah, you don't see nothing wrong
20 'cause you don't know what it looked like 50 years
21 ago, you know.

22 It's us, the people here, that are
23 living and trapping that are suffering the effects of
24 what's happened.

25 I went to the Site C hearings two

1 years ago at Dawson Creek and Peace River. I went
2 before the Panel. I told them what I -- what I seen,
3 what I -- what I seen over the years, what I heard,
4 what people have said.

5 Sure, they give you a real sympathetic
6 ear. They even let me talk an extra 20 minutes, which
7 was good. I thought, "Boy, we might get some action
8 here".

9 But the Chairman come to me after the
10 meeting and he told me, "Earl, you know, you got some
11 really, really valid points there", he said, "but all
12 we are", he said, "is an information gathering group
13 here", he said. "All we're doing is gather
14 information and we pass it on".

15 And then prior to me speaking, they
16 had -- he was the Minister of Environment, but he had
17 retired. And some group -- some group involved with
18 the development hired him.

19 So he was up there preaching how good
20 this Site C was going to be for the people, you know,
21 a complete turncoat from what he was when he was
22 working for the government, you know.

23 So what kind of message does that send
24 to the people when you got the Minister up there
25 saying how good it is, yet a day before, he was

1 against it? So you know, sometimes you just don't
2 have a chance, but you've got to voice what you can.

3 Like I was talking about, like when we
4 were trapping rats, we'd come out of our cabin in the
5 morning and if there was a south wind blowing from
6 Fort McMurray, you could smell it. You could smell it
7 in the air, the oil sands, that sulphur smell, you
8 know.

9 Then when you go to collect water, we
10 always tried to scrape off all the top layer to get
11 the water underneath because that snow melted and it's
12 kind of yellowish-black scum on top of that water.

13 Right now I live on the Slave River,
14 30 miles from Fort Smith. I have a cabin there. I
15 live in Fort Smith but I live in my cabin lots. And I
16 hardly see any boat traffic anymore. Nobody hunts on
17 the rivers because there's no more moose.

18 I was out there last week for a week
19 and I seen two boats because nobody's hunting.

20 The Slave River to the Delta in Fort
21 Res is about 210 miles long. So about 20 years ago we
22 GPS'd all the sites that people use, all the cabins
23 and stuff. We were cataloguing some information, and
24 I did half the river. I went up to Hook Lake, Ken
25 Hudson and I. We GPS'd 97 sites where there was

1 people living, cabins, saw mills, that type of thing.
2 Now there's not one left there, not one. Out of 97
3 I'm the only one left there. I'm the only one
4 standing on the bank waving. Nobody's coming by.
5 Nothing left. Everything's gone.

6 And the other half of the river is the
7 same thing towards Res. I think there's three cabins
8 down below there now.

9 There's no use on the river because
10 it's getting so you can't make a living on there. You
11 can't trap. There's a few fish, I'll say that. We
12 get a few fish.

13 It's sad to see what's really
14 happened. I had all these people out there and now
15 there's nothing going on. That whole lifestyle is
16 gone.

17 Anyway, I've got a few other things to
18 say. Am I done here or what?

19 Okay. See, there's a canoe and those
20 are rat sticks in a canoe. You put your trap in
21 there. We didn't have sleighs so we just used
22 whatever we had. Like I said, we were a pretty
23 rag-tag group but we got along okay, you know.

24 When we were in the bush we'd eat
25 rats. We'd stay out there for six, seven weeks and

1 we'd eat roasted rat, boiled rat, fried rat, smoked
2 rat. Pretty soon your teeth are getting a little
3 longer because you look like a rat. But it was good.
4 You know, it was a really good lifestyle and the kids
5 enjoyed it.

6 And there's some fine fur. Like I
7 said, you need a little bigger line to get foxes and
8 lynx and stuff like that.

9 But yeah, all the people in Chip, I'm
10 sure they really miss that. I know the old-timers do.
11 The younger generation kind of missed out on that.

12 You see there's one picture, that
13 picture there, that's rats that used to be on the
14 river. We used to be able to hunt rats on the river.
15 Now there's no rats on the river. All the little
16 sloughs and that stuff that used to have little
17 backwaters where the rats can build their houses and
18 push-ups, now there's no more sloughs so there's no
19 more rats.

20 That's one night's hunting on the
21 river and there's probably maybe a hundred rats in
22 that bunch. Now I can go down that Slave River -- I
23 went down to the Delta this spring, my friend Terrence
24 and I, and I think we seen three rats the whole trip,
25 whereas before we might have seen a couple of thousand

1 like nothing.

2 And Henry and the guys here from Chip,
3 from Fort Res, are saying the same thing. The animals
4 aren't there. They're just not there.

5 This really impacted our way of life
6 because a lot of people, they don't have jobs and
7 that's the only thing they have. And there's our kids
8 there, we took them out wherever we went. We showed
9 them how to live off the land. Now they can live by
10 themselves out there. If they go out, they know what
11 to do. They can survive, which is one thing we still
12 can teach them.

13 We've got to find a way to involve
14 more youth. I don't know how we're going to do it,
15 but we have to do something.

16 And I wish the government would do
17 more studies, involve more people in water studies and
18 what's happening on the river. We'd go down the
19 river, like the Peace River here, and we'd pull that
20 canoe behind us with that other boat, and we'd take
21 that canoe and we'd portage into the sloughs, pack
22 that boat in about half a mile. Then we'd hunt all
23 those sloughs and get our rats and beavers and stuff.

24 Now you could pull that canoe down the
25 river all day and you won't find a slough to put it in

1 because there's no more there. They're all dried up.

2 In 1974 when we had that big flood in
3 the Peace River, Ken Hudson and I, we packed that
4 canoe. There's a road around by the Sand Hills, it's
5 called Lovers Lane. We packed our canoe down there
6 and paddled across. There was hundreds and hundreds
7 of dead buffaloes. It flooded in those sloughs and
8 there was buffaloes all over, piled up in the bush.

9 There was places there where the
10 wolves were climbing up in the willows, hanging on up
11 in the willows because they had nowhere to go.
12 Buffaloes standing with their head just out of the
13 water.

14 I seen a buffalo standing there, five
15 of them, for four days. We passed by every day and
16 that buffalo was eating willows, just his nose
17 sticking out of the water and no place to lay down,
18 you know.

19 These are the things we'd see out
20 there. People don't believe you when you say that.
21 But I've seen it and I've seen it all.

22 There's a picture of a bear, you know.
23 We'd kill a bear and we'd strip all the fat off. We'd
24 get 15, 20 jars out of a big bear like that. And we'd
25 keep the meat. We'd smoke the meat. That's how we

1 lived. We lived off anything we can get our hands on,
2 we eat that's good.

3 Bear meat right now is nice and sweet.
4 They're eating berries. Good meat, you know.

5 And that's the way we used to live.
6 The Métis always lived like that. We always did. We
7 always had a good life.

8 And that cabin right there, that's on
9 the Peace River by Carlson's Landing. That was built
10 in 1978 by Jimmy Cascannon(ph). The Cascannons lived
11 at Carlson's. It was a big family. They had four
12 cabins there plus this one.

13 And that old lady Cascannon, she was
14 90-something years old and she was still packing water
15 down the hill by herself. She had all her family
16 there. There was probably 20, 25 people there and
17 they lived there. They lived there all their lives.

18 And when everything dried up in the
19 late eighties, they all moved out.

20 But that cabin right now, if you seen
21 it you wouldn't recognize it. It's about three feet
22 high. It's all caved in, crumbled in. Pretty sad.

23 But at one time it was a thriving
24 little community.

25 And all along the Peace River there

1 was places like that where people gathered.

2 Barrel(ph) Creek, at one time you
3 could take - my father-in-law would take a speed boat.
4 He'd leave Fort Chip. He'd cross Lake Mamawi, Lake
5 Claire, take Pine River, cut across Barrel Lake, take
6 Barrel Creek and come out at the Peace River right at
7 Moose Island, about a 50-60 mile loop with a speed
8 boat.

9 Now at the mouth of Barrel Creek you
10 wouldn't recognize it. There's trees this big, 30
11 feet high, at the mouth of that creek. That creek's
12 all dried up.

13 And that's all part of the dam.

14 And they say there's no pollution on
15 the Slave River? Well, look at that baby. That's a
16 mile from my cabin. That come down on the ice last
17 winter.

18 That tire is well in excess of a
19 thousand pounds, you know.

20 And it seems like there's got to be
21 more monitoring done on the Peace River in the spring
22 time, because I think everybody that's living along
23 the Peace River shoves all their garbage on the ice
24 just before it goes down.

25 I've seen stuff on that river you

1 wouldn't believe. Just up river from that, an
2 18-cubic foot refrigerator that come down on the ice,
3 piled up on the bank, you know.

4 There's garbage coming down that Peace
5 River like you would not believe. There's bicycle
6 tires and old tires and Styrofoam. Holy!

7 I was doing a sand study with a guy on
8 Slave River. He's collecting sand. And we stopped at
9 24 sites. I think they were 500 metres apart. So the
10 first site we stopped. Oh, there's a can right there.
11 The next site. Then he was looking for this black
12 sand. So sometimes he had to walk maybe 50 feet to
13 get it because he couldn't find the right sand he was
14 looking for.

15 And then he'd come back. Where is the
16 other can? Twenty-three stops, 23 sites, 23 cans,
17 bottles, pieces of Styrofoam. Something that somebody
18 threw in the river that was there.

19 And the last place we went, he stopped
20 and he was washing his boots. He didn't find
21 anything. He was cleaning his boots and all of a
22 sudden, thump, thump, thump on the side of the boat.
23 He looks down and there's a Kokanee can. There it is.
24 Twenty-four sites, 24.

25 You know, the garbage that comes down

1 that river is unreal.

2 And I think Styrofoam is the biggest
3 piece of stuff you see because it breaks into so many
4 small pieces. It comes down on the ice and the ice
5 crumbles it all up, breaks it all up. And boy,
6 there's so much garbage on that river.

7 And that tire came down with the ice
8 and on the 25th of July we had a high water event on
9 the Slave River. I went to get that tire. See I
10 marked it with a ribbon. I was going to cable it to
11 the bank and I thought shit, that's not going to go
12 anywhere. I come back and it's gone. The high water
13 took it. You wouldn't believe it would lift a tire
14 that big, but it's gone. Somewhere in the Delta now.

15 Two years ago I found a big black and
16 white cow at the Delta. I seen the eagle sitting on
17 something, so I went there. Holy, there's a big
18 frickin' milk cow, all bloated up. Half the skin is
19 off it.

20 Yeah, that come down from some
21 farmer's place. But it made it to the Delta.

22 Okay, that's it.

23 Anyway, I would just like to thank
24 everybody here. Like I said, it was a little bit
25 different presentation and stuff. But I mean, this is

1 just some of the things we see. I really can expand
2 on a lot of things.

3 One thing I said, we'd like to see
4 more monitoring done on the river. And one of the
5 things I brought up, I asked a few biologists about
6 it, is when the river comes up, like some years you'll
7 get a high water event for a couple of years where the
8 water will come up six feet, six-eight feet if you get
9 a lot of rain down south and that, and you get all
10 this sludge on these willows, sometimes 6-8 feet, and
11 all the vegetation on the ground is covered with this
12 brown sludge from the foam off the water.

13 I was asking this biologist do you
14 think that has any effect on the small animals and
15 small birds? That's their food, you know. That
16 sludge that's on that willow, in order to eat that
17 willow he's got to eat that sludge, unless he brushes
18 it off with his little paw. But I doubt that.

19 They are eating all that stuff that's
20 coming on the water and on the vegetation, on the
21 grass. The rabbits eating the grass and that.

22 I said has anybody ever done any
23 studies to see what's on there? Is there contaminants
24 on that stuff?

25 I know at Camp 6 where that sawmill

1 used to be, Ken Hudson and I hunted rabbits for the
2 people there. In one evening in two hours we killed
3 120 rabbits. Rabbits turn white when it gets cold in
4 October, and we'd just go along and shoot ten, drop
5 them off at the river, shoot ten. This is all within
6 50 feet of the bank of the river.

7 And there was rabbits. You could
8 drive your boat along and there was big red willow
9 flat and it looked just like snowflakes. There was
10 just rabbits all over in there.

11 Last year we walked that whole island
12 and the islands above it and we never seen one rabbit.
13 And it's been like that for 20, 30 years. The rabbits
14 have not come back. I don't know why.

15 And this is questions we ask and we
16 wonder, but nobody seems to have any answers.

17 And there's several of them like that,
18 you know. There's several things we would like to
19 know more about.

20 So more monitoring has to be done. I
21 know projects are going to go ahead, things are going
22 to move ahead. But we've got to do something too.
23 We've got to try to look ahead and try to be positive.

24 People need jobs. I know that. It's
25 a good thing, there's no doubt about that. But we

1 also have to be careful with the environment and the
2 animals, try to do the best we can to work with
3 everybody and try to protect the environment too.

4 Thank you.

5 THE CHAIRPERSON: Thank you.

6 Does Teck have any questions for the
7 Northwest Territory Métis?

8 MR. IGNASIAK: No, Mr. Chair, although
9 on behalf of Teck we did want to thank you for coming
10 and for sharing your views and your thoughts. Thank
11 you.

12 ELDER EVANS: I was hoping you were
13 going to give me a drilling like you gave the other
14 guy there.

15 --- Laughter / Rires

16 MR. IGNASIAK: It wouldn't have been
17 me standing up.

18 --- Laughter / Rires

19 THE CHAIRPERSON: Do staff have any
20 questions?

21 EXAMINATION

22 MR. BIRCHALL: Thank you, Elder Evans
23 and Dr. Yoworsky. My name is Birchall. I'm one of
24 the lawyers for the Panel.

25 I just have a couple of questions for

1 you.

2 Elder Evans, you spoke to us about
3 your grandson who you took out when you were out
4 monitoring and the importance of getting youth
5 engaged. And you spoke eloquently about that.

6 You also talked about the need for
7 more monitoring on the Slave River.

8 Are there any other monitoring
9 activities that you can recommend that we should take
10 into account or you think would help?

11 You talked about more studies, more
12 monitoring. Is there anything else you can add?

13 ELDER EVANS: Yes, that would be a
14 great idea. I think it was the early eighties when
15 some of the oil sand stuff was starting to build up
16 speed, and we did some monitoring in conjunction with
17 the federal government out of Fort Smith. But I think
18 it was just water quality stuff.

19 I would like to see more small animal,
20 you know contaminants. Like I was explaining how I'd
21 like to see the vegetation, more vegetation work and
22 stuff done.

23 I know there's several different types
24 of monitoring they do. They have that benthics where
25 they put these little traps in the water and they

1 catch all these bugs and stuff. Certain bugs are more
2 susceptible to climate change and stuff. So when they
3 pull out these traps and these little bugs are dead
4 and stuff, or they're not there or whatever, that's an
5 indicator type of thing. And the tougher bugs, the
6 ones that survive, it kind of gives you an indication
7 of the health of the water.

8 They also do that kick sampling where
9 they have a net and they go ahead and they disturb the
10 bottom and they kick it into the net and they collect
11 little bugs and stuff like that.

12 Then I do some mercury sampling with
13 them. We take mercury samples.

14 And we also put in, it's kind of a
15 centrifuge or whatever it is, and it collects water.
16 It gives you kind of a -- there's a meter in there
17 that tells you how fast the water is going, gives you
18 dates and all the rest of the stuff.

19 And there's also the centrifuge stuff
20 from the spin. You have the centrifuge and it spins
21 out all the contaminants and stuff and tells you what
22 sediment contaminants and stuff is in the water.

23 But yeah, the more monitoring the
24 better and the better handle we'll have on things.

25 I think some of it should have been

1 done, baseline stuff should have been done a long time
2 ago. Like I said, the more baseline information you
3 have, the better idea you're going to have of what's
4 happening out there.

5 Like I said, changes are slow. You
6 don't really see them. But if you have that
7 information, you know you have something to go back
8 to.

9 DR. YOWORSKY: If I could add, as Earl
10 is saying, baseline information is absolutely
11 essential.

12 The other essential part is to link
13 the western science monitoring with indigenous
14 traditional knowledge. What did we see in the past
15 and what are the changes now that will be recorded
16 with the monitoring?

17 That will give us a better idea moving
18 forward, adoptive management techniques, things like
19 that.

20 So we would like to see stronger
21 linkages between, you know, the western science
22 monitoring and the traditional knowledge and
23 especially capturing the traditional knowledge of what
24 pre-industrial development state was in the Park, in
25 the PADD and in the Slave River.

1 We are losing our Elders and that
2 knowledge has not adequately been captured to date.

3 So you can see how Earl through taking
4 his grandson out, etc., is trying to link that western
5 and indigenous knowledge together. We need a lot more
6 efforts ad a lot more resources in that area.

7 MR. BIRCHALL: Thank you, Dr.
8 Yoworsky.

9 The staff have listened very carefully
10 to your presentations and the presentations yesterday
11 and we've heard about the difficulties in getting
12 around on the water and the land.

13 So, Elder Evans, how do you adapt in
14 those circumstances? How do you get around given the
15 difficulties you are encountering?

16 ELDER EVANS: Well, I'll give you a
17 clue. I just bought a \$38,000 Argo. That might help.

18 But I mean, in the past we've always
19 got around, whether it was by dog team, skidoo, walk.
20 If you've got to get somewhere, you'll go.

21 Like I do some work with the
22 University of Saskatchewan. On my line the last few
23 years I've found a lot of air pockets in the river and
24 stuff.

25 I took some pictures of what happened

1 when I -- I build an ice road every year to my cabin,
2 a kilometre across. So I have to put an ice bridge
3 in. I was telling this professor from the U of S,
4 Karl Lindenschmidt -- he's a world-renowned ice
5 specialist. I was telling him about all these air
6 pockets. You punch a hole with a drill and it will
7 blow your hat right off your head, there's so much
8 pressure under the water. And he didn't understand
9 what I was talking about.

10 He said send me some information. So
11 I sent him a video of that.

12 He said I have never seen that, he
13 said. So he contacted his buddy, a Russian guy, and
14 he said I haven't seen that either. So they both came
15 down. A guy came from Russia and the University
16 brought their staff to the cabin, and we drilled a
17 bunch of holes and I showed them that.

18 And he said what do you think's
19 causing that? I said well, I don't know, you're the
20 ice expert. Don't ask me. I said it's got to be
21 something to do with the turbulence in the river, in
22 the sandbars and the make-up of the water in the
23 river. I don't really know.

24 So they've been coming every three or
25 four years and they've been studying that in front of

1 my cabin, trying to figure out what's causing this and
2 whether it has anything to do with the rapids upstream
3 or whatever.

4 These are just some of the things that
5 we're working on.

6 We use an Argo there. It's good to
7 use because it floats. But by that time we usually
8 have enough ice that we can use our skidoos.

9 So whatever's appropriate for that
10 time of year we adapt to that.

11 MR. BIRCHALL: Thank you.

12 My last question. Elder Evans, you
13 talked about the importance of controlling the pace of
14 development.

15 Dr. Yoworsky, Elder Evans, would you
16 have any advice or suggestions for the Panel as to how
17 the Métis Nation should be engaged in that effort?

18 DR. YOWORSKY: Well, let's start with
19 using the word that you used there: engage. We need
20 to be engaged.

21 It was interesting. It just occurred
22 to me today when I put the map up of showing where our
23 communities are with respect to the Project and no
24 engagement in the developments south of us, which we
25 are downstream of, and I contrast that with the

1 engagement that the diamond mines have undertaken.
2 And it's dramatically different.

3 The diamond mines, which are much
4 farther away, they understand the responsibility to
5 engage, the responsibility to provide socioeconomic
6 benefits to communities. And while I'm not holding
7 them up to be the diamond standard, so to speak, at
8 least there's that effort.

9 So I think step one is engagement.

10 It helps communities understand
11 developments. It helps communities understand what
12 the impacts will be, and it will help our community
13 understand how we can adapt through the sorts of
14 things Earl was talking about: let's engage our youth
15 in different activities; let's engage our youth in
16 monitoring activities; let's engage our youth in job
17 training, in looking at what aspects of industrial
18 development that they want to participate in, be it,
19 you know, apprenticeship jobs, be it environmental
20 jobs. Those sorts of things.

21 But we have to start that dialogue.

22 MR. BIRCHALL: Mr. Chair, those are my
23 questions. Thank you, panel, for --

24 ELDER EVANS: Yeah, I had one more,
25 speaking about youth there.

1 You know, like you said, it's
2 important to engage among the young and stuff. And I
3 guess telling my little grandson -- I've raised him
4 since he was eight days old.

5 At my cabin we go down to the river
6 for water; take a couple of pails and go down and get
7 water. And it's about 40 below. We went down there.
8 We walked down there in the nice moonlight, took the
9 chisel and chiselled a hole. It froze pretty hard.
10 So chiselled it all out, clean it out. I filled up
11 the two pails and I took the dipper and I took a
12 drink.

13 My grandson, "Hey, Poppa, you're not
14 supposed to drink that water!" I thought, holy man,
15 that little guy, you know, he's been around the cabin,
16 been around people talking, and talking about water
17 and, you know. He picked that up, five years old and
18 he figures there's something wrong with that water
19 already just by listening to the people, you know,
20 that are talking about what's happening to the river
21 systems.

22 I was so amazed. I said, "Don't
23 worry, son." I said, "Just a little sip won't hurt
24 me." "But it's no good for you," he said. So it's
25 just ingrained in his head that that water was no good

1 already. You know, I found that pretty amazing.

2 I also had one more question. I asked
3 Tara if you had a biologist on staff. I wanted to
4 talk to her about caribou. Because these woodland
5 caribou that are in this area, whatever few are left,
6 they're going to be displaced by this project here.
7 They're going to move, they're going to move north,
8 they're going to go that way.

9 So our concerns north of the border is
10 the CWD, chronic wasting disease, which is prevalent
11 in the deer. I'm just wondering if Alberta has done
12 any studies on CWD in this woodland caribou?

13 Because last week, the first time in
14 70 years, two woodland caribou were killed near Fort
15 Smith on Highway 5. Where they came from? Did they
16 come from this area? We don't know. If so, they
17 could be taking that CWD with them if they're infected
18 and taking it into our animals, you know? Can it be
19 transferred between animals? These are the things we
20 want to know.

21 You know, we're not experts in that
22 field of diseases and how they're spread and what
23 animals can spread them to different animals and that.
24 So these are some of the questions that we'd like
25 asked.

1 If you ever seen a map, you know where
2 the East Arm is on Great Slave Lake? It's about 40
3 miles from the barren lands. Five years ago, there's
4 a guy living there, he seen a white-tailed deer
5 swimming across that bay, 40 miles from the tree line.
6 That's a long long ways. If those deer are infected,
7 they could spread that disease onto the caribou.

8 There was a guy, his name's George
9 Marlow, he was going hunting, he's only about 20 miles
10 from that -- not even that, 10 miles from that site
11 where he seen that deer, he seen there's a muskox by
12 the trail, there was a prairie and this muskox was
13 going around in a circle in this prairie. That
14 prairie's about the size of this room.

15 So they stopped there, and they
16 weren't hunting muskox they're hunting caribou. So
17 George said, "What the heck's with this muskox?" He
18 was all kind of covered in ice and he was going round
19 and round.

20 So they took off, they come back four
21 days later, that muskox was still going in a circle in
22 that prairie, round and round. He had that ground
23 beat down just like this floor, and he's all covered
24 in ice. So we shot him. He said, there must be
25 something wrong with him. They didn't want to touch

1 it, they just shot him and left him right there.

2 So these kinds of things, when you see
3 an animal going in a circle, a moose or deer,
4 whatever, that's a sign of CWD, you know? Was this
5 muskox infected? We don't know. You know, that's the
6 kind of things we need. Can this CWD affect moose,
7 buffalo, whatever?

8 This is more information we've got to
9 get put out to us so us, as hunters and people living
10 here, we know more about these diseases we never had,
11 but they're moving north. This could be -- like I
12 said, this displacement of these animals from this
13 area could end up in our area and affect our food
14 supply.

15 MR. BIRCHALL: Thank you for that.

16 Mr. Chair, I have no further
17 questions. Thank you, Panel.

18 ELDER EVANS: Thank you.

19 MS LACASSE: Gentlemen, I believe Dr.
20 Yoworsky addressed this to some degree, about having
21 the youth involved in monitoring.

22 I just wondered, Mr. Evans, if you had
23 any additional ideas about how traditional knowledge
24 from you and your peers, people like Mr. Hudson or you
25 mentioned Mr. Marlow. Do you have any ideas about how

1 you could be involved in monitoring, about
2 environmental effects from development, whether it's
3 Teck or other matters?

4 ELDER EVANS: Yeah. I think we are
5 starting that to some degree. We have these
6 on-the-land camps. Like this summer, I participated
7 in one. I took three kids from Fort Smith down to
8 Great Slave Lake on the Slave River and we took three
9 elders and we showed the kids how to do a round of
10 water sampling, because I was in the process of water
11 sampling. I showed them, explained to them what we're
12 looking for and that kind of thing, you know, how to
13 do it.

14 Then we showed them how to pick
15 plants, how to plucks ducks, clean ducks, how to singe
16 ducts, how to pick different medicine plants, how to
17 set a fish net, how to clean fish, you know, just that
18 basic stuff.

19 But, like I said, water monitoring and
20 other monitoring could be injected into one of these
21 programs and we can do it that way. Because we have a
22 foothold, we are starting to do some of it. But to
23 what degree, it's yet to be determined.

24 MS LACASSE: Anything beyond water
25 monitoring you'd like to see in terms of having your

1 traditional knowledge used to monitor what's going on?

2 DR. YOWORSKY: I could add looking at
3 the plants --

4 MS LACASSE: Yes.

5 DR. YOWORSKY: -- looking at the
6 animals, bugs, the landscapes, I mean the whole
7 environment. Even when we're talking to some of the
8 elders about the planning for that trip, they're
9 saying even the weather, you know, looking at the
10 clouds, looking at weather patterns, the winds, have
11 they changed since their youth and what are the
12 indicators to try to flag these long-term changes and
13 its knowledge.

14 As I've mentioned before, we have to
15 capture very quickly.

16 MS LACASSE: Mr. Evans, thank you very
17 much for sharing your pictures with us, they were
18 extremely interesting. Thank you.

19 ELDER EVANS: That's good. I was
20 going to tell you, I got 40 albums that thick, 40
21 albums of all the country, the hunting, the trapping,
22 and on the lifestyle that we lived. Like, there's
23 probably 5,000 pictures that we have taken over the
24 years. You know, it shows the Peace River 40 years
25 ago. You know, it shows the country 40-50 years ago,

1 which is good.

2 Also, I just wanted to mention too.
3 Like, the last three or four years ENR out of
4 Yellowknife and out of Fort Smith, their water
5 department have taken efforts to work with us. They
6 want us to help them, they want us to work with them,
7 which is really good. That hasn't happened much in
8 the past.

9 But it seems like all the governments
10 are turning more that way, getting more people
11 involved in what they're doing on the ground, which is
12 a good thing. That's what we need. We need more of
13 that. You know, it's a positive step. Hopefully, the
14 rest of the governments and people can follow suit, it
15 would be great.

16 MS LACASSE: Thank you so much.

17 MEMBER MCMANUS: Thank you, Mr.
18 Chairman. I don't have any questions, but I did want
19 to say thank you the panel, Mr. Evans, and Dr.
20 Yoworsky. I wish you would have brought those 40,000
21 picture albums, because the pictures were really
22 interesting. So thank you for sharing that.

23 ELDER EVANS: Yeah. Thank you.

24 MEMBER KLASSEN: Thank you, Mr.
25 Chairman. I have one question. I too appreciated the

1 information you provided, Elder Evans.

2 Dr. Yoworsky, you mentioned -- well,
3 first of all, the map that showed where all the
4 trading posts had been and that as proxy for how the
5 land had been used by the Métis. I'm wondering, and I
6 don't know whether you can share this with us given
7 where the negotiations on land and resources are, but
8 how much of the Wood Buffalo National Park do those
9 negotiations cover?

10 DR. YOWORSKY: What I can share is in
11 terms of the park. It covers the entire park, so
12 there's no delineation north of 60, south of 60.

13 MEMBER KLASSEN: Thank you.

14 THE CHAIRPERSON: Thank you. I don't
15 have any questions myself. But I also wanted to thank
16 you, Dr. Yoworsky and Elder Evans, for participating
17 in the process, for sharing your experiences and your
18 knowledge.

19 Thank you very much.

20 MS LACASSE: One housekeeping matter,
21 the slide presentation from The Northwest Territory
22 Métis is Document No. 586.

23 EXHIBIT NO. 586: Slide
24 presentation from The Northwest
25 Territory Métis

1 THE CHAIRPERSON: Okay, thank you.

2 With that, we'll take our break. It's
3 about 10:45, so we'll be back at 11:05.

4 Thanks.

5 --- Upon recessing at 1045 / Suspension à 1045

6 --- Upon resuming at 1115 / Reprise à 1115

7 AFFIRMED: JULE ASTERISK

8 AFFIRMED: PAUL BÉLANGER

9 AFFIRMED: GERDA KITS

10 AFFIRMED: JOHN O'CONNOR

11 SWORN ON EAGLE FEATHER: REGAN BOYCHUK

12 SWORN ON EAGLE FEATHER: JEAN L'HOMMECOURT

13 THE CHAIRPERSON: Thank you. Please
14 be seated.

15 Mr. Ignasiak.

16 MR. IGNASIAK: Thank you, Mr. Chair.

17 I just wanted to deal with the two
18 outstanding undertakings that Teck has. First, I
19 believe, being Undertaking No. 4, this was the request
20 by Ms LaCasse provide a revised Water Management Plan.

21 MS LaCASSE: Mr. Chair, this document
22 would be 590.

23 EXHIBIT NO. 590: Revised Water
24 Management Plan (Response to
25 Undertaking 4)

1 MR. IGNASIAK: The other undertaking
2 was No. 5, which was a request to revise certain
3 tables taking into account the potable water
4 guidelines, so I'll provide a document to Ms LaCasse,
5 the answer to that undertaking.

6 MS LaCASSE: Mr. Chair, that will be
7 Document 591.

8 EXHIBIT NO. 591: Revised tables,
9 taking into account potable water
10 guidelines (Response to
11 Undertaking 5)

12 MR. IGNASIAK: So with that, Mr.
13 Chair, I think there's one outstanding undertaking,
14 but I don't think it's Teck. So I think Teck's
15 fulfilled all of its undertakings.

16 Then I'm staying standing, because I
17 think there's one more preliminary matter regarding
18 some further materials that the Keepers have asked to
19 file that we've had a chance to look at.

20 THE CHAIRPERSON: Okay. Just on the
21 undertaking issues, does Staff have the same view as
22 Mr. Ignasiak, that all of Teck's undertakings are been
23 completed?

24 MS LaCASSE: I believe we do, yes.

25 THE CHAIRPERSON: Okay, thank you.

1 With respect to the other preliminary
2 matter, I'm not sure who wants to speak to it first.
3 Mr. Ignasiak, did you want to speak to it or Ms
4 Asterisk?

5 MS ASTERISK: I was just going to ask
6 the Panel if I could quickly go get Dr. John? He's a
7 bit lost, he's very close, at the Fox Den.

8 THE CHAIRPERSON: Okay, sure. Yeah,
9 please do.

10 MR. IGNASIAK: So Mr. Haddon advised
11 me that there was a request by Keepers to file a
12 number of images taken from various reports. We've
13 had a quick look at them and a number of them are very
14 technical and deal with hydrology or hydrogeology
15 issues.

16 So we object to adding those further
17 figures to the record for two reasons: one, it's
18 somewhat prejudicial to Teck, given we didn't have a
19 chance to see them before we presented our direct
20 evidence or to provide any comment of them in
21 evidence, so that opportunity slipped us by because
22 they weren't filed by the deadline of August 31; and,
23 the second is as far as I'm aware we were never
24 provided a CV for Mr. Belanger, but we were told he's
25 not appearing as an expert.

1 As far as I know, there's no one on
2 the Panel with any background in hydrogeology or
3 hydrology on the Keepers' witness panel, so I don't
4 think it would be appropriate to file that evidence.
5 I think there's enough on the record already for
6 Keepers to make their presentation.

7 THE CHAIRPERSON: Thank you, Mr.
8 Ignasiak.

9 Mr. Belanger, do you have anything
10 that you want to say in response to that? I assume
11 the figures are related to the presentation or
12 comments you're going to do, is that correct?

13 MR. BELANGER: So what I'm doing is
14 summarizing --

15 THE CHAIRPERSON: Could you move into
16 the mic a little bit?

17 MR. BELANGER: Oh sorry, yeah. So
18 what I'm doing with my presentation is summarizing
19 studies, mostly peer-reviewed studies, and also
20 summarizing an expert's review by a hydrogeologist
21 that we retained of the information provided by Teck.

22 So some of the images just help to
23 explain what I'm going to read out or summarize, and
24 so they would -- without the images it'll just be a
25 little more less informative to those that are

1 participating today because some of the images do help
2 explain some of the text that I'll be reading.

3 Beyond hydrogeology, there's also
4 toxicology summary information that I'm bringing up
5 and the imagery then, you know, does help with that.
6 But it's just -- I'm fine either way. I think it'll
7 just take away from what I'm presenting, but that
8 information will be available and will be used going
9 forward anyway, so it won't be lost.

10 THE CHAIRPERSON: Okay, thanks for
11 that. Just give us a second.

12 So, Mr. Belanger, just to clarify, the
13 figures that we're talking about aren't from documents
14 that were submitted, these are kind of new materials
15 that weren't filed in the original submission?

16 MR. BELANGER: Yes, some of the
17 graphic information are from the studies, and other
18 maps or pieces of information are just to further
19 explain what the researcher or scientist was talking
20 about in the study. So, yes, some are connected, some
21 are not connected. They're not necessarily new
22 information, they're just simply an explanation of the
23 summaries or abstracts that I'll be going over.

24 THE CHAIRPERSON: Okay. I think I
25 understood from what you said that, you know, you

1 could still proceed with your presentation without the
2 figures.

3 I think, given that they weren't
4 provided to Teck in advance and weren't filed as part
5 of the submission, that's probably the basis on which
6 we should proceed. Because there is a bit of a
7 fairness issue of introducing new things that people
8 haven't had a chance to consider.

9 MR. BELANGER: Sure, I understand.

10 THE CHAIRPERSON: Okay, thank you.

11 MS ASTERISK: Could I ask that we able
12 to submit them as an item though for the record?
13 Because they are -- what Paul's put together to
14 support his statement that was submitted are the
15 graphic images and the maps that basically support
16 those studies that he is going to be talking about.

17 So we think that it would help the
18 Panel, the visual aspect of it, might help clarify
19 some of his presentation.

20 THE CHAIRPERSON: I think it does
21 raise a fairness issue. But, Mr. Ignasiak, do you
22 have anything further you want to say?

23 MR. IGNASIAK: No. That's exactly
24 what I was addressing though, them being put in on the
25 record. I don't think it's appropriate at this stage.

1 THE CHAIRPERSON: Yeah, I would have
2 to agree with Mr. Ignasiak. The material should have
3 been filed previously on the record. To file them
4 now, Teck won't get another opportunity to
5 cross-examine on those materials because they will do
6 their cross-examine right after your presentation, so
7 that's the issue.

8 Okay, so with that Ms Asterisk, do you
9 want to introduce your panel and start?

10 EVIDENCE IN CHIEF

11 MS ASTERISK: Thank you. Yes, I do
12 have a bit of an introduction and I first of all want
13 to thank the Joint Review Panel for giving us this
14 opportunity to come and present to you today.

15 Keepers of the Athabasca was founded
16 in 2006 and we're First Nations Metis Inuit
17 environment groups and watershed citizens working
18 together for the protection of water, land and air,
19 and thus for all living things today and tomorrow in
20 the Athabasca watershed.

21 Along with this work that we've
22 prepared for you today we also are working on multiple
23 files, so we're a small group, we've got about 3000
24 members and a Board of 12 people; we're a local group;
25 we have capacity issues. For instance, the full

1 financial security statement that I know is in there
2 that Teck had originally put in their application that
3 they would be prepared to offer full financial
4 security on their tailings -- I'm going to find it by
5 the time this hearing closes, but I have not had a
6 chance to look at it yet. So, just so that you are
7 aware, we're not a large organization and capacity is
8 a challenge for us.

9 So, just to pick up a little bit where
10 we left off because I felt that some of the cross-exam
11 questions may have been taken the wrong way, I don't
12 want Teck to feel singled out in the criticism of
13 their science. We're certainly not only critical of
14 Teck's scientists. The knowledge holders have really
15 led us to understand in a very deep way that western
16 science itself is kind of flawed. There's industry
17 evasion, there's lots going on with science and that's
18 kind of contorted. We have the example of tobacco
19 science for example, and it looks like pharma science
20 is going the same way with lawsuits against
21 pharmaceutical companies starting up now. It's
22 possible that there will be lawsuits in the future
23 about climate change denial.

24 So, for the science thing we certainly
25 didn't want to single out Teck and say, 'Oh, they're

1 so bad.' No, it's a tendency, it's kind of a theme
2 that we're seeing that science has really been partly
3 responsible for leading us to very near environmental
4 collapse now by researching all around the issues
5 without ever looking for the actual problem. So, we
6 certainly didn't want anyone to take that personally,
7 those questions that we had asked about contorted
8 science.

9 I just want to read one -- I'm going
10 to limit it to one, quote, because I see that you are
11 hearing from a lot of the original knowledge holders,
12 and next week, as well, and I just really encourage
13 the Panel to listen carefully to these. But, this
14 fellow who I'm going to read his quote now, he
15 actually can't talk anymore; he's being treated for
16 cancer so I feel that it is pertinent to read. And it
17 is a quote about environmental scientists in general.
18 We're not talking about Teck. Okay,

19 "When all these pipelines are
20 done they will just leave them in
21 the ground and our arsenic levels
22 will go crazy around here. The
23 heated pipelines are raising
24 minerals to the surface that
25 aren't ordinarily there. The

1 animals are not getting the
2 minerals they should when they go
3 to their licks. In one place I
4 was at by Wandering River, we
5 found 10 licks that people
6 thought were natural, yet all of
7 these licks were near risers, and
8 that's the only place I noticed
9 them was by these heated lines.
10 It is not possible to have that
11 many natural licks. Normally
12 animals will have to go for miles
13 and miles. When the animals lick
14 at these new licks barium,
15 mercury, arsenic and other
16 chemicals are more present
17 because they rise at a higher
18 speed with the warmth of the
19 Project underground. I have
20 watched this happen.
21 When environmental scientists do
22 not see this, it is really weird
23 to me. They get so excited that
24 there is a natural "lick" and
25 animals are coming, but not

1 seeing the potential that there
2 are other elements that are not
3 naturally present. They are
4 looking for animal tracks and
5 they are finding them.

6 When I bring this up, it is a
7 shock to them. I'm only on
8 short-term. I go out with
9 liaison people for oil companies.
10 They ask really dumb questions.
11 They put a pipeline through
12 wetlands just because people will
13 never live there; that's their
14 reason for putting a pipeline
15 through because they have a
16 thousand people's signatures that
17 they would never live in a
18 wetland.

19 We actually don't have enough
20 wetlands in the province to
21 support our environment."

22 (As read)

23 And then I'll skip some of this and go

24 down to,

25 "I believe they may have already

1 wiped out a bunch of stuff
2 without even thinking. Most
3 people are paid to be quiet, keep
4 your mouth shut and keep your
5 job. It's hard to believe that
6 environmental scientists do this
7 but they have a life, too. The
8 government ignores it; they let
9 them go ahead." (As read)

10 So, yeah, I just really feel for Rob
11 not being able to be here with us today to speak to
12 you, and I won't quote any more; you can read when you
13 have a chance to read the rest of the ideas.

14 So, yeah, his point about government,
15 unfortunately the government is not immune from this
16 tendency to ignore important science.

17 I had occasion to go to a presentation
18 of the cabin program -- someone was talking about that
19 earlier with the benthic invertebrates and there is a
20 presenter from Environment Climate Change Canada,
21 Robert Brewer (ph), he did a project with benthic
22 invertebrates and fish in the Athabasca River and he
23 had a whole bunch of factors that he was listing for,
24 you know, what would potentially affect these little
25 insects and fish. And tailings was not included.

1 Trucks were included, emissions were
2 included, traffic was included, lots of things were
3 included but tailings was not, so I asked him in the
4 public question time after his presentation, 'Why did
5 you not include tailings?' and right away he piped up,
6 'There's no evidence tailings are leaking.' So,
7 afterwards, after his presentation during the break I
8 cornered him, I admit, and said to him, 'There is
9 evidence.' You know, I didn't want to contradict him
10 right on stage, 'But there actually is evidence that
11 the tailings ponds are leaking and how can you not
12 acknowledge that?' And he said, 'Oh, well, yes, you're
13 right, it's acknowledged that the tailings are leaking
14 into the groundwater and then coming up in the river.'
15 So, he knew that. He knew it, but he ignored it. And
16 that's Environment and Climate Change Canada.

17 So, you know, this is a real concern.
18 It's a real tendency. We feel that some ideas are
19 shut out and this resistance to recognizing new ideas
20 is a documented thing; it happens in curriculum. I
21 think the research shows that it takes 17 years to get
22 a new idea into the curriculum. It happens in best
23 practises and other places as well. But I want to
24 encourage the Panel to please recognize the concerns
25 of the knowledge holders, the Indigenous knowledge

1 holders that are closest to the land.

2 One example from our interviews that I
3 saw is this idea about the carbon aerial emissions,
4 the hydrocarbon particulate matter aerial emissions,
5 over decades. The visible emissions that are landing
6 all over the forest over a period of decades, and the
7 concern is with all these extra hydrocarbons does the
8 forest become more flammable?

9 Now, we asked Teck in the cross-exam
10 if they had studied this. They have not studied this.
11 I don't know if anyone has studied this, but I want to
12 bring this forward here today for the public record.
13 This is a concern: forest increasing flammability. It
14 is something that needs to be studied, and I sure hope
15 we don't take 17 years to study it.

16 We don't have the luxury of that kind
17 of time anymore. We're very, very, very close to some
18 terrible things. Well, things are happening. We have
19 sewn the wind. We are now reaping the whirlwind. We
20 have these cumulative effects that are not officially
21 acknowledged yet they are strong enough, strong enough
22 to spur a NAFTA challenge to our tailings management.

23 Part of the issue is this idea of best
24 available technology. If it was best available
25 technology that would be great. But, unfortunately,

1 the tag line of economically achievable that gives
2 industry an out every time. They didn't do any of the
3 green chemistry. They won't even look at tanks. We
4 asked, 'Will you look at storing the most dangerous
5 tailings, not all of them but the worst tailings in
6 tanks and evaporating them from there?' It can be
7 done. They won't consider it. They will not even
8 consider that. Their plan is to put tailings into
9 wetlands and expect the cattails to do all the work.
10 That's just not fair when we have green chemistry.
11 There are other much better options.

12 Keepers concerns in a nutshell: We're
13 concerned about emissions into the air and the water.
14 We're concerned about water withdrawals because they
15 are already very, very intense and we have
16 accumulating factors that are making the river flow
17 much less and it is becoming not viable for ecological
18 reasons. And, also, with the compounding effects of
19 climate change that increases those issues with water
20 withdrawals.

21 And then we're very concerned about
22 cumulative effects. I work through Alberta
23 Environment Network on a number of committees. One of
24 them is working with Alberta Environment and the
25 Alberta Energy Regulator to define the new cumulative

1 effects monitoring strategy. I think it is going to
2 take years.

3 They are looking at a very few
4 indicator species to start with. These cumulative
5 effects strategies are not in place yet. And, once
6 again, we don't have the luxury of time; we have to
7 move on this new science now rather than later because
8 we're in a very urgent situation with a lot of the
9 cumulative effects still not being acknowledged
10 officially. You know, that's how we have this NAFTA
11 challenge without the Government of Canada ever
12 challenging, you know. It's we're in a very
13 interesting historical period.

14 The health effects are another place
15 where we're going to hear from Dr. John first on our
16 Panel that have not been officially acknowledged, and
17 we are -- Keepers of the Athabasca is calling for a
18 comprehensive health study. The one that was designed
19 with great care and the terms of reference took years
20 to develop and then was abandoned, that's the one that
21 we need to see.

22 We're also concerned about the
23 economics of the whole situation. We're in a very
24 dynamic economic place right now and our two economic
25 experts will much better address that than me.

1 And our co-chair -- we have two
2 co-chairs to present to you today, our co-chair Paul
3 Bélanger will present studies about tailings and talk
4 about the green chemistry, things that I keep
5 mentioning.

6 And our co-chair Jean L'hommecourt
7 will also speak on behalf of traditional knowledge
8 holders.

9 And then I will just do a little
10 wrap-up afterwards.

11 Thank you.

12 THE CHAIRPERSON: I think Dr. O'Connor
13 is first on the list?

14 MS ASTERISK: Yes, please.

15 THE CHAIRPERSON: Okay.

16 MS ASTERISK: If he's ready. Are you
17 ready?

18 DR. O'CONNOR: Yes, I am (Speaking off
19 mic).

20 Good morning. Sorry for being late, I
21 was up most of the night on call and had an early
22 start at the hospital this morning.

23 My name is Dr. John O'Connor, I'm a
24 family physician and have been in northern Alberta for
25 the last 25 years. For the majority of that time I

1 have also provided primary care health services to the
2 Aboriginal communities outside of Fort McMurray,
3 notably Fort Chipewyan and Fort McKay.

4 I'm relatively new to the area of
5 health activism and advocacy, but I am fully prepared
6 to do that regardless of the risk personally, or
7 professional risks.

8 For thousands of years Indigenous
9 people living in and around northern Alberta had
10 subsisted independently off the land and water.
11 Generations of families have managed successfully to
12 fully use economically what nature has provided in a
13 sustainable way. However, over the past approximately
14 50 years many of those close to the land have asked
15 questions and voiced concerns regarding changes,
16 changes which have increasingly seriously impacted
17 their traditional way of life.

18 In Fort Chipewyan no one had any
19 answers nor could they get any answers from
20 authorities.

21 You see, a description of what I was
22 regaled with by many of the Elders when they started
23 going up to Fort Chip in the early 2000s was water
24 once drinkable directly from the Athabasca River and
25 Lake increasingly tasted bad and undrinkable with a

1 constant sheen of oil on the surface. And these are
2 people that went fishing on the lake, especially on
3 the lake, and would be able to stay out for two or
4 three days at a stretch, camping on many of the
5 islands on the lake would be able to drink water
6 directly from the lake, boil it to make tea, or cook
7 their food. They couldn't understand why this change
8 was happened and it seemed to be getting worse.

9 They were increasingly catching fish
10 with deformities, extra or missing pieces and whose
11 flesh tasted bad. Duck and moose, part of their
12 subsistence, was increasing inedible. Muskrats were
13 similarly inedible, and with a shrinking population.

14 The flora and fauna, cattails and
15 other flora, long sources of traditional medicines
16 were increasingly harder to find along the river and
17 lakeshores. And the air -- this is most interesting,
18 the air increasingly smelled like gasoline or like
19 exhaust.

20 That's the largest community, Fort
21 Chip. The population is around 1200, it's probably a
22 little bit more now. It was established in 1788 and
23 made up of Cree, Chipewyan and Metis populations with
24 some non-Indigenous groups. About 70 percent of the
25 population lived traditionally, lived off the land and

1 the water.

2 These descriptions that I had heard
3 were voiced by the exact population that lived close
4 to the land and the water.

5 Since the early '90s the North River
6 Basin Study and its companion study, the Northern
7 River Basin's Human Health Monitoring Program -- there
8 have been myriad studies focussed on environmental --
9 the environment downstream of the 140,000-plus square
10 kilometres undergoing mining for tar sand oil. Many
11 peer reviewed respected and published studies, for
12 instance in the proceedings of the National Academy of
13 Science, one after another has demonstrated different
14 aspects of the impacts of mining, of tar sands, and of
15 the accumulation of waste including water along the
16 way.

17 Science, indeed, has mirrored
18 traditional environmental knowledge which has, in its
19 own way, vividly described these changes and quality
20 deterioration.

21 All this, when I started to hear about
22 first, all this was in sharp contrast to the
23 contention from especially the Alberta Government,
24 that there was no evidence of degradation, or
25 contribution of degradation coming from decades of

1 mining activity. This claim, despite growing evidence
2 from traditional environmental knowledge and
3 scientific studies has still be adhered to by
4 successive governments and industry.

5 For Chip, since the last '90s had
6 begun to experience health issues unlike any time in
7 its 200-plus years, malignancies, autoimmune diseases,
8 diabetes, to mention just a few, in a community so
9 traditional in its lifestyle and far removed from the
10 stresses and processed life of Fort McMurray. This
11 was completely foreign to residents.

12 A spike in certain cancers,
13 especially, was quite noticeable by the early 2000s,
14 cancers that included cancer of the billiard tract,
15 notably cholangiocarcinoma, a particular cancer that
16 was rare and not expected to occur at more than
17 1:200,00 of the general population. The community
18 needed answers.

19 Health Canada who is responsible for
20 the majority of on reserve health issues, in response
21 to questions from the community, sent three physicians
22 up to Fort Chip in February or March of 2006. The
23 senior physician in the group took a swig of water
24 from the tap in the nursing station and turned to the
25 Globe and Mail reporter who happened to be there in

1 the nursing station at the time, and reassured
2 everyone there's nothing wrong with the water in Fort
3 Chip. This is his first time in Fort Chip.

4 Later on in 2006 Health Canada gave
5 the community a confident reassurance that its cancer
6 rate was no higher than expected after a superficial
7 examination of deceased files gathered from storage in
8 the nursing station in Fort Chip.

9 Independent analysis quickly followed
10 and contradicted what Health Canada told the
11 community. This left Fort Chip troubled and with a
12 definite loss of faith in Health Canada.

13 In 2006-2007 Golder and Associates, a
14 group that has long been employed by industry to study
15 environmental impacts of proposed plants and
16 expansions predicted that certain metals including
17 mercury would rise exponentially in concentration in
18 traditional foods downstream of a proposed Suncor
19 expansion. This was downplayed by none other than
20 Health Canada.

21 In response the Nunee Health
22 Authority, the health authority that runs the health
23 system in Fort Chip internally contracted Dr. Kevin
24 Timley, (ph) a scientist from Edmonton, to study
25 traditional foods and water proximate to Fort Chip.

1 His findings were presented to the community in
2 November of 2007 when he found that mercury arsenic
3 and PAH's, Polycyclic Aromatic Hydrocarbons were high
4 and appeared to be increasing in concentration in the
5 water, especially in the water and the sediment around
6 the community, but he also studied some of the
7 wildlife that the community had subsisted on.

8 He advised the community that they
9 should not -- they should refrain -- pregnant women
10 and children should refrain from eating fish,
11 especially walleye from the lake and pregnant women --
12 sorry, men and non-pregnant women, to eat a meal of
13 fish no more than once a week.

14 Health Canada responded a day or two
15 later saying that they had advised the community of
16 this some years before. But nobody in Fort Chip was
17 aware of this.

18 Interestingly, around the same time
19 Suncor at a conference in November of 2007 had
20 revealed that its oldest tailings pond, Tar Island
21 Pond, was leaking and seeping at the rate of 67 litres
22 per second and had been for years into the Athabasca.
23 This amounted to about 6 millions litres a year
24 directly into the water.

25 My advocacy on behalf of Fort Chip

1 earned me a series of complaints from Health Canada
2 supported by Alberta Health at the College of
3 Physicians in Edmonton. The most egregious of these
4 complaints was of raising undue alarm in Fort Chip.
5 The community was up in arms and with one voice said,

6 "We are not alarmed by what Dr.
7 O'Connor is saying. We realize
8 we have experienced this high
9 cancer and increasing cancer
10 numbers in our community and
11 other illnesses. We were alarmed
12 by the fact that people were
13 ignoring us. We are now relieved
14 that Dr. O'Connor has become our
15 voice." (As read)

16 In 2008, in response to -- sorry. The
17 Alberta Cancer Board was asked to do a formal study of
18 cancers in response to continued clamouring and public
19 pressure. They took a year to study cancers in Fort
20 Chip, and came out with a decent study that looked at
21 various types and brought their findings to the
22 community and presented them in public.

23 They identified a 30 percent higher
24 rate of cancer in Fort Chip, which contradicted what
25 Health Canada had said in -- three years before in

1 2006. They expected to find 37 cases, and they found
2 51 cases of cancer, including a few clusters, and
3 notably cholangiocarcinoma. They had identified two
4 cases when they would have expected to find none.

5 The recommendation after this was that
6 Fort Chip undergo a health study, comprehensive health
7 study.

8 Both myself and Dr. Liam Griffin, a
9 colleague of mine who, at that time, was also
10 providing primary care services to Fort Chip, were
11 asked to participate in a scientific team to put
12 together terms of reference for a big study.

13 We took about a year to come up with
14 terms of reference that suited Fort Chip, which was
15 based on the study that was done in the Delaunay
16 region but moulded to fit Fort Chip.

17 The second-last meeting, the Chair of
18 our committee, who was at the time a Medical Officer
19 of Health for the Fort McMurray region, insisted on
20 inserting a clause that said that industry should be
21 part of a management oversight committee on any such
22 study.

23 Many of us on the committee were
24 puzzled. Dr. Griffin and myself objected strongly to
25 this clause, as did a couple of other representatives

1 from Fort Chip.

2 Nevertheless, a clause was put in. We
3 had predicted that if this was presented to Fort Chip
4 that Fort Chip would reject it. Indeed, this came to
5 happen.

6 Fort Chip -- Justin Cole, one of the
7 leaders, said that this could be akin to the fox
8 looking after the henhouse if it was found that there
9 were health issues in the community directly linked to
10 mining activity upstream.

11 I must stress that the community
12 welcomed the idea of a comprehensive health study, an
13 impartial, multi-factorial looking -- study looking at
14 all aspects of health.

15 This was not an effort to nail down
16 the tar sands mining activity to health issues in the
17 community. There were questions, questions that the
18 community needed answered.

19 In any case, after the clause of
20 having industry be part of a management oversight
21 committee was rejected, the government left the
22 community, saying, "If you don't accept this, we're
23 not doing a study". And they've never come back.

24 About a week later or a few days later
25 after this happened, we -- many of us on this

1 committee discovered that the chair of the scientific
2 team, while at the time the Medical Officer of Health
3 for the Fort McMurray region, was also, and this was
4 undisclosed to us, the chair at -- the Health and
5 Environmental Advisor to the Oil Sands Developers
6 Group.

7 This would have been interesting
8 information prior to him taking on the position of
9 chair of this committee, and certainly Fort Chip would
10 have been interested to hear that.

11 This was the closest that Fort Chip
12 has ever come to a comprehensive health study.

13 Interestingly, in 1999, when the
14 Northern River Basin Human Health Monitoring Programs
15 study was completed, the recommendations that came out
16 of that, the scientific and technological
17 recommendations were to develop the capacity to
18 monitor environmental input and health outcomes more
19 effectively through the development of data and
20 monitoring systems with participation of governments,
21 universities, industry, research organizations and
22 health authorities.

23 Number two, they recommended to make
24 better and more effective use of routinely collected
25 administrative health data, ensuring the timely

1 collection of high quality, valid and appropriate data
2 to expand the monitoring of illnesses and health
3 conditions beyond common communicable diseases, to
4 identify contaminants of concern in the local
5 environment and to monitor exposures, early biological
6 changes and health outcomes, to establish a process to
7 regularly monitor selected contaminants in animals and
8 fish used for human consumption, to assess variations
9 and detect changes over time, to ensure current
10 regulations and guidelines support continuous
11 improvement and reduction of industry emissions, and
12 to initiate action to better understand the higher
13 incidence of congenital anomalies in the region.

14 To my knowledge, and speaking to some
15 of the participants in this study back in the
16 nineties, these recommendations were never followed up
17 on.

18 So I want to stress no human health
19 study, no human health comprehensive studies have ever
20 been completed by either provincial or federal health
21 authorities downstream of the tar sands.

22 In 2016, while I was at the Health
23 Directory in Fort MacKay, I got an email from a
24 Professor Jonathan Martin. He was a Professor in the
25 Faculty of Science at the UofA.

1 He had done -- along with his
2 undergrads, he had done a two-year study of the impact
3 of coke dust, so-called pet coke, that emanates from
4 mounds of waste product of tar sand production. It's
5 a fine particulate matter, and it contains the highest
6 concentration -- my knowledge is not extensive on
7 this, but the highest concentration of PAHs, which is
8 the highest -- has the highest carcinogenic impact --
9 single impact in humans.

10 It's a Class 1 human carcinogen.

11 Pet coke becomes airborne and spreads,
12 and is distributed for a radius of at least 30
13 kilometres from its origin at the larger, more
14 established tar sand mining operations.

15 So this has been blowing in the wind
16 for years and years. It has a particular impact on
17 Fort MacKay where the community has complained --
18 noticed and complained for years of the dust that
19 settles not just outside of their houses and on their
20 vehicles, but inside their houses, gets into their air
21 vents.

22 The computer filters have to be
23 changed every couple of weeks. They're black when
24 they take them out.

25 One of the community members,

1 interested in what's happening in the environment and
2 more curious, had infrared cameras positioned outside
3 his house and he asked me to come to see the footage
4 one day. He had a bright sunny day in spring, and he
5 had this footage of what looked like sparks blowing in
6 the wind, would blow for a period of a few minutes and
7 then ease off for a minute and then blow again, coming
8 from all different directions like a Wilson cloud
9 chamber, if anyone understands that.

10 When we went outside, we could see
11 nothing go back inside and we saw the footage again on
12 the camera. This apparently represented pet coke
13 falling into the community.

14 This study was actually published in
15 January of 2016 by Professor Martin.

16 Despite the fairly widespread reaction
17 to the study, there's been no response from local,
18 provincial or federal governments.

19 There is a pressing and urgent
20 pressing need to assess human health downstream of the
21 tar sands mining area in northern Alberta. It must be
22 undertaken before any more development is allowed to
23 occur.

24 Enough evidence -- I've noted some
25 studies in my presentation. Enough evidence has

1 amassed in study after study to indicate that
2 significant exposure has already occurred.

3 Promises were made regarding
4 comprehensive health studies but were, unfortunately,
5 never kept. At this point, there is little or no
6 trust in provincial and federal health authorities
7 when it comes to health surveillance.

8 I said at the outset I'm a family doc.
9 I am from Ireland. I've been in Canada since 1984.
10 I've got children, I've got grandchildren.

11 I've got a duty to my patients and to
12 my community and, at the end of the day, to my
13 children and grandchildren. I have to be able to
14 stand up to them -- with them or sit down with them
15 and when they ask me, "What did you do?" I have to be
16 able to say I did this because saying nothing, being
17 silent is condoning what's happening.

18 Thank you.

19 THE CHAIRPERSON: Thank you, Dr.
20 O'Connor.

21 I'm assuming you're just kind of going
22 to work through each of your experts and the plan will
23 be to do all cross at the end, so wherever you'd like
24 to go next.

25 Thank you.

1 MS ASTERISK: Thank you, Mr. Chairman.
2 I've got Dr. Kits.

3 DR. KITS: Thank you, Mr. Chair and
4 Panel. My name is Gerda Kits. I'm Associate
5 Professor of Economics at The King's University in
6 Edmonton.

7 Before I get into the specifics of my
8 report, I do want to put it in a broader context.

9 Teck has stated that the project
10 should be approved because it will yield net benefits
11 to society. The determination of whether a project
12 will have net benefits requires a comprehensive and
13 transparent accounting of costs alongside benefits.

14 While Teck's application does provide
15 estimates of private costs, so costs to the company
16 itself, it does not provide an accounting of external
17 or social costs, so costs that fall on parties other
18 than the company.

19 This means they have not provided the
20 evidence necessary to support the claim that the
21 project will have net benefits, that is, that the
22 total benefits of the project are larger than the
23 total costs.

24 The appropriate tool to determine
25 whether a project will have net benefits to society is

1 cost-benefit analysis, and I won't get into this in
2 detail since I don't want to duplicate OSEC's
3 testimony.

4 I did just want to comment in this
5 context on one remark made by Mr. Shewchuk from page
6 95 of the first day's hearing transcript. He stated
7 that the Panel should not rely on cost-benefit
8 analysis because of its sensitivity to assumptions.

9 It is true that doing any cost-benefit
10 analysis requires the analyst to make assumptions
11 which are subject to debate. However, I would suggest
12 that making the claim that the project will have net
13 benefits to society without actually calculating the
14 total costs of the project to determine how they
15 compare to the benefits is an even larger assumptions.

16 My apologies. I'm just getting over a
17 cold.

18 I do agree, however, that the Panel
19 should not only consider cost-benefit analysis in
20 their decision. One of the limitations of
21 cost-benefit analysis is that it cannot include costs
22 that are subject to uncertainty. We need to know the
23 probability of a negative event occurring in order to
24 include it in a cost-benefit analysis.

25 My report focuses on costs about which

1 there is some uncertainty about the impacts or
2 difficulties in monetizing the impacts. Based on the
3 precautionary principle, even costs about which there
4 is some uncertainty should be considered in the
5 Panel's deliberations, even if they cannot be included
6 in a cost-benefit analysis given the current state of
7 our knowledge.

8 The potential for these costs to occur
9 should still be weighed against the potential benefits
10 from the project in deciding whether or not the
11 project is likely to have net benefits to society.

12 Dr. O'Connor has discussed potential
13 human health impacts resulting from Teck's project.
14 To put a dollar figure on these human health impacts
15 in order to include them in the calculation of total
16 costs, we would need to know how many people are
17 likely to become sick or die as a result of the
18 project.

19 We would then value those illnesses or
20 deaths by determining how much people would be willing
21 to pay to avoid them. This valuation technique
22 captures the subjective value that people place on
23 this type of negative event, which typically is much
24 greater than the actual cost of treating an illness.

25 For example, a number of studies which

1 are referenced in my written report have raised
2 concerns about PAH emissions exceeding expected levels
3 in the region around the oil sands. PAHs are known
4 carcinogens.

5 Valuation studies have shown that
6 people are willing to pay significant amounts of
7 money, in the range of millions of dollars per case,
8 to avoid illness and death from cancer.

9 Unfortunately, the lack of a comprehensive health
10 study means that we are unable, in the current state
11 of our knowledge, to determine how many people might
12 become sick or die as a result of PAH emissions from
13 the oil sands.

14 This prevents us from including those
15 health costs resulting from Teck's PAH emissions in a
16 cost-benefit analysis. However, this does not mean
17 that we should simply assume that the costs are zero.
18 Instead, we should be conducting further research into
19 these impacts so that they can be fully and
20 transparently included in the determination of whether
21 or not Teck's project will, indeed, have net benefits
22 to society.

23 Similarly, studies referenced in my
24 report have raised concerns about human health impacts
25 resulting from the deposition of mercury and other

1 priority pollutants. One of the health impacts
2 associated with mercury is a decrease in the IQ of
3 children of mothers who have been exposed to mercury.

4 These impacts can be valued by
5 estimating the loss in lifetime earnings resulting
6 from these decreases in IQ.

7 Again, in the present state of our
8 knowledge, we are not able to include these costs in a
9 cost-benefit analysis of Teck's project. However,
10 again, we should not assume that the difficulty of
11 measuring these costs mean they do not exist.

12 Concerns have also been raised about
13 the impacts of the project on Aboriginal traditional
14 land use rights and culture, and it is probably not
15 possible to capture the full cultural value of the
16 project's impacts in monetary terms. However, there
17 are some techniques that would allow us to at least
18 partially estimate these costs so that they can be
19 weighed against the project's benefits.

20 For example, studies have shown that
21 Aboriginal households in Saskatchewan are willing to
22 pay positive amounts of money to protect wildlife
23 populations in wilderness areas. These willingness to
24 pay studies attempt to capture the subjective value,
25 including cultural value, that these households place

1 on access to wildlife and wilderness.

2 Other studies have calculated the
3 market value of meat, hides and antlers harvested from
4 northern caribou herds. Again, this technique
5 provides a way to at least partially capture the costs
6 that Aboriginal hunters will experience as a result of
7 loss of access to hunting areas and project impacts on
8 wildlife populations.

9 I also want to emphasize that these
10 costs exist even if an Aboriginal group has signed a
11 benefit agreement with the company causing the
12 impacts. Just because costs are partially or fully
13 compensated does not mean they cease to exist. They
14 would still need to be weighed in the overall
15 comparison of costs and benefits.

16 Some intervenors have also raised
17 concerns about potential impacts of the project on
18 Wood Buffalo National Park. Should the Panel conclude
19 that the project does have the potential to negatively
20 impact the Park, the costs associated with these
21 impacts should also be determined in the assessment of
22 net benefits.

23 Again, the monetary values associated
24 with parks and wilderness are often assessed using
25 willingness to pay studies, and a number of Canadian

1 studies have indicated that Canadian households do
2 have a positive willingness to pay for wilderness and
3 wildlife protection.

4 I was unable to find any studies that
5 specifically valued Wood Buffalo National Park, and
6 the amounts determined in the studies that are cited
7 in my report do not capture the full range of
8 ecosystem and biodiversity benefits provided by the
9 Park. Therefore, further research would be needed to
10 estimate those values.

11 However, again, the difficulties
12 associated with estimating them should not mean that
13 they are ignored.

14 Finally, I would like to urge the
15 Panel to consider the distribution of the costs and
16 benefits resulting from the project in their
17 deliberations.

18 Of the costs I have discussed here,
19 most are disproportionately borne by households living
20 in the oil sands region, particularly Aboriginal
21 communities. When a particular ethnic group bears an
22 unfair burden of environmental impacts, we call this
23 environmental injustice or environmental racism.

24 Given that these communities are
25 experiencing costs not just from this project, but

1 from all of the oil sands projects that are already
2 operating, it is troubling that we have not yet done
3 the research necessary to determine what the extent of
4 those costs might be.

5 Thank you.

6 THE CHAIRPERSON: Thank you.

7 Ms Asterisk, I'm just wondering about
8 the time. It's about five after 12:00. We could take
9 a break now and then resume right after lunch, if
10 that's fine, or if you want to carry on.

11 MS ASTERISK: That sounds like a plan.

12 THE CHAIRPERSON: Okay. So let's --
13 we'll take our one-hour break. It's five after 12:00,
14 so let's say five after 1:00 we'll resume.

15 Thank you.

16 --- Upon recessing at 1206 / Suspension à 1206

17 --- Upon resuming at 1306 / Reprise à 1306

18 THE CHAIRPERSON: Thank you. Please
19 be seated.

20 We seem to be missing Ms Asterisk. Do
21 we know where she is?

22 UNIDENTIFIED SPEAKER: She will be
23 about a minute.

24 THE CHAIRPERSON: Okay. Oh, there she
25 is.

1 MS ASTERISK: I'm sorry.

2 THE CHAIRPERSON: Yes. No worries.

3 So just proceed with whoever is next.

4 MS ASTERISK: Thank you, Mr. Chairman.

5 We have a question because we had put
6 forward a motion to have a couple of witnesses I guess
7 from the Energy Regulator. I wonder if Mr. Boychuk
8 could please give their names again. We were asked
9 for an affidavit, we presented the affidavit and, as I
10 explained previously, this is our first hearing,
11 Keepers of the Athabasca. We're just wondering, in
12 the process what's up with two witnesses.

13 THE CHAIRPERSON: Sure. I can give an
14 update. So the Panel is still working on the three
15 motions we got, which were all to compel witnesses.
16 If the Panel decides to compel the witnesses, the plan
17 would be to bring them back after we're in Fort Chip,
18 so they would be seated probably after Canada's panel,
19 and then if we compel and if they provide evidence,
20 then you would be able to cross-examine them at that
21 time.

22 MS ASTERISK: So we are looking at the
23 week after the Fort Chip segment of the hearing? THE
24 CHAIRPERSON: Yes, that would be the plan. There has
25 been nothing scheduled yet because we have not made a

1 decision whether we will compel or not.

2 MS ASTERISK: Oh, I see. And is there
3 an indication of time when we might know to be able to
4 make arrangements?

5 THE CHAIRPERSON: Yes. We will make
6 sure you get some advance notice. We will try and get
7 the decisions out as soon as we can. Obviously we
8 have been quite busy with the hearing in the last two
9 weeks, getting questions ready and that, but we will
10 make sure everybody has advance notice of the decision
11 so that you can make arrangements.

12 MS ASTERISK: Thank you.

13 MS LaCASSE: And, Mr. Chair, I just
14 want to be clear. I thought I heard you say they
15 might testify the week after Fort Chip. I think it
16 could even be the week after Canada testifies.

17 THE CHAIRPERSON: Yes.

18 MS ASTERISK: Oh, so it could be two
19 weeks after Fort Chip even?

20 THE CHAIRPERSON: Yes. Ms LaCasse is
21 correct. We are currently anticipating it may take
22 the majority of the week to deal with Canada's panel,
23 both direct and cross, so if we don't have time that
24 week it would be the following week.

25 MS ASTERISK: Understood.

1 THE CHAIRPERSON: Okay?

2 MS ASTERISK: Thank you.

3 Okay. Well, I guess we can proceed
4 with Mr. Boychuk's presentation.

5 MR. BOYCHUK: My name is Regan
6 Boychuk, I am an independent researcher in Calgary and
7 I'm going to be speaking today about environmental
8 liabilities and the accounting of them as well as
9 royalty risk related to oil sands projects.

10 Any credible evaluation of whether an
11 energy project is in the public interest must soberly
12 examine both sides of the balance sheet. The
13 potential economic benefits must be carefully weighed
14 against its likely fiscal, environmental, health and
15 climate costs.

16 My submission will focus on two
17 dimensions of this equation on the liability side of
18 the balance sheet: first, the environmental
19 liabilities inherent in Teck Resources' proposed
20 bitumen mine; and second, the royalty risk inherent in
21 approving a marginal project on the assumption royalty
22 rates will remain in place indefinitely.

23 According to the provincial Energy
24 Regulator, Alberta currently has roughly \$260 billion
25 in oilfield- and mining-related environmental

1 liabilities, virtually all of which are unfunded.
2 Alberta's regulatory assurance programs collect only a
3 very small fraction of this total as security,
4 currently roughly 1/2 of 1 percent of that total, and
5 the bitumen programs are unlikely to collect
6 significantly more assurance before climate
7 constraints limit and eventually eliminate bitumen
8 production.

9 The oil and gas and mining industries
10 do not have a savings plan for the eventual retirement
11 of what are trillions of dollars globally in unfunded
12 environmental liabilities. Cleanup is funded from
13 cash flow generated by current operations and this
14 poses special financial risks that require proper
15 planning for unanticipated acceleration of cleanup
16 obligations due to regulatory, economic and natural
17 causes.

18 As legal scholar Alexander Clarkson
19 warned:

20 "resource extraction industries
21 are capital intensive and can be
22 heavily reliant on debt
23 financing. Therefore, when
24 commodity prices fall, the
25 solvency of the company falls

1 dramatically and the company is
2 quickly unable to comply with
3 [environmental regulatory]
4 orders."

5 Teck Resources has flirted with
6 bankruptcy more than once in recent years. The 2008
7 collapse in commodity prices left a debt-riddled Teck
8 teetering on the brink of financial meltdown due to
9 the \$9.8 million in debt it took on buying Fording
10 Canadian Coal in the final days of the commodities
11 boom. Teck's unlikely saviour was a stunning
12 turnaround in the U.S. corporate bond markets in the
13 spring of 2009, giving Teck desperately needed cash in
14 time to manage its crushing financial obligations.

15 At the end of 2009, Teck CEO Don
16 Lindsay reflected: "The world was in a freefall and
17 nobody knew where the bottom was." Lindsay conceded
18 "the company had never considered an economic meltdown
19 of the magnitude that occurred in late 2008 and 2009."
20 "It could happen again", he said.

21 With the slowdown in economic growth
22 in China in 2015, Teck's bonds again slipped back to
23 speculative grade. Moody's and Standard & Poor's cut
24 Teck's outlook to negative in June and Teck's implied
25 credit rating slipped six levels below investment

1 grade. By the end of 2015's third quarter Teck had
2 lost \$2.1 billion in written down assets by \$2.2
3 billion.

4 Teck again recovered as the result of
5 a larger than expected bond sale in U.S. markets,
6 refinancing debt at higher interest rates to buy
7 itself time to complete investments in its 20 percent
8 take in Suncor's Fort Hills bitumen project. If
9 climate constraints or accelerated regulatory
10 obligations lead to early retirement of producing
11 assets, however, Teck will not have the option of
12 turning to capital markets for salvation.

13 Trillions of dollars in unfunded
14 environmental liabilities put the oil and gas and
15 mining industries at constant risk of bankruptcy,
16 leaving the public at constant risk of inheriting
17 enormous cleanup costs. This manifests itself as
18 powerful leverage for industry against government to
19 extract regulatory royalty and even diplomatic
20 concessions in order to avoid or delay costs that
21 could lead to bankruptcy. It is the regulator's
22 responsibility to prevent placing the public and their
23 political representatives in this Catch-22. This
24 dynamic has already manifested itself in relation to
25 Teck Resources and our neighbours next door in B.C.

1 It should serve as a cautionary tale.

2 Teck Resources had been aware of the
3 issue of selenium runoff from their coal operations in
4 the Elk Valley for many years. In February 2013 Teck
5 announced to shareholders it would spend up to \$600
6 million over five years on water diversion and
7 treatment facilities to address the problem. Teck
8 also told shareholders to expect permanent delays for
9 future projects until regulators accept their selenium
10 management plan and assess cumulative impacts.

11 The British Columbia Government
12 approved Teck's planned expansion of coal operations
13 in the Elk Valley later that same year, despite the
14 fact the environmental assessment was not able to
15 conclude on the magnitude, reversibility and therefore
16 significance of an array of pollutants. Nor could it
17 determine the effectiveness of two planned water
18 treatment plant facilities that will use new methods
19 to filter out selenium.

20 As it turned out, Environment Canada's
21 2012 investigations had found selenium levels in the
22 Fording River so high the reproductive output of fish
23 had been reduced by about 180,000 per year. Teck's
24 \$100 million treatment plant, only the second such
25 plant to ever utilize fluid bed reactor technology,

1 was shut down in 2014 after a fish kill downstream.
2 Teck received the largest ever single incident fine in
3 relation to the B.C. *Fisheries Act* pollution, \$1.4
4 million. It ended its relationship with the U.S.
5 engineering firm that had built the plant. It
6 reconfigured the still offline treatment facility and
7 announced selenium-related spending would now increase
8 50 percent to over \$900 million over the following
9 five years. The B.C. Auditor General later found that
10 the Ministry of Environment had denied a permit for
11 Teck's expansion of its Line Creek Coal Mine, but
12 Cabinet ignored the risks to the Elk Valley watershed
13 and approved it anyway, the first time such powers had
14 been used in B.C.

15 The federal government has since run
16 diplomatic interference with our downstream
17 neighbours, blocking the release of information on
18 contaminants many times above guideline levels to the
19 International Joint Commission.

20 A lot of this is related to the issue
21 of the way accounting practice allows the discounting
22 of environmental liabilities. The discounting of
23 environmental liabilities on company balance sheets is
24 perhaps the most controversial aspect to financial
25 accounting. Counterintuitively, the less stable and

1 resilient a company, the more accounting practice has
2 tolerated the extent to which a company can discount
3 its environmental liabilities. This has the perverse
4 effect of enabling the worst companies to take on the
5 most dubious projects, placing both the public purse
6 and the environment at maximal risk.

7 Reclamation costs are often the
8 largest unfunded liabilities on the financial
9 statements of firms operating in polluting industries.
10 Those liability amounts are accounted for on a net
11 present value basis, making them very sensitive to the
12 discount rate used. The difference in discount rates
13 can increase an asset retirement obligation by 100 or
14 125 percent or even more for particularly long-lived
15 assets like a coal or bitumen mine. This is an area
16 of major divergence between generally accepted
17 accounting principles in the U.S.A. and the
18 international financial reporting standards that
19 Canada now observes. Before the move to international
20 accounting rules in 2011, Canadian accounting practice
21 was converged with U.S. on the reporting of
22 environmental liabilities.

23 As Greg Rogers, the world's leading
24 authority on an environmental liability reporting
25 wrote in 2010:

1 "It is a well-known 'dirty
2 secret' that environmental
3 liability estimates developed in
4 conformance with US accounting
5 standards are unreliable and all
6 too often materially understated.
7 The vagaries of contingency
8 accounting and environmental law
9 and science, however, have made
10 it practically impossible to
11 empirically demonstrate this
12 conclusion. As a result, the
13 inherent incentives for
14 manipulation have been
15 unconstrained."

16 In what follows, the evolution of
17 environmental liability accounting will be traced,
18 Teck's environmental liability reporting will be
19 analyzed, and a practical solution to the discount
20 rate controversy developed by leading environmental
21 liability experts Greg Rogers and Charlie Atkins will
22 be laid out.

23 It wasn't until 1991 that
24 environmental liabilities were required to be
25 accounted for in Canada. However, lax rules around

1 management discretion over estimation, discount rates
2 and useful life mean these liabilities have posed
3 little challenge to industry balance sheets. But the
4 2011 transition from Canadian Generally Acceptable
5 Accounting Principles to the International Financial
6 Reporting Standards, IFRS, could have resulted in
7 billions in additional liabilities being recognized on
8 Canadian balance sheets. IFRS did allow exemptions
9 for first-time accounting of oil and gas liabilities
10 in transition to its rules, but there was already
11 significant diversity in how environmental liabilities
12 were accounted for among Canadian companies and the
13 biggest difference between Canadian accounting rules
14 and the international rules they were shifting to had
15 to do with discount rates and whether to include own
16 risk within the risk-free discount rate.

17 Calculating the net present value of
18 future environmental liabilities involves discounting
19 future cash flows related to their retirement over the
20 remaining useful life of the asset. Under the old
21 Canadian rules and U.S. rules, the asset retirement
22 obligation, or ARO, is estimated and then is
23 discounted based on the credit adjusted risk-free
24 rate. This is calculated as the current risk-free
25 rate plus an adjustment to reflect the

1 creditworthiness of the firm. Hence, the worse the
2 firm's credit rating, the higher the discount rate and
3 the lower the present value of the asset retirement
4 obligation.

5 The International Accounting Standards
6 Board is the group of experts responsible for
7 developing IFRS Standards.

8 International Accounting Standard
9 37 -- provisions, contingent liabilities and
10 contingent assets -- is most often interpreted as
11 dictating the use of a risk-free discount rate, with
12 no adjustments for own credit risk. However, IAS 37
13 does not explicitly state that including own credit
14 risk is not allowed and it was argued that firms could
15 choose to include own credit risk in discounting the
16 future environmental liabilities.

17 As the Canadian IFRS transition date
18 approached, the oil and gas industry in particular
19 promoted the idea that including own credit risk was
20 allowed under IAS 37. The debate over including own
21 credit risk became a major issue for practitioners and
22 standard setters during the transition to IFRS in
23 Canada. Canadian regulators requested guidance from
24 the IFRS Interpretations Committee over the discount
25 rate -- IFRIC, that's the acronym -- but IFRIC refused

1 and the issue was left unresolved at the time of
2 transition.

3 At its November 2010 meeting IFRIC
4 recognized diversity of practice in including own risk
5 but was reluctant to clarify the issue itself.
6 According to IFRIC staff's assessment on whether the
7 committee would be able to reach a consensus on a
8 timely basis, it answered:

9 "No. The problem with the IAS 37
10 measurements in general, and
11 discount rates in particular, is
12 that they are vague. There is
13 not a clear measurement
14 objective. Accordingly, any
15 consensus the Committee reaches
16 may be controversial, and could
17 differ from decisions made by the
18 [International Accounting
19 Standards] Board, as it continues
20 its deliberations of ongoing
21 liabilities project."

22 The new liabilities standard had been
23 expected to be issued in 2011.

24 In deciding to not take the issue onto
25 its agenda in November 2010, IFRIC noted IAS 37 does

1 not explicitly state whether or not own credit risk
2 should be included, but noted that predominant
3 practice was to exclude own credit risk. This did not
4 sit well with Canadian respondents, particularly the
5 Accounting Standards Board, who wrote:

6 "The inclusion of the comment
7 regarding 'predominant practice'
8 in the tentative agenda decision
9 could imply excluding credit risk
10 from the discount rate for
11 liabilities is consistent with
12 the Framework and that no other
13 accounting choice is
14 permissible."

15 The Canadian Accounting Standards
16 Board requested IFRIC acknowledge that there was
17 diversity, but defer to the larger liability project
18 to clarify the issue, which is what IFRIC ultimately
19 recommended.

20 The issue came to a head at a
21 contentious IFRIC meeting in March 2011. The Chair of
22 the Interpretations Committee noted the objections
23 seemed to stem from an industry in one country
24 adopting IFRS in 2011 and opined that the objections
25 were not persuasive to overturn the assertion that

1 predominant practice among those already using IFRS
2 was to exclude own credit risk from risks specific to
3 the liability in IAS 37.

4 Over the course of the meeting, the
5 Chair of the International Financial Reporting
6 Interpretations Committee stated some strong views:

7 "...if I can make an observation
8 at all about what I know of the
9 extractive industry and also the
10 Canadian situation. ...the key
11 issue I think is the more I see
12 one industry particularly in one
13 country but certainly one
14 industry complaining, I have to
15 question why they are complaining
16 and what the change is. Many in
17 the extractive industry for
18 environmental reasons have to
19 post a bond or a Government
20 guarantee or some other assurance
21 that they will be able to meet
22 their environmental obligation
23 when it falls due several years
24 in the future. They do that
25 because not to put too fine a

1 point on it, people in the
2 extractive industry, especially
3 the smaller ones, exploit,
4 pillage, rape and then disappear
5 with all the money and leave the
6 mess behind for other people to
7 clean up."

8 Big Four accounting firm Deloitte
9 maintains an independent record of the International
10 Accounting Standards Board activities. The record of
11 that March 10th meeting expected the predominant
12 practice comment to remain in the committee's
13 decision, but it was ultimately dropped. As a result
14 of IFRIC's refusal to clarify the issue, two of the
15 four major accounting firms that did not allow for
16 inclusion of own credit risk had to change their
17 position and allow it.

18 Part of IFRIC's reasoning in not
19 addressing the ambiguity of IAS 37 in 2010 and 2011
20 was that it would be dealt with shortly by the a
21 liabilities project underway, expected to be completed
22 in 2011, but more than seven years later that project
23 remains years away from any conclusion. Reluctant to
24 contradict major international oil and gas companies
25 like ENI, Statoil, and those operating in Alberta's

1 oil sands that incorporate own risk into their
2 environmental liability discount rates, but no longer
3 being able to credibly defer to the a liabilities
4 project to decide the issue, the International
5 Standards Board appears to have regressed to insisting
6 there is no substantial diversity in practice. While
7 convenient for avoiding conflict with powerful
8 clients, this position is not credible.

9 Decommissioning and restoration
10 provisions under IFRS or asset retirement obligations
11 under U.S. accounting rules "cover a number of very
12 large future financial obligations which, by
13 definition, are uncertain as to their timing and/or
14 amount." According to accounting professor Thomas
15 Schneider:

16 "They are subject to a certain
17 degree of management discretion
18 with regards to both the amount
19 and the timing, which leaves a
20 great deal of flexibility in
21 calculating the final number that
22 shows up on the balance sheet."

23 Overall, their analysis of Canadian
24 use of the discount rate discretion led Schneider,
25 Michelon and Maier to conclude:

1 "the size of a firm's
2 environmental provision and its
3 exposure to the US capital market
4 are key determinants in managers
5 choosing to continue to include
6 own credit risk in discounting
7 their environmental liabilities."

8 But, while IFRIC had reluctantly
9 acknowledged Canadian own risk discount rate diversity
10 at the time of transition, it nonetheless maintained
11 that diversity did not exist internationally.

12 Schneider, Michelon and Maier examined this contention
13 and found it unsupported by the evidence:

14 "We conclude that there are
15 enough oil and gas firms
16 including own credit risk that a
17 Canadian oil and gas firm would
18 be justified in pointing to
19 international practice as a
20 reason for including own credit
21 risk. This is what the Canadian
22 oil and gas industry did when
23 presenting its arguments to the
24 IFRIC and we believe this is a
25 major reason we find significant

1 diversity in practice in the oil
2 and gas industry upon transition
3 to IAS 37."

4 The story is somewhat different for
5 the mining industry. Of the 20 international mining
6 firms they sampled, they couldn't identify any that
7 included own credit risk.

8 "This puts the Canadian mining
9 industry in a weaker position as
10 compared to the oil and gas
11 industry. However, if an audit
12 firm allows an oil and gas firm
13 to include own credit risk, the
14 same audit firm would not be able
15 to tell a mining company it could
16 not do the same: in other words,
17 once the practice is adopted by
18 one industry, an auditor would be
19 unable to deny its adoption by a
20 firm in a similar industry."

21 While no international mining
22 companies were found to include own credit risk in
23 their discount rates, Teck Resources does include own
24 risk, at times using discount rates as high as 15
25 percent to shrink environmental liabilities on its

1 balance sheet, while also using useful lives extending
2 more than a century into the future to apply those
3 discounts to. The result is comparatively miniscule
4 environmental liabilities showing up on their balance
5 sheet.

6 As a part of this analysis I also
7 looked at a decade of Teck Resources environmental
8 liability reporting from 2007 to 2017.

9 In a November 2011 comment letter to
10 the International Accounting Standards Board, Teck
11 Resources noted:

12 "extractive activities are a
13 global industry and there is
14 disparity in the accounting for
15 and presentation of various
16 significant items, which makes
17 comparison of similar entities
18 difficult."

19 And Teck urged:

20 "the IASB to address the
21 significant divergence issues in
22 accounting for extractive
23 activities."

24 But the IASB's refusal has allowed
25 significant management discretion and Teck has

1 utilized that discretion. For instance, under IAS 37
2 the discount rate used when the provision is
3 originally recognized does not stay with the
4 provision. All provisions are re-valued based on the
5 discount rate as calculated at the current financial
6 statement date, not the discount rate at the time of
7 the original recognition. This difference in
8 addressing revisions to the discount rate with the
9 move to IFRS has the potential to be the most
10 significant change in the way environmental
11 liabilities are valued on the balance sheet and
12 ultimately pass through the income statement.

13 Schneider, Michelon and Maier found
14 this inappropriate and recommended IAS 37 be changed
15 to align with U.S. accounting rules on this point:

16 "With own credit risk allowed
17 under IAS 37, if a firm
18 approaches bankruptcy
19 environmental provisions can be
20 wiped off the balance sheet. We
21 struggle to believe this was the
22 actual intention of the IASB and
23 the IFRIC."

24 As the economic crisis of 2008 pushed
25 Teck to the brink of collapse, its inclusion of own

1 risk gave it the opportunity to increase its nominal
2 discount rate to 16.5 percent, but Canadian accounting
3 rules meant it could only apply that discount rate to
4 liabilities incurred in that same year, so the balance
5 sheet impact was relatively minimal. However, the
6 2011 shift to IFRS granted far greater discretion,
7 allowing new discount rates to be applied to all
8 environmental liabilities, regardless of when they
9 were incurred. When slowing growth in China pushed
10 Teck's corporate bonds back into junk status in 2015,
11 part of the way Teck weathered the storm was doubling
12 the discount rate it applied to its environmental
13 liabilities. IFRS rules allowed Teck to temporarily
14 shave more than half a billion dollars in
15 environmental liabilities off its balance sheet by
16 doubling its discount rates to about 14 percent.

17 Upon transition to IFRS in 2011, and
18 more than a year after its bonds had regained
19 investment grade, Teck reduced its selenium-related
20 discount rates, adding \$230 million to their
21 decommissioning and restoration provisions.

22 After the fish kill downstream from
23 its Elk Valley treatment plant in October 2014, Teck
24 changed its decommissioning and restoration cash flow
25 estimates related to selenium again and increased the

1 related discount rate, shaving \$331 million in
2 liabilities from its balance sheet. After pleading
3 guilty to the resulting environmental charges in 2017,
4 Teck's water quality DRPs tripled to almost \$400
5 million. And yet, this was still only a fraction of
6 the \$900 million of expected selenium-related spending
7 over the next five years, some of which would have to
8 continue indefinitely in order to manage pollution
9 levels.

10 Rather than establishing an asset
11 retirement savings plan to ensure the timely
12 settlement of selenium-related decommissioning and
13 restoration provisions, Teck management has used its
14 discretion to manipulate accounting estimates to suit
15 the financial needs of the moment.

16 I had hoped to do a more detailed
17 analysis of Teck's environmental reporting based on
18 its regulatory filings modelled on the advanced
19 financial analytics utilized by leading experts Greg
20 Rogers and Charlie Atkins, but this exercise was
21 fatally compromised by inconsistencies and
22 insufficiencies in Teck's environmental liability
23 reporting, as well as the 2011 transition to
24 international rules.

25 Teck's closing 2010 balance of

1 environmental liabilities under Canadian accounting
2 rules is not reconciled with the opening 2011 balance
3 under international rules, leaving a difference of
4 hundreds of millions of dollars unexplained. The
5 post-2010 data is both insufficient as well as too
6 inconsistent to draw any informed conclusions. Teck's
7 failure to publicly report undiscounted and
8 un-inflated figures prevents any alternative analysis
9 of their liability data.

10 Another major limitation is Teck's
11 failure to separately report "new liabilities
12 incurred" separate from "revisions to prior cash flow
13 estimates". Combining new liabilities with revisions
14 to prior estimates eliminates accountability for poor
15 estimation.

16 All this leaves in question whether
17 even Teck itself properly understands its
18 environmental liabilities, which it is presently
19 applying to expand significantly with the Frontier
20 bitumen mine. Teck Resources makes inappropriate use
21 of large, own risk discount rates to minimize the
22 balance sheet impacts of its vast environmental
23 liabilities, it does not publicly report sufficient
24 data to allow a detailed evaluation of its
25 environmental liability management, and the company

1 has not properly planned to fund the eventual
2 retirement of its significant global liabilities.
3 This leaves the public at extreme risk of inheriting
4 very significant environmental liabilities, virtually
5 guaranteed to exceed the economic benefit it derives
6 from Teck's proposed bitumen mine.

7 While Teck Resources will enjoy
8 significant capital gains from share price
9 appreciation resulting from the expanded economic
10 potential and the booking of bitumen reserves very
11 early in the Frontier bitumen mine project, but any
12 change in the projected operations over the coming
13 decades leaves the company at real risk of bankruptcy
14 and the public at real risk of ultimately enduring a
15 net loss on the project. The economics of the Teck
16 bitumen mine must be robust enough to properly protect
17 the public from adding to the already enormous
18 unfunded environmental liabilities Alberta is
19 currently at severe risk of inheriting from industry.
20 The proper use of discount rates is essential to that
21 calculus.

22 Experts have resolved this issue I
23 think quite satisfactorily over the discount rate and
24 what the proper rate is to be used on projects like
25 this.

1 There are glaring differences between
2 environmental and financial liabilities, but
3 accounting rules continue to treat them as if they
4 were the same. Schneider, Michelon and Maier write:

5 "In the case of default on
6 financial liabilities, the
7 creditors end up with the firm's
8 assets and the debt is
9 effectively discharged.

10 Environmental liabilities do not
11 simply disappear if the polluting
12 firm goes into insolvency."

13 On the contrary, they often remain
14 with the associated asset and serve to impair any
15 future cash flows if the firm's creditors take over.
16 Environmental liabilities may lead the creditor to
17 have no desire to take over the residual assets of the
18 firm if they loom too large on the balance sheet.
19 Ultimately, and in any case, all the costs associated
20 with pollution are born by society at some level.

21 Schneider, Michelon and Maier
22 conclude:

23 "The ultimate goal is to get
24 standards setters to make balance
25 sheet environmental liabilities

1 directly reflect the true nature
2 of these liabilities. No matter
3 what one would wish, they do not
4 simply go away if an entity is
5 unwilling or unable to pay for
6 them."

7 In my opinion, Greg Rogers and Charlie
8 Atkins have convincingly resolved the debate over the
9 inclusion of own risk in discount rates under both
10 U.S. accounting rules and international ones. The key
11 to reconciling the seemingly more permissive U.S.
12 rules with the supposedly less accommodating
13 international rules is to be found in Statement of
14 Financial Accounting Standards No. 143, which governs
15 accounting for asset retirement obligations under U.S.
16 accounting rules. Note 18 to paragraph A21 states:

17 "In determining the adjustment
18 for the effect of its credit
19 standing, an entity should
20 consider the effects of all
21 terms, collateral, and existing
22 guarantees that would affect the
23 amount required to settle the
24 liability."

25 Rogers and Atkins comment:

1 "In determining the adjustment
2 for the effect of its credit
3 standing, an E&P [oil/gas
4 exploration and production]
5 company should consider 'the
6 effects of all terms, collateral,
7 and existing guarantees on the
8 fair value of the liability.'
9 Our research shows that E&P
10 companies frequently estimate the
11 fair value of AROs using a credit
12 risk adjustment based on their
13 incremental unsecured borrowing
14 rate above a risk free rate
15 (credit spread) on debt of
16 similar maturity. For example,
17 if the interest rate on a 30-year
18 US Treasury is 2.5 percent and
19 the interest rate on the
20 reporting entity's 30-year
21 unsecured bond is 6.5 percent,
22 the credit spread is 4.0 percent.
23 Use of the entity's credit spread
24 in estimating the fair value of
25 environmental liabilities

1 implicitly assumes that 'terms,
2 collateral, and existing
3 guarantees' applicable to a
4 company's unsecured corporate
5 bonds are the same as those
6 applicable to its environmental
7 liabilities. However, this
8 assumption is not valid."

9 Am I able to put up the one chart that
10 I passed along?

11 Part of their argument is making the
12 distinction between the credit terms of an unsecured
13 corporate bond versus environmental liabilities, and
14 the differences are quite significant. They are
15 summarized in the chart there and I will describe them
16 in some more detail.

17 A number of terms and conditions
18 relate to these DRPs and they protect the Alberta
19 government against default by the debtor.

20 First is the Principal Amount. The
21 actual cost of decommissioning and restoration
22 obligations cannot be fully known until the actual
23 work is complete, but the legal and moral
24 responsibility is to return the site to near its
25 original state. The largest DRP expense and biggest

1 unknown is the extent to which remediation is required
2 for spills, leaks and contamination that occurs at
3 known rates but is not quantified at specific sites
4 until investigation, typically only when reclamation
5 is finally carried out.

6 The Due Date. Difference between
7 environmental liabilities and corporate bonds is that
8 environmental liabilities have an indeterminate due
9 date that is subject to acceleration by government
10 action. The government's ability to accelerate
11 maturity through discretionary enforcement reduces its
12 default risk.

13 With regards to the Interest Rate,
14 environmental liabilities do not carry interest, so
15 there is no risk of default on accrued but unpaid
16 interest on the debt, and therefore the risk of
17 default is lower.

18 With regards to Collateral,
19 environmental liabilities are secured by the related
20 asset. When DRPs are incurred, reclamation is fully
21 secured because the value of an oil, gas or bitumen
22 lease is reasonably assumed to exceed the value of the
23 related decommissioning obligations. The lease can
24 also be sold to a third party who then assumes the
25 liability, in which case the holder of the liability,

1 the Alberta government, may now have the security of
2 the new owner, the prior owner, and the property and
3 equipment. Additionally, the liability may be
4 effectively cross-collateralized by other assets of
5 the debtor. And even at the end of an asset's useful
6 life, there may still be significant salvage value on
7 site to offset reclamation costs.

8 Environmental liabilities also have
9 another form of security unavailable to corporate
10 bonds in regulatory assurance, surety bonds, letters
11 of credit, et cetera. The Alberta Energy Regulator's
12 Licensee Liability Rating Program and Mine Financial
13 Security Program are two such regimes and their tests
14 are at least intended to ensure the debtor poses an
15 acceptably small default risk.

16 The Tax Effects between corporate
17 bonds and environmental liabilities are also
18 different. Environmental liability costs are tax
19 deductible. Thus, tax savings, which are not
20 considered in the estimated cash outflows used to
21 estimate the liability, should be deducted from the
22 principal amount of the obligation when calculating
23 the amount of the debt. Because the principal amount
24 of the debt is smaller relative to the debtor's
25 assets, default risk is further reduced.

1 Priority in Bankruptcy is another
2 major difference between corporate bonds and
3 environmental liabilities. It is slightly complicated
4 at the moment in Alberta with the *Redwater* case
5 currently before the Supreme Court, but in any case
6 the power, though rarely used by Alberta officials
7 until recently was the regulators were able to hold
8 polluters jointly and severally liable. This was
9 clearly established by the *Northern Badger* case here
10 in Alberta in 1991. The *Redwater Energy* case,
11 currently before the Supreme Court of Canada, has
12 recently cast doubt on these powers, but the super
13 priority of regulators in bankruptcy was clearly
14 established in Canadian courts until Ontario and the
15 Supreme Court began applying an alternate and widely
16 permissive interpretation of some 1997 amendments to
17 the federal *Bankruptcy and Insolvency Act* after 2007.
18 This culminated in the Supreme Court's 2012
19 *AbitibiBowater* decision.

20 The *Redwater* case has furthered the
21 controversy in these regards with specific relevance
22 to oil and gas operations in Alberta, but at least in
23 my own opinion there is a reasonable chance the
24 Supreme Court will limit or reverse the currently
25 permissive interpretation of bankruptcy law and

1 re-establish some or all of the regulators' super
2 priority in the matter of environmental liabilities in
3 bankruptcy. If the Supreme Court upholds the
4 currently permissive interpretation of bankruptcy law,
5 no regulator can in good conscience approve a project
6 the scale of Teck's Frontier bitumen mine without full
7 security for environmental liabilities up front.

8 In summary, as Rogers and Atkins have
9 persuasively concluded, U.S. bankruptcy courts, the
10 U.S. Securities and Exchange Commission, U.S.
11 generally accepted accounting principles, the
12 International Accounting Standards Board, and
13 environmental regulators:

14 "all reach the same conclusion:
15 the debtor's credit risk should
16 not be included in the discount
17 rate used to estimate
18 environmental liabilities.
19 Instead, environmental
20 liabilities should be discounted
21 at a rate no higher than the risk
22 free rate."

23 And using some examples from Teck's
24 estimates related to the Frontier mine we get a sense
25 of the impact the proper discount rate makes on these

1 sorts of estimates.

2 In its May 2017 responses to Joint
3 Review Panel information requests, Teck reports the
4 total reclamation cost of the proposed Frontier mine
5 as \$11.8 billion.

6 Teck also suggests the maximum
7 outstanding reclamation balance for the project would
8 be \$4.3 billion in 2037.

9 To give a sense of the importance of
10 discount rates in estimating the balance sheet impact
11 and cost-benefit import of environmental liabilities,
12 consider the above two estimates discounted using
13 Teck's chosen discount rate versus using the risk-free
14 discount rate.

15 In Teck's application, its net present
16 value calculations use an 8 percent discount rate.
17 The proper benchmark for a risk-free rate is the yield
18 on the Bank of Canada's Real Return Bonds. As of
19 September 2018, the maturity date most relevant to
20 Teck's Frontier mine expecting to operate until 2066
21 are the 2050 Real Return Bonds, which yield
22 0.5 percent.

23 Discounting the \$11.8 billion total
24 liability estimate for the Frontier mine over its
25 useful life using Teck's 8 percent discount rate

1 results in a net present value of just \$216 million
2 today. Using a proper risk-free discount rate results
3 in a net present value of \$9.3 billion, a difference
4 of more than \$9 billion or more than 4,200 percent.

5 The schedule of creating and retiring
6 those environmental liabilities is more complicated
7 than simply requesting the net present value of \$11.8
8 billion today as full security of the project, but the
9 example illustrates the impact of proper discounting.

10 Because Teck prefers, and the Mining
11 Financial Security Program allows, virtually all of
12 these environmental liabilities to be secured by
13 yet-to-be-produced bitumen, Teck suggests the maximum
14 outstanding liability it might ever have to secure
15 would be \$4.3 billion if the mine unexpectedly closed
16 in 2037. If regulators decided to impose full
17 security for what Teck suggests as 'maximum
18 liability', the net present value of \$4.3 billion in
19 2037 would be \$883 million today using Teck's
20 8 percent discount rate. Using a proper risk-free
21 discount rate that same \$4.3 billion would be valued
22 at \$3.9 billion today, a difference of more than
23 \$3 billion or 343 percent.

24 But even Teck's \$11.8 billion and
25 \$4.3 billion estimates are not complete totals of

1 environmental risk. Contingent liabilities related to
2 unintended leaks, spills and contamination need to be
3 added to that total on a probability-weighted,
4 expected value basis. Considering Teck's proposed
5 water-capping remains an "unproven" strategy for
6 managing bitumen tailings, contingent liabilities have
7 the potential to be significant.

8 And finally, the second part of my
9 presentation relates to royalty risk.

10 Alberta's bitumen royalty regime was
11 designed by six oil sands executives and was adopted
12 "in the main" by the Alberta government in 1997. Not
13 surprisingly, it is exceedingly generous to industry.
14 A decade later, the independent Royalty Review Panel
15 deemed that the royalty regime was in need of
16 significant reform in order to reflect the public
17 interest. The Alberta government, however, failed to
18 implement the majority of the Panel's recommendations,
19 leaving the industry-designed regime in place with
20 adjustments that merely compensated for the corporate
21 tax cuts enacted over the previous decade -- and even
22 then, only at sufficiently high oil prices, which we
23 don't have today.

24 Alberta's bitumen royalty regime was
25 formally excluded from examination during the

1 province's 2010 royalty review and was effectively
2 excluded from examination during the 2015 royalty
3 review. Bitumen land sales and royalties currently
4 collect much less than a nickel for every dollar
5 generated from oil sands development. Alberta has
6 never produced more oil or collected fewer royalties
7 than it does today. This is simply not sustainable
8 over the long term.

9 A proper public interest evaluation of
10 Teck's proposed bitumen mine needs to appropriately
11 account for royalty risk. The spectrum of potential
12 royalty outcomes over the course of the Frontier
13 mine's life need to be weighted by probability and
14 incorporated on an expected value basis into the
15 cost-benefit analysis of whether the project is in the
16 public interest.

17 That's the end of my presentation.

18 MS ASTERISK: Thank you, Mr. Boychuk.
19 Should we continue?

20 THE CHAIRPERSON: Yes, please.

21 MS ASTERISK: And we will present our
22 Co-Chair, Paul Belanger to talk about tailings.

23 MR. BELANGER: Thank you for the
24 opportunity.

25 Just a quick couple of points about my

1 background. For 10 years I owned an oilfield supply
2 and safety company in Northern Alberta. Part of our
3 business was air monitoring and worksite safety
4 consulting. And my last 15 years I've been involved
5 with another company I own, which is a Cleantech
6 company.

7 On the other side, I've lived all my
8 life in the Athabasca Watershed and a couple of years
9 in the Peace River Watershed and value very much a
10 healthy ecology.

11 Keepers of the Athabasca is very
12 concerned about the environmental impacts of an
13 additional oil sand mine north of existing operations.
14 So we contend that the impacts of a large and new
15 mining project will be too risky to approve without
16 major changes to the proponent's proposal and some
17 changes with the regulatory environment.

18 As a group consisting of indigenous,
19 Métis and concerned citizens living in the Athabasca
20 Watershed, we are the people most impacted, along with
21 all the wildlife.

22 I want to review quickly several
23 studies which show the risks to the watershed as they
24 exist today with the existing operations.

25 Tailings ponds are a large concern. A

1 conventional tailings pond, as proposed by Teck
2 Resources, is we feel far too risky to add to the
3 existing problems that we are currently dealing with.
4 There is an added risk of several toxic compounds
5 which add to the current impact load of the existing
6 oil sand industrial operations.

7 Secondly I want to summarize some
8 other studies which demonstrate cumulative
9 environmental impacts, some of which have reached the
10 threshold level.

11 They show critical impacts have been
12 reached in northeastern Alberta and the Athabasca
13 Watershed. Some studies indicate in some cases there
14 is no ecological buffer remaining for an additional
15 large development the way it's described by Teck
16 Resources.

17 The environmental impacts affect water
18 quality in the regional terrestrial animal and plant
19 ecosystem. Additionally, current and past air
20 emissions are and have produced acid rain, which show
21 a clear cumulative impact to lakes and the boreal
22 forest in a very large area.

23 Finally there's questions about the
24 mining technology choices by Teck Resources. They
25 don't appear to be the best available oil sands mining

1 and extraction methods. There are no available, and
2 in some cases in use, tailings waste-free extraction
3 technologies.

4 We feel there needs to be a
5 modernization of the bitumen extraction methods or
6 industries.

7 Taking a quick look at the process in
8 the Teck application, it appears to be basically the
9 same as was proposed 50 years ago by Syncrude Suncor.

10 The first study I want to cover is
11 original information that's not necessarily available
12 on-line. It's a review of the Teck Resources
13 hydrogeology information by GW Solutions, a
14 professional company headed by Gilles Wendling.

15 He had seven concerns and I'm just
16 going to read a few of them and try and move quickly
17 and not get into too much of the detail of his review.

18 GW Solutions has reviewed the
19 groundwater baseline dataset in the hydrogeology
20 studies completed by Teck for the proposed Frontier
21 Project and presented in its application and submitted
22 documents.

23 GW Solutions has also created a 3D
24 conceptual hydrogeological model to assess the level
25 of confidence of Teck's recognized potential adverse

1 effect of the project on the water resources.

2 GW Solutions has identified the
3 following key weaknesses and omissions.

4 No. 1: the top and bottom lateral
5 extent of formations as partly defined for two of the
6 formations looked at in the proposal. Consequently
7 the top and bottom formations that play an important
8 role in the groundwater movement are poorly defined in
9 areas that are sensitive because they correspond to
10 areas where groundwater discharges to the Athabasca
11 River.

12 In addition, these areas with data
13 gaps are critical because they correspond to areas
14 where conduits and cavities could be present in the
15 subsurface, as inferred by map sinkholes.

16 A few boreholes and corral showing
17 sound bedrock would misrepresent a bedrock that could
18 be 100 to 1,000 times more conductive due to
19 karst-related conduits.

20 So there are some specific -- what
21 he's pointing out here is there are some very specific
22 known subsurface phenomena where you could have
23 localized rapid movement of groundwater and other
24 areas very slow movement of groundwater. So what he
25 is saying is there needs to be a lot of drill holes

1 early on to properly assess those risks.

2 No. 2 concern: the geological and
3 groundwater data available for the east side of the
4 Project are limited to the Quaternary layers.
5 Therefore, they admit the definition to understanding
6 of important layers such as the Devonian formation.
7 Again he's pointing out a data gap here.

8 Going to 3(a): The hydrogeological
9 units at the Teck site may have different
10 hydrogeological behaviour than similar units at other
11 oil sands projects located tens of kilometres away.
12 Only one formation, the Quaternary, which is the
13 uppermost aquifer, was adequately assessed locally.

14 The groundwater flow -- this is point
15 No. 4.

16 The groundwater flow between the mine
17 site and the Athabasca River has not been adequately
18 defined. This is a major gap in the required
19 information because groundwater very likely flows
20 through the Devonian and Quaternary formations to
21 discharges into the Athabasca River.

22 New to this site, the Athabasca River
23 local cuts down into the Devonian formation. There is
24 possibly direct interaction between the Athabasca
25 River and groundwater in the Devonian formation,

1 particularly near the sinkholes.

2 The groundwater flow is critical in
3 supplying the river base flow in winter conditions and
4 needs to be properly assessed.

5 An interesting point is that in the
6 winter the flow rates are about one-tenth of summer
7 flow rates. So healthy groundwater is critical for
8 winter flow of the river.

9 Teck has used assumptions in their
10 conceptual and numerical models that have not been
11 confirmed by field investigations.

12 Jumping to 6: The baseline
13 information describing groundwater recharge and
14 discharge and groundwater surface water interaction
15 provided in Teck's application is very general and
16 limited and not supported with field measurements.

17 In addition, Teck refers to outdated
18 studies published as far back as 1979.

19 And Gilles mentions here that
20 scientific information has evolved drastically and
21 knowledge about groundwater interactions has evolved
22 drastically in the last ten to 20 years.

23 So he is suggesting that Teck needs to
24 do more testing in order to provide adequate
25 information to assess what they are proposing. We

1 need more drill holes and much more data and models
2 that are actually based on drill holes rather than
3 assumptions. There's lots of unusual variables in the
4 geology in that area.

5 One other thing pointed out too by
6 locals to me, what I did notice, if you look to the
7 west of the proposed mine site there's steep slopes
8 going up to the Birch Mountains. The site is in
9 effect a catch basin for a very large area of the
10 Birch Mountains. In fact, there are several creeks
11 that flow into the mine site.

12 In other words, the impact on the
13 river is unusually large, much larger than at other
14 mine sites. If we look at the watershed that flows to
15 the mine site, there may be at least double the
16 surface area impact of the mine site itself in terms
17 of water deferred or prevented from reaching the
18 Athabasca River.

19 So in other words, there's a huge loss
20 of water to the river based on the flow of the Birch
21 Mountain watershed area into that site, plus the
22 footprint of the site itself. This is something we
23 are going to take a closer look at and try to get more
24 numbers. Take the average annual rainfall and also
25 groundwater flows from that area.

1 This is quite alarming actually.

2 Getting into the next study, the
3 general conclusion is there is a need for
4 comprehensive data through monitoring groundwater and
5 the Athabasca River and tributaries if we are to
6 understand the real and complete impacts to the
7 watershed.

8 There's been a lot of talk about
9 monitoring and who does the monitoring.

10 So I'm quoting from a 2012 study here.

11 "As the extraction rates and
12 regional extent of oil sands
13 development will increase in the
14 near future, collaborative
15 efforts aiming at understanding
16 the groundwater flow systems and
17 fingerprinting the natural and
18 mine-related sources of organic
19 and metallic contaminants may be
20 determinant in maintaining good
21 water quality and healthy aquatic
22 ecosystems in the Canadian oil
23 sands district." (As read)

24 This is from Section 1.2 of this
25 particular 2012 study. You could always go to your

1 notes. The title of the study is there.

2 Section 1.2 refers to potential
3 natural and anthropogenic sources of naphthenic acids
4 and metals in the lower Athabasca Oil Sands Region.
5 Naphthenic acids are a complex suite of carboxylic
6 acids which are water soluble polar organic compounds
7 potentially toxic to aquatic organisms, including
8 phytoplankton, daphnia fish and mammals and are also
9 endocrine destructing.

10 I'm going to focus on naphthenic acids
11 as one of the more worrisome substances in terms of
12 the different compounds created by oil sands mining.

13 It's only been lately and much to
14 their credit Suncor Syncrude are starting to deal with
15 this issue.

16 These organic acids are naturally
17 present in petroleum. While ambient levels of
18 naphthenic acids in the groundwater in the study area
19 are around 1 milligram per litre, which is one part
20 per million, naphthenic acids become concentrated and
21 may exceed 100 in the oil sands processed water.

22 For that reason, nearby groundwater
23 surface water systems are prone to potential
24 contamination. Consequently, new methods that can
25 accurately assess the relative contributions of these

1 compounds from both natural and background potential
2 oil sands production-related inputs would be helpful
3 to delineate environmental impact related to current
4 and potential increased mining.

5 In other words, we need more
6 sophisticated monitoring to track such elusive
7 compounds and dangerous compounds such as naphthenic
8 acid.

9 I will just quote a paragraph of a
10 study from 2013, called Environmental Hydrogeology of
11 Oil Sands. It shows that:

12 Ongoing problems with access to data
13 from government and industry and when we are wanting
14 to assess risk we are still having a hard time knowing
15 how risky current operations are, let alone other
16 operations.

17 "Oil sands mining and in situ
18 project licensing and operation
19 regulations include environmental
20 impact assessments that mandate
21 considerable hydrogeological
22 measurements in monitoring work.
23 However, little of this is
24 independently evaluated for
25 accuracy or synthesized or

1 interpreted for the public.
2 Recent changes in Alberta
3 environmental regulation,
4 including the establishment of
5 the Alberta Environmental
6 Monitoring Management Board --
7 October 2012, old news -- are
8 expected to bring new
9 transparency to environmental
10 management of oil sands
11 operations." (As read)

12 This is 2018 and information remains
13 elusive. We are very concerned about that.

14 It's really hard. We've done some
15 work trying to collect from different departments
16 tailings pond data. It's been challenging.

17 So this is a real blemish in the
18 system. The system is not providing data to the
19 public. I should say not providing it properly on a
20 timely basis, on a summarized basis, without a lot of
21 work, forensic work.

22 I would like to quote just a couple of
23 paragraphs from another study from 2014, titled
24 "Profiling Oil Sands Mixtures from Industrial
25 Development and Natural Groundwater for Source

1 Identification".

2 This study clearly shows that current
3 Teck proposed management methods are not adequate for
4 the protection of the Athabasca Watershed. A tailings
5 pond lining which would not allow leaching is the only
6 safe holding pond.

7 But as we all know, as industry knows,
8 this is too expensive and adds a large financial
9 burden to the Project.

10 I would say investors should be
11 concerned about the risk of not having a liner.

12 Currently it is known that leaching is
13 reaching the Athabasca River but poor data collection
14 cannot inform us as to the extent of this problem.
15 And I doubt if anybody in this room can give us a
16 clear answer on that.

17 This study points to the conclusion
18 that any new mine site must use extraction methods
19 which is tailings waste free, since the regional
20 watershed cannot tolerate additional large tailings
21 ponds and the risk and the contamination that come
22 from them.

23 Current active mining operations in
24 the tailings ponds are increasing in size every year
25 without any regulatory control. There is no

1 requirement to apply for increasing the size of your
2 holding pond right now. You just make them as big as
3 you want.

4 There are some good efforts now by
5 Syncrude Suncor to deal with issues and to capture
6 these substances, but it's been a real struggle and a
7 real pain in the butt for these industries for many
8 years. And it's haunting them. I talked to some of
9 these people. They're pulling their hair over these
10 issues. It's been a real technical struggle.

11 What I would like to do is jump to a
12 well-written Globe and Mail summary of the important
13 points of the above study.

14 This is Bob Webber, Edmonton Globe and
15 Mail, 2014.

16 New federal research has strongly
17 backed suspicions that toxic chemicals from Alberta's
18 vast oil sands tailings ponds are leaching into
19 groundwater and seeping into the Athabasca River.
20 Leakage from oil sands tailings ponds, which now cover
21 176 square kilometres, has long been an issue.
22 Industry has acknowledged that seepages can occur and
23 previous studies using models have estimated it at 6.5
24 million litres a day from a single pond. The soil
25 around the developments contains many chemicals from

1 naturally occurring bitumen deposits and scientists
2 have never been able to separate them from
3 contaminants released by industry.

4 Now that was 2014. A year later that
5 changed. We can now fingerprint naphthenic acid from
6 tailings ponds and groundwater versus the one part per
7 million naphthenic acid that's naturally occurring
8 there.

9 The current Environment Canada Study
10 accepted for publication in the Journal of
11 Environmental Science and Technology used new
12 technology discovered that the mix of chemicals is
13 slightly different between the two sources. That
14 discovery made using the \$1.6 million piece of
15 equipment purchased in 2010 to help answer such
16 questions allowed scientists to actually fingerprint
17 chemicals and trace them back to where they came from.

18 Differentiation of natural from
19 tailings water sources was apparent, says the study.

20 Analysis focused on so-called acid
21 extractable organics, which include a family of
22 chemicals called naphthenic acids, their enhanced
23 water solubility makes them prime candidates for
24 possible migration beyond contaminant structures, be
25 it groundwater, the report says.

1 These toxins were found in groundwater
2 both near and far from the development, but their
3 chemical composition was slightly different near the
4 mines closer to that found in the water from the
5 ponds.

6 The resemblance between the compounds
7 profiles from the tailings water and the six
8 groundwater samples adjacent to two tailings ponds
9 imply a common source. These samples included two of
10 upper flow groundwater collected one metre beneath the
11 Athabasca River, suggesting tailings waters reaching
12 the river system.

13 The study doesn't quantify the amount
14 of tailings waters that is escaping.

15 Industry is working, current industry
16 is working to address the tailings issue. They
17 budgeted they say more than a billion in tailings
18 reduction technology.

19 So really the scale-up of a 50-year
20 old extraction process didn't work very well. It's
21 been a real headache for Syncrude Suncor. For 50
22 years they've been dealing, starting to deal with it
23 properly it seems in the last several years. But the
24 problem is not solved. And it seems to be a
25 combination of regulatory industrial commercial

1 challenge.

2 I think this problem needs to be
3 solved before you build another tailings pond.

4 Jumping to another study looking a
5 little more closely at naphthenic acid, naphthenic
6 acids appear to be a high risk toxic release from
7 tailings ponds into river water.

8 This quote is from a study below,
9 which indicates that soil does not absorb oil sands
10 produced water, naphthenic acid, and it is water
11 soluble, especially when mixed with salt water in
12 tailings ponds.

13 I think it is important to know that
14 the extraction process involves salts, and the study
15 has shown that the salts make the tailings pond more
16 water soluble and move more quickly.

17 I'll jump to the next study.

18 Naphthenic acids are shown to be very
19 toxic and require close monitoring as well as
20 remediation.

21 Syncrude in particular is now talking
22 about remediation methods for naphthenic acid.

23 There are more than a billion cubic
24 metres of tailings pond content to date. The volume
25 is increasing rapidly. Tailings ponds of varying

1 concentrations of naphthenic acid, about 100 ppm and
2 even -- is common, 200 ppm has been measured. These
3 conclusions come from a 2011 study.

4 Naphthenic acids are considered to be
5 a major toxic component of oil sands operations and
6 are also widely used for industrial processes. The
7 effects of previously identified naphthenic acids, 54
8 so far, together with six alkylphenols, were modelled
9 for a range of environmental and human toxicity
10 related end points using ADMET Predictor software.

11 Polycyclic acids containing a single
12 aromatic ring were predicted to be the most toxic to
13 fathead minnows. Some of these compounds were also
14 predicted to be the most carcinogenic based on rat and
15 mouse models. They possess human estrogenic and
16 androgenic activity and potentially disruptive of
17 reproductive processes.

18 So in other words, what we're talking
19 about is endocrine disruptors. If you look at the
20 molecule of oestrogen or the molecule of testosterone,
21 it looks very similar to naphthenic acid molecules.
22 Now, there are many different combinations of
23 naphthenic acid molecules and there's potentially
24 thousands of variations, but they all mimic oestrogen
25 and testosterone, which makes them particularly high

1 risk for eggs and foetuses of all species.

2 So that means there's endocrine
3 disruption, effects similar to DDT, herbicides,
4 pesticides. In particular, eggs and foetuses, the
5 endocrine disruptors -- now, we need a toxicologist to
6 address this, but the literature says that parts per
7 billion have a dramatic effect on foetuses and eggs
8 and, of course, are initiators of cancer, in other
9 words carcinogenic. Plenty of studies to refer to.

10 I'll just jump to cumulative impacts
11 and move away from naphthenic acid.

12 Overall, there are significant and
13 well-reported various environmental impacts of current
14 and previous oil sands industry activities in
15 north-eastern Alberta. Over the past 10 years new
16 studies and understanding have examined the growing
17 cumulative impacts. Some ecological areas of concern
18 have reached critical levels of impact load, as
19 outlined below.

20 Another large mining operation with
21 last-century technology cannot be approved without
22 causing regional ecological disaster.

23 Just some quick points here from a
24 2009 study looking at cumulative impacts. Here are
25 the 11 sources talked about in this study from oil

1 sands operations:

2 "(1) permitted (licensed)
3 discharges to air and land; (2)
4 seepage from tailings ponds; (3)
5 evaporation from tailings ponds;
6 (4) leaks from pipelines; (5)
7 major spills of bitumen, oil, and
8 wastewater; (6) stack emissions;
9 windblown (7) coke dust, (8) dry
10 tailings, and (9) tar sands dust;
11 (10) outgassing from mine faces;
12 and (11) ancillary activities
13 such as transportation,
14 construction of mines, ponds,
15 roads, pipelines, and facilities,
16 and landscape dewatering."

17 There is an urgent need for
18 information about the impact of existing activities.
19 Much is stake for the long-term health of humans and
20 all those living in the ecosystem.

21 The impacts are likely reaching far up
22 in to the Mackenzie watershed. This is not an Alberta
23 issue, this is a Canadian issue. We very much need
24 regulatory guidance from the feds here. The impacts
25 are large and outside this province.

1 "Given the 40-year history of
2 licensed and unlicensed
3 discharges into air, soil and
4 water, the baseline
5 predevelopment condition of the
6 Athabasca River may have been
7 lost long ago." (As read)

8 One point we can make there is we do
9 now have baseline information based on sediment layers
10 of lakes in the area where we can look at sediment
11 from 500 years ago and see what's in those profiles
12 and compare it to now.

13 Unfortunately, we don't have that for
14 the river, but we certainly have hundreds of lakes.
15 So we do have baseline information available.

16 "Presently," (As Read)
17 this is as of 2009,

18 "we cannot quantitatively
19 apportion contaminant levels to
20 natural industrial sources. The
21 attention of the world scientific
22 community is urgently needed.
23 The extent to which oil sands
24 pollutants are affecting
25 ecosystems and public health

1 deserves immediate and systematic
2 study. Short of this, the
3 increased mining activity in the
4 next decade may result in
5 unacceptably large and unforeseen
6 impacts." (As read)

7 Now, here, I think it's important to
8 quote some of the amazing knowledge of David Schindler
9 and some of his teams. This next study shows how
10 massive the snow melt impact is to the waterways of
11 the Lower Athabasca. A question that comes out of
12 this, how will regulators, when they understand this,
13 how will they manage this? Will industry care?

14 This is from a 2009 study:

15 " For over a decade, the
16 contribution of oil sands mining
17 and processing to the pollution
18 of the Athabasca River has been
19 controversial. We show that the
20 oil sands development is a
21 greater source of contamination
22 than previously realized. In
23 2008, within 50 km of oil sands
24 upgrading facilities, the loading
25 to the snowpack of airborne

1 particulates was 11,400 T over 4
2 months and included 391 kg of
3 polycyclic aromatic compounds
4 (PAC), equivalent to 600 T of
5 bitumen, while 168 kg of
6 dissolved PAC was also
7 deposited."

8 Dissolved PAC concentrations in
9 tributaries to the Athabasca increased from a very
10 tiny amount to well over 100 times more, depending on
11 the time of year. In other words, .009 parts per
12 million to .2 parts per million, which is a huge
13 difference.

14 So in other words, what's happening is
15 all winter particles are collecting in the snow and
16 they have attached to them polycyclic compounds, and
17 during snowmelt they're all released suddenly in
18 whatever it is, five days, two weeks, and this hits
19 the streams and tributaries and the river all at once.

20 Some studies show a pretty alarming
21 effect, we're talking about a pH drop from 7.5 to 5.0
22 in tributaries. A pretty deadly impact for a short
23 period of time, and there's been very little work done
24 with the long-term impact of this seasonal phenomena.
25 We have to credit Schindler in his work for

1 identifying that issue.

2 On a separate study, snowmelt and
3 release of gasses was also connected to human rashes
4 in certain communities, skin rashes, which is
5 basically a sudden overloading of the body systems,
6 body organs, expressing as a rash.

7 So in this particular study Schindler
8 indicated that, "These results indicate that major
9 changes are needed to the way that environmental
10 impact of oil sands developments are monitored and
11 managed."

12 I'll just mention a conclusion here
13 from a 2013 water quality issues study:

14 "Recent improvements in water
15 monitoring by Environment Canada
16 show promise of resolving the
17 controversies, although
18 independent governance for
19 Canada's and Alberta's water
20 monitoring program in the Lower
21 Athabasca River will be necessary
22 to rebuild public confidence in
23 the data and their interpretation
24 by government and industry."

25 (As read)

1 So this is still in the works. I
2 think there appears to be some positive movement in
3 this direction, but we're really counting on
4 Environment Canada to rebuild public confidence in the
5 data that has been shared with us or not shared, us
6 being the public, Indigenous community.

7 Now, I think it's important to, you
8 know, somehow listen very carefully to a polarized
9 issue, and increased polarization as the media sort of
10 frenzies up the extreme sides, always looking to quote
11 the extremists of every story for effect.

12 But I think if we listen to each other
13 and then focus on the science, I think there's a
14 possibility of technological solutions to vastly
15 improve the way the current industry is operating.

16 There has been some problem with poor
17 science or opinions that are not based on science, or
18 statements made not based on science, whether it's one
19 side or the other. So, again, I'm going back to the
20 David Schindler editorial, I'm going to read some of
21 it. This editorial, this is March 13th, 2017. He's
22 making comments on a study by a U of A professor:

23 " We disagree with the assessment
24 of Prof. William Shotyk that
25 "contamination problems in the

1 oil sands region are overstated."

2 Like Shotyk, previous research
3 (including Kelly et al. 2010,
4 Proceedings of the U.S. National
5 Academy of Sciences) has found
6 that the concentrations of
7 elements dissolved in the
8 Athabasca River were well below
9 Canadian Council of Ministers of
10 the Environment (CCME) guidelines
11 for drinking water. Most of the
12 elements are carried in suspended
13 particles, which he filters out
14 before analyzing water samples.
15 However, these particles are not
16 inert -- they contain a cocktail
17 of toxic elements and petroleum
18 hydrocarbons."

19 In other words, the same that fall and
20 accumulate in the snow that carry polycyclic aromatic
21 compounds were filtered out of that U of A study.

22 " They are ingested by people and
23 animals that drink directly from
24 the river, and may enter the
25 bloodstream. Considering the

1 toxicity of one element at a time
2 also overlooks potential
3 interactive toxicity among
4 elements and between elements and
5 organics."

6 "The fate and behaviour in
7 particulates are also modified in
8 the river ecosystem. A good
9 example is mercury, which can
10 undergo chemical and biological
11 transformation into a potent
12 neurotoxin, methylmercury, that
13 bioaccumulates in aquatic food
14 chains. In the Athabasca system,
15 this has contributed to
16 increasing mercury in the eggs of
17 fish-eating birds and consumption
18 advisories for walleye. Another
19 example is polycyclic aromatic
20 hydrocarbons (PAHs), some of
21 which are more toxic in sunlight
22 than in the dark. A thorough
23 assessment of toxic contaminants
24 in the oil sands region must
25 include a broad suite of

1 chemicals in both suspended and
2 dissolved phases to understand
3 the true potential ecosystem
4 impact. Comprehensive water
5 quality monitoring must include
6 water samples under a range of
7 seasons and river conditions.
8 Sampling the river only at autumn
9 low flow as the Shotyk team did,
10 minimizes the apparent
11 contaminant problem because that
12 is when the river carries its
13 lowest load of particles. Inputs
14 from tributaries that drain the
15 active mining area, which have
16 higher concentrations of
17 contaminants than the mainstream
18 Athabasca River, and input from
19 snowmelt, are also lowest in the
20 autumn when soil erosion from
21 mining activities is least."

22 That's because of less rain.

23 "The acidity of the river in the
24 oil sands area increases
25 significantly during snowmelt, as

1 the result of acid deposition in
2 snow. This too would increase
3 the solubility of many elements,
4 enhancing their mobility into
5 food chains."

6 Now, the elements are heavy metals, so
7 if the river temporarily hits pH 5.0 - 5.5 heavy
8 metals go into suspension and increase in water
9 bodies. This is well-known.

10 " In summary, focusing only on a
11 few dissolved elements as Shotyk
12 advocates misses important
13 pathways to wildlife and humans,
14 particularly indigenous people,
15 and oversimplifies the complex
16 nature of oil sands contaminants
17 and the Athabasca River itself."

18 So what Schindler says here, this is
19 last March:

20 " Fortunately, the current
21 monitoring program carried out by
22 Alberta Environment and Parks and
23 Environment and Climate Change
24 Canada measures both suspended
25 and dissolved fractions of a wide

1 suite of water quality
2 parameters. Results from this
3 program have continued to build
4 upon the Kelly et al. papers,
5 reinforcing the need for better,
6 more integrated scientific
7 efforts."

8 So finally, I want to refer to a
9 study, a final study I wanted to point out, it is a
10 study just published this year which shows alarming
11 new information in regard to the cumulative impacts of
12 years of acid rain and acid deposition in the
13 down-wind region of the oil sands operation.

14 It clearly shows there's no more room
15 for added air pollution. In fact, current emissions
16 will need to be cut dramatically to prevent collapse:
17 first, of lake ecosystems; and, the forest later.

18 Now, we're talking about an area that
19 could be as large as Germany that has been receiving,
20 for 50 years, acid, acid rain, SO₂-related substances,
21 and the forest as a buffer, has been absorbing for
22 decades and buffering this acid rain.

23 So this particular study, this was
24 published July 18th, 2018, Estimates of exceedences of
25 critical load for acidifying deposition in Alberta and

1 Saskatchewan, published in Atmospheric Chemistry and
2 Physics.

3 So they did model simulations based on
4 all the pH measurements of the numerous lakes. In
5 summary, what their finding is is that the pH is such
6 that if you reach a certain point, a critical point,
7 there's a dramatic shift in the biology of the lake.
8 So what we had in the early 1980s, before Mulroney and
9 company changed the -- created air emissions rules to
10 eliminate acid problems, we had clear dead lakes with
11 no life in them they were so acidified.

12 So we're on the verge of this
13 happening in Northern Saskatchewan and in Northern
14 Alberta, according to this study. So the regulators
15 and the feds must deal with a national issue, a
16 national acid rain issue. This is not an Alberta
17 issue, this is a national issue.

18 That's all. Thanks for the
19 opportunity.

20 MS ASTERISK: Thank you, Mr. Belanger.

21 We have our last presenter, our other
22 Co-Chair, Jean L'HommeCourt. Then I'll just do a
23 short wrap-up after.

24 THE CHAIRPERSON: Okay.

25 MS L'HOMMECOURT: Good afternoon

1 everyone in this room. I'd like to bring note to
2 today, what today is for our people. Today is Missing
3 and Murdered Indigenous Awareness Day.

4 All across Turtle Island women and
5 children are walking for our missing and murdered
6 women. I am wearing a shirt today of my missing niece
7 whose body has not been found yet, missing out of
8 Edmonton, Alberta, 25 years old, fresh out of
9 graduation.

10 Therefore, I would like to take a
11 minute for everyone to stand out of respect for our
12 missing and murdered women, which I can't partake in
13 the activities today because of my much-needed
14 presence here today. So, out of respect, please stand
15 and we'll take one minute of silence.

16 Thank you.

17 --- Moment of silence / Moment de silence

18 MS L'HOMMECOURT: Thank you.

19 For those of you that were not present
20 when I did my cross-examination the other day, I will
21 repeat myself, I will reintroduce myself. My name is
22 Shara Jean L'Hommeccourt, legal name. I am of Dene
23 descent, raised at Poplar Point. My grandfather,
24 Moise L'Hommeccourt, held a trap line in the Birch
25 Mountain area.

1 My father, Norbert L'Hommecourt, also
2 known as K'áí, was his Dene name; means willow.
3 Because my dad was a tall man, 6'4", built strong.
4 They are both laid to rest. My father is laid to rest
5 at Poplar Point.

6 I will try not to bore you with my
7 talk so as you don't nod off, as I have seen in the
8 present days -- previous days that I was present here.
9 I realize that we are all grandfathers, grandmothers,
10 those of you that are older than I am. I know how
11 hard it is to sit here all day and listen to people
12 talk about their life, their livelihood, their
13 survival.

14 I am here today to protect my future
15 generations. I'd like to have a moment of silence
16 which I thank you for that you respected to honour our
17 women and girls and men that are out there murdered.

18 Most of my schoolmates from
19 residential school are not here today but lay buried
20 in Fort Chip and other graveyards in this region.

21 I would like to give a few mentioned
22 to these women that have gone before me and some of
23 them have never reached the age of 50 because they
24 were residential school survivors.

25 My very first friend that I lost, her

1 name was Geraldine Dubutte. Sandra Dubutte, her
2 sister, older sister whose body was found in a United
3 States landfill site;

4 Irene Decoin Ward who was also a
5 survivor of residential school we lost two years ago,
6 passed on.

7 Donna Mercredi, my friend, got hit by
8 a bus at Supertest Hill. She got out of a cab, a bus
9 was coming down the hill at full speed and hit her and
10 she went flying and was instantly dead.

11 Virginia Martin who I haven't seen in
12 many years after I left the north for a bit, she died
13 of a brain tumour.

14 Along with my friend Joyce Cardinal
15 also died of a brain tumour.

16 Connie Voyageur just months ago passed
17 away from cancer, also from Fort Chip.

18 Amber Tucker, all over the news. One
19 voice heard over the radio, played many, many times
20 and yet we cannot find this man that killed Amber
21 Tucker and left her body to rot for how many years
22 until a horseback rider found her skull laying on the
23 ground on his property just outside Nisku.

24 Shirley Walkwin, a Mikisew Cree member
25 is still missing from Fort McMurray.

1 My sister-in-law Janice Jazz
2 Desjarlais (ph), her body lays in the landfill site in
3 Fort McMurray. The RCMP combed the area which they
4 said was -- I forget the number of baseball fields
5 they had, because her body wasn't even reported
6 missing until two or three days later after Fort
7 McMurray's trucks took her away from the Hope Centre
8 where she climbed into a dumpster to keep warm. It
9 was exactly this month that she died and was taken and
10 crushed and spilled over in the Fort McMurray landfill
11 site.

12 Elaina Look, missing from Target, from
13 Tower Road, still missing, her body still out there,
14 her family are still searching, as I am searching for
15 my niece, Shelley Tanis Dean (ph), 25 years old, left
16 Vernon, BC to come and visit with her sister in
17 Edmonton, her younger sister that was going to be
18 taken by the system and put in a group home. She
19 wanted to interfere. She wanted to intervene. She
20 wanted to take her sister in her arms and help protect
21 her. At the young age of 25, she was in Edmonton a
22 mere two months before she went missing. Today, her
23 body is out there.

24 That brings me to my grief.
25 Currently, I am still grieving for my family and my

1 friends that I mentioned. I have never stopped
2 grieving. In our culture we grieve for a year. This
3 means no celebrating by dancing, no partaking in any
4 celebrations, et cetera. We do not decorate at
5 Christmas that year following their death.

6 Grieving also includes the loss of our
7 lands that we used to have family gatherings at. One
8 of them was mentioned here today, Tar Island. It used
9 to be a gathering place for all Nations in this
10 region.

11 There are other locations in the
12 Shell, Jack Pine and Muskeg River Mines that my uncles
13 had traplines on, namely Uncle Theodore Boucher, Chief
14 Jim Boucher's father, my mother's brother.

15 No longer do we have access to that
16 area. There's gates there. We have to sign in. We
17 have to give notice to Shell that we want to go there;
18 we have to have visitation passes to go there.
19 Despite all that, all the stresses of trying to go to
20 your ancestral lands just to gather, to feel that
21 connection to your family is taken away by industry.
22 So, therefore, no more family get-together's. We
23 haven't gathered there since my kids who are now in
24 their 30s, they used to come with me there when they
25 were five, six, seven, eight years old.

1 I am most likely one of very few
2 survivors that still has oral history instilled in me.

3 I am also most likely of very few Dene
4 women that has travelled to the Barren Lands for
5 caribou as my father has a young man with his father,
6 and his father with my great-grandfather.

7 I lived in the Northwest Territories
8 in a pristine environment. I left Fort Mac in 1981.
9 But I had to return to my homelands so that my
10 children can connect with their grandparents before
11 their grandparents passed on.

12 Dene, we are a nomadic peoples, and we
13 rely on our way of life for survival. We, too, are
14 becoming at the risk of becoming a species at risk and
15 are now endangered as a First Nations Dene peoples.

16 For McKay leadership does not
17 represent me in Teck's agreements, which Teck made
18 agreements with the leadership which consists of one
19 chief and four councillors, to which I did not vote
20 for to represent me. I did not cast my vote and
21 therefore am not represented under them under the
22 *Indian Act*.

23 I found it very difficult for me to
24 write all this down on a paper, because I was raised
25 through oral traditions. This is not my culture.

1 This pen and this paper is not my culture. My culture
2 is out there on the land; that is where I learned from
3 my grandparents, from my mothers, from my fathers
4 before me; they taught me and I listened with my ears
5 that the Creator gave me so I can learn, I can hear
6 them. Even as a child I still remember their words.
7 I can repeat them. But, none of you will understand
8 because we do not interpreters here to interpret our
9 first language.

10 I saw today that Teck has arranged for
11 security upon entering this building, upon entering
12 this room. This is exactly the type of intimidation
13 we face out there as well -- gates all over our
14 traditional trails with security and security
15 personnel from all different countries, all
16 immigrants. This is what we also encounter at the
17 grocery stores here in Fort McMurray and shopping
18 malls. Our people are consistently being monitored
19 more so than the wildlife and our ecosystem and our
20 environment.

21 I'd like to give you a little bit of a
22 history. Further down the river, ten minutes from my
23 home in Fort McKay the bitumen oil sands site from the
24 1920s, the very first oil sands industry to come into
25 our region -- the 1920s. It's still leaking, leaching

1 contaminants into the river. The Alberta Government
2 has designated it a historical site because it is too
3 costly to clean it up.

4 Asbestos infested buildings standing,
5 left, remaining left behind to collapse on the ground.
6 Where is the clean-up for that area? When is that
7 going to be cleaned up? All our people on boats drive
8 by the bitumen site and see that as a reminder of when
9 you people first became -- came onto our lands. The
10 destruction that's left behind.

11 The wind carries all that, all these
12 particulates and ends up in our Athabasca River and
13 goes down and affects our people, our relations up
14 north.

15 I recently, just the other day, found
16 out that Imperial Aspen has been given the go-ahead to
17 proceed with their project. This was approved by AAR.

18 We were in talks with Imperial. We
19 gave them all our concerns, all the concerns of our
20 wildlife. With no more boreal forest to sustain
21 themselves, no more habitat for them to survive so
22 they can feed us, where are we going to get out
23 traditional foods?

24 Imperial Aspen is next-door to my
25 mom's trapline, my late mother's trapline, that she

1 passed on to my brother which I still access.

2 I read this news on Fort McMurray
3 today. I was shocked when I got home. This was a
4 slap in the face to me yet again as I am grieving for
5 my family, for my land, for my children, for my niece,
6 for all my future generations that have yet to deal
7 with this atrocity, this genocide that we live in.

8 According to Fort McKay Chief Jim
9 Boucher there was concerns from Fort McKay. Where are
10 all those documents? Where are all those papers that
11 we signed onto stating our concerns? Who got rid of
12 them? Are they sitting in some shelf in somebody's
13 office? This is the kind of disrespect for our
14 Indigenous women. We are the carriers of life. Life
15 givers for all humanity. We carry our children in our
16 wombs filled with water, every one of you have come
17 from a woman; every one of you was born with water.

18 I was born in 1963. Syncrude Suncor
19 were born in 1964. My parents used to put me a boat
20 and we used to drive by Suncor when there was no
21 regulations, no accountability for our health, for our
22 impacts. My mother used to cover our heads as we
23 passed by Suncor, the stacks. The stench was in our
24 mouths, in our throats, burning our eyes, but we had
25 to get past there in order to reach our families down

1 south.

2 We used to drink water from the river,
3 the Athabasca River on our travels to Fort Mac from
4 Poplar Point. We used to dip our cup into the river
5 and take a drink when we were thirsty. That is no
6 longer the case today. We are made to drink water out
7 of plastic bottles.

8 Water was delivered to our community
9 for two-plus years because our water was contaminated.
10 Children couldn't take a bath in hot water. 'Use
11 lukewarm water, they'd tell us. Don't bathe your
12 children more than ten minutes in the water. And, oh,
13 by the way, boil water notification will not address
14 the contaminants in you water so, therefore, do not
15 boil your water because the steam releases in the air
16 from the water, and it is airborne.' This is what we
17 were told.

18 Health Canada knew about our water
19 being contaminated for months on end before they gave
20 us public notice that we should be looking after
21 ourselves and that we should not be consuming the
22 water through the tap. Too late. How many billions
23 and billions of liters already were consumed by our
24 peoples.

25 I have a grandson I am raising. I am

1 a grandmother, I shouldn't be raising my grandchildren
2 but in today's world, in our Indigenous world, in our
3 Indigenous community this is what happens because our
4 young mothers are sick with diseases and cannot care
5 for their children so they rely on their grandmothers
6 to take their children for them and raise them.

7 My grandson Des Lumcourt (ph), his
8 name means river interpreted in my language, because
9 he is of the river. He was born with an
10 underdeveloped heart. Three major open-heart
11 surgeries this grandson of mine, my firstborn grandson
12 had to endure. Today he is at home. I let him go to
13 school, the first day of school September 4th, he was
14 so happy to be back, I thought. But inside he was
15 dying, he was crying, 'No, Grandma, don't make me go
16 to school.' I should have listened knowing what
17 happened to me in residential school. I should have
18 listened to him.

19 Leaving the school that day he walked
20 out of school and across the yard. He lost his
21 footing and he fell, he broke his arm. Ten years old,
22 first day of school. Which child -- how many children
23 suffer?

24 He had a brand new backpack that he
25 adored. He was more concerned that the people, the

1 first responders had to cut his backpack off his
2 shoulders in order to straighten his arm.

3 His brand new shirt, his brand new
4 sweater, those, too, were cut off his arm. Children
5 surrounded him, the whole school, the whole under 40,
6 50-plus -- I'm not sure of the exact numbers in our
7 school today.

8 Less and less children are attending
9 school in Fort McKay because the education system is
10 not there for our children. There is no money for
11 them. They don't have a hot lunch program.

12 My grandson doesn't have a bus to pick
13 him up and go to school because he lives close to the
14 school, he says. But yet he cannot walk that far
15 without losing breath.

16 Just recently he had a test done. His
17 saturation oxygen level has gone low, way beyond what
18 is normal, but yet he fights to breathe, to breathe in
19 all the toxins that we have in Fort McKay. Every day
20 we walk out our door, every day that stench hits us.

21 I, myself, too, have health
22 complications. I fear for leaving my grandson. Who
23 is going to protect him? Who is going to ensure that
24 he is safe once I am gone? I, too, went for an
25 ultrasound on my throat because there is something

1 happening which the doctors -- this is the second
2 ultrasound that I have been to, and yet they can't
3 find what's wrong with my throat. I have a big lump
4 in my throat. And I keep saying this is because I am
5 grieving. My pain is carried in my throat. The only
6 way I can heal is to speak out for my future
7 generations and to heal.

8 Speaking of healing, I got a call the
9 other day from the Missing and Murdered Indigenous
10 Women Inquiry which happened last year. I made a
11 statement on behalf of my family.

12 Now I am eligible for \$3,500 for
13 healing. I cannot put a price on my healing, and they
14 ask me, "Where do you want to go to heal and how do
15 you want to address your healing from all this stuff
16 that happened to you?" The government is asking.

17 I told them -- I told her, the worker,
18 "I want to go back to my homeland territory where I
19 was ripped away from as a child. That is where I need
20 to go to heal", and that is right across from Teck.

21 The government says they want to heal
22 me, and with one hand they're shaking my hand saying,
23 "Here. Here's the money to heal". On the other hand,
24 they're ripping the ground, the very roots under my
25 feet so I'll topple over.

1 How can I heal?

2 I cannot understand that. But I will
3 take that \$3,500. I will give it to a chopper pilot
4 or whoever wants to take me there and drop me off
5 where I can heal, I can be one with nature.

6 Not in an AA group. Not in some
7 institution out there. My healing comes from the
8 land.

9 This is why I'm alive today. If I
10 don't go out in the bush or out on the land, my spirit
11 gets broken. I get weak. So therefore -- this
12 weekend is long weekend, Thanksgiving. What does that
13 mean for me?

14 I have not harvest a moose this year
15 yet. I have not had the opportunity to return to the
16 bush because I am so kept busy going to meeting after
17 meeting after meeting, taking my time away from my
18 true practices that I should be doing to heal myself.

19 I have not had opportunities to grieve
20 because one member after one member after one member
21 keeps dying.

22 I was here a few days ago. I
23 mentioned my cousin's son being buried while I was
24 here. I was unable to attend, unable to pay my
25 respects.

1 And today, the same thing. Darren
2 from the Fort McMurray First Nation passed on, Darren
3 Burke. His body has brought -- has been brought back
4 last night, and he lays in a building downtown Fort
5 McMurray.

6 That is where our peoples are.

7 Darren Burke and I sat together
8 through many, many meetings with CEMA which the
9 government dismantled. Cumulative Effects Management
10 Association.

11 We sat together on a group called
12 Traditional Knowledge Working Group. We provided
13 evidence, experience, indigenous knowledge, history.
14 We provided teachings. We provided everything in our
15 power, everything that we had to address our people's
16 genocide, which is happening.

17 The government chose to shut that
18 down. They left it up to industry whether they want
19 to contribute, whether they find it feasible enough to
20 have this CEMA Board go forward, which consisted of
21 many groups which industry sat on, which First Nations
22 sat on, which government sat on, which Environment sat
23 on, which AER sat on. The list goes on and on and on.

24 Now I sit before you here with no
25 associations except my Keepers of the Athabasca

1 founded through Keepers of the Water which the Dene
2 Nation created.

3 I am from the Athabasca watershed. I
4 am of Dene descent.

5 Teck is ripping apart my grandparents,
6 my ancestral, my fathers' lands. In the archives, you
7 can pull up the map and look at the names on those
8 trap lines that existed in the 1920s, in the 1930s, in
9 the 1940s, in the 1950s, in the 1960s until the fur
10 trade came and wiped them all out.

11 Their income was taken from them.
12 Their livelihoods were taken from them.

13 My dad have to give up his line so he
14 could go seek employment so when we -- we came out of
15 residential school, daddy'll have -- he'll be ready
16 for us, daddy'll have a home for us to continue to
17 live in.

18 Guess what? When I got out of
19 residential school, my parents were already into the
20 alcohol. They could not handle nine of their children
21 being taken from them by three by three.

22 I was the last batch that was ripped
23 from them. They could not handle their children being
24 torn from them. They had no longer the means to go
25 out there and hunt for their kids because there was no

1 kids to feed any more.

2 So what did they do? They moved in to
3 Fort McMurray. My dad got a job as -- on the Northern
4 Transportation Barge System, NTCL, Canadian
5 Transportation -- Northern Transportation Canadian
6 Limited. That's the barge system that went all the
7 way up Athabasca River all the way to Fort Smith, all
8 the way to Hay River, all the way to Yellowknife.

9 My dad travelled because he knew the
10 river like the back of his hand. He knew all the
11 creeks. He knew all the sand bars. He knew
12 everything about the river 'cause he travelled it
13 many, many times.

14 The grief of losing his children was
15 too much to bear for him. He succumbed to the money
16 and what it brought, the alcohol, the alcoholism. He
17 died a chronic alcoholic in 1996.

18 I'm sorry, 1997 because 1996 is when I
19 brought my children back to Alberta unwillingly
20 because I wanted them to connect with their parents,
21 with their grandparents and their family.

22 It takes roots to be strong. Where
23 are our roots going to be once Teck rips them out? My
24 roots are the Birch Mountains.

25 My mother left my father after he

1 started abusing alcohol. I was 14 or 13 years old. I
2 can't remember that year the age I was because I was
3 made to put in her -- in her place to look after my
4 younger sisters while she was a single mother working
5 hard to provide for us three girls while the rest of
6 my family were out there on their own already, adults,
7 already having children, already, while we were still
8 in the home.

9 My mother passed away at the age of
10 80. She had a cabin which she had built along with
11 some -- with her new common-law who was connected to
12 the land, who had a piece of land at Imperial, which
13 is now by Imperial. That is a trap line that my
14 brother now holds.

15 That is only the place I can go
16 immediately. Within an hour and a half of my time,
17 I'm there.

18 It used to take me 35 minutes, but
19 Shell interfered with that. They put a highway, East
20 Athabasca Highway, for me to access, for them to
21 access, for everyone to access right through the
22 caribou range despite caribou at risk.

23 I can see fidgeting going around like
24 you want me to stop talking, that you're losing
25 interest. This is what happens when we are at

1 meetings. They try to make light of it, give us
2 jokes, serve us coffee, gives us sweets, poisonous to
3 our bodies, caffeine, sugar. The four poisons are
4 white, the salt, the sugar, the lard and the flour.

5 Those are things that our people are
6 not accustomed to consuming. Those are the things
7 that are killing our people along with destruction of
8 our lands, our berries, our medicines.

9 Those are the things we need to keep
10 us alive, the very roots, the plants.

11 Mint tea. They have mint tea in
12 packages over there in the back. There's no honey.
13 There's white sugar.

14 We pick our mint tea on our own. We
15 go out on the land, we find lakes that are pristine or
16 close to pristine. There is where we pick our mint.

17 We go to the land. We pick our
18 berries, our cranberries, our medicine. Our
19 blueberries, our medicine. Those are our
20 antioxidants. Those are our vitamins.

21 Our rat roots is our medicine that
22 comes from the boreal. We have to search for it, dig
23 for it. We offer tobacco for it to heal our people.

24 Those medicines are getting destroyed,
25 are getting contaminated. Now we have to go further,

1 further away from our homelands to collect those
2 medicines to bring back to our people.

3 How is Teck going to protect those?
4 How are they going to ensure that we can still go out
5 there and collect these pristine medicines and
6 berries?

7 But you no longer have to worry about
8 that once you go to your grave because all that will
9 be left to us, to our children.

10 For those of you here, the elderly, I
11 respect you. I ask you, think about what I say before
12 you go and meet your creator, before you go and meet
13 your maker.

14 When they ask you, "What have you done
15 for my mother earth?" what are you going to tell them?

16 My Elders are gone to the afterlife,
17 but their spirits surround us when I call them on with
18 my drums. We have sweet grass to burn, to cleanse our
19 body, our spirit, to give us strength. Even this is
20 in danger.

21 Our eagle feather signifies strength,
22 power for our people. It is sacred. The eagle
23 feather is sacred. Even though it is off the body you
24 can put it under a microscope and look at it. You'll
25 see it is alive.

1 This medicine wheel, this is a
2 medicine wheel that signifies all nations of this
3 earth, mother earth. You notice how the white beads
4 are on top? That is for the white people.

5 Why are they on top? This medicine
6 wheel should be turned around. Our people should be
7 at the top because we were first here, First Nations.

8 We represent the red on this circle.
9 To our right is the black. To our left is the
10 Chinese, the yellow. And at the bottom of us is the
11 white.

12 My late friend, Lawrence
13 Sangrie(phon), Dene from Northwest Territories, made
14 this for me before he passed on. He was on dialysis
15 for 17 years on a waiting list. He passed away before
16 he got a chance.

17 Seventeen (17) years waiting for a
18 donor.

19 The earrings that I wear, these are
20 also made by an indigenous person. My footwear that I
21 wear are made by an Elder in her eighties who's passed
22 on. She comes from Fort St. John. I have the last
23 pair that she made. I am honoured to walk with these
24 moccasins.

25 I only wish you could walk a mile in

1 my moccasins so you can understand how it is, so you
2 can understand how I feel. But that is a wish I don't
3 think that will come true.

4 I thank you for listening, for staying
5 awake. I know it's been a long day, and there will be
6 many more long days ahead of you. And there will be
7 many more long days ahead of me because in January
8 again I will be facing you. This time it'll be
9 Syncrude for their expansion.

10 Again, another impact. They're
11 proposing to build a bridge over MacKay River.

12 And then I got a call the other day,
13 "Oh, Suncor wants to meet with you". Guess what?
14 Another expansion?

15 Syncrude says, "No more tailings
16 ponds, but the ones that we have, we'll expand their
17 lifetime and we'll expand that tailings ponds".

18 THE CHAIRPERSON: Thank you, Ms --

19 MS L'HOMMECOURT: I will stop there
20 because my body is telling me to stop. My throat is
21 telling me to stop.

22 Thank you very much for listening.

23 THE CHAIRPERSON: Okay. Thank you for
24 sharing your experiences and your words, very
25 powerful, for the Panel.

1 Ms Asterisk, you said you had a few
2 comments you'd like to make just to kind of wrap
3 things up?

4 MS ASTERISK: Thank you, Mr. Chair.

5 Thank you, co-chair Jean L'Hommecourt
6 for sharing so deeply from your heart.

7 Just to wrap up, I'm going to quote
8 briefly from the *Canadian Environmental Assessment*
9 *Act*, whose purpose in section 4 states:

10 "...to protect the environment
11 from significant adverse
12 environmental effects caused by a
13 designated project, to ensure
14 that designated projects that
15 require an exercise of power or
16 performance, duty or function by
17 a federal authority are
18 considered in a careful and
19 precautionary manner to avoid
20 significant adverse environmental
21 effects."

22 I'm sure you -- the Panel knows this.
23 I'm just saying this for the public record.

24 And then Alberta's *Environmental*
25 *Protection Enhancement Act* in section 2, the purpose,

1 is stated:

2 "...to support and promote the
3 protection, enhancement and wise
4 use of the environment..."

5 And this includes specific reference
6 to the principle of sustainable development:

7 "...which ensures that the use of
8 resources in the environment
9 today does not impair prospects
10 for their use by future
11 generations."

12 I just think it's really important to
13 consider these legal documents, and I'm sure you are,
14 because we are not in a place of sustainability any
15 more. Our current system is not sustainable, and it's
16 simply not ethical to continue approvals -- my Board
17 might smack me for this, but I am begging you not to
18 approve this project.

19 Teck has used outdated technology in
20 their plans, they have insufficient evidence of any
21 kind of adaptation to climate change. The sections
22 that we asked about, we looked at them.

23 They're regarding extreme wind speeds,
24 regarding extreme flooding and fires. They don't have
25 any plans to accommodate for that.

1 In Alberta right now, we're tied in
2 knots when it comes to cumulative effects.

3 I hope you had a chance to read this
4 opinion piece by Chief Jim Boucher of our
5 (indiscernible) First Nation and Chief Archie Walker.
6 This was the day that the hearing opened in the
7 Edmonton Journal.

8 And it mentions cumulative effects
9 over and over again, and as Jean said, the CEMA, the
10 Cumulative Effects Management Agency, was shut down.
11 That's telling. That's very, very telling.

12 We have serious unacknowledged
13 environmental and health issues that need to be
14 addressed. That's one of the ways we're tied in
15 knots.

16 Another way is at the current time,
17 industry is writing its own rules, its own regulations
18 when it comes to tailing management.

19 Directive 74 was not -- they weren't
20 able to comply, so it was dissolved. The whole
21 regulation was thrown away through the shredder, and
22 now we have Directive 85 which allows industry to
23 write their own regulation.

24 That's another way we're tied in
25 knots.

1 The *Redwater* decision that Regan
2 Boychuck talked about has completely tied our public
3 interest in knots. Our orphan well program has grown
4 by hundreds of percent and continues to grow extremely
5 rapidly as more and more companies toss out their
6 remediation projects.

7 We are aware of many companies selling
8 their leases further down, further down to smaller and
9 smaller companies to get -- to squeeze out the last
10 little bit, and then those very small mom and pop
11 companies at the end go bankrupt and throw it to the
12 orphan well program, which has increased hundreds of
13 percent every year since the *Redwater* decision, which
14 is still tied up in Court.

15 So that's another way that we're tied
16 in knots.

17 And so these well sites and exhausted
18 infrastructure is becoming a public liability
19 systematically now.

20 Last year we had our first bitumen
21 facility that entered the orphan well program. It was
22 a very, very serious financial concern.

23 Now, the last way that we're tied in
24 knots is that this tragedy of the commons that I tried
25 to get to in the cross-examination, but I'm kind of

1 inexperienced at that and I got thrown off track.

2 But the fact of the matter is, for
3 environmental goods and for environmental services,
4 there is no charge. We don't have that kind of a
5 system where we pay for clean air and we pay for clean
6 water.

7 Our system requires that it's -- it's
8 supposed to be polluter pay. You pay to pollute the
9 air or pollute the water. You pay fees for that.

10 So Teck said that, you know, don't
11 change the discount rate. Increase the price for
12 environmental goods.

13 That's not the system we have. We
14 can't overturn everything just to suit a company that
15 would rather manipulate the finances around us.

16 We were approached this year by a team
17 of hydro geologists. Keepers of the Athabasca is
18 currently working to develop a data visualization tool
19 in partnership with communities so that they can use
20 this tool for community-based water monitoring.

21 And this tool will enable -- with the
22 click of a mouse, will enable you to look on a map and
23 see the surface water quality and see the groundwater
24 quality and see if there's any interaction between the
25 two.

1 If we had this project -- if we had
2 done this project a couple of years ago, we'd probably
3 be bringing evidence from it here at -- now because
4 that is the acknowledged and understood way, as
5 explained to me by Robert Brouha of Environment and
6 Climate Change Canada after his presentation, which
7 did not include tailings as a factor.

8 That is the understood way that
9 tailings are leaking down into the groundwater and
10 back up into the aquifers -- into the surface water,
11 sorry, bubbling back up.

12 So why is this up to Keepers of the
13 Athabasca, a small environment group? Why are we the
14 ones having to develop these tools? Where are our
15 regulators? Where are our governments that are
16 supposed to be looking after sustainable development?

17 We're at a crucial point in history.
18 We're at a turning point.

19 We have a valuable bitumen resource,
20 very valuable, extremely valuable. Probably more
21 valuable to future generations than it is today.

22 There is no good reason to continue
23 burning all of our resources as fast as we can. They
24 will probably have future uses that are a lot more
25 important than simply burning them into the air.

1 I'm encouraged by the agreement that
2 was signed yesterday, an international agreement
3 banning commercial fishing in the Arctic. All of the
4 Arctic nations signed on.

5 People are looking to Canada to kind
6 of lead this, and most exciting of all is the Inuit --
7 I'm going to say this. I'm wrong, I'm sure. Tapiriit
8 Kanatami, which is basically the Inuit leadership, are
9 very deeply involved in this project.

10 And it just -- it warms my heart that
11 the world is going to study cumulative effects.
12 They're going to make sure, within a two-year welfare,
13 that we have plans for baseline studies and plans for
14 ecological studies. Cumulative ecological studies,
15 not just cod, right. Not just the fishing.

16 This, to me, is where the future is
17 going. More cooperation, more monitoring, more
18 working together, better understanding of the
19 cumulative effects, things that have been ignored in
20 Alberta for decades. Literally decades. And we've
21 come to a crisis point.

22 We're at a crisis point now. And you
23 have the power. It's up to you.

24 And that's why I'm begging you. It's
25 probably not a word a lot of our Board, and especially

1 the traditional knowledge holders, would use, but I
2 have children and I expect to have grandchildren some
3 day, too.

4 And we're not perfect here. We
5 haven't found every page of the things that we're
6 trying to quote. But we're doing our best we can to
7 bring some perspective to the Joint Review Panel.

8 So again, thank you for the
9 opportunity.

10 THE CHAIRPERSON: Thank you very much,
11 Ms Asterisk.

12 We'll take a break now and then we'll
13 come back for questions afterwards.

14 It's about 25 to 4:00, so we'll come
15 back at five to 4:00.

16 Thank you.

17 --- Upon recessing at 1533 / Suspension à 1533

18 --- Upon resuming at 1555 / Reprise à 1555

19 THE CHAIRPERSON: Thank you. Please
20 be seated.

21 Mr. Ignasiak, any questions from Teck?

22 MR. FONTAINE: Yes, Mr. Chair, Teck
23 has some questions.

24 I'm just noticing -- I'll put it to
25 the panel. Is Dr. O'Connor going to be returning?

1 UNIDENTIFIED SPEAKER: No. He's been
2 called back to the hospital.

3 MS ASTERISK: There's a seriously ill
4 patient who looks like he needs to be flown out. He's
5 going to be back as soon as possible. He just had to
6 go attend to some things at the hospital and he will
7 be right back.

8 So maybe save the questions for Dr.
9 John for later and any other questions, if that's
10 possible.

11 THE CHAIRPERSON: Okay. So maybe
12 we'll circle through the other witnesses, if you have
13 any questions for them, and then hopefully by then Mr.
14 O'Connor will have returned.

15 And if we have to circle through
16 again, that's what we will do.

17 MR. FONTAINE: Okay, that works great
18 for us. Thank you, Mr. Chair.

19 CROSS-EXAMINATION

20 MR. FONTAINE: I guess I'll begin by
21 thanking you for being here today, witnesses.

22 Ms L'Hommecourt, I would like to thank
23 you for bringing it to our attention that it's the
24 National Day of Awareness for Missing and Murdered
25 Indigenous Women and Girls.

1 Mr. Boychuk, I'll begin by thanking
2 you for reading your submission found in the August
3 31st Keepers of the Athabasca Submission. I have not
4 too many questions.

5 If we could go to Exhibit 496, that's
6 the August 31st submission -- oh, I see. Okay.

7 We might not have to pull it up. The
8 questions are fairly straightforward.

9 It's your Curriculum Vitae, your CV.

10 You authored your own CV. Is that
11 correct?

12 MR. BOYCHUK: Yes.

13 MR. FONTAINE: And your CV is current?

14 MR. BOYCHUK: Yeah.

15 MR. FONTAINE: And your CV states that
16 you are recognized as a leading expert on the Alberta
17 oil patch's environmental liabilities?

18 MR. BOYCHUK: Yeah.

19 MR. FONTAINE: Thank you.

20 So, Mr. Boychuk, your CV also states
21 that you have a Bachelor of Arts degree in
22 International Relations from 2004 from the University
23 of Calgary.

24 Is that correct?

25 MR. BOYCHUK: It is.

1 MR. FONTAINE: Thank you. And your CV
2 also states that you have a Masters of Arts Degree in
3 Political Science, 2005, from York.

4 Is that correct?

5 MR. BOYCHUK: Right.

6 MR. FONTAINE: Mr. Boychuk, you
7 authored the submission that you read, titled "Alberta
8 Over a Barrel Environmental Liabilities and Royalties
9 in the Oil Sands".

10 That's correct?

11 MR. BOYCHUK: Yes.

12 MR. FONTAINE: Mr. Boychuk, was this
13 submission peer reviewed?

14 MR. BOYCHUK: I have a number of
15 expert friends that have reviewed it, but I don't have
16 a peer review process myself needed as the Water
17 Keepers.

18 MR. FONTAINE: Right. But you haven't
19 submitted it to an academic journal or any other form
20 of peer review?

21 MR. BOYCHUK: No.

22 MR. FONTAINE: Okay, thank you for
23 that.

24 Can you tell the Panel what documents
25 from the Teck application you reviewed in preparation

1 for providing your report and subsequently giving
2 testimony today?

3 MR. BOYCHUK: They are all cited in
4 the paper.

5 MR. FONTAINE: So is it fair to say
6 that everything you have cited you would have
7 reviewed?

8 MR. BOYCHUK: Absolutely.

9 MR. FONTAINE: Okay, thank you.

10 So there's a fair bit of citings. So
11 you are fairly familiar with the Project then?

12 MR. BOYCHUK: Only what I cited. You
13 have a great deal of documents submitted yourself and
14 I only concerned myself with the few that I quoted
15 that related to my presentation.

16 MR. FONTAINE: Okay, thank you.

17 I will note that in your report -- oh,
18 am I talking that far away from it? My apologies.

19 In your report, at PDF page 50 -- and
20 that's of Exhibit 496. It's the August 31st
21 submission and it's page 20 of your report.

22 You state that:

23 "Considering Teck's proposed
24 water capping remains an unproven
25 strategy for managing bitumen

1 tailings, contingent liabilities
2 have the potential to be
3 significant."

4 Do you recall that portion of your
5 report?

6 MR. BOYCHUK: Certainly.

7 MR. FONTAINE: And given that you are
8 speaking about the Project, that's based on something
9 you reviewed from the Project application?

10 MR. BOYCHUK: That you are using water
11 capping?

12 MR. FONTAINE: M'hmm.

13 MR. BOYCHUK: Yes.

14 MR. FONTAINE: And you still agree
15 with this statement?

16 MR. BOYCHUK: The unproven part, which
17 is cited to the energy regulator itself, yeah.

18 MR. FONTAINE: And the water capping
19 part?

20 MR. BOYCHUK: That was my
21 understanding.

22 MR. FONTAINE: Okay. We've
23 established that you are fairly familiar with all
24 portions of the Project that you have cited.

25 Mr. Boychuk, are you aware that Teck

1 has not proposed to use water capping for any of its
2 tailings?

3 MR. BOYCHUK: That wasn't my
4 understanding.

5 MR. FONTAINE: Okay. So that would be
6 incorrect then in your report. At least the potential
7 significant contingent liabilities would not be
8 present.

9 MR. BOYCHUK: No. There's quite
10 obviously an enormous amount of contingent liabilities
11 involved in a bitumen mine and tailings ponds. Your
12 estimates assume nothing will ever be spilled or
13 leaked so there would be no adverse consequences.

14 That's not an accurate assessment of
15 the risk. Those are going to be in addition to the
16 environmental risks that you estimate above the 11.8
17 billion you cite. There's very significant contingent
18 liabilities regardless of the technology you are
19 using. Even if you adopted some more technologies
20 that the Keepers suggested, there will still be
21 significant contingent liabilities in addition to the
22 risks you estimated.

23 MR. FONTAINE: Okay. But as far as
24 your analysis goes for the purposes of creating this
25 report, and the potential significant liabilities

1 you've cited in relation to water capping, that would
2 no longer be present in your model. Right?

3 MR. BOYCHUK: I don't have a model.

4 MR. FONTAINE: Okay, we'll come to
5 that in a bit.

6 I'm just curious. Mr. Boychuk, are
7 you a certified professional accountant?

8 MR. BOYCHUK: No.

9 MR. FONTAINE: No. You have a B.A. in
10 International Relations and a Masters in Poly Sci.
11 Correct?

12 MR. BOYCHUK: M'hmm.

13 MR. FONTAINE: And according to your
14 CV -- I'll pull it up here -- you've never been
15 employed by a third party financial statement auditing
16 firm type of body, one of the big four say?

17 MR. BOYCHUK: No.

18 MR. FONTAINE: And you've never been
19 retained by a publicly traded company to conduct
20 financial analysis or any sort of professional
21 auditing?

22 MR. BOYCHUK: I've never been an
23 auditor, no.

24 MR. FONTAINE: And I believe you've
25 stated fairly significantly that Teck has to follow

1 the IFRS?

2 MR. BOYCHUK: For Canadian reporting,
3 that's the accounting system.

4 MR. FONTAINE: When drafting your
5 report did you adhere to the same standards in the
6 IFRS or did you --

7 MR. BOYCHUK: I'm unaware of their --

8 MR. FONTAINE: Well, did you take them
9 into consideration when drafting up your analysis of
10 these contingent liabilities?

11 MR. BOYCHUK: I mentioned contingent
12 liabilities. I didn't draft any sort of estimate or
13 conduct any sort of analysis. It's just an obvious
14 fact that your estimate did not include contingent
15 liabilities, and I merely made note that it didn't
16 involve international accounting standard procedures.

17 MR. FONTAINE: Thank you, Mr. Boychuk.

18 Can you explain to me what you mean
19 then, on PDF page 40, so that's page 10 of your
20 report, where I believe it states that you analyzed
21 Teck's report of environmental liabilities modelled on
22 the advanced financial analytics used by Greg Rogers
23 and Charlie Atkins?

24 So that sentence seems to suggest to
25 me that you did some sort of analysis with some sort

1 of model of Teck's liabilities.

2 MR. BOYCHUK: I went through all of
3 your security filings and what it actually says is
4 that I had hoped to conduct advanced financial
5 analytics but your reporting lacked the detail to
6 carry that out.

7 So there was nothing terribly
8 convoluted or complicated that involved. I read all
9 of your securities filings related to environmental
10 liabilities carefully over the last 12 years to try to
11 be able to deduce some sort of analysis from it. That
12 wasn't possible.

13 And that's what the paper says.

14 MR. FONTAINE: Okay. So Greg Rogers
15 and Charlie Atkins did not analyze Teck's reporting of
16 environmental liabilities. You just kind of took a
17 framework that they generally abide by?

18 MR. BOYCHUK: They also looked at your
19 reporting and they also looked at my report and had no
20 trouble with it at all.

21 MR. FONTAINE: Okay, thank you.

22 So, Mr. Boychuk, again as I mentioned,
23 you read your submission so I'm not going to drag us
24 through the PDF pages here.

25 You mentioned that Teck manipulates

1 accounting estimates to suit the financial needs of
2 the moment.

3 MR. BOYCHUK: That is correct. That's
4 what I said.

5 MR. FONTAINE: And you recognize that
6 Teck, as has been stated here a number of times in
7 different cross-examinations of our panel, that they
8 have to follow IFRS and they also have a third party
9 independent auditor PWC. Their records are also
10 reviewed by their Board.

11 And you, with a B.A. in International
12 Relations and a Masters in Poly Sci, are more
13 qualified than say PWC?

14 MR. BOYCHUK: I never said I was more
15 qualified. I was simply pointing to the facts. If
16 there's a problem with something that I've said or a
17 claim that I've made, it would be easier for you to
18 point to that rather than to challenge my credentials.

19 MR. FONTAINE: Well, I believe I just
20 did, sir, by your assertion that Teck is manipulating
21 accounting estimates to suit financial needs of the
22 moment.

23 That's a fairly serious claim.

24 MR. BOYCHUK: And that's exactly what
25 I demonstrated in great detail with citation of every

1 sentence involved.

2 MR. FONTAINE: All right.

3 So you are neither trained nor
4 certified to conduct advanced financial analytics.
5 You've never done so in a professional capacity. You
6 don't have to adhere to any certain standards. You
7 are a researcher. And you are one of Alberta's
8 self-proclaimed recognized leading experts on
9 Alberta's oil patch environmental liabilities.

10 And yet somehow you came to
11 drastically different results than what is
12 internationally recognized accounting practices that
13 Teck has been required to do for its publicly
14 available financial documents?

15 MR. BOYCHUK: I'm unclear what the
16 question is.

17 MR. FONTAINE: I just fail to see how
18 you are in any way qualified to make such
19 characterizations of Teck's financial statements.

20 MR. BOYCHUK: Well, you and your team
21 should certainly be qualified to critique what I wrote
22 rather than to challenge my education and background.

23 Everything that I wrote is detailed
24 and documented extensively so you can understand
25 everything that I said, the source of everything that

1 I said. And if I said something that is wrong, I
2 would appreciate you pointing it out so we could
3 correct it or clarify the record.

4 But challenging my education from 15
5 years ago is hardly relevant to what's in the paper.
6 It's all in the paper. And if you have specific
7 problems with it, if I've made some mistakes and you
8 would like to challenge something, I would welcome
9 that.

10 What I wrote stands on its own. I
11 don't need a professional certification to do what I
12 did.

13 --- Pause

14 MR. FONTAINE: Okay, thank you, Mr.
15 Boychuk. Those are all my questions for you.

16 Mr. Chair, as it would be, we only
17 have other questions for Dr. O'Connor.

18 THE CHAIRPERSON: Okay, thank you.

19 We will move on through the other
20 parties and then we will see if Mr. O'Connor is back
21 and we'll circle back again.

22 MR. FONTAINE: Thank you.

23 THE CHAIRPERSON: Okay.

24 Does Canada have any questions for
25 witnesses?

1 MR. ELFORD: James Elford for the
2 Attorney General of Canada.

3 We only have a few short questions but
4 they're all for Dr. O'Connor.

5 THE CHAIRPERSON: Okay, thank you.
6 Does staff have any questions?

7 MS LaCASSE: No, we don't, Mr. Chair.

8 THE CHAIRPERSON: Okay.

9 It seems like we don't have any
10 questions other than a few remaining questions for Dr.
11 O'Connor.

12 So maybe what I will suggest is we'll
13 take a bit of a break to see if Mr. O'Connor is able
14 to rejoin us.

15 Ms Asterisk, I would ask if you could
16 give a bit of an update as soon as you are able.

17 Mr. Ignasiak?

18 MR. IGNASIAK: Mr. Chair, for Dr.
19 O'Connor we don't necessarily have to cross in the
20 sense that we were simply going to put several
21 documents to him that he referred to, namely the
22 Alberta Health Studies.

23 I don't know what Canada's intent is.
24 But if we can simply enter those documents we intended
25 to enter that are specifically related to what he was

1 referring to, the health studies and his allegation
2 about the 6 million litres from Pond One or Tar
3 Island, then we are satisfied with that as opposed to
4 waiting for him because I have no sense of when he's
5 going to be back.

6 THE CHAIRPERSON: Okay.

7 Mr. Elford?

8 MR. ELFORD: Similarly, we are going
9 to be entering a few documents we shared previously
10 with the Keepers of the Athabasca and the Panel and
11 asking some very basic questions about them.

12 However, if those documents are on the
13 record, that should satisfy us.

14 We are also prepared to pursue these
15 very basic questions simply by way of some undertaking
16 that could be answered at a later date. That is also
17 an option that we are quite happy to live with.

18 These are very short questions.

19 THE CHAIRPERSON: Okay.

20 Ms Asterisk, I don't know if you have
21 a strong preference. I think what I'm hearing from
22 both Teck and Canada is that if they were allowed to
23 put certain documents on the record that they wanted
24 Mr. O'Connor to acknowledge, I guess, or speak to,
25 that may suffice.

1 Alternatively, if you think he's going
2 to be back in a reasonable period of time, then we
3 could take a short break.

4 I'm just wondering about how certain
5 that is.

6 MS ASTERISK: Yeah. I just texted him
7 and let him know that we are ready for him for
8 questions. But I'm really uncertain about the length
9 of time that he's going to need to be at the hospital.

10 Luckily it's not far away.

11 THE CHAIRPERSON: Okay.

12 Ms LaCasse, any advice for the Panel?

13 MS LaCASSE: Not in particular. I
14 don't know if there's any agreement from the Keepers
15 about admitting the documents or agreeing to give
16 undertakings to Mr. Elford, or the group's preference.

17 I suspect Mr. Ignasiak's preference
18 isn't to do this. But if we wanted to wait a few
19 minutes to see if Dr. O'Connor becomes available, it
20 really doesn't matter to staff which way we proceed.

21 THE CHAIRPERSON: Okay.

22 And Mr. Elford, do you have a
23 preference one way or the other?

24 MR. ELFORD: No. I'm happy to speak
25 with the Keepers over the break to determine whether

1 or not these would be very basic undertakings, should
2 we seek to proceed with them, that they could answer
3 or to have Dr. O'Connor answer.

4 THE CHAIRPERSON: Okay.

5 --- Upon recessing at 1612 / Suspension à 1612

6 --- Upon resuming at 1648 / Reprise à 1648

7 THE CHAIRPERSON: Thank you. Please
8 be seated.

9 Thank you, Dr. O'Connor, for making
10 the journey back. Okay, I think just Teck and Canada
11 have a few questions that they'd like to ask you.

12 MS LACASSE: We assumed Teck would be
13 going first, but if you have agreement with Canada for
14 them to go first, it doesn't really matter to us.

15 EXAMINATION

16 MR. ELFORD: Good day, Dr. O'Connor,
17 my name is James Elford, I'm with the Attorney General
18 of Canada. I want to thank you for coming today.

19 DR. O'CONNOR: Thank you.

20 MR. ELFORD: I've got a few very short
21 questions. Now, we provided some documents the other
22 day to the Keepers that I understand they passed on to
23 you and you provided them to the Panel. I believe
24 they have a number as a bundle, I believe?

25 MS LaCASSE: We do, and the documents

1 are CEAA 589.

2 MR. ELFORD: Thank you. All my
3 questions are going to be about that bundle of
4 documents, sir. Do you have them before you?

5 DR. O'CONNOR: I do.

6 MR. ELFORD: Great, thank you.

7 So at one point in your written
8 submissions and then orally today you referred to an
9 investigation arising out of a complaint in around
10 2007 to the College of Physicians and Surgeons by
11 Health Canada physicians?

12 DR. O'CONNOR: Yes.

13 MR. ELFORD: There's a document before
14 you called Investigation Report dated November 4th,
15 2009. Do you have it before you?

16 DR. O'CONNOR: I do.

17 MR. ELFORD: Is that the document you
18 were referring to when you referred to a complaint?
19 I'm sorry, let me rephrase that. Is this
20 Investigation Report the report that arose out of the
21 complaint that you were referring to?

22 DR. O'CONNOR: That's right. It was
23 according to the CPSA, the College of Physicians and
24 Surgeons of Alberta, confidential, and would remain
25 with the college and with myself and my lawyer, and

1 Health Canada got a copy. Then within 24 or 30 hours
2 it was leaked to the media.

3 MR. ELFORD: So it has been in public
4 before?

5 DR. O'CONNOR: Unofficially, yeah.

6 MR. ELFORD: Okay. I just wanted to
7 clarify that. But I just want to clarify that that's
8 what that is, okay.

9 The second document you have is Cancer
10 Incidence in Fort Chipewyan, Alberta 1995-2006. Do
11 you have that document before you, sir?

12 DR. O'CONNOR: I do.

13 MR. ELFORD: Okay, great. Earlier
14 this morning you referred to a cancer study as decent.
15 Is this the report you were referring to?

16 DR. O'CONNOR: Absolutely.

17 MR. ELFORD: In your written
18 submissions you also talked about a cancer report by
19 the Alberta Cancer Board in around 2008. Is this the
20 document that you're referring to there as well?

21 DR. O'CONNOR: No. The report is in
22 2000 and -- sorry. Yeah, this is a 2009 report. It
23 was in the documentation there's been referenced to a
24 previous Alberta Cancer Board report, but that was
25 Health Canada. That's the only Cancer Board reports

1 I'm aware of.

2 MR. ELFORD: Okay. Just to clarify,
3 at page 3 of your submissions you say:

4 "In 2008, with confidence in now
5 both Alberta and Health Canada at
6 an all-time low, the Alberta
7 Cancer Board was asked to do a
8 formal study of cancers in Fort
9 Chip." (As Read)

10 Is this document, Cancer Incidence in
11 Fort Chipewyan, Alberta 1995-2006, the document you're
12 referring to in the citation from your written
13 submissions that I just read to you?

14 DR. O'CONNOR: I'm looking at my
15 words. Yes.

16 MR. ELFORD: Okay, thank you. If you
17 could turn to a document that says, Appendix 1, Fort
18 Chipewyan Update, February 7th, 2014.

19 DR. O'CONNOR: Yeah, got it.

20 MR. ELFORD: Have you seen this
21 document before today, sir?

22 DR. O'CONNOR: I have.

23 MR. ELFORD: So would you agree with
24 me that this document is an update on the report that
25 we just spoke about entitled Cancer Incidence in Fort

1 Chipewyan, Alberta 1995-2006?

2 DR. O'CONNOR: Yes, it appears to be.
3 Yes, yes. The Alberta Cancer Board was actually
4 dissolved, was no longer in existence when this came
5 out.

6 MR. ELFORD: Okay, thank you.

7 There's one last document entitled,
8 Overview, it has a date of March 24th, 2014. It says,
9 "Cancer incidence in Fort Chipewyan Follow-up Report."

10 DR. O'CONNOR: Yes.

11 MR. ELFORD: Would you agree with me
12 if I described this as a overview produced by Alberta
13 Health Services summarizing the findings in the
14 document entitled, Appendix 1, Fort Chipewyan Update
15 February 7th, 2014?

16 DR. O'CONNOR: Yeah.

17 MR. ELFORD: Okay. Thank you very
18 much, sir. Those are all my questions.

19 DR. O'CONNOR: You're welcome.

20 THE CHAIRPERSON: Thank you. Any
21 questions from Teck?

22 CROSS-EXAMINATION

23 MR. FONTAINE: Yes, Mr. Chair, just
24 one.

25 Dr. O'Connor, are you familiar with an

1 independent peer review that occurred in respect of
2 the 2009 report just referenced by my friend from
3 Canada? It was authored by a Professor Bruce
4 Armstrong.

5 DR. O'CONNOR: No.

6 MR. FONTAINE: Oh, you're not? Okay.
7 I've got paper copies. I'm just dealing with a USB
8 issue right now, so I'll have electronics over
9 shortly.

10 MS LACASSE: Just to get the
11 recordkeeping out of the way, these documents coming
12 from Teck will be 592. Correction, Document 593.

13 EXHIBIT NO. 593: Independent
14 Peer Review authored by Professor
15 Bruce Armstrong

16 MS LACASSE: Panel, do you require
17 further copies? Because I've got some here.

18 MS ASTERISK: If you have extra, that
19 would be great.

20 MR. FONTAINE: So, to be clear, this
21 is an excerpt and the copy we'll be providing will
22 have the further layouts and the views of the doctors
23 who are listed on the front that it was reviewed by.

24 But I just wanted to bring it to the
25 attention of Dr. O'Connor, the third sentence that's

1 been highlighted:

2 "and they considered that the
3 investigation of suspected
4 cluster of cancers in the
5 Community of Fort Chipewyan to be
6 thorough, well-done, and to cover
7 all issues material to such an
8 investigation and the
9 interpretations of results." (As
10 Read)

11 Have you not seen this prior, Dr.
12 O'Connor?

13 DR. O'CONNOR: No. First time seeing
14 it.

15 MR. FONTAINE: Okay. Dr. O'Connor,
16 would you agree with this finding of the report?

17 DR. O'CONNOR: Just give me a minute
18 to look through it.

19 Yeah, I agree with that sentence.

20 MR. FONTAINE: Okay. Thank you, Dr.
21 O'Connor. Those are all my questions.

22 MS LaCASSE: Staff has no questions.

23 THE CHAIRPERSON: Okay, thank you.

24 So, Ms Asterisk, I know this is your
25 first hearing, so usually after cross-examination of a

1 panel, counsel has an opportunity to do what's called
2 redirect, and that's if you feel that any of the
3 responses the other panel members gave were unclear
4 and need some further clarification.

5 You have an opportunity to ask them
6 questions to try and make it clearer. But you can
7 only do that for issues that were addressed during the
8 cross-examination. So it's not an opportunity to
9 explore other issues and do other things.

10 So in this case it would be for either
11 Mr. Boychuck or Dr. O'Connor, if you thought there was
12 any additional clarity required, you have an
13 opportunity to do so. But you're not required, so
14 your opportunity.

15 RE-EXAMINATION

16 MS ASTERISK: Thank you. Thank you
17 for explaining that, Mr. Chairman, I appreciate it.

18 I would like to ask just one question
19 of Dr. O'Connor. There's a lot of back and forth
20 about reports, and the clarity that I'm looking for is
21 in regards to the appropriateness of previous health
22 studies.

23 We have this document that was just
24 given to us, a peer review by Professor Bruce
25 Armstrong, and he states further down in the fourth

1 paragraph, third sentence:

2 "If, however, it were to show a
3 clear gradient towards increasing
4 risk of cancer with increasing
5 duration of residents in Fort
6 Chipewyan it could suggest the
7 possibility of higher risk of
8 cancer in Fort Chipewyan due to
9 some unusual environmental
10 exposure in Chipewyan --"

11 (As read)

12 Then the very last sentence -- well, I
13 guess that whole paragraph is one sentence.

14 "-- regardless of whether or not
15 there is truly an increased risk
16 of cancer in residents of Fort
17 Chipewyan, well-done studies of
18 personal exposure of Fort
19 Chipewyan residents to
20 potentially toxic chemicals
21 originating in the oil sands
22 development and comparison of the
23 results with accepted standards
24 for environmental exposure of
25 communities might, depending on

1 the results, provide reassurance
2 to community members or point to
3 the need for stricter
4 environmental controls on oil
5 sands operations to the benefit
6 of the community's health."

7 (As read)

8 So I'm just going to ask Dr. O'Connor
9 to speak to those points. Basically, it seems that
10 Professor Armstrong is concurring with you, that
11 further study is needed. I just wonder if you could,
12 I guess, elaborate and give the Panel your thoughts?

13 DR. O'CONNOR: Yeah, I agree. This
14 links back to the Northern River Basin Human Health
15 Monitoring Program and the recommendations from that
16 panel regarding ongoing monitoring, especially of
17 environmental impacts or potential environmental
18 impacts on human health.

19 It goes back to the recommendations
20 out of this report, Cancer Incidence, Fort Chip, that
21 the community enjoys a 30 per cent higher rate of
22 cancers contradicting what Health Canada had told the
23 community in 2006. It links in with what the
24 community has been asking for in its own words long
25 before I came to Fort Chip, when they've been seeing

1 the changes in their environment.

2 I guess, I would be happy if a study
3 finally, a comprehensive health study, was done with a
4 particular slant on environmental influences on human
5 health, but not necessarily emphasizing that.

6 After all of the evidence that's
7 accumulated, all of the -- Dr. Schindler's studies,
8 the U of A Scientific Toxicology studies on pet. coke,
9 Dr. Kevin Timoney's studies, the evidence that the
10 communities have produced from nature with the
11 question, why is this happening, nobody has answered
12 it. Despite repeated promises of health studies, none
13 has taken place.

14 So I would agree and I would have
15 actually highlighted that last paragraph. I'm very
16 happy to see this page. Thank you. I think this
17 totally supports what we're trying to do here.

18 Thank you for that.

19 THE CHAIRPERSON: Okay. Thank you
20 very much, panel, we appreciate the time and effort
21 you put into your materials and for being here today
22 and participating in the process.

23 We're at the end of the day. We are
24 about to adjourn until Monday, hopefully I'll get the
25 date right this time, October 15th, in Fort Chipewyan.

1 I'm not sure I know what the start
2 time is, but I'll say tentatively the start time is
3 9:00, but stay tuned and if there's any adjustments to
4 that we'll let you know. But I believe that's the
5 plan, unless I'm told otherwise.

6 MS LaCASSE: I'm going to tell you
7 otherwise right now.

8 THE CHAIRPERSON: Okay.

9 MS LaCASSE: I believe we're going to
10 have to start at 9:30 for various logistical reasons.

11 THE CHAIRPERSON: Okay, 9:30 on
12 Monday, October 15th, in Fort Chipewyan.

13 DR. O'CONNOR: One suggestion. When
14 you go to Fort Chip, bring your cameras, enjoy the
15 scenery, enjoy the community, because it is God's
16 country.

17 THE CHAIRPERSON: Okay. Thank you,
18 Dr. O'Connor.

19 Okay, we're adjourned.

20 Thanks everybody.

21 --- Whereupon the hearing adjourned at 1705, to
22 resume on Monday, October 15, 2018 at 0930 /
23 L'audience est ajournée à 1705 pour reprendre
24 le lundi 15 octobre 2018 à 0930

25

