THE ALBERTA ENERGY REGULATOR

IN THE MATTER OF Application Nos. 1709793,
001-00247548, and 00303079
to the Alberta Energy Regulator

AER PROCEEDING

FINAL ARGUMENT

Calgary, Alberta

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(PROCEEDINGS COMMENCED AT 9:00 AM)

Discussion

THE CHAIR: Thank you. Please be seated.

Good morning, everyone. Just before we get started, just a reminder that this proceeding is being audio webcast. If you have any concerns, please let

Ms. Lacasse, Ms. Doebele, or Ms. Wheaton know what your concerns are.

Are there any preliminary matters that we need to address before we continue with final argument?

Seeing none, Ms. Asterick, Keepers of the Athabasca, it's your opportunity for final argument.

MS. LACASSE: Just before we get started, I was just going to attribute a number to the written version of your presentation, and that will be 698. Sorry. 99.

MR. MCMANUS: Ms. Asterick, you need to press the button.

Final Submissions by Ms. Asterick

MS. ASTERICK: There we go. Is that good?

All right. Mr. Chairman, Panel, Keepers of the Athabasca would like to acknowledge that we're participating in this hearing Treaty 7 territory which is home to the Blackfoot Confederacy, Tsuut'ina, and Stoney Nakoda, along with Metis Nation Zone 3.

Thank you for this opportunity to make final statements for your consideration in hopefully not approving this new proposed bitumen project. As human health and environmental effects in the area are already severe and not adequately documented, as this project is proposed to utilize the same tailings management and other techniques that have produced the

situation, as Alberta's bitumen resource is currently very much overproduced and infrastructure challenges considered continue, as international challenges to Canada's management of tailings contrast with current work to release tailings to the environment, as industrial emissions are affecting wildlife in Wood Buffalo National Park and spurring more international investigation, as Canada's global commitments require us to produce less greenhouse gas to prevent catastrophic climate change which is already strongly felt in the area, we call on you not to grant approval to this project. If you do approve the approval for the Frontier bitumen project, you will be liable and responsible for throwing the entire region into an abyss of contamination and climate change. History will not be favourable to this decision.

Through our experience participating in this hearing process, Keepers of the Athabasca wishes to make sure the following points are taken into consideration: Number 1, the lack of Indigenous knowledge utilized by Teck Resources. Contrary to what Mr. Ignasiak said yesterday during the hearing, Teck Resources explained on page 588 of the hearing transcripts by Dr. Johnstone that they do not engage directly with Indigenous knowledge keepers. While we understand the process of engagement is with chief and

council, it is also true that Teck Resources could have requested community meetings with Indigenous knowledge holders.

We submit that Teck Resources has failed to incorporate all knowledge into the development of their project. By meeting specifically with Indigenous knowledge holders, Teck Resources would have had exceptional insight into solutions to environmental and health problems that their proposal in its current form will exacerbate. This oversight is further compounded by the passing off of every single concern raised by First Nations as described in the consultation documents provided to the Panel.

First Nations are encouraged to pursue process through LARP, through the energy regulator, and through forums other than the project-specific consultation process. The reason these issues were brought forward to this table is that the Joint Review Panel is responsible for reviewing concerns. Yourselves, the Joint Review Panel, is responsible for adhering to the precautionary principle as laid out in Canada's Environmental Enhancement and Protection Act. You must consider that passing the buck for concerns raised by those closest to the land, along to other processes, should not be acceptable either to the Joint Review Panel or to Teck Resources.

As an example, diverting water into man-made lakes as compensation lakes is not a solution to the environmental degradation experienced regionally, as these man-made lakes are not appropriate for conducting traditional livelihood activities, such as trapping, hunting, and fishing, even while the traditional areas are destroyed.

Confidential agreements with small numbers of First Nations leadership are not an appropriate method of gaining First Nations support. As the Supreme Court of Canada has been very clear, that decision-making power lies with the membership of First Nation and not the leadership. A better model is shown by Dene Nation or Akitcho Territory negotiators. They consult with the entire community of out-projects. The community itself meets and give theirs thoughts and concerns to a negotiator, who then meet with the project proponent. Chief and council are brought in at the final stage to ratify the agreement between project proponents and the community.

Even a community referendum for projects would be preferable to the system in use in this current project, where community members, including traditional knowledge holders with crucial information that has bearing on the project have no voice. It is a mistake to avoid the Indigenous knowledge of those closest to

the land with environmental understandings passed on through generations. This lost opportunity will come back to bite us.

Our co-chair, Jean L'Hommecourt, would like to address the Panel.

Final Submissions by Ms. L'Hommecourt

MS. L'HOMMECOURT: Good morning, Panel Members. Good morning to the three gentlemen at the head -- at the head of the table, Joint Review Panel members.

I also would like to acknowledge our presence here on Treaty 7 territory. My friend here is from the Kainai Nation, Roxane Blood.

Thank you for inviting us to be a participant at this hearing.

(OTHER LANGUAGE SPOKEN)

Today I stand here before you, once again, to advocate for the survival of our wildlife that do not have a voice and are not commonly to -- and are too commonly referred to in numbers, graphs, sizes, patterns, et cetera, et cetera. That is the Western science methology [sic] that has brought us to this crisis of many species on being extinguished forever, such as the Ronald Lake buffalo, the whooping cranes, the caribou, the wolverine, the wolves, polar bears, grizzly bears, blue herons, moose, otters, minx, owls, et cetera, et cetera. These animals do not have a

voice, but I am here to represent them.

Our peoples -- our first peoples of this land are known as "stewards of the land". This interpretation comes with the acknowledgment that we are addressed as "First Nations" because we inhabited this land long before the Europeans discovered our peoples and our territories, only to rely on our first peoples for survival and to discover the rich natural resources that was raped -- that was reaped for the country's and worldwide economic prosperity. In exchange for our natural resources, we have sacrificed our cultural way of life through broken treaty agreements that we have made in good faith of [sic] the government, to which they have stolen our land, our language, our children, our woman [sic], and eventually our men.

This brings me to remember a legendary story of our -- of our peoples of a trickster named was Wasaki Jack [phonetic] and other tribes also known as Witegoo, and "Witegoo" meaning greedy. His unsatiable appetite never gets fulfilled as he continuously consumes everything in site until no more is available. Hence our cultural teachings: Take only what you need.

This is the type of greed that we are facing today in industrial development in our traditional territory. This greed for more materialistic gain has now brought us to where we now advocate for protection of Mother

Earth, protection of water globally, as every human being depends on water for life. Without water, humanity will not survive. Water is life. Water is boss.

Those phrases are simple and straightforward, but, yet, we continue to gamble with our future, our children's and our grandchildren's future. Everyone in this room will pass on their lineage and naturally will want to protect their safety, their health, and well-being. Who in this room can say that they don't care for the future of your family's generations to come?

These are now genuine worldwide concerns that are being questioned as to who will ensure that this planet will survive for another hundred years. The devastation inflicted upon humanity worldwide has reached a tipping point of no return, as scientists predict catastrophic consequences that no human will survive called by the dominant society as -- as the Apocalypse. Our elders say (OTHER LANGUAGE SPOKEN), meaning the land is gone, and that will be the end of Mother Earth.

I want to speak to you about Teck's experts. I heard the name Daryl Shevolup many times and how he -- how he questioned our traditional land-use territory that was done in our territory. Daryl Shevolup was a

brother to Chuck Shevolup, who lived across the river in a cabin after being removed from his home and left his family with nowhere to go. This Daryl Shevolup is known to us as "Dode", his nickname.

This person is a person that we helped when he came North. When he came onto our lands, he said that there would be enough buffalo to feed everybody in the region, which I disagree with because when he was out there with his young Indigenous woman and their child, they experienced hunger, and it was left to our family to feed him, to bring him food and supplies for him and his family. So I don't know how he got the information or -- or how he be -- came to be an expert.

In 1788, Fort Chipewyan, the oldest and continuous oldest settlement in Alberta, was founded. 1870, Hudson's Bay Company store was built in Fort Chipewyan. 1922, Thomas Draper was granted a lease to built the McMurray Asphaltum and Oil Limited plant in what is now called "Draper". And it goes on from there. 1941, the Asphaltum Oil Sands Limited refinery begins operations.

On our river today, the Athabasca River, there is a old, abandoned first mine site that is called the "bitumen mine site". To this day, when we travel on the river past it, we see the effects of the oil sands and what they have left for us to clean up. And the Government of Alberta has failed to protect our -- our

lands, our resources that we depend on for the very survival of our cultural way of life.

This bitumen piece of devastation is in our face every day, as we see it, and because of the -- the extreme costs of trying to get it cleaned up, which they couldn't do, instead, they designated it a historical site with buildings dilapidated and ready to collapse.

And the -- the contamination of the buildings contain asbestos, and when we have the south winds, it blows all the asbestos onto the river, and -- and, therefore, the Fort Chipewyan people experience all the effects of everything that goes down towards them.

The 24th United Nations Climate Change Summit is happening, and it poses a lot of humanity advocating for change, climate changes, justice to face global catastrophe of severe droughts, floods, sea level rising, extreme heat, and eventually poverty caused by wildfires. Our land is being dried up, and our forests are burnt. Our animals are suffering with no food, and this is what's going to happen to us as a peoples as well.

Last week, there was an article about the man camps that are being proposed that come into our -- our territory. This inflicts all forms of violence against Indigenous woman and girls in -- in the area, which

cause -- is causing social, economical, cultural, institutional, and historical causes contributing to ongoing violence and particular vulnerabilities of our Indigenous woman and girls in Canada, as the numbers speaks for itself in the statistics of our missing and murdered Indigenous peoples.

Merci. I will end there. Thanks very much for listening.

Final Submissions by Ms. Asterick

MS. ASTERICK: I should've said for the record I'm Jule Asterick for Keepers of the Athabasca.

The point about man camps, being that there's another huge one proposed with Teck for their 7,000 workers. So, yeah, it would -- again, exacerbate an existing known situation that has been studied and shown to be very detrimental.

Our second issue that we'd like to talk about is the principle of sustainable development as defined under the Canadian Environmental Assessment Act and Alberta's Environmental Protection and Enhancement Act. It's not upheld in this application in that the project, both alone and in conjunction with other projects in the region, compromises the ability of future generations to meet their needs.

Cumulative environmental effects and human health effects in the area are already severe, as evidenced in

studies we presented to this Panel in Fort McMurray. Increases in contaminants in water, sediment, and fish downstream of industrial sources; significant air emissions and major pollution incidents; and the loss of over 65,000 hectares of boreal ecosystems are well documented.

Cumulative environmental impacts have reached a critical threshold based on recent studies. Studies we provided and described by cochair Paul Belanger describe how there is no longer any ecological buffer remaining. Environmental impacts affect water quality and the terrestrial animal and plant ecosystems. Additionally, current and past industry air emissions are and have produced acid rain showing a clear cumulative impact to lakes in the boreal forest in a very large area. Teck Resources asks this Panel --

THE CHAIR: Ms. Asterick --

MS. ASTERICK: Yes.

THE CHAIR: -- I think you have to slow down a little bit. I think the court reporters are having trouble keeping up.

MS. ASTERICK: Okay.

THE CHAIR: Thank you.

MS. ASTERICK: Teck Resources asks this Panel to lower standards in evaluating environmental and financial effects and considering the fate of

endangered species and asks that this Panel completely disregard environmental regulations regarding Parks Canada and Environment and Climate Change Canada studies and presentations.

Teck asks this Panel to consider Parks Canada's 2014 study instead of their most recent work, another example of backwards standards. Teck insists that everyone else has confirmation by us, when, in fact, they are obviously working only in their own interest and minimizing any and all issues this proposed project will exacerbate. We ask that the Panel note the science wars that Teck has instigated by denying science presented by others.

When the UNESCO world heritage committee made 17 recommendations to Canada in order to adequately protect Wood Buffalo National Park, Recommendation Number 5 asked Canada to conduct an environmental and social impact assessment of the proposed Teck Frontier Oil Sands Mine Project in line with the IUC and world heritage advice note on environmental assessment fully taking into account the outstanding universal value of the property, including the Peace Athabasca Delta.

Keepers of the Athabasca asks that the joint review panel carefully consider our international obligations in protecting an already endangered world heritage site and not approve the current project.

Approving a new bitumen project, the largest and most -- most northerly bitumen mine yet, and very close to Wood Buffalo National Park, will push regional cumulative effects past the breaking point.

To illustrate our previous point, concerns raised by all of the First Nations in their consultation documents mentioned cumulative effects, and all of these concerns are passed over to other venues via these same consultation documents.

Keepers of the Athabasca maintains that it is appropriate for the Joint Review Panel to consider the exacerbation of already severe cumulative effects as you are tasked with ensuring that this project conforms to EPM.

Number 3, health effects. This project would exacerbate current known, while not properly documented, health effects, including rare cancers. Our expert Dr. John O'Connor discussed the fact that residents in Fort Chipewyan, since the late '90s, had begun to experience health issues unlike any time in its 200-plus years. Malignancies, auto-immune diseases, diabetes were previously foreign to residents. A spike in certain cancers especially was quite noticeable by the early 2000s. Cancers that include cancer of the biliary tract notably cholangiocarcinoma, a particular cancer that was rare

and not expected to occur in more than 1 and 200,000 of the general population occur in the Fort Chipewyan area at a rate of 3 out of 850 people. The Alberta Cancer Board revealed to Fort Chipewyan that cancer was at least 30 percent more prevalent there, singling out specific types of cancer including hepatobiliary cancer. The comprehensive health study, whose terms of reference were put together by a scientific team and approved by all local First Nations, was abandoned when bitumen industry representatives announced that they would be part of the oversight committee. Teck insists on talking about their health assessment, which is not anything close to a health study. The much needed comprehensive health study has never yet been completed, and human health impacts from existing projects continue increasing in severity.

Number 4, environmental and human health monitoring. As current self-reporting practices by industry are shown not to be successful in protecting either the environment or human health, the approval of yet another bitumen project will exacerbate these issues.

We discussed in our presentation to the Panel the fact that government monitoring efforts have also been biased, referencing the CABIN study by Robert Brua -- spelling is incorrect in the transcript -- of

Environment Canada page 1,849 of hearing transcript on October 4th. Third-party independent monitoring and community-based monitoring is needed.

Funding for independent monitoring is not readily available either for community monitoring programs or for independent third-party scientists. Community-monitoring programs will need development and capacity building in order to be successful, and open-source data banks are needed to file, share, and compare monitoring results. There is currently no independent or non-biased scientific monitoring being done on a consistent basis, and past monitoring results from the excellent but now dissolved cumulative effects management association have been dispersed. Very many people poured their time, effort, work, and heart into the important work of this association for over a decade to have all of that disbanded and discontinued, and the results no longer available. This is not acceptable and also affects community attitude toward the current proposal as cynicism regarding monitoring in general is setting in.

Number 5, financial considerations, including potential overstating of royalties, income, and taxes; the potential for huge costs to Canadian society in case of stranding or abandonment; and the overall economic viability of this project. As our expert

witness Dr. Gerda Kits stated, a fair and full assessment of the project requires that benefits be weighed against the potential costs resulting from the project. Not only does Teck not provide any cost-benefit analysis, it asks the Panel to disregard the cost-benefit analysis that was presented.

Teck's submission provides only part of the information necessary to determine whether the project will, in fact, yield net benefits. It does not provide an estimate of total revenues over the life of the project necessary to determine the benefits of the project. It provides estimates of private costs, construction, operation, and reclamation costs, but does not provide any monetized estimates of social costs, such as the costs associated with climate change, species loss, other environmental damages, or impacts on human health, all of which are possible to estimate.

The Oil Sands Conservation Act states that projects may be approved if they are in the public interest, and it is not possible to determine the public interest based on the information provided by Teck Resources in regards to the financial viability of the Frontier bitumen project.

Canada's EPEA recognizes that the production of the environment is essential to the integrity of

ecosystems and human health and to the well-being of society and, finally, the principle of sustainable development, which ensures that the use of resources and environment today do not impair prospects for their use by future generations. None of these legal requirements are met by Teck Resources in their application for a new bitumen mine.

The information we wanted to present you with in our motion to call witnesses that was denied by you has now hit the news. The cost of reclaiming fossil fuel infrastructure in Alberta can be as high as $260 billion, much more than previous estimates. This new 260 billion figure is important for the Joint Review Panel to consider, following the precautionary principle in looking at worst-case scenarios as you evaluate adding yet another longest yet potential source of liability to the already onerous list of oil and gas bitumen facilities for Alberta and Canada.

In order for regulators, including the Joint Review Panel, to properly assess the environmental effect of decommissioning and restoration provisions, or "DRPs", and the ability of Teck to fulfill their decommissioning and restoration obligations, the following recommendations need to be fulfilled.

And here I'd just like to point -- oh, sorry. I'd just like to point out what was stated yesterday

about -- recommendations should actually be conditions because, as we've seen, recommendations don't really have any effect at all.

The other thing I'd like to say from our expert Regan Boychuk, who has written what I'm going to read now, in terms of these recommendations or potentially conditions that need to be fulfilled -- he defends himself -- Teck has attacked him and his expertise. He says: (as read)

> I could list at least half a dozen undisputed leading experts from industry and government that would vouch for my expertise and formidable research on these topics. Teck's team of experts could not find anything substantively wrong with my 42-page paper. There's a famous story attributed to Sam Irvin [phonetic], a conservative American senator, who once said that, as a young lawyer, he had learned that if the law is against you, concentrate on the facts; if the facts are against you, concentrate on the law; and if both the facts and the law are against you, denounce your opposing counsel.

And that is what Teck has done in trying to discredit Regan's work.

So on to the recommendations, possibly conditions.

Disclose separate values for liabilities incurred and revisions to estimated cash flows.

Identify and correct any internal control system deficiencies underlying high year over year rates of revision to expected cash flows.

Establish an asset retirement savings plan to ensure timely settlement of DRPs. The savings plan should account for the possibility of significant unanticipated acceleration in settlement dates.

Include DRP payments in the obligation table reported in the annual management discussion and analysis.

If the amounts are discounted, it is important to supplement the disclosures with undiscounted figures so that analysts could see the total amount of undiscounted expected cash flows.

If amounts include inflated adjustment -- sorry, inflation adjustment, this fact should be disclosed along with the uninflated amounts.

If expected cash flows are truncated, for example, disregarded beyond a certain number of years, disclose the truncation period. The justification for the truncation and the total period over which settlement of existing DRPs is expected to occur.

If some obligations require perpetual asset retirement activities, for example, water containment

or treatment, highly relevant -- both are highly relevant to Teck's operations.

Disclose the annual undiscounted --

THE CHAIR: Ms. Asterick, sorry to interrupt, but just slow it down a little bit --

MS. ASTERICK: Okay.

THE CHAIR: -- just for the court reporters.

MS. ASTERICK: Thank you.

-- and uninflated cost of these activities. Recognize that DRPs are critical accounting estimates and provide useful non-boilerplate MDNA disclosures that will improve forecasting.

Disclose the following additional information if not included elsewhere, and then we have a series of bullets under that one.

The undiscounted value of newly discommissioning [sic] and restoration provisions incurred during the year.

Separately disclose data for provisions assumed in business combinations.

The expected number of years over which Teck's existing DRPs will be settled, the expected cash flow compounding annual growth rates, "CAGRs", over that period, and the factors contributing to the anticipated cash flow CAGRs.

The historical and anticipated future order and pace of DRP settlement, and there's three bullets under that one.

Absent information to the contrary it is expected that similar assets will be retired on a first-in-first-out basis if asset retirement costs relating to newer assets will be incurred prior to decommissioning and restoration provisions for older assets, and the change in that order will have a significant impact on the amount and timing of expected cash flows; Teck should disclose this information.

Also, absent information to the contrary, it is expected that Teck would, on average, retire one year of DRPs incurred 30 to 60 years ago every year. This could be called an "equilibrium pace".

To assist analysts in making projections in historical DRP payments, Teck should disclose whether recent DRP settlement costs reflect an accelerated equilibrium or deferred pace of retirement.

The undiscounted amount of market risk premium with an explanation of how this amount was determined should be disclosed.

The discount rate to calculate the present value of expected cash flows, and if the rate includes a credit adjustment, an explanation of how the credit adjustment was determined taking into consideration the

effects of all terms, collateral, and existing guarantees specifically related to Teck's DRPs should be disclosed.

Reasons for historical trends in the rate of revisions to expected cash flows and expectations for future revision rates should also be disclosed. Historical DRP/CapEx ratios, forecasted changes in this ratio, and the underlying causes of such changes should be disclosed.

The amount and types of financial assurance including restricted assets in place to secure settlement of DRPs should be disclosed.

Details about any decommissioning and restoration savings programs designed to assure the availability of sufficient resources to satisfy DRPs in a timely manner as they come due should also be disclosed.

The above information and analysis is required in order for the Joint Review Panel to sufficiently evaluate Teck's environmental liability management if regulators intend to make an informed decision in the public interest to add billions more to the approximately $260 billion in oil/gas mining liabilities the Alberta public is already at severe risk of inheriting from industry.

Any evaluation of the viability of Teck Resources and any cost-benefit analysis of their proposed

Frontier bitumen mine -- both need to properly account for their current and proposed environmental liabilities, including contingent liabilities and the potential for regulatory acceleration of decommissioning and restoration obligations.

Alberta's bitumen royalty regime was formally excluded from examination during the Province's 2010 royalty review and was effectively excluded from examination during the 2015 royalty review.

Bitumen land sales and royalties currently collect much less than a nickel for every dollar generated in oil sands development. Alberta has never produced more oil or bitumen -- or collected fewer royalties than it does today, and this is simply not sustainable over the long term.

A proper public interest evaluation of Teck's proposed bitumen mine needs to appropriately account for royalty risk. The spectrum of potential royalty outcomes over the course of the Frontier Mine's life need to be weighted by probability and incorporated on an expected-value basis into the cost-benefit analysis of whether the project is in the public interest.

Number 6, consideration of climate change in relation to this project. Teck's stated objectives in their application and subsequent responses to information requests are simply not achievable.

Extreme weather may provide risks not listed in the environmental impact statement or in Teck's answers to information requests, as extreme winds, fires, and floods can affect facilities, production, and plans for tailings management.

Regarding the advisability of adding yet another new bitumen mine to production after the Prosper Bitumen Mine and Imperial's new expansion project at Cold Lake were already approved just this year among other projects, Keepers feel that your approval of the largest bitumen mine yet would be a terrible mistake.

Scientists, including William Pelletier, head of University of Toronto Centre for Global Change Science, John Smol Canada's research chair in environmental change at Queen's University, and David Schindler professor at University of Alberta recently said together: (as read)

> Strong action must be taken in the next few years [in regards to climate change]. There is no time for the transitional economies that some have touted to pacify fossil fuel interests by investing in still more fossil fuel infrastructure.

Additionally, approving this current project will subtract more peatlands from the mix in northern Alberta. Current plans dictate the replacement of

areas destroyed for open pit bitumen mining with upland forest and tailings storage lakes amounting to the destruction of over 29,500 hectares of peatland habitat.

Peatland sequesters carbon dioxide so this loss will increase our carbon emissions. Landscape changes caused by mines approved only until 2011 will release between 11.4 and 47.3 million metric tons of stored carbon and will reduce carbon sequestration potential by between 5,700 and 7,200 metric tons of carbon per year, and that's through the peatland destruction. So additional bitumen development, including the current proposal for Alberta's largest bitumen mine yet, will decrease Canada's ability to sequester and store carbon dioxide exponentially.

Recent reports show that world carbon emissions increased substantially this past year. Canada is one out of only five countries in the world whose carbon emissions increased. Sir David Attenborough recently said: (as read)

> If we don't take action on climate change, the collapse of our civilization is on the horizon.

We are in a struggle to provide a sustainable future in this historic time, and approving Teck's [sic] Resources proposal for a new largest ever bitumen mine

would be far worse than fiddling while Rome burns; it would be like adding gasoline to the fire.

Number 7, tailings. Contrary to Mr. Ignasiak's statement yesterday, Keepers certainly does challenge Teck's tailings management plan. The proposed tailings management for this project is not acceptable, considering known impacts of current tailings management. Planning on using the same tailings management plans as other bitumen projects shows insufficient research and effort by Teck Resources.

On page 597 and 598 of the hearing transcripts for September 27th, tailings management is discussed. Mr. Chiasson admits that there is not an engineered clay liner or any type of liner in their tailings management plan. My point is that even municipal landfills must have either engineered compacted clay or synthetic liners. Some larger landfills have a dual liner with leak detection leachate return systems, and we have this technology readily available. Why is it not already in use by industry as required by -- and required by the Alberta Energy Regulator?

The Joint Review Panel needs to weigh the advisability of adding more inadequate and massive tailings into the landscape. For Teck to claim that they consider their proposed tailings to be full containment is patently ridiculous without even a

liner, never mind a single tank.

Teck Resources describes their tailing management plan similar to other industry plans as including seepage walls to return tailings seepage from beside the ponds. No tailings management plan, including that of Teck Resources, takes vertical seepage into account in which tailing leakage vertically enters groundwater and moves to other locations, including the Athabasca River.

The risk of infiltration of tailings and other process water has been acknowledged by industry and government since at least 1981 according to the 2008 Allen Report for Natural Resources Canada. This brings to question self-reporting by industry regarding the massive tailings leakage into groundwater that we are currently experiencing. There has been much obfuscation around seepage walls which does not examine the issue of vertical seepage whatsoever, but actively avoids it. From our knowledge, there has never yet been a report of tailings leakage into groundwater.

We have a NAFTA challenge regarding Canada's current management of tailings, and tailing ponds are known to be leaking down into the groundwater and then back up into the Athabasca River. No company has specifically reported this, to our knowledge.

With this state of affairs, it is not appropriate

for this Panel to grant approval to a new bitumen mine that intends to maintain the same poor tailings management and reporting options as other bitumen facilities. Approval of this project would be an embarrassment to Canada and especially to this Panel.

Regarding groundwater tailing leakage, as Dr. Wendling's study points out, the hydrogeological [sic] units at the Teck site may have different hydrological behaviours than similar units at other oil sands project sites located tens of kilometres away. Also, Teck has used assumptions in their conceptual and numerical model, for example, assuming the presence of impermeable layers that create a barrier to groundwater flow near and under the Athabasca River that have not been confirmed by field investigations. These assumptions, while convenient for Teck, are inaccurate and show the bias of their expertise in this area.

Poor definition of the piezometric conditions also affects the reliability and validity of both the conceptual and numerical models provided by Teck. Teck refers to outdated studies published as far back as 1979, 38 years ago, in the scientific field of surface water and groundwater interaction that has evolved drastically in the last 10 to 20 years.

Currently available tools and protocols should've

been used by Teck in their application to adequately assess the surface water and groundwater integration in the affected region.

Keepers note the lack of any full containment options for tailings, page 606 to page 614 on the transcripts from September 27th. This technology is available. Pond liners, dual liners with leak detection and return, tanks and other infrastructure, and because of the lack of innovation -- contrary to Teck's claims of their innovation -- and lack of resources put into tailings management and reporting, grave environmental and health effects are taking place without being appropriately measured incurring international challenges to Canada's approach to tailings management. Long-term tailings approaches threaten to undermine sustainable development as risks are deferred and placed on future generations.

Number 8, aerial emissions. Particulate matter affects human health. Studies on the effects of particulate matter experienced by humans show that effects can vary from irritation, eye, nose, and throat, headaches, nausea, dizziness, the worsening of asthma symptoms, to more severe effects like damage to the liver, kidneys, central nervous system, to increasing the risks of cancer. Studies show that the evaporation and atmospheric oxidation of low volatility

organic vapours from the mined oil sands material is directly responsible for the majority of observed secondary organic aerosol mass.

The resultant production rates of between 45 and 84 tons per day of particulate matter make the oil sands one of the largest sources of anthropogenic secondary organic aerosols in North America. While these regional exceedances and particulate matter are well-documented, their specific effects on local human health and the environment have somehow not been well-documented at all.

Traditional knowledge holders in our membership have raised the possibility of increased forest flammability with over 50 tons of hydrocarbon-related particulate matter landing on the northern Alberta boreal forest every day. The addition of yet more emissions with this largest yet bitumen mine and placed even further north would be a disaster. What kind of disaster could depend on ingredients such as lightning and wind. As we have seen during the Slave Lake 2011 and Fort McMurray 2016 fire, our increasing wind speeds make forest fires literally unstoppable.

While forest flammability may be a new idea for many, it deserves to be researched and treated seriously. The northerly aspect of the current project demands that the Joint Review Panel think about the

tons of hydrocarbon particulate matter released every day and, in the absence of research on forest flammability, take these aerial emissions into consideration in your decision.

We are changing the world around us, and this dynamic situation we have created affects us as well.

Our director, Roxane Blood, would like to address the Panel, and then I have a very brief conclusion.

Final Submissions by Ms. Blood

MS. BLOOD: Good morning. (OTHER LANGUAGE SPOKEN). My name is Roxane Blood, and I'm here on behalf of Keepers of the Water, but also speaking for my children.

I'm the mother of four daughters, and I'm concerned about the future for -- for our children, for your grandchildren, and I -- I ask that you take into consideration this project that's going to be happening -- proposed to happen. I -- I would like to acknowledge the water and how, as humans -- all of us, we need the water. And what's being done to the water up there is just criminal. We have places throughout Canada where our First Nations people are on boiled advisory.

I would also like to acknowledge the man camps that are going up there and what's happening to the women.

My -- my mother is from Kainai, and my father is from Fort Providence, so I'm speaking on behalf of my relatives that aren't here. A lot of our people have not been able to participate and know what -- the devastation that's coming to them. We already see it with what's happening with industry that has been there, and if people are able to go up and see the land that's -- that is there and what's happening from an aerial view, they don't even have to see it. You could see it through the smog that's being produced and the toxins that's -- that's out there. And that's criminal.

So everybody talks about this money. Money, money, money. But, yet, that's -- that's not going to be a promise for our children in the future because the air's not going to be there. If you look at what's happening in China with the -- the pollution and the -- they have to wear masks; you can foresee that coming to Canada. If this is going to be the largest carbon-producing mine that's coming here, we are going to be the contributors of that, and we don't want that to go down in history without stopping it.

So my plea is for you to look at what's happening and going to happen in the future if Teck goes up. And I ask that you take that into consideration and to take a moral stand for your children, for your grandchildren

to come. And so, yeah, that's all I'd like to say on behalf of myself and my people. So thank you.

Final Submissions by Ms. L'Hommecourt

MS. L'HOMMECOURT: Thank you to my sister, Roxane, for contributing here at the hearing.

I'd like to bring your attention to a media release that was released on December 6th, 2018, from the Fort McKay First Nation, to which I am a member of. (as read)

> The Fort McKay First Nation sues Alberta for Treaty 8 infringement. Fort McKay First Nation, this week, filed suit against the Government of Alberta for Treaty 8 infringement on Fort McKay's claim. Fort McKay's claim seeks an injunction to prevent the authorization of any industrial development in the Moose Lake area, as well as other remedies.
>
> Fort McKay First Nation is located at the centre of the oil -- Athabasca oil sands area, north of Fort McMurray, and has already lost most of its traditional territory to extensive industrial development.
>
> Fort McKay has sought to protect the Moose Lake area from encroaching developments since the early 2000s. Alberta has

acknowledged the Moose Lake area is sacred land that needs protection to support the meaningful exercise of treaty rights for generations to come.

Yet, despite the acknowledgment, Alberta continues to prove -- approve oil sands projects in the area, which Fort McKay says breaches the Crown's solemn promises made by the Treaty 8. Chief Jim Boucher, leader of the Fort McKay First Nation, for decades has led his people to relative prosperity as active participants in the oil sands region, but he also says there is a limit to what his people should have to endure. "We have constitutional rights under Treaty 8 that are being completely disregarded. Moose Lake is the last place where our people can exercise those rights which were promised to our ancestors in perpetuity under the treaty. We will not stand idly by and let the area be destroyed", says -- said Chief Boucher, adding, "Fort McKay First Nation is fighting for its cultural survival as one of the largest industrial projects on the planet devours more of our land that has been our home for "millennia".

Chief Boucher's position is exactly in line with Canadian law known to everyone since 1899. Alberta can take up land for industry and settlement, but there is a limit, and that limit is reached when industrialization and settlement prevent the meaningful exercise of treaty -- of our treaty rights. "The potential destruction of the Moose Lake area reaches and threatens to cross over that line."

These are the words that are said by Jack Woodward, Fort McKay's legal counsel in this matter. So I bring that attention to you.

And here we are, standing again, once again, advocating for our treaty rights which has been infringed upon, and the Government continues to -- to approve every project that comes before them.

I'd also like to -- like to bring your attention to the -- the mine -- the proposed mine site which they indicate will create 10,000 jobs. I have a son that is 24 years old and has never had a job in the -- in the oil industry. He has tickets for entry onto a site but has never been accepted, which I am very thankful for so that will look -- so he can look after his health.

And our ancestors are looking down on us today, and I am proud to stand here to say that I have done my

job to advocate for our people's future, the children's future, for the protection of Mother Earth. Thank you.

Final Submissions of Ms. Asterick

MS. ASTERICK: Thank you to, Jean.

Yeah. The relevance of the court case against the Moose Lake proposal is -- is the fact that cumulative effects have reached the limit. They've reached the limit, and no amount of science words can change that.

So, in conclusion, an overview is necessary to make the best decision possible. Some of our board would like to encourage you, the Panel, to be heroes in your decision and take a hero's stance. It is with the distress of local communities that we are here today to offer statements that will assist your decision regarding the proposed Frontier bitumen project. The ultimate outcome of your decision will soon be exposed and affect us long into the future.

This decision will have impacts for all of life on our planet for the next seven generations, whether it is built or not. It is our understanding, based on our experience with Teck Resources in this hearing, that the preconditioned need to maintain current consultation process combined with ill-informed inadequacy of the project plan does not meet best interests and well-being. We are considering a whole-world approach. Teck misrepresents global

interests and needs in a fully biased and self-serving way.

As the joint review Panel, we hold you responsible for a full overview of the Frontier Oil Sands Mine Project. The name itself is a fallacy and presents a perspective that is very misleading. "Frontier" is a word meaning international border, edge of settlement, or limit of knowledge, and this word was used to colonize Canada. The word "frontier" perpetuates the distreatment and discriminatory concept of terra nullius that there can be vacant or unproductive land and that Christians have the right to remove others who are there and remove the resources for their own benefit.

Keepers of the Athabasca hereby register our objection to this concept and encourage you not to offer approval of this project. Thank you.

THE CHAIR: Thank you, Ms. Asterick. Thank you. The Panel has no questions. Thank you very much for your participation.

We'll take a short break. It's -- just a sec. Let's say 'til ten after 10, and then Mikisew will be up. Thank you.

(ADJOURNMENT)

THE CHAIR: Mr. Gustafson, whenever you're ready.

Final Submission by Mr. Gustafson

MR. GUSTAFSON: Thank you. Good morning, Mr. Chair, Panel, Panel Secretariat.

Today, my colleague, Karey Brooks, and I will be delivering Mikisew's closing argument. Before I start, two -- two items that I'd like to bring to your attention. First, my colleague has some exhibits that she will use in her part of the presentation, which I think now have an exhibit number.

MS. LACASSE: Yes. That will be Document Number 700.

THE CHAIR: Mr. Gustafson, just for the record, these are all materials that are already on the record that --

MR. GUSTAFSON: Absolutely.

THE CHAIR: Okay.

MR. GUSTAFSON: The second preliminary matter is a personal one. This is Day 2 of a slight allergy issue I'm dealing with, so I will be, potentially, wiping my eyes or coughing more than normal. I raise it so it's not a distraction and, also, as a matter of professional reputation, I do worry that people might think I might be having emotions, and I'm pretty sure, with my law degree, I had to transfer those for my JD. So I just wanted to make sure everybody's clear on that.

Okay. So Mikisew's closing argument is divided into four sections. I'll begin by situating Mikisew's submission for you; and then we'll provide an overview of the legal framework for this proceeding; followed by Ms. Brooks, who will take you through the evidence that Mikisew submits is most relevant for your review; and, in closing, I will summarize the disposition sought by Mikisew.

So, first of all -- and please let me know if I'm not speaking well into the microphone -- I want to draw your attention back to the introduction in Mikisew's written submission back in August. Mikisew stated there that they would take a different approach in this proceeding; specifically, Mikisew said they would focus its participation on: One, bringing forward the best Western science and Indigenous knowledge information available about its key interests; two, showing the Panel where Teck and Mikisew have found common ground on ways to reduce the risks to Mikisew's interests; and, three, helping the Panel understand how those issues where further mitigative actions are needed can be addressed through government actions and commitments prior to final approvals.

As Ms. Lepine stated well on the third day of Mikisew's Panel evidence, quote: (as read)

The first two panels provided evidence about

our needs and our concerns with the project. We provided that evidence for a very specific reason. It wasn't to debate Teck; it was help you, Panel and Mr. Chairman, understand why our joint conditions with Teck and our recommendations to government are absolutely necessary and supported by strong evidence.

Although you will hear again today that there are still areas where Teck and Mikisew disagree about the level of potential effects or risks to particular environmental components that support Mikisew's rights and culture, those differences do not place you in a position of having to make a binary decision. Rather, in Mikisew's submission, the evidence for Mikisew and from Teck leads you to the same two outcomes: First, the evidence confirms that the joint conditions developed by Mikisew and Teck must be included as regulatory conditions for the project to ensure Teck does everything it can do to reduce or avoid impacts to Mikisew's rights and culture.

Second, the evidence shows that issues remain that can and must be addressed by governments before their final approvals are issued for the project. I emphasize "their approvals" because it is up to governments to address the outstanding issues.

Next, I'd like to comment on how this hearing has

been unique. I'll start with the simplest. This is a unique project in terms of its risks to Mikisew's treaty rights and its most cherished places and resources. It is the closest open-pit oil sands mine ever proposed to Wood Buffalo National Park. It is the first to involve mining in a watershed that flows directly into Lake Claire, a key part of the Peace Athabasca Delta, and it is the first to so directly and substantially disturb the habitat of the Ronald Lake bison herd. As you know, that herd is the only disease-free bison herd available to Mikisew for legal harvest in its territory.

This is also the first joint review panel to take place after the world heritage reactive monitoring mission and the Wood Buffalo National Park strategic environmental assessments both confirmed that parts of the Wood Buffalo National Park are failing to meet international world heritage standards, and there are causal linkages to the oil sands industry. That is a significant shift from where we were at in 2014.

Next, this hearing is unique with respect to assessing effects on Section 35 rights. First, this is the first oil sands hearing where a joint review panel has been presented with a formal methodology, not to mention one collaboratively developed by an Indigenous group and a Crown agency for how to assess project

effects on Section 35 rights. Unlike other proceedings, this JRP has been presented with a valuable road map to follow for carrying out that assessment.

Second, this is also the first oil sands hearing where a First Nation has undertaken a comprehensive assessment of project effects on its treaty rights specifically. The fact that the terms of reference for Mikisew's rights and cultural assessment were developed with Teck is notable, as it speaks to the collaboration between Mikisew and Teck in this proceeding.

And, third, this is the first oil sands hearing where the federal government has submitted evidence at the hearing stage about its views of project effects on Mikisew's treaty rights. The evidence provided by CEAA confirms the project will have a high level of impact on the treaty rights of the Mikisew. In Mikisew's submission, all of this means that the guesswork that has stymied previous regulatory proceedings around Section 35 rights is not present here.

Finally, this hearing is different with -- with respect to the key issue of project mitigation. Here, the Panel has been presented with proposed regulatory conditions jointly developed by Teck and Mikisew that help to reduce a number of critical project effects. Those regulatory conditions came out of the negotiation

of a participation agreement between Mikisew and Teck which further evidences the real work that has been done by Mikisew and Teck to establish a constructive relationship and to resolve a number of the issues important to Mikisew that are within Teck's power to resolve or undertake.

As a result of those efforts, the scope of the issues that need further mitigation has been narrowed and allow this hearing to be more focused on core outstanding issues. For those, Mikisew has provided a concise package supported by clear evidence of the measures that need to be taken by governments to resolve the remaining outstanding issues and risks associated with the project. That is the Nikechinahonan framework.

As an anecdote, I did try to get Elder Marvin here so we could continue our Cree lesson, but was unsuccessful, which is, to some extent, a relief to me because I have to say the word a number of times in this -- through argument.

There is no doubt that this Panel faces a complicated task as you prepare your report in your decision. But with respect to Mikisew's core concerns, you have a better road map than previous panels. Mikisew submits that the evidence in this proceeding will not only help you follow that road map but

supports Mikisew's request for the joint conditions and government actions as laid out in the Nikechinahonan framework.

Now I'd like to turn to review of the legal framework that must guide you in the next few months. I'd like to start with environmental assessments. One responsibility of you, as a Panel, is to undertake environmental assessments. As a planning tool that identifies and evaluates potential consequences of a project, environmental assessment is an integral component of sound decision-making. An environmental assessment is tasked with the management of future risk and, in doing so, must be guided by the precautionary principle. Lack of full scientific agreement or a certainty should not be used as a reason for postponing measures to prevent environmental degradation or to reduce potential risks.

Here, the Panel must carry out an assessment taking into account this principle so that government decision makers can make rational and informed decisions with an understanding of the consequences of their decision which will ultimately be borne by the Mikisew.

In undertaking this environmental assessment, we ask the Panel to be mindful of the unfortunate experiences that Mikisew has had in previous

environmental assessments. Mikisew often finds that in trying to voice its concerns, the regulatory process silences its perspective or, at best, treats Mikisew elders and youth as less valid and less legitimate than the perspectives of people who have interacted with the issues only as words on a page or who won't live and breathe the results. It is critical that, in coming to your decision on this project, the Panel place a high and equal value on the Mikisew Cree, its knowledge, its culture, and its perspectives.

Moving on. Part 3 of the Panel's terms of reference require you to consider information related to potential environmental effects of the project on Wood Buffalo National Park and its outstanding universal value, or "OUV". The OUV of the park is based on criteria which are set out in the world heritage convention, the operational guidelines for the World Heritage Committee, and a number of documents developed by their advisory.

To be clear, the OUV is not synonymous with the park as a whole. It is possible to increase risks to OUV without pushing the full park over an ecological tipping point. In Mikisew's submission, the three attributes of the park's OUV that are most at issue in this hearing are: One, the great concentrations of migratory wildlife, migratory birds which is designated

under Criteria 7; the rare and superlative natural phenomena of the large inland Delta, which is the "PAD", which is designated under Criteria 7; and, third, the predator/prey relationship between wolves and wood bison that has continued unbroken over time, which is designated under Criteria 9.

Canada has recently undertaken an inclusive process for defining the desired outcomes or objectives for each of those three OUV attributes. These objectives provide an important measure against which you can assess risks that the project poses to the OUV. In the -- the written version of this we will be providing shortly after I sit down, we go through those three -- the outcomes for those three criteria in detail. For the sake of time, I won't do that now. I'll just refer you there. The desired outcomes for the OUV are set out in the strategic environmental assessments. That's Registry Number 401 at pages 3-14.

I will, however, walk you through some of the principles from world heritage guidance for how you can assess effects or risks of a project on an OUV. First, Criterion 7, which, again, is the PAD and migratory waterfowl has both objective and subjective aspects in the world heritage system, which means that experiential, cultural, and spiritual values of those attributes need to be considered.

Next, cultural understandings of the OUV from Indigenous peoples should not be ignored, even where the criteria are, in the world heritage system, natural -- nature-based rather than culture-based.

Another important principle is the Indigenous knowledge and the social, cultural, religious, and spiritual values and practice of Indigenous peoples must be understood and respected when considering biodiversity and OUV values.

And the last one I'll mention: Conservation values should be interpreted in a manner that includes an understanding of the affected people, including Indigenous people and their relationship with the OUV.

What all of this means, in Mikisew's submission, is that when you consider effects on the OUV, you must consider Mikisew's relationship with the OUV in that assessment.

Next, as you've heard, I think, from every party giving closing arguments, you must consider the public interest in your work as -- and in your role as the AER. Guidance from the Supreme Court of Canada confirms that the public interest includes the specific interests of Aboriginal people and the impacts that a decision will have on Section 35 rights.

The Supreme Court has also indicated that a, quote: (as read)

Special or heightened public interest arises when there are constitutional dimensions of a proposed decision.

As the Supreme Court of Canada has said -- stated, quote: (as read)

A project authorization that breaches the constitutionally protected rights of Indigenous peoples cannot serve the public interest [end quote].

It is, therefore, necessary that the Panel, in its consideration of whether this project is in the public interest, consider the impacts or risks the project may pose for Mikisew's constitutionally protected rights and, in Mikisew's submission, give effect to the joint conditions and the Nikechinahonan framework.

For the court reporter, I can spell that afterwards.

In Mikisew's submission, the public interest threshold can only be met when the Panel incorporates the joint conditions in its decision as the AER and recommends to the Governments of Canada and Alberta that they commit to the Nikechinahonan framework before issuing final approvals.

Next, I'd like to outline the Panel's responsibilities with respect to Aboriginal issues. Part 3 of your terms of reference imposes two different

types of requirements with respect to Aboriginal rights and interest, a procedural requirement to receive certain types of information, and a substantive requirement to consider various criteria in preparing your report as they relate to Aboriginal rights.

You have received clear and uncontested information about the nature of Mikisew's treaty rights and the risks and effects that this project may create for those rights. For example, Mikisew asserts that its treaty right to harvest bison is engaged in this proceeding. Mikisew is not asking you to decide as a matter of law that it has a specific right to harvest bison as a part of Treaty 8, but submits that the terms of reference requires you to assess effects on Mikisew's right as they are asserted.

Mr. Chairman and Panel, a number of factors must guide you as you consider effects on treaty rights. First, given the fundamental importance of Section -- given that the fundamental purpose of Section 35 is the reconciliation of Aboriginal and non-Aboriginal Canadians in a mutually respectful relationship, the Panel has a duty to consider how your decision will give effect to reconciliation.

Second, you must be mindful that there are differences between the evaluation of environmental effects and the consideration of effects on treaty

rights. It is now widely recognized that a biophysical approach to assessment of impacts on Indigenous rights is unduly restrictive. To really understand impacts to treaty rights and what mitigations are required here, the factors that influence whether and how Mikisew members exercise their rights and culture must be considered.

In addition, consideration must be given to the avoidance of areas and resources that can result from perceived contamination or incompatibility with cultural values. Assessing impacts on treaty rights also requires an understanding of the context of cumulative effects in which those rights are exercised.

An assessment of effects on treaty rights must also be based on an understanding that there are historical, cultural, familial, and spiritual reasons why certain areas and certain resources are particularly critical. Assuming the Mikisew members can, quote, "go elsewhere" in response to impacts would make for a flawed assessment. It would also ignore the evidence from the Mikisew members you met in Fort Chipewyan, like GM, Larry, Jocelyn, and Terry, that they can't go elsewhere for cultural and economic -- or ecological reasons.

For this project, as I mentioned, a rights-based methodology was jointly developed by Mikisew and the

Canadian Environmental Assessment Agency. It is the first publicly available methodology of its kind. Ms. Candace Anderson, the Crown consultation coordinator from CEAA for the project, testified that the rights-based methodology was, in fact, intended to be used during the environmental assessment of the project, not just in Crown consultation.

She testified that Canada recognized that a structured approach to assessing impacts to rights and culture was required. And the methodology was informed by and consistent with case law, academic literature, and best assessment practices. She also testified that that methodology underwent some senior management review.

As described by both Ms. Lepine and Ms. Anderson, it was necessary to develop that methodology because of inadequacies in traditional environmental assessments.

Ms. Anderson described the difference in this way, and I'll read this quote: (as read)

> The environmental assessment process, as set out today, does focus quite extensively on biophysical assessments. What makes this approach particularly unique is that it does -- that it does take into consideration impacts on rights which could be broader than what the statute sets out, things like

consideration of how a sense of connection in place and attachment to the lands can be -- can better be considered through a rights-based approach, and that's what this methodology sets out to capture.

Mr. Lepine provided examples -- further examples of the differences between rights-based assessments and environmental assessments. For example, she explained how the methodology would assess how shifts to movement of the Ronald Lake bison herd would result in impacts to Mikisew's culture and way of life.

So that it's fresh in your minds, I will walk you through very briefly the three steps of that methodology. The first step is to determine the context in which potential impacts on rights occur. That means identifying the conditions, the communities identified for supporting its rights, and understanding how historic, existing, and approved activities are already impacting those rights.

The second step, and only after completion of the first, is to then evaluate potential project effects on rights. And there's various principles set out in that methodology to help you with that aspect of your work.

And the third step is follow-up and evaluation.

The joint Mikisew-CEAA methodology provides a cogent and principled approach for conducting an

assessment of impacts of the project of Mikisew's rights that meets all legal and methodological standards.

You will recall that the rights-based methodology was applied twice; once by Dr. Candler and, second, by the Canadian Environmental Assessment Agency. Both assessments found that the potential for serious adverse impact to Mikisew's rights and culture could occur if the project is approved without further mitigation measures.

Next, I'd like to comment on what Alberta's land-use planning regime means for how you discharge your responsibilities in relation to Aboriginal issues. Interpreting Section 20 of the Responsible Energy Development Act to constrain your consideration of cumulative effects on rights would be a serious error. To assume that consistency with LARP simultaneously discharges your consideration of cumulative effects on treaty rights would be inconsistent with the approach set out by the Courts that I've just described. It would also be inconsistent with statements made by senior Alberta Environment and Parks officials to Mikisew during this regulatory process that rights were not, in fact, considered when developing LARP.

LARP does not purport to set thresholds or measures relating to treaty rights, and nothing in the

statutory scheme for this Panel would allow for such an interpretation. Confirming compliance with LARP does not confirm compliance with the Constitution Act of 1982.

As the last part of this section, I would like to flag that it is important to recognize that your duty to act constitutionally also applies to your recommendations. The federal court has held that the obligation of an administrative body to act constitutionally also arises when a body is making recommendations. This means that when you are considering recommendations for measures to mitigate effects on rights, you must be informed by the imperative of reconciliation.

Mr. Chair and Panel, the evidence before you and the principles just described support Mikisew's submission that the joint conditions proposed by Mikisew and Teck and the Nikechinahonan framework are essential for respecting Mikisew treaty rights.

As a final matter in this section, I'll turn to the issue of the ACO reports. As part of discharging your duties, the Panel must consider the weight to give to evidence it's received. Where a party has provided evidence but declined to adopt it under oath or make itself available for questioning, the decision-maker or trier of fact must be very cautious in attributing any

weight to that evidence.

Alberta has filed the ACO report along with the more recent ACO hearing report in this proceeding. The ACO reports together purport to provide opinions on what actions or mitigations are required to address adverse effects on treaty rights. Mikisew submits that these reports be given no weight in your deliberations, and that to do so would undermine the fairness of this proceeding.

Unlike other participants in this proceeding, the ACO has twice submitted materials without making itself available for questions. Despite providing opinion evidence, the ACO has not provided any qualifications for the person providing it, nor has the ACO adopted its reports under oath.

And there are still further reasons why the Panel cannot give weight to the ACO reports. For one, the findings of the reports are inconsistent with evidence that is on the record regarding mitigation measures for bison and project-related cumulative effects.

To the extent that the ACO reports rely on evidence that is provided out -- has -- sorry. To the extent that the ACO reports rely on evidence that is from outside of this record, which appears to be the case, the Panel's reliance on those reports would significantly undermine the fairness of this

proceeding.

As explained by Mr. Stuckless, the original ACO report relies on an approach that is inconsistent with clear guidance from the Courts for considering impacts to treaty rights. The absurdity of the ACO's report was made clear in Mikisew's evidence which showed, among other things, that the ACO ignored key reports and that the ACO had confirmed to Mikisew that, typically -- and this number is -- comes from the ACO -- 97 to 99.5 of First Nation concerns regarding impacts of oil sands projects on treaty rights are determined by the ACO to not be site-specific, no matter what evidence is provided by a First Nation, and that includes 100 percent of concerns that are ever raised in relation to water.

The new ACO report adopts the same fundamentally flawed approach as the original report critiqued by Mr. Stuckless. Importing the ACO's analysis into yours would result in errors by this Panel and create procedural unfairness.

With that, I'll turn the podium over to my colleague, Karey Brooks, who will speak to Mikisew's impact assessments following the steps of the rights methodology.

Final Submissions by Ms. Brooks

MS. BROOKS: Thank you.

As Mr. Gustafson said, my comments are going to provide an overview of Mikisew's assessment of adverse impacts to its rights and culture and to the environment generally.

Mikisew submits that the project has the potential to result in adverse impacts to its treaty rights and culture, the Ronald Lake bison herd, water quantity, water quality, air quality, human health, migratory birds, and the OUV of the park.

You've heard that Mikisew has worked diligently with Teck to develop proposed conditions that will mitigate or reduce many of these adverse impacts. As Chief Waquan stated: (as read)

> Mikisew leadership appreciates its relationship with Teck and the work that has been done through the participation agreement and the joint conditions to resolve issues that are in Teck's power to resolve or undertake.

As I discuss the potential impacts, I will refer to these mitigations where appropriate. However, I note that they can be found in full in Mikisew's initial submission CEAA Doc 497, Appendix 2.

As stated throughout the proceedings, some of the important mitigations are beyond the control of Teck and, instead, require government action. Mikisew has

proposed a number of government actions through its Nikechinahonan framework to address outstanding risks to Mikisew's rights and culture. And that framework is Exhibit 621. I will also refer to these government recommendations where appropriate in this presentation.

My presentation follows the rights methodology structure referred to by Mr. Gustafson, and I will start, therefore, with the conditions Mikisew members need to support a meaningful exercise of their rights and culture. First, Mikisew members described living a bush way of life. The evidence presented made it clear that the ability of Mikisew members to practice their Aboriginal and treaty rights is connected to a healthy land-based way of life. This includes the harvesting of plants, fish, and other wildlife, such as bison, moose, and migratory birds in accordance with Mikisew's seasonal round. You've heard that, for Mikisew, every season has a purpose. Elder Terry, Elder George, and Jocelyn Marten gave extensive evidence about what activities they did with their families, in what areas, and at what times of year.

Mikisew evidence also shows that its way of life is more than hunting and trapping. Relying confidently on clean water and abundant land and resources in familiar areas is critical for Mikisew way of life. Mikisew members described in detail living on the land

in places where their ancestors lived previously, including at cabins and camps along the Athabasca River and around Lake Claire. As put by Elder Terry: (as read)

> I was born and raised out on the land. We had love there. We had ownership there with our parents, all our family members. Everything was your friend. You're just in harmony with nature.

She reinforced how integral the bush way of life is to Mikisew identity. She's testified: (as read)

> We are part of the land. We are with the land and water as soon as the day you are born. We have that identity. We have that ownership right from the day we are born.

Second, the PAD is a key cultural landscape for the Mikisew. It is a primary location for harvesting social, economic, political, and cultural activities that are vital to the cultural continuity of Mikisew. The Athabasca River provides an essential corridor for Mikisew members to travel and harvest. It also plays an integral role in creating and replenishing the PAD. As stated by older -- Elder George: (as read)

> We need the two rivers to flow properly to have enough water to flow, the Athabasca River and the Peace River, because if they're

flowing when they have high water, they're very, very powerful, and they bring all the water into the Delta. It makes a clean, healthy environment.

Mikisew testified that the PAD is their grocery store, their classroom, their medicine cabinet, their church, their highway, their photo album, and the place where their most happiest memories live. Elder George reflected fondly on his memories of the PAD. He stated: (as read)

I was born in the Delta. Birch Mountain country is where I was raised. I was a trapper at a very young age. Everything then was very nice. The water level was high. We had all different types of species in our Delta. Everything was alive. The humans were happy, the animals, everything. We were happy to live on the land.

Elder Larry confirmed the abundance of the resources in the PAD. He said it's critical to Mikisew's way of life. He said: (as read)

We had a lot of water. Everything was good. And you mention "buffalo". They were all over. The Delta was rich, the whole Delta, not just one area.

Jocelyn described that the PAD is her therapist

and essential for helping youth live a healthy Mikisew life. She stated: (as read)

> When I'm going to Lake Claire, it's like I'm going home to see my therapist. I'm sure a lot of people here maybe have their own therapist. I have my own, which is Lake Claire, Gull River, Frog Creek. It's a place that just takes everything away from me. Again, the memories come back. It's just a great feeling. It's my therapist, my mother, my home.

The northern part of the project will cross into the Buckton watershed. This watershed flows directly northward into Lake Claire, into the PAD. Elder George emphasized the importance of this watershed. He said: (as read)

> Buckton River is very, very important. It brings the life to the environment, to the habitat, to all the animals, to the rivers. They're healthy. And that's what I like about that area, because in other places, they don't have much water, so pollution settles. And with that settling, you then have thistles and you have willows growing. But in Buckton, you know there's still hope. It's still healthy. That's my territory.

That's where I loved hunting for all types of animals. That's where I did my trapping, and that's where I made by livelihood.

Other Mikisew members agree that the health of the Buckton watershed is necessary for the integrity of the PAD and Mikisew's cultural and spiritual relationship to it. Jocelyn explained: (as read)

> The river from Birch Mountain flows into the Buckton area, into the lake, and it's healthy water that flows through Buckton.

She also stressed the importance of this place. She said: (as read)

> And I cannot leave that area because it's where I grew up. That's my area. That's where I'm from. It's my home. It's the place I grew up. It's the place I was taught my way of life. It's memories I have as a child. It's important for me to go to these places, to teach my children, my two girls and my grandson especially, and to take other families there to show them places I've been.

Third, a critical condition is water. It is not possible to spend time in Fort Chipewyan without understanding the phrase "water is boss". Clean, abundant water provides for safe drinking and healthy wildlife and vegetation and supports the ecosystem in

the PAD. It is needed for Mikisew people to travel throughout the area and to have the resources required for harvesting.

Elder Terry put it plainly: (as read)

> In our territory, water is everything. We need plentiful, healthy water to access our lands and have resources to be able to harvest. Everything in our territory, in our land is connected to water, and that's why water is boss. It is life. It gives lives to humans, to our water systems, to the rivers, the lakes, for accessibility, to practice our rights, to live our way of life, to give good, clean food for the animals, to give good, clean water for the animals to drink. Every living specie needs good, clean water to be able to live. That's where "water is boss" came from. Quality and quantity of water is crucial for us to be able to go into our territories, our lands because the river systems and the lakes are our transportation.

Jocelyn also stressed the importance of water. She said: (as read)

> First of all, we need healthy water before we can harvest anything. It's important for the

birds and all other animals. We need water levels to be high at the right times. Water is important all year round, but in the fall and spring are the most critical times for the water to be able to harvest in fall or spring. Floods give freshwater into the land lakes that you need for healthy plants. Water stays in the summer to keep healthy vegetation. High springwater will tell you how the year will help you with your harvesting throughout that year. You can predict whether it's going to be a good summer, a good fall, a good winter harvest.

She emphasized passing down knowledge requires water. She said: (as read)

> To pass on my knowledge and my teachings to my children and my grandchildren, I need to access my traditional hunting, trapping, fishing areas, my home. I need water. I need clean water.

Similar sentiments were expressed by Elder George, who stated: (as read)

> I just want to refer what a wonderful life we had when the water was high.

Fourth, bison is a key component for the meaningful exercise of rights and culture. Bison is a preferred

meat. It is also a cultural keystone species to the Mikisew with skulls used in sweat lodges, as alters, and in ceremonies in many households. As stated by Elder George: (as read)

> Everybody relies on bison. Even the animals. For example, the wolves. They kill bison for food. Then the little birds will come and feed off that carcass of the bison. The foxes will come as well and eat from that kill. So everybody -- all the animals had food from bison. We do not kill the bison to have trophies, we only kill bison for survival and to bring home food.

The bison hunt and the practices and customs that accompany the hunt are also considered by Mikisew members as important opportunities for transmission of culture and knowledge from Elders to younger land users.

Dr. McCormack, Professor Emeritus at the University of Alberta and ethnohistorian, filed a report that describes Mikisew's reliance on bison. She stated that the Indigenous treaty signatories understood that the treaty promised them the continued freedom to choose their way of life and to use all wildlife resources in the future, including bison. She stated that the, quote: (as read)

Treaty commissioners were -- made the strongest assurances that nothing would interfere with the land-based resources and way of life.

Dr. McCormack's findings are consistent with the community evidence collected by Dr. Candler and detailed in his report. Dr. Candler stated: (as read)

> It is clear that Mikisew members have relied on bison, both culturally and for sustenant purposes for generations. They continue to rely on them today.

He notes: (as read)

> Although Mikisew relationship with the use of bison has remained continuous, their practices have had to change because of park regulation and reduced access.

Mikisew evidence showed that the conditions required for harvesting of bison include healthy bison, abundant bison, accessible bison in preferred locations, legal harvest of bison, preferred means of harvest away from industrial disturbances and where continuity between generations can be maintained.

Fifth, abundance. Abundant resources are critical. Treaty -- Mikisew's treaty rights depend on having access to a sufficient quantity of each kind of traditional resource such as moose, bison, migratory

birds, and fish in culturally relevant areas. Elder Rita confirmed: (as read)

> Prior to 1899, the Mikisew people, our ancestors, and our families, our parents, our grandparents had an abundance of everything. They were very wealthy. They could harvest anything they wanted.

Mikisew members testified that the exercise of their treaty rights requires a sufficient diversity or richness of resources. This allows Mikisew members to maintain a seasonal round so that no resource becomes depleted through overharvesting.

Sixth, Mikisew evidence shows that experiencing environmental health and being able to trust the quality of water and traditional resources is a necessary condition for the exercise of Mikisew's rights, and this was described through the notion of certainty. Elder Terry spoke of the importance of certainty in places of knowledge transfer in particular. She said: (as read)

> We need certainty to be able to go out to our areas, to our land where we live in harmony with nature. We need -- where we need to be able to go out there and teach our young ones about exactly where they came from, who they are, and what they need to be able to

identify themselves as Mikisew Cree First Nation people so they don't get lost in the future or they don't know where they come from. We need that. If water is polluted or perceived to be polluted, confidence in the resources erodes.

As put by Elder George: (as read)

When you see or notice water is not healthy, you will notice that the water has a funny smell, and no one wants to go there. Even I'm afraid to walk in the water because I'm afraid that it's all polluted, and I don't want to get ill. You know how the water is not healthy. You see how the grass grows. I always observe how water flows. In the wintertime, you can tell when the water is polluted because sometimes I take my axe and I make a hole in the ice, and the water looks black. It's black, so I know it's polluted. I'm not a scholar; however, I do know my own way of life. I learn from observing. I learn how the environment is.

Seventh, a persistent theme in what Mikisew members need to exercise their rights is access. As a community dependent on the Delta, adequate amounts of water are needed from Mikisew members to access

harvesting areas where their customs, practices, and traditions can occur.

As put by Jocelyn: (as read)

> To pass on my knowledge and my teachings to my children and grandchildren, I need access to my traditional, hunting, trapping and fishing areas, my home.

Elder Terry stated: (as read)

> We need plentiful healthy water to access our lands and have resources to be able to harvest. [She summarized] Quality and quantity of water is crucial for us to access our territories, our lands because the river systems are our transportation.

Eighth, sense of place and maintaining ongoing relationships and connections with lands and water is a necessary condition for Mikisew's rights, including with respect to spiritual connections. As Elder Terry stated: (as read)

> We not only have the land as a teaching tool. We have our ceremonies out there. We have our own spiritual grounds. Everything that you do with ceremony has to be done in a very, very clean area without disturbance. So we need our land to be able to teach our young the way of life.

Sense of place is also tied to identity. Again, as put by Elder Terry: (as read)

> There is such a tremendous amount of connection between the people and the land. You just can't separate them. It's a good feeling when you go out there. I put my hand in the water and you're back home and it's beautiful.

Mikisew indicators of a supportive sense of place include solitude, lack of sensory disturbances, safety, and cultural connections to an area. Conditions that are inconsistent with experience required for the exercise of rights include, among other things, industrial sights, smells, and sounds.

And, finally, you heard throughout the quotes that I've just referred to and in the testimony by the Mikisew Cree, it's equally important for Mikisew's rights and culture to pass down this way of life for future generations. As Elder Terry put it: (as read)

> We need our land to be able to teach our young our way of life. That's the importance of the land and our people. They're connected.

Next, in accordance with the rights-based methodology, I'd like to turn to how these current conditions that we've described have been deviated from from the

conditions that are necessary to support Mikisew's rights and culture before I go on to consider the project effects.

The evidence confirms that industrial development has contributed significantly to the negative effects on Mikisew's territory and rights. Elder Larry said: (as read)

> The Delta was rich. The whole Delta, not just one area. There were no oil plants in those days. There was one, Suncor. I remember that was the only plant out there. Ever since then, we started losing water. There's willow and grass. The buffalo are all gone. The fish are no longer what they used to be. For the water, we're right down in Lake Mamawi. That's our main travelling route, going out to the Delta. There used to be 8 feet of water; now we're lucky if we have 2.

What the evidence demonstrated is that, for Mikisew members, the once vibrant PAD is no longer meeting the conditions Mikisew members require to confidently and productively exercise their rights. You heard statements from the Mikisew members that the PAD used to be filled with many species and water was abundant, but now water levels are in significant decline, which

is driving away many of the species that used to live in the PAD such as the muskrats and the bison.

Mikisew members also described how as a result of low water levels, travel to different parts of the PAD can be difficult if not impossible. Elder Sloan spoke to this point. He said: (as read)

> Whenever you travel, it's difficult. Last summer, I was travelling in my boat, and in Lake Mamawi, I barely got through. I turned by boat -- my motor lower, and even then, I hit dirt because the water level is too low.

Mikisew members no longer have certainty about the need for their land and waters. Elder Larry said: (as read)

> If -- the water's not safe to drink. We never drink it. Years ago we drank from the creek and river, but now we have to carry our own water. Water there is not safe.

Mikisew evidence shows that the availability of healthy and accessible Wood bison has been reduced to the Ronald Lake bison herd. While there are bison herds in the park, Mikisew's evidence and the recent strategic environmental assessment for the park show the park bison are diseased, diminishing, and losing habitat due to drying trends and the spread of invasive -- evasive vegetation.

Elder George testified the buffalo are also affected by low water. He said: (as read)

> We had a lot of buffalo back in our area. Now they're disappearing because of the water levels. Now they have thistle, and this is really taking over the Delta, and it's really affecting the animals, the buffalo. They're unable to survive, so they move away. The muskrats used to live on goose grass. That was their feeding area. Because back then, the water was clean; the air quality was good. Now, with low water depleting, all the living species are being affected.

Elder Sloan also commented that the Delta is drying and affecting the buffalo.

In addition to the bison, Mikisew's evidence shows that other traditional resources in Mikisew's territory are no longer available in sufficient amounts to meet the harvesting levels that they require. Populations of caribou are rare and declining. Populations of moose are declining. This is also true of fish. As stated by Elder Sloan: (as read)

> In the past, we used to go up Birch River in my trapping area, and in the fall we would set nets, and we would get a lot of fish. We used to hang fish for the winter. There was

a lot of Jackfish, a lot of whitefish. Since they started mining industry, we are losing our fish.

I remember in the wintertime, right below our winter cabin, we would set small nets. We would check the nets every two hour [sic]. We had so many whitefish.

Today, there's no fish. There's more dams. Water levels are very, very low. And that is very, very sad to see.

It's also true of migratory birds. As stated by Elder Larry: (as read)

There's very few birds that come here in the springtime. They have no place to feed. They just come here and go right through. If you're lucky, you're in their path when they're flying, and you might get a few birds, not like the old days.

It is also true of muskrats another cultural key -- another cultural keystone species. Elder Larry said: (as read)

In the winter months, I used to see when it -- the water was high. I used to see muskrat -- muskrat houses in the wintertime. Now you see nothing like that. It's all willow and grass.

Loss of access is a big concern. When waters fall below Mikisew's navigation threshold, members are not able to travel to their preferred routes. Hazards such as rocks and sand bars make it difficult and dangerous to travel by boat. Aquatic weeds, grasses, and willows can further increase and reduce accessibility, and low water levels make it difficult to travel the harvested resources back to Fort Chip.

Mikisew witnesses described how when the water levels are too low, they have to get out of their boats and push them, or they have to pull their boats to move them. As stated by Elder George: (as read)

> Today, when I try to go out to my land, I find it difficult. I'm unable to recognize where I used to travel. For example, Little Sweet Grass Creek where I used to travel, right now, there's willows growing there.

Other members describe similar occurrences. Mikisew members also described how because the water levels are lower, certain travel routes freeze over, making them inaccessible.

Additionally, Mikisew members indicate that industrial developments have resulted in a loss of the sense of remoteness, solitude, privacy, and loss of comfort and knowledge of the landscape. The stress created by low water levels in particular are -- is

acute.

You will recall that Elder George spoke powerfully about the great sense of loneliness he has when he sees the current degraded state of Buckton Creek, Lake -- and Lake Claire.

Finally, it's important to note that Mikisew's evidence shows that the plans, policies, and frameworks and other measures developed by governments to address cumulative environmental effects are not effective with respect to impacts to Mikisew's Aboriginal and treaty rights. Consequently, the LARP frameworks for mitigating project effects on Mikisew's rights and culture cannot, Mikisew submits, be relied on.

Alberta, in fact, has acknowledged that LARP has not included effective measures to protect treaty rights, contrary to the ACO report. Evidence from Mikisew and Parks Canada led to the same conclusion. The surface water quantity management framework cannot be treated as a mitigation measure for effects on any project on water quantity since it does not take into account Mikisew's navigation needs. The draft biodiversity management framework cannot be treated as a mitigation measure for effects on bison since indicator thresholds or management respondents -- responses for Wood bison are simply not included.

The surface water quality management framework and

air quality management framework also cannot be treated as mitigation measures, since, again, there are no triggers, threshold, or management responses for key oil sand-related contaminants in the areas surrounding the park, nor do the LARP frameworks assist with mitigating effects on the OUV of the park.

I'd now like to turn to the potential impacts from the project to Mikisew's rights and culture.

You've been provided with a handout of figures that have been reproduced from the slide decks from Panel 2, and I may refer to those from time to time as a visual aid.

I'm going to start with bison. The ability to hunt bison, and, in particular, the Ronald Lake bison herd, is of utmost importance to Mikisew, its culture, and its way of life. As I just detailed, Mikisew members explained how they and their ancestors would rely on bison for food. They also described the significant decrease of bison within their territory. You heard that the Ronald Lake bison herd is the only healthy accessible herd to Mikisew. The bison in the park are diseased and are legal to hunt. Mikisew members, therefore, described how it was important for them to have confidence that the Ronald Lake bison herd will continue to be sustainable, healthy, and viable.

Mikisew submits that the project represents a

serious risk to the Ronald Lake bison herd. The herd is a small herd of about 150 to 200. Dr. Komers testified that data collected over the past four years by the University of Alberta and Indigenous knowledge suggests that the population of the herd is not growing and has not been growing for decades.

The current location of the herd is depicted in the yellow points in Figure 1 attached to your handout, and that's taken from Dr. Kopach's slide deck. ECCC reported that the project will overlap with 19 percent of the range, and that's depicted in black in those handouts. But because of this -- but because the project will also remove connectivity to the south, the project will actually affect 24 percent of the total range of the herd.

I think you're being provided with hard copies of the handouts now.

Dr. Candler testified that with the addition of the project, 91 percent of Mikisew's preferred bison harvesting areas will be removed. Dr. Candler also testified that Mikisew harvers [sic] are unlikely to go elsewhere, given the difficulty in recreating the same kinds of cultural confidences and cultural attachments in new areas.

Dr. Kopach testified [sic] the habitat availability for the Ronald Lake bison herd. He

described the unique landscape features required for good quality habitat for the herd based on western science and Indigenous knowledge.

To apply his habitat availability model, Dr. Kopach relied on satellite image analysis and Indigenous knowledge of the current range, vegetation cover, and the current known bison movement in different seasons. And using this information, he determined the remaining areas of quality habitat.

His conclusions are reproduced in the handout at Figure 2. The figure shows the distribution of available habitat outside the current home range in summer and winter. Areas of high quality habitat are shown in dark green and located to the northwest of the current range inside the park.

Dr. Kopach noted that: (as read)

> Although habitat is available in the south, the collar data indicates that the bison largely avoid this habitat likely because of sensory disturbance.

Areas with poor quality habitat are shown in red, and they are located along the McIvor River and Buckton Creek. According to IK, it is more difficult for the bison to cross these areas because they're relatively wet, and they often contain windfall and trees, which makes bison passage difficult.

In his conclusion, Dr. Kopach concluded: (as read)

> There's a very real risk that the bison will move further into the park. If the herd moves into the park, they will not be accessible to Mikisew, and as noted by Teck, this also creates a risk of disease from mixing with the Delta herd.

Dr. Komers assessed the future viability of the herd using a population projection software program. The PDA compares the relative effects of potential scenarios. It relies on data relating to birth rates, mortality rates, population size, and the carrying capacity of the region. Given the lack of concrete data with respect to these factors for the Ronald Lake bison herd, Dr. Komers assumed the herd acted in a way consistent with average bison populations with the exception of a slightly lower mortality rate to account for Indigenous hunting. He included two carrying capacity scenarios, one that assumed 200 bison, the actual size, and one that assumed a hypothetical 1,000 bison could be sustained. He ran 100 iterations of the scenarios because, as he explained, of the exploratory nature of this inquiry.

The results of Dr. Komers' viability analysis is shown in Figure 3 to our handout taken from his slide

deck. The solid blue line shows that, based on average mortality and birth rates, the population would drop to about 25 in a hundred years. The green and grey dash line show that if mortality rates are increased or if birth rates decrease, the population drops to zero within 50 years. However, Dr. Komers noted that if calf mortality rates are reduced or birth rates increased, then the population can stabilize at today's size as indicated by the orange and red dash lines.

To grow the population, the herd's survival must be increased above average. Dr. Komers expressed concern about the fact that the herd had not been observed to be growing and said that that indicates high mortality rates or low birth rates. So it's particularly important that management actions be directed to these efforts.

Mikisew submits that the project proposes a high risk to the herd and to Mikisew's rights that depend on the herd. Teck and Mikisew have developed a number of conditions so that if Teck is correct that its assessments -- then these assessments can be identified in realtime -- if Teck is incorrect. For example, Teck has agreed to one regulatory condition requiring for it to report annually on the implementation of its Ronald Lake bison mitigation monitoring and adaptive plan. It has also agreed to a condition to conduct an evaluation

in consultation with Indigenous groups of the status of the herd and to verify the accuracy of its predictions as part of obtaining future approvals for the north pit.

Teck and Mikisew have also codeveloped the minimum content for Teck's wildlife mitigation and monitoring and adaptive management plan, which requires consideration of any species of risk recovery strategy applicable to the herd, the latest available information from the technical team, the latest available Indigenous knowledge, and a follow-up program to verify the accuracy of the EIA predictions over the life of the project.

As part of this, Teck has also agreed to review and update, as needed, its monitoring and management plan in response to any new information. These joint conditions reflect what Teck can realistically do.

However, in Mikisew's submission, they must be augmented by further government action. To be sure, current government efforts are not up to the task. As explained by Mr. Braun, the Ronald Lake technical team is not a long-term initiative and critically does not have any role in relation to the management of the herd or its habitat. Rather, it's an information collection body. He explained that current habitat protection measures are insufficient, and current cooperative

management proposals are nothing more than window dressing.

In Mikisew's submission, two government actions are required to reduce the risk to the herd. First, protection of the remaining herd's habitat. Establishing the full BSA would protect all remaining habitat beyond the project footprint that does not currently have legal protection.

Mikisew asks the Panel to recommend the governments commit to implementing the full BSA by the start of construction.

To deal with the risk of disease transmission and other issues relating to increasing the herd's viability, the second government action is to establish a bison comanagement arrangement with Alberta, Canada, and Indigenous groups. Dr. Komers emphasized the need for such a comanagement arrangement and stated: (as read)

> The committee should be directed to collecting data, protecting the remaining habitat, protecting the connectivity of habitat patches, improving female reproduction, reducing mortality, and preventing the bison from contracting diseased -- contacted diseased bison in the park. Monitoring must be done properly to

ensure the effectiveness of management actions.

Mikisew asks the Panel to recommend that within the next year the governments of Alberta and Canada enter into, with Indigenous communities, such an arrangement respecting research, monitoring, and comanagement of the herd.

Water quantity. You heard repeatedly throughout this proceeding that having enough water in the lakes, rivers, and tributaries within Mikisew's territory is critical for members' navigation needs. The river and lake systems are to Mikisew what highways are to urban dwellers.

Figure 4 of the handout is taken from Mr. Maclean's slide deck and depicts Mikisew's key transportation routes. As stated earlier, Mikisew members are noticing their land, lakes, and rivers and tributaries are drying up, making navigation difficult.

Because of the concerns about decreasing water levels, Mikisew started a community-based monitoring program in 2008. The purpose of the program was to track changes to the PAD. The program collects data about water depth and water quality twice a week, all year, at eight locations. The CBM program analyzes the data and tests concerns with respect to navigation and water contamination. Additionally, given that

navigability can be impeded by shifting channels and weeds, the CBM program also marks channels for safe passage.

The CBM program also tested the water navigation needs of Mikisew members. You'll recall that Indigenous navigation threshold have been previously set as a result of a study by Dr. Candler in 2010. Based on his interviews with Mikisew members, Dr. Candler determined that the Aboriginal extreme flow, which is the amount of water needed to get on step with the harvested moose in the boat, was about 400 cubic metres per second. And it's important to note that the AXF refers to zero navigation, and navigation challenges can arise at higher flow rates.

CBM findings demonstrated that this relationship is valid and, in fact, said that the AXF is closer to 500 cubic metres per second. Further, the CBM tested the relationship between flow and depth and determined that the AXF results in a minimum depth of 4 feet. And this relationship is illustrated in Figure 5 of your handout, which is reproduced from Mr. Maclean's slide deck.

I'm just going to pause here because I note we're at the hour mark. I will be approximately 15 minutes, and Mark has 5 -- Mr. Gustafson -- pardon me -- has five minutes in closing. With leave of the Panel,

could we proceed to complete our argument?

THE CHAIR: Sure. Let's proceed.

MS. BROOKS: After five years of sampling, the CBM findings showed the AXF depth was -- exceeded 95 times at the sites monitored during those years. These findings are reproduced in chart -- in the chart at Figure 6 of your handout package.

Dr. Carver assessed impacts to Indigenous navigability on the lower Athabasca system, which includes not only the main stem, but also important back channels. Dr. Carver integrated various data sets, including the CBM data, government water depth maps, and IK hazard maps to demonstrate the existing hazards distributed across Mikisew's territory and to show that those hazards increase as flows decline.

Figure 7 in your handout is a depiction of the integration of that data taken at one segment, Poplar Point. And these maps show how the back channels are the first at risk.

Dr. Carver's assessment also confirmed that the AXF is a reasonable limit. When the AXF is exceeded, he said, the navigability situation becomes dire, particularly if you include the serious health and safety issues that arise within the AXF range. In terms of the future, using a watershed model that simulates future flows from 1 to 200 years under

various climate scenarios and applying oil sands withdrawals, Dr. Carver determined that the river flows are predicted to be lower by 25 to 50 percent during the fall and late summer seasons and that the open-water seasons will be longer. For Mikisew, this means significantly less water for navigation during the hunting season. Additionally Dr. Carver observed that as flows decline, oil sands withdrawals are proportionally more significant.

Dr. Carver concluded that the climate change is leading to a reduction in the availability of water for oil sands and other activities, yet these demands are projected to escalate while river flows are expected to decline.

Dr. Carver put the future in these terms: (as read)

> We are on a collision course. Access to the territory is already at risk and, as things stand, not positioned to improve. We have a real problem on our hands.

Dr. Carver noted the EIA and Alberta only assessed change at one location, which he described as the "one-point approach". Dr. Carver expressed concern that such an approach does not capture the complexity of navigability in terms of its diversity, its thresholds, its rate of change with flow, and the

overall magnitude of the problem faced.

In terms of mitigations, it's important to note that Dr. Carver, Mr. Maclean, and Dr. Davidson all testify about the inadequacy of the surface water quantity management framework as a mitigation measure for potential project effects on Mikisew's navigation as a result of Teck's water usage.

The ultimate measures Teck have agreed to to reduce the risks to Mikisew's navigation was the subject of extensive engagement between Mikisew and Teck, and it led to a series of jointly proposed regulatory conditions. These are set out in Appendix 2 of Document 497, but I'll just briefly touch on a few of them now.

Teck has agreed to regulatory conditions to operate the project to result in only negligible water effects, effects on water quantity in Lake Claire and the Ronald Lake watershed, and planned water withdrawals to minimize water intake when the AXF is met prior to obtaining future approvals for the north pit.

Teck has agreed to design water diversion structures so they have no greater than negligible effects on water quantity in Lake Claire and the Ronald Lake watershed, to update its mine water balance to take into account updated climate assessment as part of

its detailed engineering, to design water intake and storage ponds to minimize or avoid water intake when the Athabasca River is below the AXF, and to ensure its hydrology plan includes a credible operational plan to minimize water intake when the Athabasca River is below the AXF.

And as stated by Teck, these measures do not guarantee absolute adherence by Teck to the AXF, and Mikisew agrees with the recommendation of ACFN and Katherine Cummings of Parks that to ensure there is -- there needs to be a more comprehensive effort taken to protect Mikisew Navigation from the cumulative impact of oil sands, and so government actions are still required.

Accordingly, Mikisew submits that the Panel recommend Alberta revise the surface water quantity framework under LARP to be more protective of Indigenous navigation and the OUV of the park in a manner put forward by Mikisew, ACFN, and Parks Canada.

Water quality. Mikisew also has concerns about whether the project would likely contribute to increased water contamination or risk of contamination. Mikisew members have reported smelling oil sands contaminants in the water and observing black particles around Lake Claire. Members have also observed malformations in fish. Mikisew members describe that

they are scared to touch the water because of concerns over contamination, and they have to bring bottled water out on the land.

They also describe how decreasing water levels exacerbates concerns of contamination. They indicate that in areas where water levels are low, the population -- the pollution settles and is not flushed by the proper water flows.

Mr. Maclean testified that the CBM program collects data on the metals and PAHs in the water. Mikisew is concerned about the risk that PAHs are increasing downstream of the oil sands in water and sediment.

Mr. Maclean identified that there are a number of potential oil sands contributors to PAHs in the Athabasca River system, including from upgraders, vehicle emissions, and mine dust. Part of the work of the CBM program was to determine whether oil sands development did contribute to PAHs. It sampled a number of sites along the Athabasca River and in the PAD near Lake Claire. To allow for such an analysis, the locations chosen were upstream development, across from the main development on the Athabasca River, and then downstream development into the PAD.

The results showed higher PAH levels at Suncor, Syncrude, and CNRL sites. PAHs emitted from these

operations were detected at the mouth of the Athabasca River. Mr. Maclean stated that the results showed small PAH inputs reaching the PAD.

Although the contamination levels are below the water quality guidelines of the PAD, Mr. Maclean testified that the guidelines themselves are not comprehensive and leave out key contaminants that comprise a large part of the total contaminant burden of PAHs.

Further, the PMD devices --

THE COURT REPORTER: Can you slow down.

MS. BROOKS: Yes.

-- only collect dissolved PAHs. However, PAHs dissolve poorly in water and bind to sediment. Sediment then settles in the PAD. Therefore, Mr. Maclean stated PMDs likely underestimate the true amounts of PAHs in the PAD.

Mr. Maclean testified that the CBM analysis were able to differentiate between the PAHs from forest fires and those from oil sands based on two diagnostic ratios. These tests revealed that at least two -- at two culturally important locations, PAHs were identified as deriving from oil sands and not forest fires.

The joint conditions developed by Teck and Mikisew include measures relating to Mikisew's water quality

concerns. I won't repeat them here, but, again, they appear at Appendix 2 to CEAA Doc 497. The joint conditions mark a clear recognition by Teck about the importance of this issue to Mikisew and is of considerable advancement from previous hearings.

However, given the importance of waters around the project area to Mikisew's way of life, it is Mikisew's position that any risk, regardless of the magnitude, requires additional government action. Mikisew submits that the additional risk created by the project can be mitigated through the following set of government measures.

First, government should enter into an agreement with Mikisew and other interested Indigenous groups to establish a project oversight committee so that Mikisew can be part of the review of monitoring data with regulatory authorities.

Second, governments should include more sites for the management of water quality issues in the lower Athabasca region and the PAD to improve the statistical framework for detecting change to water quality.

And, third, government should provide resources to Mikisew to monitor project effects, including investments in the CBM equipment and infrastructure for Fort Chipewyan.

Air quality. Mikisew members have expressed

concern about the extent to which their air quality is being impacted by oil sands development. Ms. Olsgard was retained to conduct an air quality assessment focusing on the PAD and the park.

Ms. Olsgard testified that Alberta has reported air quality in the region has currently deteriorated. She stated that Alberta relies on four key contaminants to assess air quality and that all four indicators have exceeded management triggers and, to a varying degree, require management action.

After determining the baseline, Ms. Olsgard conducted a screening-level assessment to determine potential pathways and emissions which would inform a more detailed modelling. She testified that a screening assessment is a simple and quick way to estimate a worse-case predicted concentration. Ms. Olsgard used the model AERMOD, which used a 50-kilometre boundary. She chose AERMOD because of its near model -- near-range modelling which could then inform an evaluation of a second far-range model. Although Teck challenges the appropriateness of AERMOD, Ms. Olsgard testified that, in her opinion, modelling in EIAs must reflect both local and regional impacts and that no single model can accurately or precisely predict ground-level concentrations on both spatial scales. Given the culturally significant places to

Mikisew are located within less than 50 kilometres of the proposed development area, she testified that both the far- and near-range model are -- was warranted.

And it should also be noted that Ms. Olsgard cited a number of peer-review studies in her report to choose her model, not just the one that was put to her under cross-examination.

To conduct the AERMOD modelling, Ms. Olsgard relied on Teck source data in -- with the exception -- with three exceptions. Teck assumed all existing mine fleets meet Tier 4 emissions, whereas Ms. Olsgard used Tier 2 standards reflecting current operations. Teck assumed a bottom-up approach to emissions from tailing ponds, whereas Ms. Olsgard used a top-down approach, as indicated by the scaling factors collected under the joint oil sands monitoring program published by the ECCC researchers. Ms. Olsgard relied on a smaller group of chemicals to align with the specific impacts that Mikisew has reported in its territory. As a result of her screening-level air-quality assessment , Ms. Olsgard found the model predicted a risk of contaminants reaching the park and the PAD.

Ms. Olsgard's report supports the need for the Panel to implement the joint conditions relating to air quality that were prepared by Teck and Mikisew. In the joint conditions, Teck has committed to both undertake

actions to verify its predictions and to include a new air-monitoring station in the region.

Ms. Olsgard proposed mitigation measures for the issues she identified, including for government to improve standards for dust oppression, require mine fleet upgrades in the region, prohibit future development close to the park, and implement an air-quality program that measures, assesses, and monitors emissions.

In Mikisew's submissions, these recommendations bolster the need for the multiple components of the Nikechinahonan framework. Specifically, the proposed BSA would draw the northern boundary for projects that could directly impact the air shed around the park and its water quality. Improved air-quality monitoring is also a key component of the project oversight committee and Mikisew's recommendations for new investments and local monitoring capacity.

Health concerns. Ms. Olsgard conducted a screening-level human and environmental health assessment. She concluded that the risk to human health predicted by the EIA for the LSA could extend into the park and the PAD. Although she stated the risks are small, evidence from Dr. Candler and the Mikisew community members highlight the need -- highlights that any increased risk can further erode

their confidence in traditional resources.

While the Panel heard there are differences in opinion between Teck's evidence and Ms. Olsgard, both Teck and Mikisew have agreed governments can take effective action in light of this possible increased risk. Specifically, Teck and Mikisew have agreed on two recommendations: One, governments must develop with Mikisew improved community health baseline data and an integrated monitoring program to evaluate project and cumulative effects on community health; and, two, governments must develop and implement robust measures with Mikisew to maintain the integrity of traditional use in the territory throughout the project. The intent of these measures will be to maintain confidence in species, waters, and the use of land in the region to ensure the continued practice of rights.

Migratory birds. Mikisew commissioned a report by Ms. Hechtenthal to assess the impact of migratory birds in the oil -- mineable oil sands region and the PAD. This report will assist the Panel in its assessment for birds and the OUV assessment. The potential risk to waterbirds arise from exposure to contaminants, changes to habitat and food availability, and changes to migratory routes.

Ms. Hechtenthal testified that birds are exposed

to contaminants because they mistake tailing ponds as natural wetlands during migration. She said: (as read)

> Despite the presence of bird-deterrent systems, tens of thousands of migratory birds are observed annually on tailing ponds.

These observations are based on time surveys. The actual number of bird contacts could be higher, estimated at over 200,000 per year, over 110 species.

> Contact with tailings ponds can cause various outcomes in waterbirds, including exposure to contaminants externally and internally. The endpoint for birds that come in contact with tailing ponds are either mortality, a decrease in fitness, sublethal effects, or no effects.

Ms. Hechtenthal stated that the data for on-site mortality is currently unknown but could be studied; the data for off-site mortality is also unknown, but difficult to measure, given that waterbirds can take days to die and do so miles away from the site of contamination. Although Teck estimates on-site and off-site mortality at 5,400 based on the number of oil birds observed flying away from existing mine sites, Ms. Hechtenthal testified that that number is likely low. She stated: (as read)

> It does not account for oil sheen; it does

not account for the difficulty in observing oil on flighted birds; it does not account for the times when waterbirds migrate at dusk, night, or dawn.

Further, she said that Teck does not comprehensively account for the sublethal effects to birds.

Habitat loss can contribute to regional population declines in bird species. Ms. Hechtenthal testified that the oil sands development has resulted in the loss of wetland habitats from project footprints and sensory disturbance and degradation. She also testified that the project will continue to contribute to the loss of regional diversity of wetlands. The LSA provides 15 different types of wetland habitat; yet, at closure, Teck is claiming only two and adding two novel habitats. The proposed reclaimed landscapes may not achieve the level of ecosystem productivity required to provide key migratory bird habitats.

Finally, you heard that land users have observed changes in the fall and to spring migrations to flock size, timing, and patterns of habitat use, and have expressed concerns that birds are now diverting around the MOSR and the park and the PAD to the east and the west. Ms. Hechtenthal stated that such diversions are plausible, given birds use a variety of sensory and environmental cues to guide their migration.

In term of mitigations, among other proposed measures, Ms. Hechtenthal testified that the project oversight committee should be designed to address the numerous critical information and assessment gaps, and she said that an independent and systemic testing of bird-deterrent systems at a mine site is required and recommended for the development of the recovery and rehabilitation centre for migratory birds in the oil sands.

My two last sections relate to the OUV, and then I'll make a last comment on the impact to rights and culture.

Earlier, Mr. Gustafson provided guidance on how to consider effects on the OUV of the park, and my comments have -- much of my comments already about the evidence will be relevant to your consideration of the effects on the OUV, but I do want to add a few -- further few things.

Mikisew testified that they felt they had to go to the international community to address their concerns that the OUV of the park is diminishing, is at further risk with increased oil sands development. You will recall that Mikisew showed a video that documented its petition.

As testified by Parks Canada, the UNESCO process has led to a change in the understanding of the health

of certain aspects of the OUV of -- of the park from the 2014 letter from Canada cited by my friend in his closing argument yesterday. It is important that you consider the most current evidence about the status of the attributes of the park's OUV, most at issue in this proceeding.

As the most recent state of the conservation report, the one prepared three years after the 2014 report read by my friend, Canada acknowledged that the findings of the 2016 reactive monitoring mission, namely the PAD, is subject to severe concerns and that the declines identified by Mikisew are not overstated.

My friend also mentioned a 2014 international union for conservation of nature report about the state of the park. As described in the affidavit of Ms. Lepine, the IUC had released an updated assessment in 2017 that stated the 2014 assessment had been revised from "good with some concerns" to "significant concerns".

The 2017 updated assessment determined that the park has the worst conservation outlook of any Canadian world heritage site and the second worst of any North American site. As you heard, the recent strategic environmental assessment also confirmed the PAD is far from having a good conservation outlook.

In short, there's clear consensus that the key

attribute of the park's OUV are no longer meeting the OUV objectives and that almost all ecological indicators associated with the PAD are in decline. It is also accepted that corrective actions are urgently needed to restore the PAD.

Parks Canada is currently working on an action plan to address the Mission 17 recommendations. Mikisew members testified that the current draft needed significant improvement if it is to help reduce the risks of the project.

In terms of your assessment approach, Mikisew agrees with Parks Canada that it's appropriate to assess the risks to the OUV against the articulation of the desired outcomes from the strategic environmental assessment. Mikisew submits that the Panel can rely the SCE -- SEA for understanding the current state and the trends of the specific OUV components.

The risks and impacts I discussed earlier show that, absent implementation of effective -- effective project conditions and additional measures by government, the project will have an adverse effect on the OUV of the park or otherwise increase the risks of the negative effects to its OUV.

In Mikisew's submission, the appropriate response to these risks is to ensure that the systems and structures are in place to proactively monitoring OUV

health and to ensure management actions if monitoring determines that Teck's predictions were overly optimistic.

In this regard, the key mitigation measures for the OUV, beyond the joint conditions, are the project committee requested by Mikisew, as well as increased investments in monitoring capacity, particularly the CBM program.

Lastly, I have already reviewed a number of effects on Mikisew's rights and culture, but I would like to highlight a few other important adverse impacts before passing the podium back to Mr. Gustafson for closing.

Dr. Candler testified that he prepared four studies specific to the project that deal with impacts to rights and culture. The rights and culture study is the key study that combines the results of research from his other studies. For this study, Mikisew focused on a local study area, 5 kilometres from the project footprint, and a larger regional study area, within 25 kilometres, that extended downstream into the receiving waters of Buckton Creek, the Athabasca River, including Lake Claire and the Delta.

The LSA and the RSA show high-density use in those areas. Dr. Candler testified that there are critical place-based family histories connected to those areas.

He stated there are critical cultural relationships to resources in the area; for example, the Ronald Lake bison herd. He found that the study area contained critical place-based Mikisew knowledge, including place names and ecological knowledge. This place-base knowledge is central to Mikisew's ability to pass down its knowledge to future generations.

The rights and culture report confirm that the area around the project is just simply unparalleled in terms of the abundance of resources, trust in resources, and uniqueness of resources. Over 350 Mikisew values are located within 5 kilometres of the project footprint and thousands more within the RSA. Mikisew's evidence shows more than 80 kill sites along the portions of the Athabasca River adjacent to the project and towards Birch Mountain.

To illustrate his main conclusions to the impacts to way of life, which includes freedom to practice your culture without interference, the ability to return to places, the ability to maintain connections, and confidence and continuity, Dr. Candler constructed a cultural zone of influence. The zone of influence reflects what he refers to as a "cultural footprint". The zone of influence is reproduced from his slide deck in your handout package at Figures 8, 9, and 10. Figure 8 shows the baseline cultural footprint;

Figure 9 shows the density of current practice; Figure 10 shows how the project is expected to influence the cultural footprint based on how Mikisew's way of life would be altered with the project.

The findings show that the inclusion of the project makes a radical difference. This is because of the mine's location. It's further north than any other oil sands mine and includes a watershed that flows into the PAD. As a result, confidence in these critical areas decreases.

Dr. Candler found that for Mikisew to maintain its way of life, it also depends on the availability of harvest, and this doesn't mean any species hunted anywhere. Dr. Candler said: (as read)

> A key point of this report is that a diversity, a variety of resources need to be presented -- present -- present on the landscape and available in the vicinity of preferred areas at different seasons, at different times. There needs to be variety in order to have the flexibility.

With respect to governance and stewardship rights, Dr. Candler concluded the impact on those rights depends on how the project proceeds. If it moves forward with deep involvement of Mikisew knowledge holders, deep attention to Mikisew's stewardship

principles and obligations on the land, it's possible that the project could actually reinforce Mikisew's stewardship and governance packages.

However, if the project moves forward in a way that is not respectful of that, it would be a very serious blow to Mikisew's governance rights. And I note that Canada has also agreed, as a result of its rights-based assessment, that there's the potential for serious impacts to Mikisew's rights and culture, and that there are outstanding issues that require further consultation and accommodation.

And on that note, I'll hand it back to Mr. Gustafson to explain Mikisew's closing submission on how the project can move forward in a way that honour and respects its rights.

Final Submissions by Mr. Gustafson

MR. GUSTAFSON: I will do my best to stick within the five-minute estimate. It may be the first time I've met my estimates. Fingers crossed.

Mr. Chair and Panel, as you know, Mikisew has done a lot of work to determine what can and must be done to mitigate the effects of the project on its rights. In the words of Elder Terry Marten: (as read)

A rights and culture mitigation approach is needed.

There are two pillars of the rights and culture

mitigation approach for this project. The first is the joint conditions which, as you've heard, were the product of extensive engagement and include real measures by Teck to do what's in its power to mitigate project effects. The parties have come very far and done it together.

The second pillar, which is the Nikechinahonan framework, is directed at how government can further minimize those effects or risks the project creates for Mikisew's rights and culture. Elder Terry Marten explained the purpose of the framework, saying: (as read)

> We need to know there is a plan in place so that Mikisew people have certainty that our culture and language will survive, and we can deal with the risks and changes caused by the project. We owe it to our elders and land users now and to our future generations.

I would suggest that is something that everyone in this room can support.

And to put it in the words of Councillor Waquan, the Nikechinahonan framework would -- is what would make it possible for decision-makers to be responsive to Mikisew's stewardship values. The first component of the Nikechinahonan framework is the biodiversity stewardship area. In Mikisew's submission, the full

BSA is a mitigation because it will help alleviate uncertainty in the community about the proximity of development, the fate of the -- of bison habitat, and shows a measure of respect for Mikisew's stewardship values.

Mr. Chair, Panel, there is already significant momentum for the BSA in large part because of joint efforts by Teck and Mikisew. Your recommendation for its full implementation is crucial.

Other parts of the Nikechinahonan framework relate to the creation of engagement structures so that Mikisew can be part of ongoing decision-making relating to project effects. Part of mitigating the uncertainties of the project creates for Mikisew is to ensure that Mikisew has a real seat at the table with governance and regulators. One part of this is the establishment of more effective habitat protections and co-management for the Ronald Lake bison herd. You heard from Dr. Gibson that this is something that happens in other regions and is imminently achievable. Again, this is something that looks likely but needs a recommendation from you.

Another part to the framework is the proposed project committee to mitigate effects on Mikisew's stewardship values. It is of crucial importance that regulators and governments create a new, more effective

relationship with Mikisew for overview of the project.

This committee for Mikisew is a key part of creating the ethical space between governments and regulators and Mikisew that Alice -- Elder Alice Marten explained to you in some detail.

In the words of Mr. Stuckless, quote: (as read)

> I think it is important to note that whether you agree with our experts or you agree with Teck's experts, the risk to Mikisew's way of life is fairly real, and it's important to them. And that is why the project committee is needed. We see the committee as a decision-maker for our community to work with the Crown to help make better decisions and to help better respect the community's desires to be an active part of managing their lands.

You heard how this is the norm with projects in the North and in others -- other areas of Canada. Canada is supportive of the proposal, and Alberta has now indicated to Mikisew that it agrees there is a strong rationale for a new multi-stakeholder regulatory assurance committee and that Alberta will participate in the committee to the extent of its jurisdiction, and this is the important part, if recommended by the Joint Review Panel.

Finally, the last components for the Nikechinahonan framework is investments by governments in making Fort Chipewyan a healthy community and in providing Mikisew with resources to maintain their culture. If you are uncertain about what this means, look no further than the words of Elder Terry Marten. If the -- and these are her words: (as read)

> If the project is approved, our culture will be even more at risk than it is already. This should be clear by now with the information you have received. Practically, that means our community will have to undertake new initiatives to actively support community members to continue using the PAD, the Peace Athabasca Delta. The land users in Lake Claire will need extra help and support, as will their children and grandchildren and future generations, to be able to maintain those connections and activities that make us Mikisew. Mikisew will also have to be actively involved in monitoring so that the current monitoring information can be shared with the community members and regulatory authorities. We will need to go through great lengths to make Fort Chip a healthy, viable place. Mikisew is up to the task, but

we need the resources and supports to undertake it, and that's what we want you to take in for us. We need the support from both governments.

As Dr. Gibson explains, support for the activities and measures Elder Marten described is about taking back the concept of stewardship. In a region where projects have disempowered communities, this part of the Nikechinahonan framework can have real social outcomes and real changes and self-confidence and self-esteem.

What does all of this mean for what Mikisew is asking of you, Mr. Chairman and Panel? Specifically, Mikisew's submission is that: One, the Panel must conclude that the project will have adverse effects on Mikisew's rights; two, the Panel should recommend that appropriate regulatory authorities require Teck to adhere to the conditions that Mikisew and Teck have jointly developed; three, the Panel should incorporate the proposed conditions in your decision as the AER; and, fourth, the Panel should recommend that the Governments of Alberta and Canada commit, prior to issuing final approvals, to implement proposed measures that Mikisew has identified in its submission.

Mr. Chair, Panel, you have heard that this project creates real risk for the Mikisew community in their

most cherished area, but you have also heard that this proponent has, through collaborative discussions with Mikisew, made project-related commitments in the form of jointly developed regulatory conditions to do what is in its power to reduce those risks.

You've also heard that Mikisew requires that governments take further actions to reduce risks associated with the outstanding issues we've identified here, risks to water quantity, the OUV of Wood Buffalo, and Mikisew's treaty rights, and their culture.

Mr. Chairman, in your final question to the ACFN witness panel in Fort Chipewyan, you asked how the Panel can reconcile ACFN's request for recommendations to government, with their testimony that governments have ignored many recommendations in the past. Well, Mikisew wasn't asked a similar question. It is germane to Mikisew. That is why I urge you and the rest of the Panel to look very closely at how Mikisew worded the recommendations in their slide presentation for the Nikechinahonan framework. You'll see in the wording of Mikisew's recommendations that they have clear timelines that are tied not to your decision but the decisions of both the federal and provincial governments that will be made after your decision.

That is a major lesson from previous hearings where recommendations have languished. Your

recommendations to governments related to effects on Mikisew's rights must be closely tied to the issuing of final project approvals, and the wording of your recommendations must clarify that implementation is needed to justify the outstanding adverse effects to Mikisew's treaty rights. That will allow Mikisew to do what it can to ensure there is real accountability on governments before final approvals are granted.

Mikisew does not object to the Panel deciding to approve the project under its authority as the AER, but that does not let Governments of Alberta and Canada off the hook for fully discharging their duties to take real steps to address outstanding issues and further mitigate effects on treaty rights before their approvals.

In this regard, I want to clarify Mikisew's position on the issue of free prior and informed consent. Mikisew agrees that Teck has undertaken significant efforts to work towards obtaining Mikisew's consent for the project through the collaborative work it has done with Mikisew. The participation agreement and the joint conditions are allotable products of those efforts. Mikisew values the relationship it has built with the Teck and the efforts by Teck to listen to the community and to commit to real actions within its power to resolve community concerns.

But Mikisew has not yet provided its full consent for this project. Mikisew's consent can only be provided if all parties that have the power to mitigate and accommodate Mikisew's concerns, including governments, have made the commitments to do so. It would be a truly bizarre twist for Alberta and Canada to be in a position of not gaining the consent of the Mikisew for industrial development over which the proponent and the Indigenous nation have found significant common ground. Industry and the Crown have separate responsibilities to seek out and receive Mikisew's consent. One aspect of consent does not make the other unnecessary or inevitable.

The Governments of Canada and Alberta are integral to those efforts given their ability to mitigate Mikisew's outstanding concerns. Put differently, the path to Mikisew's consent is and has always been through the Nikechinahonan framework. While Mikisew sees some positive signs from governments, the Crown needs another push from this Panel to make good on its constitutional duties.

And with that, I'll end with a quote from Ms. Lepine. First I'll drink a sip of water. Quote: (as read)

> We [meaning Teck], Mikisew, and yourselves, as decision-makers, have a real opportunity

to do something positive here for the land users you've heard and for our future generations that you've heard so much about. We know the governments are listening, and we know that our ancestors are listening too.

Thank you.

THE CHAIR: Thank you, Mr. Gustafson. I'll suggest that was a tad over five minutes.

The Panel has no questions. Thank you to both of you.

It is about ten to 12, so I guess we have a couple of options. One is we could take a short break, allow Canada to proceed with its final, and then take the longer lunch break, and then do reply argument after that; or we could take our lunch break now and come back after lunch. And so we will look to Mr. Elford and Mr. Ignasiak. Do you have a strong preference one way or another?

MR. ELFORD: Mr. Chair, I'm prepared to proceed without even a short break, if that would assist. I've got my material, and I'm ready to go, but I certainly wouldn't object to one. But I suspect I'll be, hopefully, around a half hour, but I feel such predictions are dangerous, but that's my current estimate.

THE CHAIR: Mr. Ignasiak, any strong

preference?
MR. IGNASIAK: Yeah. I think it would be more efficient if he proceeds, whether right away or after a short break.
THE CHAIR: Yeah.
MR. IGNASIAK: And then we could take a longer lunch, and that way, we'd be ready to hit reply after lunch, I fully respect.
THE CHAIR: Okay. I'll suggest we take a short break because I think the court reporters probably need a bit of a break and others may as well. So let's take a quick break, and then Mr. Elford will proceed. Thank you.
(ADJOURNMENT)
THE CHAIR: Thank you. Please be seated.
Mr. Elford, just before we get started, one thing.
Mr. Gustafson, upon reflection, we do have a question. I just wanted to confirm something we thought we heard you say. I thought we heard you say that -- with respect to this project committee, that Alberta had kind of endorsed it and said that they would implement it. So, first, I just want to confirm, did we hear that correctly; and, secondarily, if we did, you know, what's the basis for that? What kind of communication have you had?
MR. GUSTAFSON: So you heard it correctly.

I -- I would follow up that Alberta has also said that there are many more details that they need to work out with the Alberta Energy Regulator, with the federal government, with Mikisew, and with Teck on details, terms of reference, all those components. So it's -- it's a conceptual level of support in terms of seeing how something like that committee could provide value for how people are going to talk to each other if this project is approved.

So there have been email exchanges around that. None of that, to be totally candid, is on the record in front of you. There was a discussion about how to do that procedurally this week between a number of parties, and the result was that didn't go -- nothing went into the record. So I hope that's clear.

THE CHAIR: Okay. Thank you.

MR. GUSTAFSON: Thanks.

THE CHAIR: That's helpful clarification.

Sorry, Mr. Elford. Go ahead.

Final Submissions by Mr. Elford

MR. ELFORD: Thank you, Mr. Chair. You should have paper copies of our submissions. We will have -- or have already sent an electronic copy that could be placed on the registry.

MS. LACASSE: So that should be Document 702.

MR. ELFORD: Thank you.

So by way of introduction, on behalf of the Government of Canada, I acknowledge that we are on traditional territories of the First Nations people of Treaty 7, including the Blackfoot Confederacy, the Tsuut'ina, and the Stoney Nakoda, as well as the Metis Nation of Alberta Region 3.

The Attorney General of Canada appears on behalf of a number of federal departments and agencies that are federal authorities for the purpose of this proceeding pursuant to the Canadian Environmental Assessment Act, 2012. These include Transport Canada; Natural Resources Canada; Fisheries and Oceans Canada; Environment and Climate Change Canada, or "ECCC" as I will be using throughout this; Health Canada; and the Parks Canada agency. These federal authorities have presented scientific or expert information or knowledge in relation to their respective department's mandates and their roles within those mandates that may assist the Panel in rendering their assessment of the Frontier Project for the purpose of CEAA, 2012. In addition to this information or knowledge presented in their written and oral submissions and in answers to cross-examination questions or undertakings, the federal authorities have also participated in the hearing process leading to the appointment of the Panel

and the scheduling of this hearing.

They further participated in the supplemental information request process by providing comments regarding the sufficiency of the information provided by the proponent based on the scientific expert knowledge they possessed.

The Attorney General also represents the Canadian Environmental Assessment Agency, which attended on behalf of the whole of the federal government. It appeared in a non-expert capacity to speak to a rights impact assessment methodology developed jointly with the Mikisew Cree First Nation, as well as its preliminary assessment on potential impacts on rights and recommendations for mitigation measures arising from the application of that methodology. Agency officials also attempted to provide the Panel with an explanation of the proposed mitigation measures currently being contemplated by the Government of Canada and the Mikisew Cree First Nation.

I repeat that the agency officials who appeared as witnesses before the Panel do not have any role in assisting the Panel with its assessment of the project pursuant to CEAA, 2012 and specifically are restricted from interacting with the Panel staff in respect of this assessment.

I will speak briefly about Canada's role in these

proceedings to contextualize the evidence provided and will then highlight certain evidence provided by federal authorities.

Canada's roles in these proceedings arise from and is defined by Section 20(d) of CEAA, 2012. That section, as it applies in this process, requires that every federal authority that is in possession of specialist or expert information or knowledge with respect to a designated project that is subject to an environmental assessment must, on request, make that information or knowledge available within the specified period to the Review Panel.

Federal authorities are not here to advocate for or against the project. They have appeared as impartial experts to provide information or knowledge in response to the Panel's request. The provision of this information is a necessary and important part of this process.

By virtue of their mandates and resources, these authorities have certain information or knowledge that will assist the Panel in conducting an environmental assessment. That they are here to assist in the conduct of an assessment under CEAA, 2012 is key to understanding their role.

These are complex processes involving the application of scientific principles and knowledge, a

great deal of research and information gathering, and the application of a myriad of rules, regulations, and policies. As was evident from both their written materials and the evidence provided at the hearing, the federal authorities sought to provide the Panel with the best-available information and evidence to assist in conducting the environmental assessment and to enable the Panel to provide its rationale, conclusions, and recommendations in respect of this project.

It is important to stress that the scientific information and scientific opinion may differ and even be in conflict.

Teck has made a number of comments regarding the evidence of Canada's witnesses. Those witnesses attended the hearing to provide knowledge and information. Canada will not comment at length on Teck's statements, as there is no need. It is sufficient to note that experts will sometimes disagree. Parties should exercise caution in characterizing normal disagreements as misleading or containing an animus or malicious intention not supported by the evidence. Further, minor mistakes, if any were made, should not be inflated beyond defencible proportions. The evidence of Canada's panel speaks for itself and should be evaluated on its merits.

With regard to the evidence provided, we will

highlight some specific points already raised by four federal authorities and the agency, the agency being CEAA.

This should be brief; however, the brevity of this highlighting should not be taken to be a minimization or rejection of any of the other evidence put forth by those authorities in either their written submissions or at the hearing.

The Government of Canada continues to rely on that evidence and asks the Panel to consider the evidence as a whole. We will not be addressing all of the recommendations or evidence set out by the federal authorities, but would like to thank the Panel and its staff for the consideration of the same.

First, with regard to Health Canada, with respect to monitoring, Health Canada's evidence at the hearing was that due to the inherent uncertainties of the human health risk assessment, it is not possible to determine whether the proponent's risk estimates are actual overestimates or whether additional mitigation may be required.

As model data cannot be confirmed unless actual data is obtained to validate the exposure predictions, Health Canada gave evidence and its opinion in support of its recommendations that methylmercury concentrations in fish be monitored in any water body

that could be potentially impacted by the project and from which people are or could be harvesting and consuming fish.

This monitoring, in Health Canada's view, would help ensure that predictions are accurate and that consumption advisories remain protective of human health. Further, Health Canada recommended that Teck commit to a precautionary approach and monitor changes in lead concentrations in environmental media.

Health Canada could not comment on whether these monitoring recommendations will be incorporated into existing regional monitoring initiatives but is of the view that it is important that monitoring be completed in a consistent manner for the duration of the project.

On to Transport Canada. Transport Canada's evidence was that it has the ability, within its regulatory processes, to include terms and conditions within project approvals to address impacts and cumulative impacts to navigation. As was heard throughout these proceedings, the Athabasca River and surrounding watersheds are complex, and changes in water flow and water levels may have the potential for broader ecological impacts.

Transport Canada's evidence was that its jurisdiction is limited to addressing impacts to navigation. Any mitigation measures chosen to protect

navigation must be designed to avoid inadvertent and undesirable impacts to other aspects of the ecosystem such as fish and fish habitat or the sensitive ecosystem of the Peace Athabasca Delta.

Transport Canada confirmed that it continues to support a regional approach to water management, which can more effectively consider all of the cumulative impacts of water withdrawal for oil sands operations. To support this regional approach and to further its own understanding of the impacts of water withdrawal on navigation, Transport Canada advised that it is working to complete a navigation study in spring 2019. Transport Canada also confirmed that it is committed to working with the Province of Alberta. It committed to sharing the results of the study not only with Alberta, but also with other partners, including Indigenous people -- including Indigenous groups, Parks Canada, and ECCC.

Now, with regard to ECCC, ECCC's recommendations included monitoring, baseline data collection, and follow-up programs. It requests that the Panel recommend that such monitoring data be made publicly available.

With regard to mercury and methylmercury, ECCC's evidence was that the removal of the organic layer from the pond reservoir infrastructure will likely reduce

methyl -- will likely reduce mercury methylation in the new reservoir, but will not remove mercury methylation entirely.

As described in ECCC's submission to the JRP, there are additional factors to be considered when assessing the contribution of methylmercury production in the new reservoirs that Teck has not considered.

ECCC would therefore highlight the recommendations and methods put forward in its submissions requesting that additional monitoring and modelling using site-specific parameters for mercury and mercury methylation be completed prior to construction of the project's pond reservoir infrastructure -- and there's a -- acronym's "FHCL,OSSP" -- if the project is approved.

With regard to acid deposition, ECCC presented information to The panel which showed that, based on a -- 2013 emission levels for sulphur dioxide and nitrogen oxides, regional aquatic critical load exceedances have been reached over a sizable area of northern Alberta and Saskatchewan.

ECCC provided data to the Panel demonstrating that there are an increasing number of regional lakes with acidification trends and increasing levels of significance associated with these trends. Additionally, ECCC's evidence demonstrated SO2

concentrations continued to increase between 2013 and 2017. ECCC's analysis indicates that cumulative acidifying emissions in the oil sands region need to be reduced to prevent ecosystem damage and that these emissions need to be verified using surface concentration and satellite measurements.

Finally, we would note that Dr. Makar's paper was peer-reviewed and, as such, should not lightly be discounted.

With respect to bison, ECCC's evidence was that the project represents a high risk to the Ronald Lake Wood bison herd, even with the implementation of proposed mitigation measures. The herd is highly sensitive to disturbance, and this sensitivity alone could trigger a range shift, regardless of forage limitations.

Given the close proximity of the Ronald Lake herd to diseased bison in Wood Buffalo National Park, even a small shift in range caused either by forage limitation or sensory disturbance could result in disease transmission to the Ronald Lake herd. ECCC's evidence was that the transfer of disease to Ronald Lake bison would likely permanently alter the conservation value of the herd and use of the herd by Indigenous peoples and could impact attainment of the population and distribution objectives outlined in the final recovery

strategy for Wood bison in Canada.

The mitigation measures proposed by Teck to prevent movement or contact with the diseased bison in the park are uncertain or are likely to be ineffective and could also adversely affect other wildlife species such as boreal caribou. In addition, while biodiversity offset or compensation area could protect some bison habitat outside the project disturbance area, it would not mitigate project effects on the herd, in particular, the risk of disease transmission.

With regard to whooping cranes, ECCC's evidence was that the project represents a high risk of mortality for whooping cranes. Based on telemetry data, a relatively high number of whooping cranes have landed in close proximity to the proposed mine during migration.

Evidence from other oil sands mines indicates that the whooping cranes can land on tailings ponds despite the presence of best-available bird deterrent technology and could be attracted to certain features on tailing ponds, such as sandy beaches or shallow water. Collectively, this evidence suggests that there is a high risk that whooping cranes will land on Teck's tailings ponds resulting in a high risk of bird mortality. Best-available bird deterrent technology such as that proposed by Teck is unlikely to mitigate

this risk.

With regard to Parks Canada. Wood Buffalo National Park is a world heritage site. World heritage sites are designated to protect those parts of cultural and natural heritage that are of outstanding interest on a global scale and, therefore, need to be preserved as part of the world heritage of humanity as a whole.

A world heritage site can be designated using one or more of four different criteria, which do not necessarily relate to ecological integrity. For example, a national park could be designated a world heritage site if it contains superlative natural phenomena or areas of exceptional natural beauty and esthetic importance or outstanding examples representing major stages of earth's history, including the record of life, significant ongoing geological processes in the development of land forms, or significant geomorphic or physiographic features, neither of which directly concerns ecological matters.

In the case of Wood Buffalo National Park world heritage site, the designation criteria include the great concentrations of migratory wildlife are of world importance, and the rare and superlative natural phenomena include a large inland delta, salt plains, and gypsum karsts that are equally internationally significant. That's one.

Next one, Wood Buffalo National Park is the most ecologically complete and largest example of the entire great plains boreal grassland ecosystem of North America, the only place where the predator/prey relationship between wolves and wood bison has continued unbroken over time.

The next criterion, for example, is Wood Buffalo National Park contains the only breeding habitat in the world for the whooping crane, an endangered species brought back from the brink of extinction through careful management of the small number of breeding pairs in the park. The park's size, 4.5 million hectares, complete ecosystem, and protection are essential for in situ conservation of the whooping crane.

The designation describes ecosystem components and processes is linked to the ecological -- is linked to ecological integrity and specifically mentions species at risk. Because of the different reasons for designating a world heritage site, the only way to assess the management of a site or the effects of a project on it is by comparing potential impacts to the reasons for the designation.

With respect to species at risk, Teck provided a number of SARA permits as aids to cross-examination and seemed to suggest that they have some relevance to the

proposed project. They do not. While the methodology used by Parks Canada is consistent, the circumstances for each permit are very different. Some permits relate to the destruction of critical habitat or residences, which is not at issue in this project. Assessing destruction to critical habitat requires additional assessment steps related to the description of critical habitat, the biophysical attributes, and activities likely related to the destruction listed in recovery strategies and/or action plans.

When examining the potential for jeopardizing the survival or recovery of a species, changes to habitat would rarely have the same level of effect on a population as would killing individuals. As such, each has to be evaluated in its own context. In only two permits provided to the Panel was there an identified possibility of mortality to individuals. In one case, the risk was identified as a "temporary" during construction. In the other, the proposed mitigation measures were known to be effective. Additionally, impacting activity was decreasing over time while the population of the species at risk was increasing. While the permit rationale did not characterize the risk of an individual being harmed from the activity, the information indicates it was very low.

The Panel may also benefit from further comments

on Parks Canada's assessment of the effects on whooping crane. The assessment can be conducted using Teck's methodology or Parks Canada's methodology.

Parks Canada questions Teck's medium magnitude assessment for the population, abundance, and distribution. Teck assessed impacts to whooping crane stopover habitats as a high magnitude event. It initially assessed the risk of mortality as low, later changing it to medium. In its methodology of combining individual assessments to form an overall assessment for the population abundance and distribution, Teck normally took the highest magnitude ranking of habitat, connectivity, or mortality. In the case of whooping crane, however, Teck used the lowest of the rankings to develop its overall assessment of medium, the sole exception to their methodology.

Given ECCC's assessment of the high probability of whooping crane landing on the Frontier mine tailings pond and the high mortality risk to birds which come into contact with tailings ponds, Parks Canada questions Teck's ranking of medium risk mortality.

Using the methodology, it applies when issuing species at risk permits, Parks Canada considered it essential to consider the risk of mortality against the population and distribution objectives. Given this is the only self-sustaining population of whooping crane

on the planet, the recovery strategy indicates that the population goal for the population is 1,000. The current population is in the 490s. The population is well below the goal. And, importantly, the growth rate of whooping cranes is low, only 4 percent annually.

ECCC demonstrated the high probability of whooping crane landing on the proposed Frontier mine tailing ponds and the high mortality risk to birds which come into contact with tailing ponds. This risk from interactions with tailing ponds is not a one-time risk. It will exist during the spring and fall migration periods for up to 41 years when the tailing ponds are present. On this basis, Parks Canada is concerned project -- the project could slow the attainment of the recovery objectives.

Whether using Teck's assessment methodology or Parks Canada's approach, it is necessary to consider additionally that whooping crane breed in Wood Buffalo National Park and that their presence was specifically mentioned for designating the park as a world heritage site.

Teck presented evidence that the risk of disease transmission to the Ronald Lake bison herd from the Delta herd in Wood Buffalo National Park is high, but it would not increase as a result of the project. ECCC provided evidence illustrating that this is not the

case, and risk of disease transmission would indeed increase should the project be approved.

Teck also submitted that there are multiple mitigation options to reduce this risk and that the responsibility to implement these mitigations sits wholly with Parks Canada.

While there are mitigation options ranging from fences, control zones, vaccination programs, and fires, all of these mitigations have implementation challenges, unproven effectiveness, and serious ecological integrity implications.

While Parks Canada has initiatives to mitigate disease transmission for the park as a whole, both Parks Canada and ECCC reiterated that additional studies of the Ronald Lake bison herd and the receiving environment, including the Delta herd, are essential in order to better understand the ecology of both herds and identify which mitigation strategy would have the fewest negative ecological consequences and the highest probability of success, if any.

This additional work would not be required if the project did not proceed. It is therefore appropriate for Teck to fund this study as indicated in Recommendation 5.1-1.

Water quantity and quality in the Peace Athabasca Delta are critical to the health of the ecosystems, the

OUV of Wood Buffalo National Park, and for traditional use of Indigenous people of the Peace Athabasca Delta. This project will increase the risks to water quality, and Parks Canada has highlighted the need to apply the precautionary approach in identifying mitigation measures.

With respect to water quantity, the cumulative effects on water bodies receiving water from both the Athabasca River and the Peace River have already been recognized as significant. This project will add to the problem. In that context, strong measures of protection are necessary, and Parks Canada makes its recommendations to identify measures important for the protection of the OUV.

Parks Canada's OUV submissions relate to the potential effects of the project on the environment as defined by Section 5 of CEAA, 2012. The Panel is not required to evaluate the significance of the project on the whole park. As a result, Parks Canada did not present evidence related to the overall condition of the park or the significance of the project effects with respect to the whole park.

However, in following the Canadian Environmental Assessment Agency's operational policy statement determining whether a designated project is likely to cause significant adverse environmental effects under

CEAA, 2012, the effects on the OUV and Wood Buffalo National Park on federal land which include whooping crane, migratory birds, bison, and the Peace Athabasca Delta are part of the context in evaluating the significance of Section 5, "Environmental Effect".

CEAA officials were available to -- this is a -- for the Environmental Assessment Agency. CEAA officials were available at the hearing to speak to the methodology that was co-developed with the Mikisew Cree First Nation to assess potential effects of the project, the exercise of Aboriginal treaty rights. To clarify, however, the methodology and preliminary assessment provided on behalf of the Government of Canada, they were not provided as expert information or knowledge but as information for the Panel to consider as potentially useful in its own assessment of the project's impacts on the assessments of those rights.

The co-development of the methodology and its application, as documented in the Government of Canada's submission, provides for a preliminary assessment of potential impacts of the project on the exercise of Aboriginal or treaty rights in a manner consistent with Canada's approach to reconciliation with Indigenous peoples and the recognition of Indigenous rights.

The Government of Canada has presented these

preliminary results to demonstrate the application of the methodology and potential mitigation and accommodation measures that were contemplated at the time it was completed. However, the assessment is still a work in progress. Any analysis conducted by the Panel, whether through this methodology or otherwise, and any resulting mitigation it recommends which may serve as accommodation measures will further inform the Government of Canada's ongoing consultation activities with Indigenous groups.

This Panel may choose to apply this methodology to its assessment of the potential impacts of this project on Mikisew Cree First Nations Aboriginal and treaty rights and may choose to consider the proposed accommodation measures in the development of any recommendations.

It is our understanding that Athabasca Chipewyan First Nation has agreed to the application of this methodology to the assessment of the effects of the project on their members' Aboriginal and treaty rights. If other Indigenous groups request it, Canada also supports using this or a similar methodology to assess the potential impacts arising from this project on their Aboriginal and treaty rights. Nonetheless, we must reiterate that consultation in the context of environmental assessment and an environmental

assessment process itself are not a rights-determining process.

As such, the whole of government preliminary assessment of potential impacts on the exercise of Aboriginal treaty rights does not contain and is not intended to be used for a determination of rights for any of the identified Indigenous groups or peoples. Instead, Canada has based this preliminary assessment on impacts to rights as those rights have been presented to it.

In its August 31st, 2018, submission to the Panel, the Government of Canada indicated its intention to submit a document containing the general requirements and principles for a project-specific monitoring committee prior to the close of the Panel record. The submission indicated that should the proposed project proceed, the Government of Canada is of the view that a project-specific monitoring committee, including the federal and provincial governments, the Mikisew Cree First Nation, and potentially other Indigenous groups, would be appropriate to achieve Indigenous involvement on monitoring related to the project, advice on adaptive management, and input into regional-based monitoring through existing oil sands monitoring initiative.

It is our understanding that the Mikisew Cree

First Nation agrees with the Government of Canada that, should the project proceed, there is a sound rationale for the establishment of the committee. The Canadian Environmental Assessment Agency, on behalf of the Government of Canada, continues to work together with the Mikisew Cree First Nation to discuss the potential scope, mandate, composition, responsibilities, and resourcing for the committee. Further discussion with other parties, including authorities within the Government of Canada, the Government of Alberta, and other Indigenous groups, is also required.

The Government of Alberta has participated in initial and preliminary discussions with the Mikisew Cree First Nation and the agency regarding the creation of a committee. It is the agency's understanding that Alberta supports, in principle, a committee compromised of representatives from government, Indigenous communities, and industry to advise on environmental monitoring and management should the project proceed.

The composition of the committee, including purpose and government structure, will be determined with further discussions with the relevant parties and is reflected in the eventual development of a terms of reference. Resources to support the committee as well as linkages with existing monitoring activities, such as oil sands monitoring program, remain under

discussion. We confirm that the Government of Canada continues to consult with the Treaty 8 First Nations, Metis and nonstatus Indigenous groups potentially affected by Federal Crown activity in respect of this project.

This Panel's processes will form an important part of Canada's consultation activities in respect to the federal Crown conduct relating to this project to the extent possible. Nonetheless, Canada's consultation activities will continue after the Panel issues its report and will be informed by the results of that report.

Conclusion. As noted earlier, we do not wish to suggest that what has been said today compromises the entirety of the Government of Canada's submission in respect of the project. The federal departments and agencies reiterate and rely on their written submissions and oral evidence subject only to the corrections made on the record. Our involvement in these proceedings was to assist the Panel in its environmental assessment of the project -- the proposed project pursuant to the provisions of the Canadian Environmental Assessment Act 2012. We hope that we have done so.

We would like to thank the Panel and its staff for their consideration of the evidence and recommendations

put forward by the federal authorities in the written submissions at the hearing. Indeed, we thank the Panel and its staff for their significant efforts over an extended period for the process as a whole. We look forward to receiving and reviewing the Panel's report which will inform the federal government's decision-making processes and activities in respect of this proposed project moving forward.

We would also like to thank the proponent and all of the other participants in this process for their time and effort in this matter.

On behalf of the entire federal government team for this project, we wish everyone the very best for the season and for 2019.

THE CHAIR: Thank you, Mr. Elford.

Okay. Thank you. The Panel has no questions. Thank you, both.

MR. ELFORD: Thank you.

THE CHAIR: So it is 12:35. So I'll propose we take a one-hour break and resume at 1:40, unless Mr. Ignasiak has an alternate suggestion? You're good with that? Okay. Thank you. So we'll resume at 1:40, then. Thank you.

PROCEEDINGS ADJOURNED UNTIL 1:40 PM

Proceedings taken at Govier Hall, Calgary, Alberta

December 12, 2018 Afternoon Session

A. Bolton	The Chair
R. McManus	Hearing Commissioner
W. Klassen	Hearing Commissioner
M. LaCasse	AER Counsel
A. Doebele	AER Counsel
T. Wheaton	AER Staff
D. Campbell	AER Staff
A. Shukulkina	AER Staff
C. Birchall	Counsel to the Joint Review Panel
D. Haddon	Canadian Environmental Assessment Agency
M. Ignasiak	For Teck Resources Limited
J. Fontaine	For Teck Resources Limited
D. Chu	For Teck Resources Limited
D. Yewchuk	For Canadian Parks and Wilderness Society Northern Alberta

B. Robinson	For Oil Sands Environmental Coalition
K. Stillwell	For Oil Sands Environmental Coalition
J. Malcolm	Original Fort McMurray First Nation and Clearwater First Nation
M. Gustafson	Mikisew Cree First Nation
K. Brooks	Mikisew Cree First Nation
R. Drummond	Government of Canada
J. Elford	Government of Canada
J. Asterick	Keepers of the Athabasca
C. Longacre, RPR, CSR(A)	Official Court Reporter
A. Porco, CSR(A)	Official Court Reporter

(PROCEEDINGS COMMENCED AT 1:39 PM)

THE CHAIR: Thank you. Please be seated.

Whenever you're ready, Mr. Ignasiak.

Final Submissions by Mr. Ignasiak

MR. IGNASIAK: Thank you, Mr. Chair. I do have some brief reply arguments. It shouldn't be very

long.

I'd like to start with the precautionary principle. A number of parties, in particular, CPAWS and OSEC, have referred to the precautionary principle.

CPAWS has suggested to the Panel that applying the precautionary principle to this project means that it must not accept what it termed, quote: (as read)

> Vague adaptive management or mitigation measures that Teck proposes has a way to mitigate GHG related impacts [quote].

Katl'odeeche First Nation interpreted the precautionary principle to mean, quote: (as read)

> The outright prohibition of harmful activities [quote].

That was in KFN's written argument.

However, neither of these interpretations are consistent with the law. The precautionary principle has actually been well-canvassed by the Courts. The purpose has been stated by the Court -- this is in, for the record, Pembina Institute for Appropriate Development v. Canada (2008), FC 302. In that case, the Court interpreted it as, quote: (as read)

> Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent

environmental degradation [closed quote]. And it then went on to say: (as read)

As the nature of Panel's task is predictive, finality and certainty in an environmental assessment can never be achieved [quote]. The Court went on to say, quote: (as read)

While there does exist some uncertainty with respect to end pit lake technology, the existing level of uncertainty is not such that it should paralyze the entire project [quote]. And, sir, that was the case involving the Kearl Oil Sands Project.

So the extent of actions required by the project proponent to satisfy the precautionary approach in that Pembina case was to provide modelling predictions validated by testing end pit lake technology. The Court observed that that approach was broadly consistent with the principles of adaptive management.

The Federal Court of Appeal has noted the paralyzing effects of the precautionary principle and has explicitly stated that the concept of adaptive management is meant to counteract such effects, and that was in Canadian Parks and Wilderness Society v. Canada (Minister of Canadian Heritage), 2003 Federal Court of Appeal 197, and that's at -- specifically at

paragraph 24.

CPAWS is relying on a recent case, a Taseko Mines case, to inform this Panel's understanding regarding the precautionary principle, and they suggest that adaptive management should be overrode by the precautionary principle. We submit, though, that CPAWS is really taking that case out of its proper context.

Taseko Mines involved a mine proposal which was under review by a Panel established pursuant to CEAA, 2012. That was the Prosperity mine in BC. The case was an appeal of the Panel's decision to reject that project. The Panel had originally denied the project because there was discrepancy between the level of toxic seepage predicted to occur. Specifically, the proponent's predicted level of seepage was an order of magnitude lower than what was predicted by Natural Resources Canada. When asked by the Panel to reassess the seepage to identify where that discrepancy was coming from, the project proponent declined to do so and instead suggested it would rely on a future test program to resolve the discrepancy prior to the development. And in applying that precautionary principle, the Panel endorsed by the Court in that case found that there were -- that where the project proponent failed both to reassess the level of seepage or provide concrete mitigative techniques, it was

reasonable for the Panel to reject Taseko's vague assurances that would engage in adaptive management in order to deal with those potentially adverse environmental effects.

In order for Taseko Mines to be instructive in our present case, you have to put it in context, and that was a very different situation in the Taseko Mines case. It was a situation where there was a significant disagreement on the predicted amount of water discharge. There was discrepancies, and the proponent refused to or failed to confirm the predicted level of discharge at the project proposal stage and failed to propose any mitigative techniques at that time. The proponent declined to validate its models. It deferred conducting further tests, pointing to a later time after project approval. And it did not provide the mitigative measures that were to be assessed by the Panel. So there was an incredible threshold of uncertainty that was reached in that case, and the Court backed the Panel's decision to reject the proposal.

We submit that's in stark contrast to this case before the Panel today. Unlike in Taseko Mines where there was a significant discrepancy in predicting adverse effects, Teck's estimate of greenhouse gases through the life of the project remain reliable and

unchallenged, and without that uncertainty, that central concern that arose in the Taseko case doesn't arise.

Rather, like in the Pembina case, Teck has provided the Panel with sound, reliable science on the project's effects on greenhouse gases throughout its life cycle, as well as mitigation measures and adaptive management. It has also provided extensive evidence regarding the status of and potential risk to whooping crane and other migratory waterfowl, including the attributes of a deterrent system to mitigate effects.

Teck has also proposed in this case additional mitigation that goes beyond what has been incorporated by the environmental assessment, including the biodiversity management planning process and a request to negotiate a conservation agreement to formalize how appropriate biodiversity effects can be realized -- or offset, sorry -- biodiversity offsets. So applied to the current project, this is a very different case than what was dealt with in the Taseko decision.

Turning to migratory birds, I'd like to address a point Mr. Yewchuk and Mr. Elford made regarding the propensity of birds to land on the Frontier mine site. Both of them in argument -- and Mr. Yewchuk during the course of his evidence during the hearing -- made the point that birds were observed landing on the Frontier

mine site and suggested that this demonstrated an increased risk for birds landing.

Sir, in our view, that's nonsense. The Frontier mine site at present is relatively undisturbed, which may explain why birds are currently landing there. Once the site is developed, it's reasonable to conclude that birds will be deterred from landing there, as is the case with other sites that have already been developed to some extent; we know those landings happen. But as the evidence has shown, it's not a common occurrence. So this reference to telemetry data showing birds landing on an undisturbed -- what can be regarded as a pristine site at the moment -- to use that -- to equate that to potential risk in the future when a site's developed and there's activity and noise and light and whatever else, would submit that that holds no water at all.

I'll now address the issue of greenhouse gases raised in particular by OSEC in oral argument and CPAWS in its written argument.

First, contrary to Mr. Robinson's characterization, Teck has not claimed that Frontier is a top quartile of oil sands mines from a GHG intensity point of view. However, Teck has shown that the project will be in the top quartile of oil sands production, including in situ, and will have a lower

greenhouse gas intensity than half of all the oil currently refined in the US. That has not been contested in this proceeding. There's no evidence in this proceeding that contradicts Teck's assertion that, from a GHG intensity perspective, the Frontier Oil Sands mine is a globally competitive supply source.

Second, Mr. Robinson stated that there are inconsistencies in Teck's position regarding future oil demand and future trends regarding global greenhouse gas emissions. He states that this Panel must determine whether demand of oil will be 110 million barrels per day in 2040 or whether, on the other hand, Canada and the world will meet current international GHG targets.

That's incorrect. The Panel doesn't have to make that decision. First, there is no requirement for this Panel to determine how Canada, never mind the rest of the world, will meet any currently established climate change goals and what specific policies Canada and the rest of the world will adopt to reduce global demand for oil. It's beyond the Panel's mandate to do so, quite simply.

Second, there's no inconsistency in Teck's position regarding future demand. Teck has relied on the International Energy Agency's estimate of 110 million barrels per day by 2040. Teck's reliance

on the International Energy Agency's estimate of future oil demand is entirely reasonable because that forecast from the IEA is based on global demand that is driven by population increase and advances in the developing world, among other factors, including lower carbon economies in some parts of the world.

Third, Mr. Robinson is correct in identifying that Teck, being the responsible company that it is, has evaluated scenarios that assume a temperature increase of 2 degrees Celsius and 2.7 degrees Celsius, and that's in the climate change and resilience portfolio document that was filed in this proceeding and is referred to in Teck's September 12, 2018, reply submission.

These scenarios are -- these scenarios assume future global demand of 72.9 million barrels per day and 104.9 million barrels per day respectively for the 2 degree and 2.7 degree scenario. These scenarios are considered by Teck when planning its business.

It's important to note that the IEA's future demand forecast of 110 million barrels per day in 2040 is also based on a 2.7 degree Celsius scenario.

The fact is neither this Panel nor Alberta nor Canada can control the anticipated increase in global demand for oil, and wishing away predicted future demand will not make it so. It's beyond the control of

any of us.

Four, the reality is that Frontier, if approved and proceeded with, will emit 0.58 percent of Canada's current GHG emissions. And that's in the record in the project update Section 4.6.11.3. So 0.58 percent of Canada's current GHG emissions will be emitted by Frontier, and therefore that'll be an insignificant portion of the world's GHG emissions. Whether Frontier proceeds or not will not determine whether and to what extent Canada or the global community meets any agreed-to GHG emission targets or what steps they take to adapt to any sort of climate change.

Finally, Mr. Robinson has alleged that Frontier may result in Alberta's 100 megaton cap being exceeded. I know a number of parties have introduced new evidence through the news today. I'm not going to do that. But, Mr. Chair, that cap, assuming it continues to exist, is managed and administered by Alberta. It is not for this Panel to speculate on whether any given project may or may not exceed that cap. Alberta will manage that cap if it's in place.

And it's important to also highlight to the Panel that -- and this was in evidence -- that the provincial government's engagement with oil sands companies on the implementation of the oil sands emissions limit and the associated regulations, that's ongoing. And that was

testified to during our direct evidence.

Turning to carbon pricing, OSEC raised the issue that Teck underestimates the cost of compliance with the CCIR and characterizes Teck's understanding of the CCIR's change through time as "speculative". It is, to some degree, speculative in terms of determining what the CCIR will say in the future. I think anyone who's observed politics over the last five years will say any -- as the Panel correctly noted, what legislation will say is speculative. However, as Mr. Chiasson testified when under cross-examination by Mr. Robinson, Teck's understanding is based on explicit statements that have been made by the Government of Alberta to protect what we call "trade-exposed sectors" in order to prevent carbon leakage to jurisdictions with less progressive carbon regulation. Teck is confident that its assumptions regarding the CCIR and its estimate on costs associated with complying with the legislation are sound. But in any event, this is a risk for Teck's shareholders as it pertains to the economic returns that can be generated from the project. It's also a risk to Canada and the world as causing carbon leakage to less progressive jurisdictions is corrosive to the goal of coordinating global action to reduce greenhouse gas emissions.

Turning to the mine financial security program,

Mr. Robinson alleged that Teck cannot rely on or assert value of its resource as part of its security. This is entirely incorrect.

As I mentioned during our argument, OSEC's own witnesses critiqued the MSFP precisely because it allows companies to use an asset-to-liability approach. And that -- we refer to that at paragraph 343 of our filed argument, which is Document 696.

Mr. Robinson referred you to the Conservation and Reclamation Regulation, Section 21, to show that only certain letters of credits and other instruments can be used as a means of posting security. He's correct on that point. However, the proper reference is really to the AER's Mine Security Financial Program Standard, which is incorporated as a regulation under Section 16.1 of that Conservation and Reclamation Regulation. That standard explicitly allows for the calculation of MSFP assets and the taking into account of that asset value before you determine the amount of security that you're going to post. And that's expressly in that standard published by the AER which is incorporated as a regulation.

Mr. Robinson also challenged the adequacy of the $150 million left more post-closure monitoring and other activities. Teck has had extensive experience in mine projects and specifically closure and reclamation

activities. And all I'll say is that Teck's confident that its estimates are accurate and sufficient for post-closure activities. And, in any event, I would point out there is a security regime to make sure that that's in place for mining projects.

Turning to the water licences. We were a little surprised when Mr. Robinson suggested that Teck's application under the Water Act was incomplete because it did not include mentions of diverting Big Creek or Unnamed Creek 2. This is a new and somewhat perplexing allegation. We didn't see it in any of the submissions by OSEC so far. It wasn't raised with any of our witnesses during the course of the hearing. None of them were asked about that. But in any event, if you look at Teck's answer to Undertaking Number 4, which is CEAA Document 590, Teck's water management plan includes its application under the Water Act for approval to construct and operate water management facilities and licences to divert water. The application includes all of Teck's planned diversions within the project fence line, including Big Creek and Unnamed Creek 2. And that's consistent with typical Water Act applications.

So, in our view, the Water Act application's complete, and OSEC's claim should be rejected. Most importantly, at this stage of the environmental

assessment process, however, is the fact that Teck has outlined those water diversion plans and assessed them. Mr. Robinson went through extensive detail of the exact diversions that were being planned. All of that is set out in our materials, and it's part of what we're assessing here as part of this proceeding. And that is the primary objective at this stage of the environmental assessment process. Numerous detailed regulatory applications will follow, should the Panel approve this project and should Teck sanction the project.

So would say that this demonstrates a somewhat cursory understanding of the regime that OSEC has demonstrated and a cursory understanding of the filed material. We're concerned OSEC would raise this specious issue for the first time in final argument, despite not mentioning it previously in its submissions or with our witnesses during the course of the hearing.

There was reference to the Prosper case. Sir, that's an entirely different case. There was no environmental assessment involved with Prosper. It was a small 10,000 barrel project and under an entirely different regulatory regime.

Some comments on the International Marine Organization. The new regulations on sulphur content of marine bunker fuels comes into effect in 2020. We

discussed this during the hearing, in particular during our cross-examination of Mr. Sanzillo.

This is not a new issue. As a user of marine transport, Teck is aware of the issue and intimate with potential market impacts through ongoing monitoring via Teck's market experts and reviews with Teck's board of directors. While Teck agrees there will be a market impact, the view that some commentators are expressing are exaggerated, in our view, and the impact will be short-lived. And as we showed when we introduced those documents in the cross of Mr. Sanzillo, a number of shippers are installing scrubbers, and heavy oil refineries are expected to expand capacity to take advantage of that price differential.

In any event, the Frontier Project will not start production 'til 2026, and with that in mind, we suggest our assessment of the impacts of IMO 2020 on Frontier Project's socio-economic assessment are entirely reasonable.

Of course, this is something that'll receive scrutiny when the Teck board -- assuming this Panel recommends approval of the project, when the Teck board makes an investment decision on Frontier, at which point all market conditions will -- will be assessed in great detail, of course.

Sir, Mr. Robinson, yesterday, touched on many of

OSEC's recommended conditions for the project. Simply put, our view is they are unreasonable and inappropriate and should be dismissed by the Panel. Clear examples are the recommendations related to the oil sands emission limit, GHG benchmark, again, the MFSP, and biodiversity offset ratios that are arbitrary. To include any of them would put at risk the oil sand industry's ability to advance quality projects like Frontier.

Sir, there was -- there has been extensive reference to the oversight committee. I'm not going to practice my Cree right now, but we've heard it referred to that way. We've seen in the Government of Canada's preliminary assessment -- in the Government of Canada submission reference to an "oversight committee". There's reference in that document to providing further detail, but we haven't -- we haven't seen that detail.

So MCFN, the Government of Canada, as well as ACFN have all discussed the establishment of an oversight committee. That is, as we see it, intended to really increase capacity and participation by Indigenous groups in the -- in the oil sands industry.

In our main argument, I indicated that Teck is supportive of this, provided that there is efficiency and the avoidance of duplication. It is somewhat unclear to Teck at this time exactly what this would

look like. And, like I said, there's little on the record in terms of details of how this would operate, who would be on it, where it would sit, what it would do precisely. However, despite that uncertainty, Mr. Chair, Teck remains supportive of the initiative and requests that this Panel recommend governments and other interested parties, including Indigenous groups and regional organizations such as JOSM, work towards developing a framework that is effective and efficient.

To nail that down, these committees -- Teck's view is these committees can provide a benefit to everyone involved, but the devil's in the details. I think all of us in the room know what ineffective committees can do in terms of resources and taking the focus off what really matters. And what we would say is: Given the evidence that's in front of this Panel today, the Panel should support the initiative in a general way and let the parties come together, should you approve the project, like I said, the governments, different Indigenous groups, and other regional organizations, to see the best way to implement such an oversight committee that works in everyone's interests and, in particular, in Alberta and Canada's interests as well.

Sir, just a few things about Government of Canada. And we didn't have transcripts of the -- obviously, of the argument provided today, but -- so I apologize in

advance if we misheard anything, but I think we've got it right.

First, there was some reference by Mr. Elford to the entire 4.5 million hectares of Wood Buffalo National Park playing a role in the integrity of the OUV of the park for whooping crane. In our view, this is an example of trying to expand the meaning of the OUV to one zone. And the OUV of the park criteria related to whooping crane is, and I quote: (as read)

> Wood Buffalo National Park contains the only breeding habitat in the world for the whooping crane, an endangered species brought back from the brink of extinction through careful management of a small number of breeding pairs in the park [quote].

Sir, the breeding habitat of whooping crane is limited to the northern portion of the park within the Northwest Territories, as shown in Figure 2 of Teck's OUV assessment, which is registry Document 364. That -- that area is hundreds of kilometres north of the project. So trying to extend the meaning of the OUV to represent an environment -- environmental concern related to the entire park is -- is not appropriate.

And that -- that depiction of the breeding -- the area that is related to breeding whooping crane within

the park is also depicted in some of the Parks Canada submissions and documents relating to the park, and you'll see it's actually a small corner of the park relative to the overall size.

The Government of Canada reiterated many of its positions and arguments as it pertains to bison, acid deposition, and determining significance. Sir, during our argument, we raised significant inconsistencies and misrepresentations made by three witnesses on the government's Panel. I should point out that, overall, we thought that the Government of Canada Panel was very credible and professional. However, with those three witnesses, we, through cross-examination, demonstrated a number of misrepresentations and inconsistencies, and we note that today the Government of Canada, in its argument, did not address any of these serious shortcomings and those limited number of witnesses' credibility. And we maintain the critiques we raised and submit that the evidence of those witnesses in particular should be given little, if any, weight.

In addition, we were surprised to hear the Government of Canada state that if Frontier does not go ahead, it will not take any steps regarding the risk that bison in the park will transmit disease to the Ronald Lake bison herd. That risk in the Government's own documents already exists today. This position, if

true, is, in our view, entirely irresponsible, given the paper published by the only ECCC expert on bison, and that was Dr. Shury. In his previously published paper, in his evidence in this hearing, he stated that risk exists, and there are -- there are known ways to deal with it if people would just do it. And as you saw, Parks Canada has been saying since 2010 that they would do it, and they've done nothing.

For them to sit here today and say if this project doesn't go ahead, they don't have to deal with a herd that we only discovered was disease free several years ago is incredible to me.

So in conclusion, sir, Teck is a Canadian company that wants to do business in Canada and with Frontier in the oil sands. Teck has done everything that has been asked of them in this regulatory process. They've raised the bar for environmental assessment in the oil sands with their Frontier application. That includes establishing agreements with 14 Indigenous communities. In conclusion, we submit the project is in the public interest, and it is one that Canada, Alberta, and this Panel can and should support.

And we thank everyone for their time. Thank you, sir.

THE CHAIR: Thank you, Mr. Ignasiak.

Okay. Thank you. We have no questions.

So that brings us --

MS. LACASSE: Mr. Chair --

THE CHAIR: Sorry.

MS. LACASSE: -- one very small housekeeping matter. MCFN's oral argument, the script for that, will be Document 701 on the registry.

THE CHAIR: Okay. Thank you.

Before we close the hearing, is there any final business that we need to consider?

Seeing none, thank you, ladies and gentlemen, for your participation in this proceeding, for the evidence, for the argument, and for all the efforts you've put into providing information for the Panel's consideration.

We'll consider the evidence and the argument of all of the parties. We'll immediately, of course, begin to prepare our report, including our decisions and our recommendations related to the applications.

So the hearing and the record of the review are now closed. Thank you very much, everyone.

PROCEEDINGS CONCLUDED

CERTIFICATE OF TRANSCRIPT:

We, Christy Longacre and Angela Porco, certify that the foregoing pages are a complete and accurate transcript of the proceedings, taken down by us in shorthand and transcribed from our shorthand notes to the best of our skill and ability.

Dated at the City of Calgary, Province of Alberta, this 12th day of December 2018.

<Original signed by>

Christy Longacre, RPR, CSR(A)
Official Court Reporter

<Original signed by>

Angela Porco, CSR(A)
Official Court Reporter

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