NATIONAL ENERGY BOARD
OFFICE NATIONAL DE L'ÉNERGIE

Hearing Order OH-001-2014
Ordonnance d'audience OH-001-2014

Trans Mountain Pipeline ULC
Trans Mountain Expansion Project

Trans Mountain Pipeline ULC
Projet d'agrandissement du réseau de Trans Mountain

VOLUME 31

Hearing held at
L'audience tenue à

Delta Burnaby Hotel and Conference Centre
2nd floor, 4331 Dominion Street
Burnaby, British Columbia

January 25, 2016
Le 25 janvier 2016

International Reporting Inc.
Ottawa, Ontario
(613) 748-6043

Canada

© Her Majesty the Queen in Right of Canada 2016
as represented by the National Energy Board

© Sa Majesté du Chef du Canada 2016
représentée par l'Office national de l'énergie

This publication is the recorded verbatim transcript and, as such, is taped and transcribed in either of the official languages, depending on the languages spoken by the participant at the public hearing.

Cette publication est un compte rendu textuel des délibérations et, en tant que tel, est enregistrée et transcrite dans l'une ou l'autre des deux langues officielles, compte tenu de la langue utilisée par le participant à l'audience publique.

Printed in Canada

Imprimé au Canada

HEARING ORDER/ORDONNANCE D'AUDIENCE
OH-001-2014

IN THE MATTER OF Trans Mountain Pipeline ULC
Application for the Trans Mountain Expansion Project

HEARING LOCATION/LIEU DE L'AUDIENCE

Hearing held in Burnaby, British Columbia, Monday, January 25, 2016
Audience tenue à Burnaby (Colombie-Britannique), lundi, le 25 janvier 2016

BOARD PANEL/COMITÉ D'AUDIENCE DE L'OFFICE

D. Hamilton	Chairman/Président
P. Davies	Member/Membre
A. Scott	Member/Membre

APPEARANCES/COMPARUTIONS

Applicant/Demandeur
Trans Mountain Pipeline ULC
- Ms. Terri-Lee Oleniuk
- Ms. Lesley Matthews

Intervenors/Intervenants
City of North Vancouver
- Ms. Maegen Giltrow
- Ms. Caroline Jackson
- Ms. Julie Lowry

Lyackson First Nation
- Ms. Kathleen Johnnie

Independent Contractors and Businesses Association of BC
- Mr. Philip Hochstein

Wembley Estates Strata Council
- Mr. Matt Buie
- Mr. John Clarke

Lisa Craig
- Dr. Lisa Craig

Corporation of the City of Victoria
- Ms. Lisa Helps
- Mr. Ben Isitt

National Energy Board/Office national de l'énergie
- Ms. Nicole Godbout
- Mr. Asad Chaudhary

TABLE OF CONTENTS/TABLE DES MATIÈRES

Description	Paragraph No./No. de paragraphe
Opening remarks by the Chairman	15756
Final argument by the City of North Vancouver	
- Presentation by Ms. Giltrow	15773
- Questions by the Board	15879
Final argument by the Lyackson First Nation	
- Presentation by Ms. Johnnie	15981
- Questions by the Board	16069
Final argument by Independent Contractors and Businesses Association of BC	
- Presentation by Mr. Hochstein	16112
Opening remarks by the Chairman	16147
Final argument by the Wembley Estates Strata Council	
- Presentation by Mr. Buie and Mr. Clarke	16160
- Questions by the Board	16257
Final argument by Dr. Lisa Craig	16284
Final argument by the Corporation of the City of Victoria	
- Presentation by Ms. Helps	16353
- Presentation by Mr. Isitt	16370
- Presentation by Ms. Helps, continued	16430
- Questions by the Board	16445

LIST OF EXHIBITS/LISTE DES PIÈCES

No.	Description	Paragraph No./No. de paragraphe

--- Upon commencing at 9:03 a.m./L'audience débute à 9h03

15756. **THE CHAIRMAN**: Good morning, and welcome to this morning session here in Burnaby which is part of the National Energy Board hearing regarding Trans Mountain Expansion Project. We will continue to hear intervenor summary oral arguments.

15757. We acknowledge today being on the traditional land of the Coast Salish people.

15758. My name is David Hamilton and I am chairing the Panel. And with me to my left is Ms. Alison Scott, and to my right, Mr. Phil Davis, and together we are the Panel assessing Trans Mountain Expansion Project Application.

15759. Just a brief housekeeping item for this morning again; in the event that we hear a fire alarm, the procedure will be to exit the hearing room using the entrance that you came in. Once you are outside the hearing room, there are two evacuation routes. The first is directly to your left when you exit the hearing room doors, and the second is located beside the registration desk where some of you received your lanyard.

15760. Uniformed security guards will be at both locations to facilitate your exit. Please follow their instructions.

15761. Once outside the building, proceed to the hotel muster point located on the northwest corner of the Delta Burnaby Hotel and Conference Centre property where Sumner Avenue and Manor Street intersect. At the hotel muster point, please ensure all members of your party are accounted for and await further instruction from Delta Burnaby representatives.

15762. As indicated in Procedural Direction No. 20, the Board has set time limits to hear oral summary argument. The time limit for intervenors is 40 minutes each. This limit will be strictly enforced and they reflect that intervenors have had the opportunity to file written argument in-chief prior to providing oral summary argument.

15763. There is a timer which is -- will indicate a green light for the first 35 minutes, switching to yellow for the last five minutes of your speaking time. Finally, when your time is up a red light will come on. If necessary, the microphone will be switched off, although I will warn you before this happens.

15764. Final argument as a whole is an opportunity to express your views and opinions about the project based on the evidence filed by Trans Mountain and intervenors on the hearing record. It is also an opportunity to make recommendations to the Board about matters within the List of Issues or on any terms and conditions to which the project should be subject if it is approved.

15765. The Board will not give any weight to new evidence introduced during oral summary argument or any submissions made that do not address the List of Issues.

15766. And with that, I think we are prepared to get underway this morning.

15767. And this morning we will be hearing first from the City of North Vancouver, followed by the Lyackson First Nation, then the Independent Contractors and Businesses Association of British Columbia will finish up for this morning.

15768. Before we proceed, I would ask if, for the record and for presenters this morning, the Trans Mountain would introduce their counsel.

15769. **MS. OLENIUK**: Good morning. My name is Terri-Lee Oleniuk and I'm legal counsel to Trans Mountain. With me is Lesley Matthews, the Regulatory Lead for the expansion project.

15770. **THE CHAIRMAN**: We're now prepared to -- Ms. Giltrow, nice to see you back again on behalf of the City of North Vancouver and if you'll indulge the Panel, we may have questions throughout if you're okay with us doing that. If not, we will wait until the end, depending on how you go.

15771. So with that, we're looking forward to hearing the City of North Vancouver's oral summary argument.

15772. **MS. GILTROW**: Thank you, Chair Hamilton, and I certainly welcome questions throughout. Excuse me; a Monday morning.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR THE CITY OF NORTH VANCOUVER:

15773. **MS. GILTROW:** I would like to first begin by introducing the representatives of the City of North Vancouver, who I have here with me.

15774. On my left is Caroline Jackson, who is the Section Manager for Environmental Sustainability with the City of North Vancouver. And then further to my left is Julie Lowry, who is the Environmental Sustainability Specialist for the City of North Vancouver. And together they are the staff who have had the lead inside the City for the review and assessment of the Trans Mountain Pipeline -- the expansion project proposal.

15775. The City of North Vancouver, just to orient you, and in particular, to explain where it is in relation to the District of North Vancouver, the City of North Vancouver is a 12-square kilometre area that lies on the north shore of Burrard Inlet and it lies between the first and second narrows and it is bounded on all sides except for its coastline by the District of North Vancouver.

15776. It has a 12-kilometre coastline, all of which would be -- is on the shipping route from the Westridge Marine Terminal and at its closest point it's approximately six kilometres away from the Westridge Marine Terminal.

15777. I'll say more about the importance and the use of the shoreline and the waters of the City of North Vancouver toward the end of my presentation.

15778. I'll begin first with a few words about process.

15779. The City of North Vancouver and the -- in particular, the Council of the City of North Vancouver does wish at the outset to express its support for the position that has been articulated and taken by other intervenors in this proceeding with respect to procedural failings in the process; and in particular, the issue of the absence of cross-examination and an effective method of compelling full and informative answers on the two areas that are of particular concern to the City of North Vancouver and are the areas addressed in the written argument and that I'll talk about today. And that is specifically the question of spill risk and then the impacts of spill -- of an oil spill from the marine shipping activities on the City of North Vancouver.

15780. The City would like to acknowledge the what -- in what has been the very helpful submissions; in particular, of Elizabeth May earlier last week, that really did highlight well the gaps that were left in terms of reliable information about spill risk and spill impacts and the behaviour of bitumen through the

absence of the ability to cross-experts. Whether it's the ability to undertake the cross-examination oneself as an intervenor or to observe that cross-examination so as to be able to effectively undertake the responsibility and the role that lies with the municipalities whose communities would be affected by the project to truly understand what's at stake, what's been measured and what hasn't, and what is the better evidence as between the competing expert reports that the Panel has before it.

15781. In order to be able to take on what we're here for today, as you said in the introduction, Chair Hamilton, to express the views and opinions of an intervenor such as the City of North Vancouver, the City has done its best based on the evidence that's before the Panel and that's available to all intervenors, but it decidedly wants to note the gap that's left, in terms of being able to certainly point to any set of evidence as being the better evidence on a particular and key point.

15782. But with that, the City has worked through its -- the work of its staff and through the repeated deliberations of Council to understand what the risks of spill are, both in terms of probability, whether it's a level of risk that can be -- that the people of North Vancouver can be asked to live with and what the consequences of such a spill are.

15783. And the City has determined, and expresses its view to you today, that the risk of spill is significant and it is too significant for the City of North Vancouver to bear. And the consequences of a spill, whether cumulative consequences of smaller spills or the consequence of a catastrophic spill or a large spill, are too great for the City of North Vancouver to bear.

15784. And the City, therefore, is before you today expressing its opposition to the proposed expansion project and to urge you, the Panel, to recommend against the approval of the proposed project.

15785. I'll start first with issue of spill risk in the particular location where the City of North Vancouver lies, so in that area that lies between the first and second narrows in the Burrard Inlet.

15786. And I'll note that right at the outset of the Proponent's risk assessment done by Det Norske Veritas, DNV, as I'll call them, states at the outset that of the marine shipping route that it's analyzing -- it says at page 6 of its TERMPOL 3.15 assessment that the most challenging part of the whole tanker route from Westridge Terminal to the high seas outside the mouth of Juan de Fuca Strait is:

> *"Is the start of the route from the terminal through the Second and First Narrows in the Vancouver Harbour area."*

15787. And in its risk assessment, its hazard identification exercise, DNV -- this is segment 2 under DNV's analysis. It's called segment 2. And segment 2 was identified in its hazard identification analysis as being of "above average" hazard. Unlike several other components of the route, only two were above average, and this is at appendix 2 of its TERMPOL 3.15 assessment.

15788. And it's above average because of the draft and tidal restrictions and the obstructions from the first and second narrows, and -- so that's one factor. And second, the high density of the vessels in the harbour.

15789. City of North Vancouver lies right in the middle of the most challenging part, as identified by DNV, of the tanker route -- of the marine tanker route. However, the Applicant has not modeled a large oil spoil in this area, the segment 2 area, or in Burrard Inlet at all.

15790. And in its final argument, Trans Mountain defends its choice, saying that risk is -- this is at page 330 of the Trans Mountain final argument. And there Trans Mountain defends its choice of what has been raised by many intervenors, this issue of the failure of model a large spill in Burrard Inlet.

15791. And Trans Mountain says:

> *"Risk is commonly defined as being the product of two terms, the probability (likelihood) of a failure and the consequences of that failure."*

15792. And it goes on to say that it is the probability of failure that:

> *"Must be the principal consideration in selecting potential locations for accidents and malfunctions. For example..."*

15793. And I'm quoting from their argument here:

> *"...vessels can only ground if they enter waters that are of keel depth or less, and a loss of containment implies striking a significantly solid substrate with sufficient kinetic energy to*

> *result in damage to both outer and inner hulls. Similarly, collisions can only occur when the courses of two vessels intersect in both space and time....In this context, the probability of crude oil spills is not uniformly or randomly distributed throughout the Strait of Georgia and the Juan de Fuca Strait."*

15794. And then they go on in their final argument to discuss the oil spill trajectory modelling that was done by Genwest Systems, which was commissioned by Tsleil-Waututh First Nations, and others I believe, but certainly Tsleil-Waututh, which was done to demonstrate the impact of major oil spills occurring at four locations in Burrard Inlet.

15795. And just to orient us, what Genwest did is they looked at an oil spill of 8,000 cubic metres at Westridge Marine Terminal, an oil spill of 16,000 cubic metres at second narrows under the CN Railway bridge, an oil spill of 16,000 cubic metres at first narrows, and oil spills of 16,000 cubic metres in the outer harbour at anchorage number eight.

15796. And what Trans Mountain said about the Genwest -- and I want to orient this, I don't want to take on the evidence of other intervenors. As I've said, the City of North Vancouver has done its best with the evidence that's on the record, and reads the spill trajectory modelling of Genwest notes the absence of any modelling of a major oil spill near the region where the City of North Vancouver does in the -- lives, in the application.

15797. So with that absence, it goes looking in the intervenor evidence to see; what would a spill trajectory look like near our home? And fortunately -- and thank you to the Tsleil-Waututh and to Genwest for doing this -- such a model is given. And I've laid out where it is. So in three of those locations we're quite close to the City of North Vancouver.

15798. And then as an intervenor looking at the evidence of other intervenors in the application in this case, the City goes back to; what does Trans Mountain say about this Genwest model? What is wrong with having done this spill trajectory modelling? That's the natural flow of reasoning in trying to determine what will be the impacts on the people of the City of North Vancouver.

15799. So with respect to the modelling of larger spills in these locations inside the inner harbour close to the City of North Vancouver, what Trans

Mountain said in its closing argument is there is no justification for why Genwest modelled these precise locations as potential accident locations.

15800. They go on to say:

> *"The probability of a very large oil volume to be released during a tanker incident may only be assessed after first considering the probability of the selected location to host such a severe incident."*

15801. They say:

> *"It is concerning to note that this type of logic has been ignored in the intervenors' approach to selection of these spill locations."*

15802. So essentially when we say, okay what's wrong with what Genwest did by modelling these spill locations, Trans Mountain's argument is they shouldn't have modelled them. We have deemed them to be low probability so they shouldn't even be modelled. We shouldn't have a look at how the spill -- a spill in these areas would traject over the surrounding waters and onto the shores neighbouring these spill locations.

15803. So if we return back to the Det Norske Veritas TERMPOL 3.15, you see that it explains -- we'll be dealing -- the assumption that DNV proceeded on is that we're dealing with Aframax vessels. There could be Panamax vessels, which are smaller, which of course means more vessels. And as other intervenors point out, that would have -- one would expect a concomitant relationship on risk; smaller vessels but more of them.

15804. And that analysis isn't provided anywhere that we're aware of. But even going back to the assumption underlying the DNV analysis, the Aframax vessels, DNV explains that a typical number of cargo tanks in an Aframax vessel is 10 to 14 tanks, which gives approximately 10,000 cubic metres of crude oil in each tank.

15805. So an 8,000 litre spill, or cubic metre spill, which is the first of the four that were modelled, would only represent less than the volume of one of the 10 to 14 tanks on a ship. And of course twice that the 16,000 cubic metre volume represents two out of 10 or 14 of the tanks on an Aframax vessel.

15806. The perspective of the District of North Vancouver, who will be living across the harbour from where these vessels will be berthing and then travelling along in front of them as they exit with their crude oil or their diluted bitumen shipment, it does not seem unreasonable to model the failure of two of 14. One; certainly one of 14 of the cargo holds -- the oil cargo holds. And two of 14 doesn't seem like that much of a stretch either.

15807. It's 8,000 cubic metres; it's half of the volume of the credible worst-case spill that DNV identifies elsewhere in the shipping route, which is 16,500 cubic metres. So either way you're dealing with half of what they've said is a credible worst-case spill elsewhere, or roughly the same amount of the worst -ase spill elsewhere. And you're dealing with it in the area that DNV recognizes it being the most challenging part of the route.

15808. Trans Mountain's own evidence recognizes that 25 percent of the vessel movements in Burrard Inlet could potentially heavily damage an Aframax oil tanker. So we're inside Burrard Inlet and DNV recognizes -- and the cite for this is actually helpfully found in Metro Vancouver's argument. The evidence exhibit is number is A4V3W5.

15809. But it's recognized -- so we're inside Burrard Inlet, we're looking at vessel movements in Burrard Inlet and DNV acknowledges that 25 percent of those movements could be of a nature that could damage the cargo hold of one of these ships.

15810. And as I've said, this is in the shipping area that DNV recognizes as the most challenging portion of the route because in part of the density of vessels, and also because of the draught and tidal obstructions in that area.

15811. So Trans Mountain argues that not only have the intervenors' experts, referring to Genwest, not justified why they chose to model these spills in these locations, but they go further to suggest that -- to say that they shouldn't have done it. They say it is concerning that they did it, that they pursued these spill trajectory models.

15812. From the City of North Vancouver's perspective, the glaring question is; why would you not model those spills of that size and those locations, why would you not look at what the spill trajectory would be, the cleanup implications would be, the human health impacts would be?

15813. The people of the City of North Vancouver live here. From the perspective of the residents of North Vancouver, it would be reckless to avoid or ignore this evidence.

15814. When the Province of British Columbia asked Trans Mountain to provide the underlying information supporting the frequencies and return periods set out in the risk assessment, which of course underlie the ultimate determination that a spill in Burrard Inlet, and in particular in Segment 2, would be so low probability that it's not even worth considering, the Province was effectively referred back to the risk assessment itself.

15815. Trans Mountain also refused to provide the calculation methodology for the Marine Accident Risk Calculation, or MARCS, and this is something that Andrew Weaver spoke about helpfully too in his oral presentation. And they denied it on the basis of claiming the MARCS' model to be proprietary intellectual property.

15816. The residents of the District of West Vancouver and the surrounding oceanfront communities are the ones who will live with that risk. From the perspective of community members and from the municipality, if anybody should own the means of determining what that risk is and what an acceptable risk is, it should belong to the people who live with it.

15817. As the Province submits in its final argument, the Proponent cannot have the benefit of the conclusion of the low likelihood of risk or the assertion without the supporting evidence. The City of North Vancouver supports the Province of British Columbia's submission that the Board should accord limited weight to the conclusions in the Applicant's risk assessment.

15818. The fact is, spills have happened and they will continue to happen. Based on Trans Mountain's own evidence -- and this is helpfully translated in percentages in years through the Gunton Report, but it's derived from the return periods in the DNV Report -- the risk of a terminal or tanker spill in Vancouver Harbour is 65.5 percent within the first 30 years and increasing to 83 percent over 50 years.

15819. And of similar concern to the City of North Vancouver, the 2014 WSP Report that was commissioned, the nationwide risk assessment report that was commissions for Transport Canada that did consider both likelihood and

consequence of risk, characterized the Strait of Georgia, including Vancouver Harbour, of being at high risk for an oil spill between 10 cubic metres to 10,000 cubic metres, and then said following that that if oil transport were to double -- which is greater than what's proposed here, but along those lines, of course -- the Strait of Georgia would be in a very high-risk category for spills over 10,000 cubic metres.

15820. From the City of North Vancouver's perspective, those are risks that are just too great to bear, and there is nothing on the evidence or on the record before the Panel that has appeased the very significant concern of the people in the Council of the City of North Vancouver.

15821. And similarly, the impacts cannot be sufficiently mitigated. I've been speaking about large spills, but small spills are a very significant concern too, and the impact of cumulative small spills on water quality along the shores of North Vancouver, which of course then has an impact on the estuaries and the rivers that flow from North Vancouver into the ocean; and, of course, all of the life that depends upon those.

15822. Again, the WSP study, the 2014 study prepared for Transport Canada:

> *"...determines that spills as small as 10 cubic metres could cause significant damage in the Vancouver and Victoria areas..."*

15823. And that's cited at the Gunton Report at PDF page 849.

15824. There is no modelling in the application of the cumulative impacts of higher probability/lower consequence events. But there is the real danger of a real impact on water quality and all that depends on the water.

15825. David Farmer helpfully spoke about the chronic contamination of the water column, which is a real concern for North Vancouver. And the BC Nature and Nature Canada submissions, both in their written submissions and briefly in their oral submissions, spoke about chronic oiling.

15826. So spills at all levels, the constant presence of the danger and then the more increasingly likely reality when you're talking about smaller spills, are all of deep concern to North Vancouver.

15827. David Farmer's presentation to you was also very helpful from an intervenor perspective in terms of talking about the behaviour of the known. And we're understanding now the evidence of David Farmer, and we're on the cusp of what is known and are developing understanding of the behaviour of bitumen, and then his very helpful evidence.

15828. So of course now, it wasn't about -- he was speaking about the other high-risk location out in Haro Strait. But his helpful evidence about the ocean movement and the issue of subduction and as he said, that oil that has sunk cannot be recovered, and in David Farmer's evidence that is agreed by all involved.

15829. Mr. Farmer demonstrated, and Elizabeth May spoke about this and we need not repeat it, but made a compelling presentation revealing that the Proponent's experts appear to have not understood the more recent peer-reviewed literature on bitumen behaviour. And this is, of course, of significant concern to the City of North Vancouver that could be facing the cleanup of a spill of spilled bitumen near its shores.

15830. Another concern -- and this was articulated in the Genwest study done for Tsleil-Waututh modelling spill trajectories -- was the issue of the beaching algorithm that they used did not allow for refloating. And that's a situation where beaches will store oil for a period of time and then reissue it into the environment. And this significantly extends the harm and the degree of harm associated with a spill.

15831. And the failure to include refloating as an issue in the beaching algorithm is, as Genwest says:

> *"...strongly contradicted by experience with thousands of real oil spills."*

15832. And they go on to say:

> *"...the failure to [allow] refloating [to occur, in the model, would] lead to significant underestimates of both the extent and duration of concern associated with a spill..."*

15833. In particular, they say:

> *"This shortcoming would be more significant in scenarios*

> *representing spills in Burrard Inlet and the Fraser Delta."* (As read)

15834. You heard me speak on Friday on behalf of the District of West Vancouver about the Marathassa spill. Well, the City of North Vancouver, along with the District of North Vancouver and West Vancouver, those are the three municipalities that make up the North Shore Emergency Management Office that I was speaking to you about Friday.

15835. I won't go back into that. I don't want to use up time repeating something you've heard already.

15836. But the issue of refloating in the Marathassa spill was something that North Vancouver had direct experience of and observed. There was refloating on several points along important North Shore beaches and sites, including Kings Mill Walk in the City of North Vancouver as well as the John Lawson Beach that I spoke to you about in West Vancouver, which is the one that had the unclear endpoints for cleanup, yet the very high human use, including vulnerable populations.

15837. So refloating is a real phenomenon experienced in North Vancouver even with a relatively small like Marathassa. The Proponents' spill trajectory modelling, even recognizing that they're not done for a spill of any significant size inside Burrard Inlet, their further failure is that they fail to capture the phenomenon and the impact -- which is of course as a matter of law what we're here to determine today -- of refloating.

15838. The Genwest Report showed that:

> *"Oil spreads quickly in the confined setting of Burrard Inlet, and may spread widely throughout the Inlet.*

15839. Genwest Report at page 3.

> *Winds and Tides are major drivers of oil movement in Burrard Inlet. [And] strong winds tend to strand oil on the leeward shore, while weak winds allow tidal currents to distribute the oil more widely.*

15840. Genwest Report at page 7.

> *The models developed in the [Genwest] Report 'provide a realistic representation of the behavior of oil spills in Burrard Inlet. They can therefore be used to realistically evaluate the possible extent of oil spread resulting from a spill at the Terminal, Second Narrows, First Narrows, and the Outer Harbour locations.'"*

15841. Genwest Report at page 8.

15842. Those are the conclusions in the Genwest Report. Those are the locations that matter most to North Vancouver, and those are the locations that have no meaningful analysis of spills in the Applicant's application.

15843. The Genwest modelling showed that a spill in Burrard Inlet would quickly impact nearly all communities surround the Inlet, with a majority of oil reaching shorelines within hours and then days.

15844. The human health risk is another issue associated with this that is of great concern to North Vancouver. And North Vancouver takes very seriously the guidance document and the concerns articulated by the Vancouver Coastal Health and Fraser Health authorities that was provided to municipalities to provide municipalities some guidance and understanding what human health risks we're facing when we're facing this expansion project.

15845. And the health authorities raised the same issue that you've heard raised by other intervenors and by -- in the Gunton Report and other reports that deal with the risk assessment, which is this issue of the probabilistic risk assessment that the Proponent undertook.

15846. And the health authorities said,

> *"Probabilistic risk assessment can underestimate risks. A rare but potentially catastrophic accident such as a large oil spill is usually the end result of a number of events in a chain. The common approach in [a] probabilistic risk assessment is to assume that these events in the chain are independent of each other and therefore that the total risk is the multiplicative product of the probabilities of each event in the chain. Some of these events may not in fact be independent but are related; for*

> *example the occurrence of one event may increase the likelihood of another event in the chain to occur."*

15847. So the District of North Vancouver has that advice from the health authorities who are taking on the question of the likelihood of event from the perspective of assessing potential impacts to human health.

15848. So we have this issue of the assumption of independence of events in the chain. You go back to Det Norske Veritas' risk assessment, which states that if all current and future proposed -- so current and future proposed risk control measures are implemented -- so by "are implemented" we take them to mean are implemented properly and without fail -- then the credible worst case scenario oil spill is 30 percent -- is a 30 percent higher risk than without the project.

15849. So DNV's risk assessment is based upon the assumption that not only current risk control measures, but the future proposed ones are all implemented and are all implemented effectively, even though the future proposed ones are plans for the future. We haven't worked through the details of how those would be applied, and that's one of the significant concerns of the Province of British Columbia. Then you get the risk assessment, based upon that. That appears to be the very issue that the health authorities have identified as being the failure or the vulnerability in the probabilistic risk assessment.

15850. The health authorities also say that probabilistic risk assessments cannot in general adequately account for human errors in judgement and decision. Again, you go back to DNV, and DNV says that human error is the main cause of 80 percent of accidents.

15851. So then you go back to the health authorities, who say:

> *"Because the proponent does not believe it is a credible risk, the proponent has not modeled the consequences of a large oil spill in the Burrard Inlet. We believe this is a critical omission. Even if such an event is […] extremely unlikely as the proponent believes, and we cannot verify this conclusion,[which is a complaint you've heard from several intervenors], the public health consequences of such an event could be very significant, given the large and densely populated communities surrounding the […] Inlet."*

15852. Public Health Guidance Document at page 51.

15853. Given the large and densely populated communities surrounding the inlet. That goes back to what I said earlier; why would you not model these spills? Even if on a system of random selection -- and I leave aside issues intervenors have raised about why a segment to or how it came to be excluded; even leaving that aside, when you are dealing with population densities at this level, why would you not model the spill risk for major spill, for significant spill in this area?

15854. And then, of course, you get the concomitant impacts that flow with respect to human health risk, and you take it all together and the City of North Vancouver is in no position to say that the level of risk proposed by this project, as demonstrated by the Applicant, is something that it can safely accept living with.

15855. With respect to human health risks, in the final argument, Trans Mountain says, at page 337:

> *"The results of this assessment [and this is the "Human Health Assessment"] identified that there is no obvious indication that people's health would be seriously affected by acute inhalation exposure to the chemical vapours released during the early stages of a spill. The Marine HHRA also concluded that any health effects that could be experienced by people in the area close to an oil spill, though discomforting and annoying, would likely be […] mild, [excuse me, I've got a typo there] would likely be mild, transient sensory and/or non-sensory effects attributable largely to the irritant and central nervous system depressant properties of the chemicals. Regardless, these effects are not acceptable and Trans Mountain fully acknowledges and proposes timely and effective emergency response to limit any opportunities for public exposure to chemical vapours from a spill."*

15856. So in looking at the health impacts, you have two issues there. As the health authorities point out, Trans Mountain is only assessing air inhalation as a health exposure pathway.

15857. So with respect to air inhalation, the health authorities point out that

the assumptions in the air dispersion model are not demonstrated to be sound, and that Trans Mountain omits key and harmful air pollutants and scenarios where more volatile and flammable hydrocarbons are spilled, so the danger of flammability is also excluded from an adequate assessment from the health authority's perspective.

15858. The application also though excludes spill scenario exposure pathways other than air inhalation, such as food ingestion, dust inhalation and direct skin contact. And as the health authorities say, this emission should be explicitly acknowledged by Trans Mountain and must be explicitly grappled with by the Panel in its assessment of potential impacts.

15859. But in any event -- so that's the first point about what Trans Mountain said about the health impacts. But then they go on to say:

> *"But in any event, what we'll do is we'll rely upon our emergency response as our mitigation mechanism."* (As read).

15860. Well, there's a couple of things. First, we go back to the issue of the lack of understanding that's been demonstrated by other intervenors about the understanding of the fate of diluted bitumen in brackish water, such as those that are in Burrard Inlet near the estuaries and the rivers that flow from North Vancouver. And as David Farmer said, oil brought beneath the surface cannot be recovered, as all involved agree.

15861. So we've got that situation that's hindering the solution that arrives with emergency response mechanisms. But then we also have the -- what the province of British Columbia has said, which is that the emergency response mechanisms are not sufficiently demonstrated on the application to be acceptable. They're not enough.

15862. As the province says in its final argument, at paragraph 99:

> *"Additional evidence is required to demonstrate that the logistics for equipment and personnel transport, as well the process of setting up oil recovery equipment; for example, containment, skimming, pumping and storage for on-water response to recover mobile oil, will be sufficient to ensure such operations result in actual oil removal."* (As read).

15863. So additional evidence is needed.

15864. The province and the City of North Vancouver are not satisfied that there is sufficient evidence of sufficient response and when that's the front line response to the human health impacts that have been insufficiently assessed but have been raised effectively from the City of North Vancouver's perspective, that is simply just not enough.

15865. The emergency management plan, the Nuka Report speaks about the very importance of time in emergency response, and Nuka -- the Nuka Report, which is also relied upon by the Province of British Columbia, says:

> *"The spill response forces currently available in Southern B.C. have the capacity to recover only 10 to 20 percent of a worst case oil spill under favourable conditions."*

15866. And that the on-water oil spill recovery capacity is reduced during the winter months by as much as 50 percent compared to summer.

15867. Again, I refer you back to the lived experience of the Marathassa spill, which Vancouver and the North Shore communities experienced so acutely, despite it being a relatively minor spill in April, 2015. The significant lag in notification time that the North Shore communities weren't notified of the source of the spill and its extent until it was very, very close to shore in West Vancouver, and then of course, the very significant impact on the local communities who were intricately involved in the response to the Marathassa spill.

15868. And it all comes back to the fundamentally inevitable point that has been raised by others that all disasters are local. And from the local perspective, the risk of impact is too great of the City of North Vancouver to bear.

15869. And I'll close just by raising what's at stake for the people of North Vancouver. Human health risks are very, very significant. I've spent some time on that. I won't say more, but the human health risks are at stake for North Vancouver. They are significant. They're insufficiently assessed on the application.

15870. The intervenor evidence that's been filed that raises some of the problems with respect to human health risk are sufficient for the City of North Vancouver to take the position it has, that it is not safe to approve this project and

the City of North Vancouver stands in opposition to it and recommends that this Panel do so.

15871. The cleanliness and the health of the waterfront and environment which is located along the shores of North Vancouver are central to what North Vancouver is. The residents of North Vancouver are central to the identity of the community.

15872. North Vancouver has a long, long history associated with ship building. This is certainly not a position against ships or shipping. North Vancouver's shipyards are a central historical presence and force in the history of the city. They ran from the early 1900s until the mid-1990s and over 450 ships were launched from those fabulous shipyards in North Vancouver.

15873. The shipyards are a focal point today, a cultural and historic focal point in North Vancouver. This isn't a position against industry on water. The industry on water is central to what North Vancouver has always been. But this proposal -- this proposal to increase the shipping of diluted bitumen from the Westridge Terminal at a rate going from five ships a month to over 30 ships a month along the shores of North Vancouver, goes in the opposite direction to where North Vancouver is going today.

15874. North Vancouver has spent a significant amount of time and human resource that has followed from extensive public consultation to develop and restore its waterfront. It's developing, in conjunction with other agencies, a spirit trail that would eventually go from Deep Cove to Horseshoe Bay.

15875. It's restoring estuaries. It's been working to restore the MacKay estuary that was -- actually saw oil land on it from the Marathassa spill -- one that we know to be vulnerable from the tides in Burrard Inlet, even in the context of a minor spill. It's got extensive parks and it's developing more and more. It is working to restore parts of the waterfront that have been hit by industry. It has beautiful parks that are already beautiful, used by the public and central to the identity of the city.

15876. This proposal -- the risk entailed with this proposal, and the impacts that would go with it, are just -- they lie in opposition to what the City of North of Vancouver is trying to do and what it is today. And the city urges the Panel to reject the -- or, excuse me, to recommend against approval of the project for the reasons I've articulated today.

15877. Thank you.

15878. **THE CHAIRMAN:** Thank you for your submissions. The Panel will take a short recess until five to 10:00 to consider any possible questions for you. Thank you.

--- Upon recessing at 9:44 a.m./L'audience est suspendue à 9h44
--- Upon resuming at 9:54 a.m./L'audience est reprise à 9h54

15879. **THE CHAIRMAN:** Thank you. Perhaps Ms. Scott will start with some questions.

15880. **MEMBER SCOTT:** Thank you, Mr. Hamilton.

15881. In your presentation this morning, you made the point that you don't believe there was enough modelling done of various elements of possible scenarios that would affect your client in North Vancouver but then you went on to make the point that, in your view, DNV's risk assessment is dependent upon the likelihood of all of the elements of the emergency response plan being in place and properly implemented on every occasion when a -- something requiring the emergency response occurs.

15882. And I just wanted to be clear. Are you suggesting that the emergency response plan of TMX should have included an analysis of the probability of that actually happening? Or are you saying that it should have identified what in the emergency response plan addresses the possibility of -- or reduces the probability of all of those things not working as coordinately as they should have?

15883. **MS. GILTROW:** I think that -- I just want to distinguish two concepts, which is emergency response versus risk assessment. So when I was referring to what DNV said, that was with respect to risk assessment, so not emergency response.

15884. So what they said at page 7 of their TERMPOL 3.15 was:

> *"If all current and future proposed risk control measure are implemented, then a credible worst-case oil spill is of 30 percent higher risk than without the project."* (As read)

15885. So that is the risk control mechanisms, all of which have to be based upon -- as I understand that assertion, each of the risk control mechanisms needs to be in place, both those that we know of and those that are aspirational for the future -- need to be in place and working to get at that number of an increase of 30 percent for worst-case spill, as compared to without the project.

15886. That's, in my submission -- my submission is not that that has anything to do with the emergency response plan so we need to -- so the relevance of that is based upon the Proponent's explanation.

15887. We didn't get a proper spill trajectory model in the area of concern to North Vancouver because it was determined to be low-risk -- very low risk. Well, so that determination of low risk is contingent up on all of those risk control measures being in place.

15888. And I made that submission in the context of everything else I've said, and what other intervenors have said about the inability to inquire into the MARCS Model and everything that goes into that determination of low risk.

15889. So you question that assumption but that is what leads to -- we don't get a spill assessment -- or, excuse me, a spill trajectory model in the area that is of concern to us. We don't get it because of that low-risk assessment. So that's the distinction.

15890. **MEMBER SCOTT:** No, I understand that.

15891. I don't think I have any confusion about that.

15892. **MS. GILTROW:** Okay.

15893. **MEMBER SCOTT:** What I'm trying to do is make the connection between -- perhaps it's not a connection, but I think the same point may be arguable, at least, with respect to emergency response.

15894. We have emergency response plans in front of us but the question of human error and its contribution to the likelihood of things not going off exactly as planned -- should we require in the evidence that's before us elements in an emergency response plan that are directed to reducing the possibility of that human error?

15895. We've heard fire chiefs, for instance, talk about the need for coordination among various communities and various emergency responders. Is that something that we should be looking for in the plan that's in front of us besides just identifying the fact that this agency's responsible for that and another agency is responsible for that? Is there room for that kind of analysis in our consideration?

15896. **MS. GILTROW:** Thank you. There is but -- this harkens back to an answer I gave with respect to West Vancouver on Friday which is that what the Marathassa spill and this application and the Nuka Post-Marathassa spill report has revealed is that we are currently living with a situation that is not safe and not ready to respond. And that is consistent with what the province has said in its final argument.

15897. So certainly there is room for, and the need to, become much more specific in terms of planning for spills of the appropriate size and trajectory, human error in spill response, all of that. But the submission of North Vancouver is not that that -- inserting that condition could then assure us that we can go on to accept the increased risk that would come with this project. That needs to happen first.

15898. We need to be able to assess what the status quo is under an appropriate emergency response regime that does take all of those things into account and then determine whether this region can bear the increased that would flow from the project.

15899. **MEMBER SCOTT:** Thank you for that.

15900. And you raise the Marathassa and it's my understanding that that was not a TMX vessel; it wasn't carrying TMX product, that it was -- it wasn't even cargo that was at issue. It was fuel that the ship was using itself.

15901. And you mentioned the fact that North Vancouver appreciates the industry that is on its shores. So I take it that this risk is present, as you said, all the time. And you've said it's a risk that you face today regardless.

15902. And there are a number of agencies involved in the Marathassa process, some federal, some provincial, outside of the NEB. And I wonder if you can speak to what you think our authority is in this process to address TMX's responsibility in that kind of circumstance.

15903. **MS. GILTROW:** Well, there's a couple of points to your authority. One is your statutory obligation at this point to look at the likely impacts and the residual impacts of the proposed expansion of the shipment of diluted bitumen. So certainly there's no question that wasn't a TMX ship and it wasn't cargo fuel and it wasn't diluted bitumen. So there is -- but what it did was reveal what I've said, which is the weaknesses in the spill response regime that did involve many agencies.

15904. Trans Mountain has proposed to significantly increase its shipment of diluted bitumen through these waters. And that shipment must be contingent upon there being safe mechanisms in place to properly respond to spills.

15905. What the evidence has revealed is that we're not in a very good situation right now and that needs to improve. That means as a matter of logic that we're not in a safe enough position to add to the risk of the particular cargo that Trans Mountain proposes to increase its shipment of, through these waters, the diluted bitumen.

15906. **MEMBER SCOTT:** So you're suggesting we have to factor in the possibility in any case that other agencies exercising jurisdiction within their responsibility won't be able to respond to a situation?

15907. **MS. GILTROW:** When that is the evidence before you yes, you do. That's the submission of North Vancouver.

15908. Because the question is the ultimate one, the ultimate one of the actual safety of the endeavour. So it's not a question of relying upon other agencies, relying upon existing regulation when that has been revealed to be lacking because that gets at the actual, the outcome in terms of risk.

15909. Especially when on the evidence before you -- human error is recognized both by the Proponent's expert and the experts in risk assessment whose evidence has been led by the intervenors -- that human error is a fundamental component of assessing the real life risk that the residents of the area will be living with with this increased bitumen shipment.

15910. So those other agencies and that other regulatory authority, in terms of what that means on the ground, that's scope for human error. And the evidence is -- and the Marathassa spill reveals this and the province's assessment of the spill

response regime also is consistent with this -- is that whether it's a combination of a lack of jurisdictional uncertainty or a lack of planning or scope for human error that has been revealed as being a real factor on the water here, the existing circumstance is not one that allows you to safely say that we can add to the risk under that very same regime.

15911. **MEMBER SCOTT:** So in your description it's not so much that we could remedy this situation by imposing conditions or whatever because it's dependent on other agencies, you're suggesting, I think.

15912. **MS. GILTROW:** That is my suggestion. I'm at a loss to say what conditions you could impose to solve this unless they were conditions that could guarantee the sort of end points that have been revealed to be lacking here. And that is what needs to be -- I mean, that's going to be a complicated process and it's one that absolutely has to involve local first responders. It has to involve the other agencies that are involved.

15913. It fundamentally needs to improve though before we can move forward. And unless your condition is an enforceable and detailed and clear one that can reach that fundamental improvement -- and in my submission that's going to be a process that is going to have many agencies involved and is going to have to be the product of much dialogue and much training and much full-scale exercises in that sort of matter.

15914. What condition can you impose other than fundamentally requiring that? But that's not a matter of, sort of, saying, "You must have a perfect spill response regime and then you can go from there." It's just too vague; it's unenforceable. But it fundamentally needs to improve before you can move on from there safely.

15915. **MEMBER SCOTT:** And it goes without saying, we don't have supervisory jurisdiction over other agencies and I don't think you're suggesting that we should.

15916. In any event, those are my questions. Thank you; you've been very helpful.

15917. **THE CHAIRMAN:** Just perhaps following up and just to -- I understand your response to Ms. Scott's question of the jurist, you know, the multiple agencies that are involved in the whole coastline and Burrard Inlet and

right down the Fraser and all those agencies. And I note your suggestions on the fact that there does not appear -- the Trans Mountain's EMP, it's on page 41 of your written argument:

> *"…to achieve these goals related to end points. In particular, there does not appear to be any objective standards for what end points are appropriate for very high public use beaches."*

15918. NSEM Affidavit at paragraph 6.12 (f).

15919. That's one example there.

15920. And also on the following page, on 42, the Health Authority's comments regarding -- they have also commented:

> *"[They] have not seen a comprehensive emergency response plan from the proponent, which includes how the proponent intends to work/communicate with health authorities and other agencies, and how it intends to assess…monitor exposure in the event of a spill and to share [that] information…"*

15921. It's sort of in line with what Ms. Scott's going. We have the ability to condition Trans Mountain's application. But I guess it's your argument also is that there's only one component of a lot of agencies in the Burrard Inlet and a number of -- and there's a lot of ship movements.

15922. And so how do we influence that or how can we adequately address the City of North Vancouver's concern with response and health issues and end points? All that you've laid out here, I'm just still grasping with that.

15923. **MS. GILTROW:** In my submission, the most fundamental way you can influence that is by saying that, "This project can't proceed; we cannot recommend that it proceed under the current conditions. What needs to happen is the following." And we have set out our submissions on the comments on what's missing. "What needs to happen is the following. We can't recommend approval without the following happening."

15924. But that is a very different thing than saying, "If the following happens then we could recommend approval" because in my submission, you need to assess then. Once things have been fixed, then you can have a look at how the

region is doing, what a spill risk situation would look like at that time and what the spill response mechanisms are. You can't presume that by recommending certain conditions that we will then be in a position where you can say, in light of your CEAA, your environmental assessment obligations, that we can safely -- in light of the human environmental risks that would be posed by this project -- we can recommend approval.

15925. So in terms of influencing, the influence comes by saying, "These things are lacking. This needs to be fixed. We can't recommend approval in the present context." It's not, in my submission, something that you can fix through conditions that attach to this volume of diluted bitumen running through along the shores of the City of North Vancouver.

15926. It can't be that a condition of fixing this problem is that you let this increased bitumen shipment happen. It's got to happen first. And then if a proposal comes in some future point, we assess the impacts -- which is the obligation under the statute -- based upon a status quo that is much more acceptable.

15927. **THE CHAIRMAN:** Thank you. One second.

--- (A short pause/Courte pause)

15928. **THE CHAIRMAN:** Ms. Scott just has a brief follow-up to my question and your answer.

15929. **MEMBER SCOTT:** Mr. Hamilton has the controls on this. Sometimes they don't always work after he has the mic.

15930. You raised the point -- your argument, I just heard you suggest to Mr. Hamilton, is that we can't condition the type of emergency response plan that's necessary here because it can only be evaluated when those plans are in place. Is that accurate?

15931. **MS. GILTROW:** My submission would be you don't have the evidence in front of you to get conditions that are going to be effective enough to solve this problem. You just don't have that evidence in front of you, and I think in a very real sense the right solution will come through much interagency work that's been revealed to be needed.

15932. But my submission, in terms of jurisdiction and what you need to do to properly environmentally assess this, is that you can't -- you need to establish your baseline and status quo. And we're at a wholly unacceptable baseline right now. We need to fix our baseline before we can then assess whether, on an appropriate -- when we're doing much better in terms of risk and emergency response, then can the region bear more risk added to an acceptable baseline? That's my submission.

15933. **MEMBER SCOTT:** All right. And in our process typically we -- it's a two-stage process. We recommend, and assuming Governor in Council -- if we have recommended to approve a project and Governor in Council has accepted that recommendation if you get to that point, then there's a subsequent process, lead to an open process where another panel is struck -- probably not this one -- and they will -- they assess whether or not there has been condition compliance.

15934. Is that -- do you have any views on the adequacy of that two-step process?

15935. **MS. GILTROW:** Well, that gets back to the problem that Chair Hamilton was identifying which is that Trans Mountain will have a very limited responsibility in that. Your jurisdiction in that situation will only be over Trans Mountain.

15936. So if the failing is -- for instance, in this case the evidence of North Shore Emergency Management office was that clearly Trans Mountain didn't fail in the Marathassa spill but there were failings that revealed that we're not living under a safe enough spill response regime. And in that instance, Western Canada Marine responds, and the Coast Guard played a role in what, in the municipality's submission, was an insufficient and not prompt enough and not tight enough emergency response.

15937. The leave to open -- you won't have jurisdiction over those agencies. You'll only have jurisdiction over Trans Mountain. So if the failings lie elsewhere, then that won't provide any effective remedy.

15938. The point though, flowing backwards, is Trans Mountain, while in that scenario it won't necessarily be Trans Mountain's fault if things aren't ready to go. But the point is, right now Trans Mountain can't rely on saying, "Well, that's a regulated area; those are other people's problems. We don't have control over the tankers when they come."

15939. If they're going to propose a project that's going to put the people of North Vancouver at increased risk, they need to be able to put before you an assurance that we're in a spill response regime that is safe enough for the people of North Vancouver to bear.

15940. So unfortunately for Trans Mountain, it does flow back upon them in the context of this application, but your jurisdiction over them in the leave to open will just not be sufficient to solve the problem that the residents bear.

15941. **MEMBER SCOTT:** Just one other question before I conclude.

15942. Are you able to give us any advice on the -- our CEAA responsibility at the different points of decision-making? We're assessing CEAA, or we have a responsibility under CEAA in this application but does it carry over to the leave to open process, do you think?

15943. **MS. GILTROW:** I have to say honestly I haven't thought about whether it carries over to the leave to open process. If I can risk an instinctive answer it would be "No" because the decision statement will have been issued then and you will be functus on the question of environmental assessment.

15944. **THE CHAIRMAN:** Mr. Davies has a question.

15945. **MEMBER DAVIES:** I have to say this has been very helpful to not only hear your argument but to -- your responses to the questions.

15946. I want to go back to your proposition that -- I'll put it this way. You didn't say this but it's one way to, I think, paraphrase what you say, which is my intention.

15947. To recommend approval with conditions is premature, that only when the status quo has been improved should that take place. Is that a fair summary of what I heard you say?

15948. **MS. GILTROW:** It is, and it rests upon the ultimate impact, the risk impact that the residents will bear. So it flows back into your obligation under CEAA that under the current circumstance we're not even close, so -- in terms of what would be a safe impact to have residents bear.

15949. So it's not jurisdictional or anything like that. It's really more quantitative, that on the evidence that's before us the impact is just -- the risk, knowing that risk is probability and consequence, et cetera. We're not even close.

15950. **MEMBER DAVIES:** Where I'm going is I'm trying to imagine a condition that would allow that future assessment to take place, if that's what is needed. And the type of condition I'm thinking is something that might go along the lines of encouraging improvement of the status quo as opposed to allowing it to drift as we've learned it has; no fault of the Applicant.

15951. The condition I have in mind -- and I'm thinking aloud; this may be a poor attempt but I'd like to hear your comments anyways -- would be that we would withhold leave to open until satisfied that -- and how we are satisfied is where I'm going to get -- that the emergency preparedness and response capacity had been improved. But I'm looking for something concrete that would say that; for instance, a letter from the Port of Metro Vancouver, a letter from the Coast Guard, that sort of thing; the agency who has got senior responsibility to coordinate the response on the water in the marine environment.

15952. **MS. GILTROW:** Again, thinking aloud back -- my concern with that is your task in this regulatory inquiry is to assess all the evidence and determine, as a matter of fact, whether there will be likely impacts that are significant and residual, et cetera. That's a matter of weighing competing evidence. It's not a matter of a regulatory tick box from another agency, because we're under regulatory agencies and the evidence is that those have failed. Failed is a strong word but they're not sufficient in terms of where we're at, in terms of spill response.

15953. What agency could unequivocally assert that we're at the level of response capacity that we need to be at? That is effectively -- because it goes to the ultimate question of impacts and what the people in this area -- and I'm focusing on people. I'm sure I should mention the ecological factors and environmental factors but I'm here for the people of the district -- or of the City of North Vancouver.

15954. It's a question of fact that you have to find in terms of the impacts that they are living with. And because that is inherently embroiled with this question of -- well, what's the current regulatory regime? How is it serving us, in terms of spill response?

15955. In my submission, it wouldn't be sufficient to defer that determination to another regulatory agency because your job, under your mandate, under CEAA is to make that finding of fact yourselves, based upon, unfortunately, what will be competing and complex evidence.

15956. **MEMBER DAVIES:** This Panel may be functus; I'm not sure of that. But we may be functus when it comes to condition compliance.

15957. But if the conditions require the Board to receive further evidence in examining whether or not the emergency response capacity deficits that you and others have identified, if those are in fact there, that there could be another proceeding around the questions of conditional compliance that would allow that factual foundation to be both put on the record and challenged.

15958. And I'm just thinking about public interest generally. We've got a lot of time and money spent on this proceeding, and if this proceeding could also lend some energy to getting the status quo improved, which as you've pointed out, your clients live with day to day today, then that's not necessarily a bad thing.

15959. But what you're saying is we can't delegate that authority. I appreciate that. But we could write a condition that required an evidentiary record for the Board, a future panel, to consider under the question of whether or not that panel is satisfied that the regime has improved to a certain point.

15960. Forgive my wordiness; it would be shorter if I had more time to prepare. That's where I'm going.

15961. **MS. GILTROW:** And I'm going to propose a deferral of an answer because actually I appear before you on Friday of this week, and representing municipalities in the Fraser Valley who don't have the marine shipping issues, they have the pipeline issues.

15962. And one of the significant issues that those municipalities have raised is the issue of the current framing of draft conditions. And their deep concern, that there isn't a future opportunity for independent oversight that would take into account evidence from those municipalities in terms of whether conditions have actually gone some distance to dealing with the safety concerns, et cetera, that they've identified in their submissions.

15963. I assure you I'm not looking for an out, but I'd like to consider your

question.

15964. **MEMBER DAVIES:** It's not -- don't apologize at all, and do consider the question. We're dealing with a serious issue, and I'd like to explore the options that we might deploy in these circumstances that could contribute to a larger good without unfairly burdening the Applicant with responsibilities that go far beyond those that it should necessarily bear.

15965. So I'll leave it with you for follow-up later in the week.

15966. **MS. GILTROW:** Thank you.

15967. **THE CHAIRMAN:** With that, if you want to add something please do.

15968. **MS. GILTROW:** Well, I will just -- Ms. Jackson pointed out that discussing the conditions tends to presuppose the outcome. But we have discussed, and we discussed Friday that of course the NEB is bound to suggest conditions whether or not you're recommending approval or not. So I understand our entire exchange has been in that context.

15969. **THE CHAIRMAN:** That's exactly right. For clarification, we have to recommend conditions. Whether we recommend approval or rejection, we still have to put the conditions in there. It's required by the Act.

15970. With that, on behalf of -- for both your attendance here today, and the work that you've put into this, on behalf of your municipality, Ms. Giltrow, thank you again.

15971. We will take a short recess when we will be hearing from the Lyackson First Nation.

--- Upon recessing at 10:24 a.m./L'audience est suspendue à 10h24
--- Upon resuming at 10:38 a.m./L'audience est reprise à 10h38

15972. **THE CHAIRMAN:** The Panel has -- maybe I'll just ask if you'd like to just take -- we have one small procedural matter to deal with first before we come to your presentation.

15973. The Panel has considered North Shore NOPE's request filed this morning to be permitted to have up to four total members present during the District of North Vancouver's presentation tomorrow. North Shore NOPE said that they had been working closely with the District of North Vancouver for two years, and wanted to have additional members present when the distract mayor speaks.

15974. The Panel have reviewed this motion, this request, and have accepted the request, and a written ruling will follow.

--- (A short pause/Courte pause)

15975. **THE CHAIRMAN:** And maybe just to make clear, that the request was for to have four representatives attend for the remainder of the hearing here in Burnaby. So the Panel will be -- have agreed to that request and will be issuing a ruling shortly.

15976. And perhaps we can get the ruling number from our capable Regulatory Officer.

15977. **THE REGULATORY OFFICER:** It will be Ruling 116.

15978. **THE CHAIRMAN:** Apologize for that. We just wanted to take care of that matter since we got that request this morning.

15979. And so welcome; and we are now prepared to hear the oral summary argument of the Lyackson First Nation.

15980. **MS. JOHNNIE:** Thank you.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR THE LYACKSON FIRST NATION:

15981. **MS. JOHNNIE:** I considered how I would present this oral summary. I feel like you have probably heard a lot of very traditional, from your perspective, legalistic responses in this oral summary. And I wanted to share with you more along the lines of how we responded to our oral presentation to you in the fall, and in how our community, the Lyackson First Nation, would want to respond if they could be present.

15982. So this will be a little more traditional on my side of the table and perhaps a little less traditional on your side of the table. I have no long speaking notes. I'm going to be referring to our evidence submitted as of January 12th, 2016. And I believe that's called C219-13-1 on occasion. And other than that, I've just simply got some speaking cards to share my thoughts with you.

15983. My name is Kathleen Johnnie. I work for the Lyackson First Nation as their Lands and Resources Coordinator, and that's where my formal training resides. I do have informal training as a First Nations responder to Crown consultation. I've worked in that field for the last 17-and-a-half years. There is no formal training for that kind of expertise. I was trained generally under Murray Browne, who is now an associate at Woodward & Company, one of the leading Aboriginal law firms in B.C.

15984. I wanted to speak to you -- and I do want to express my Chief's regrets; he could not be here. He had significant engagements yesterday and today, and trying to fit this in between those two would not have allowed him to be present. But Pahalicktun would like to have been here to address the Board again.

15985. And I thank you for the opportunity to be here. I understand I have 40 minutes approximately, and I thought I only had 20. So I was really going to motor through these. So I'll just stretch that out a little bit.

15986. Referring to my cards, if the Chief could be here, he would want to talk with you about the sacredness of this space, the sacredness of the Salish Seas of Le'eyqsun Island, of Valdes Island, and of our practices in and around these areas.

15987. Being able to fish, you'll hear a lot about our communities and our fisheries' practices in the Salish Seas. And we have submitted sufficient evidence, I believe, to apprise the Board of how important this area is for our fisheries' practices.

15988. If Council of the Lyackson First Nation could be here, they would want to talk to you about the importance of being able to exercise the right. And you see that in many environmental assessment reviews; that the Crown, the Federal Crown especially is looking at current use.

15989. So the Council would talk about how important it is for our people to

continue to be able to practice and exercise their rights and traditions, such that we have reported out to the Board already that we, in our socioeconomic study, that we have annual cultural retreats to Le'eyqsun Island, where we are training our largely urban community in the exercise and practice of their rights.

15990. If the Elders could be here, they would talk a lot about fishing. They would talk a lot about how they left from Knight Inlet or Mudge Island in the north, and they would follow the salmon in through the Johnstone Strait into the Salish Seas and into the Fraser River, and how important that annual trek was to them.

15991. And if the Norris family could be here from the Lyackson First Nation, they would talk about that. They would talk specifically about starting out at Knight Inlet and fishing all the way into the Fraser River and camping there and drying their fish and interacting with our neighbouring nations in the south arm of the Fraser River.

15992. If the Thomas family could be here they would also talk about their fishing treks starting at Mudge Island -- not Mudge Island, I'm saying it wrong -- talking about their fishing treks from up north through the Johnstone Straits into the Salish Seas and over to the Fraser River for weeks each summer, as well as their annual treks over to the lower mainland that led to treks down into Washington State,

> *"...where we would interact with our family that lived down in Washington State."* (As read)

15993. From a technical report perspective, as the Lands and Resources Coordinator for the Lyackson First Nation, I am here to talk to you about how we continue that practice today.

15994. We have an obligation to meet our fisherman. He's not a commercial fisherman for us when he's doing Food Social and Ceremonial, but he uses his vessel to carry out our Food Social and Ceremonial Fisheries.

15995. And he fishes from up north of the island, follows the fish in through the Johnstone Strait, and fishes in the Salish Seas and at the mouth of the Fraser River. And our team of people readily meet him anywhere along that line because we have to acquire our fish from him in a timely manner.

15996. And in my area of expertise for Crown consultation, I would want to talk to you about the various aspects of Crown consultation that the Proponent is responsible for in terms of procedural aspects, that the National Energy Board is responsible for as reviewers of how the consultation has been carried out by the Proponent. And the Crown themselves at the oral presentation in the fall -- we specifically addressed the federal Crown and their outstanding duties following the Board review because there will be work to be done at the end of this project.

15997. So those are some of the things that we would want to talk about with you, and we believe that we've characterized them in our submission of January 12th, 2016, which I referenced earlier.

15998. So in our final argument, we talked about what we feel that the Board should be submitting. And we'll carry on with our own submission to the responsible ministers because we feel that it is not only our duty, but it is our right to make sure that the ministers making the decision have our full information in front of them in a way that we want to express. Regardless of how fine an effort everyone makes on both sides of any discussion, we often find that the translation gets lost and the importance gets lost or is not captured fully or wholly in the way we intended it to be.

15999. So we will provide our own submissions to the responsible ministers. We will meet with the federal Crown after this engagement is done.

16000. This has been a fairly onerous project on the Lyackson First Nation as we've relayed to you. We're a very small nation; we only have about just over 200 members. When the Chief leaves our office he always likes to remind the Crown that 25 percent of his full time workforce has left the office. And I'm not one of his full time workforce. I only work three days a week for Lyackson.

16001. So this is a very large project for our First Nation; it's a very onerous project. And we're working very hard to keep up with it, but it is very difficult for us to follow, especially in this process, this particular hearing-style process. So we will submit our own and have our own discussions with the federal Crown once this review has concluded. Whatever your decision is, we will meet with the federal Crown and provide our own reports to them.

16002. But we have asked you for specific items on page 1 of our January 12th, 2016 submission. We ask you to:

> *"Advise the Minister of [our] opinion pursuant to Section 52(1)(a) of the NEB Act that a CPCN should not be issues for all or any of the Project."*

16003. We ask that you:

> *"Advise the Minister that the Project is likely to cause significant adverse effects to the environment regarding Lyackson as aboriginal peoples pursuant to the Canadian Environment Assessment Act, 2012, s.5(1)(c)."*

16004. We:

> *"Recommend that the Governor in Council decide that the Project is likely to cause significant adverse environmental effects that cannot be justified in the circumstances pursuant to [Canadian Environmental Assessment Act], 2012."*

16005. And we ask that you:

> *"Grant such further and other relief as Lyackson may request or the Board may consider appropriate."*

16006. I wanted to make sure that was in particular on the record. My Chief when he talks about this project, talks about it from his heart. You'll see that at the end of the document where he has asked me specific questions on what could be done in the event of a spill and whether or not it could be remediated or returned to its original state, the environment or the effects on our practices. And you'll see that I have stated to him that it is not clear that that it is possible given other oil spills in the region and that the effects may be very long-lasting.

16007. We have identified to the Board again that the waters are our highways; that the Lyackson traverse from Le'eyqsun Island to Tl'uqtinus in the south arm of the Fraser River; that these were important; that Tl'uqtinus itself was a major, major centre of trade for the Lyackson First Nation; and that it was an area that allowed us to interact with and relate to other First Nations, Coast Salish Nations, on a government-to-government basis. It's a very important area.

16008. We have relayed to the Board in our other evidence that we are very concerned about the sediment flow from the Fraser River and the fact that it flows

across the Salish Seas to Valdes Island, and that we are very concerned that should a spill occur, that the dilute bitumen could combine to the sediment and then thereby drop to the ocean floor. And we have expressed our deep concerns about how that could occur and how it could affect us in our fisheries and our traditional fisheries.

16009. We have asked the intervenor if they had studied those flows and they have said that it was not necessary, that the Board did not require that those flows be studied. But we remain concerned as Port Metro Vancouver has a major project that they are currently reviewing under the *Canada Environmental Assessment Act*. And that might increase the flows to Lyackson and even push them further north on Le'eyqsun Island.

16010. So we have expressed those concerns in previous submissions and at our oral presentation.

16011. These are things that we maintain have not been properly reviewed -- properly presented to the Board or properly reviewed for the Board's understanding of the potential effects of this project and those potential effects on the Lyackson people.

16012. We have talked about our many harvesting types of activities in the Salish Seas and around Le'eyqsun Island and over to Tl'uqtinus. And I'm kind of fast-forwarding here to page 12, I believe it is.

16013. So on page 12, starting at line 255, this is where we talked about the sediment plume. This is where I wanted to make sure that you fully understood that this is a serious concern to us. We understand that diluted bitumen can connect to the sediment plume, that it can drop to the ocean floor.

16014. Your previous speaker spoke about how if diluted bitumen drops to the ocean floor, it may not be recoverable. I believe she actually asserted that it would not be recoverable. And that is a huge concern to us and our fisheries in the Salish Seas.

16015. On page 13, we raised concerns about potential adverse impacts of increased marine traffic on killer whales. Killer whales are a central cultural species to the Lyackson. It is also a food source to the Lyackson. They're also an important cultural component in terms of our legends.

16016. The water quality of the south arm of the Fraser River at our Tl'uqtinus village site and key fish resources such as salmon and white sturgeon, and Lyackson's ability to carry on its traditional and cultural practices in the Salish Sea in the face of increased marine traffic, its resulting noise and pollution and potential adverse impacts of an oil spill or facility malfunction is of huge concern to us in that area.

16017. Should a spill occur off the mouth of the Fraser River, the Fraser River does -- although the Fraser River flushes quite well, it also has salt water marshes far up the Fraser River, which indicates that salt water does make it from the Salish Seas up to the Fraser River.

16018. So we're very concerned about a potential spill on the wrong kind of tide rushing into the Fraser River and impacting species at risk like the white sturgeon. It's a very important species to us. It was one of the primary reasons that we used to go to the Fraser River for fishering -- for fisheries, is because that is where the white sturgeon existed. So it was a very important fishery for us.

16019. We also talked about potential economic development plans that the Lyackson has developed over the last -- ever since I've been there. But even before I was there, we've spent a lot of money investigating the resources on and around Le'eyqsun Island.

16020. That's not to say that we're not going to do it anywhere else in our traditional territory; it's just that Le'eyqsun Island -- we needed some place to start and my husband would always say, "You have to chunk it down." He was an auto body mechanic. So he'd say, "Just do the door. Don't look at the whole car, just do the door. Get that part done first and then move on."

16021. So I hope these little anecdotes don't bother you, but that's what we decided to do, was we decided to focus on Le'eyqsun Island, get as much information as we could on and around Le'eyqsun Island first and then carry on to other areas.

16022. Kinder Morgan's introduction of this project forced us to fast forward some of our research into other areas but we have expended a significant amount of money and resources and time and community and Chief and Council consultations to identify the importance of that island and how it needs to be preserved and protected for our future use.

16023. And so we're very concerned about the potential effect of a spill in the Salish Seas affecting all of the work that we have done because I have been at the Lyackson First Nation for six and a half years -- six years now, and in that time we have spent over a million dollars just focusing on that island, and we intend to do this in every aspect of our territory.

16024. And we have not had the time and the resources through this process to be able to fully understand the impacts of this project in and around these resources, simply because it does take time. It takes more than a month to do a traditional use study. It takes more than a year to do that Use and Occupancy Mapping Study.

16025. It takes time to understand the socioeconomic interests related to that use. It takes time that we did not have through this National Energy Board process to be able to fully understand those potential impacts, not as fully as we would like to, although even from what little time we have had on this project, we are seeing evidence, strong evidence of significant adverse impact to the First Nations title and rights.

16026. On page 15, I believe, part of the exercise related to the National Energy Board process is information responses that the Natural Resources Canada requested of the Lyackson First Nation and other intervenors. And we provided a detailed response to NRCan's Information Request number 21.

16027. In our response we talked about -- well, in our review of the questions that were asked us, it appeared to us that NRCan was using a template that did not fit the marine concerns that we were concerned about. They appeared to be very -- and Natural Resources Canada appeared to be very focused on the pipeline, on the extraction point, the end point at Westridge Terminals, I believe it's called.

16028. But the marine issues that we were talking about were not part of the questions that they asked us about. And so we feel very strongly that Natural Resources Canada did not -- was not considerate of the Lyackson First Nation's specific concerns -- specific areas of concern, and did not capture our concerns, although even at the oral presentation in the fall, we were very specific about what we were concerned about related to marine traffic, related to climate change. And we told the government at that time that they were not off the hook and they're still not off the hook.

16029. On page 17, part of the reason that we are concerned about the

National Energy Board process is that the iteration -- they type of iteration that occurs in a First Nation when we do these studies is very different than the hearing process itself can -- or in this particular process, has provided for.

16030. I've got more information coming to me every time I go to meet the community about different aspects that I can't present to you today because you will not hear new evidence. But it came to me last week, it came to me yesterday, it came to me two months ago, and your process does not serve that kind of iteration that naturally occurs in a community.

16031. And so that is one of the things that we feel that the National Energy Board process fails First Nations consultation. And part of the point that we make about climate change and the Crown's role in this is that the fact that you will not review climate change issues means that the Crown will no longer have the substantive wealth of power you have to bring science to the table to inform the Crown about what we are talking about.

16032. So we feel that the National Energy Board process cannot fully serve the First Nations consultation. There are other aspects of the consultation process -- the procedural aspects related to the Proponent that you will not see because they are contained within agreements between the First Nation and the Proponent that have confidentiality agreements where I cannot bring forward to you some of the issues that are coming out of that agreement. And that is a failure of this process, the type -- this type of process.

16033. If the National Energy Board had required of the Proponent that these agreements and relevant components of the agreement must be delivered to the Board for its assessment, then we feel that that would have served us much better in this process. It would have kept the Trans Mountain group -- it would have kept their feet to the fire. It would have kept them on their toes more than they have had to be because of the confidentiality of those agreements and the way that that was worded.

16034. On page 21, we talk about our practices of travel, and I gave you a high overview in my cards. The Lyackson travel in the Salish Sea and they continue to travel today. We have community members that live in the Lower Mainland. They're active. They're activists. They're social activists, actually, who look after and care for people at risk, people on the streets, women's rights issues, Aboriginal women's rights issues, and they have family on Vancouver Island. Our travel to and from Vancouver could be compromised easily by any

kind of an accident from any vessels in the Salish Seas, and that's a huge concern to us.

16035. Our Use and Occupancy Mapping Study pointed out that these large vessels actually impeded the willingness of our -- some of our community members to continue to fish in smaller boats because they felt they were at threat or at risk from these larger vessels traversing near them. Their nets were at risk, which could put their livelihood at risk. They felt that these larger vessels were a concern for them about them even training their youth, their own children, in the same industry.

16036. So it is -- I relayed to earlier that counsel wants us to practise our rights. They want us to bring the Lyackson people out to practise their rights. And if there are more vessels than there are even now, we are concerned about the impediment that would be to our youth to being able to get them to re-engage and fully begin practising their rights again.

--- (A short pause/Courte pause)

16037. **MS. JOHNNIE:** On page 23, we go over our submissions about -- sorry, I'm supposed to give you a minute. I'm not supposed to take a minute and then start talking; I'm supposed to give you minute to get to page 23.

16038. We talk about our concern about sensory disturbance from tanker noise, light and vibration, tanker-generated waves and light and noise disturbance; our concerns about coastal erosion of foreshore, environmental features and cultural features including archeological sites, burials, village areas, shell middens and clam gardens; disturbance of marine and foreshore habitat areas for octopus, sea lions and a variety of other marine species; increased hazards for small boats, which I just talked about; and impediments to subsistence harvesting of foreshore resources. And we've also talked about the concern about increased marine pollution and increased risk of accidents or oil spills.

16039. The Le'eyqsun Island is a -- it's kind of like a sandstone wedge. And the east-facing side faces the Salish Sea and it -- the part that becomes the tall wedge part faces the west. And what we have noticed on the east side is that there is a significant sound that comes through the rock. And it can go 1,000 feet, 500 feet back into that rock. And I believe it's call low-frequency noise that is considered to be very disturbing. And it appears to the Lyackson First Nation that it sounds like a large -- the propellers from large vessels interacting with the rock

and creating this low-frequency sound.

16040. If we'd had the opportunity for reviewing mitigation measures for things like that, we would have wanted that studied by the project because they are talking about increasing their traffic -- marine traffic from 40 to over 400 marine vessels a year. And so that makes it a very huge concern to us.

16041. And although they talk about having two tugs escorting the vessels in, tugs themselves create a very large noise; they are very powerful vessels in a very short body. And we're very concerned about that increase in traffic. We're very concerned about the increased potential in light disturbance from the lower mainland and from the vessel traffic.

16042. We've commented on these things to other organizations like the Deltaport Third Berth. They actually created down-lighting systems. They're talking about even doing more to reduce the light pollution because the -- that particular causeway used to be a big, permanent sunset on the -- artificial sunset on the horizon from the east side. So we are very concerned about the sensory disturbances around light and vibration from these vessels and the increase potential.

16043. We talked about our concern about killer whales. We know that sound is a disturbance to killer whales, although current science does talk about the fact that it's not the larger vessels; it's the smaller vessels. Again, the tug boats are smaller vessels and they have very powerful motors.

16044. There is another matter that I'd like to bring up to you but I can't because it's something new. It's some new evidence that has come out of another project review. So you're going to be going without that particular bit of evidence in this hearing, but we will raise it to the minister responsible for species at risk.

16045. We talked about the sediment flow and we talked about the potential for environmental effects on the project in our previous submissions where we expressed concern that should there be an earthquake centering under Richmond and Delta, largely sediment-based parcels of land, that that -- because it is sediment flow from the Fraser River that's created those two parcels, those two areas or regions -- that the area will liquefy and then could potentially rush into the Salish Seas.

16046. And Kinder Morgan -- and we said this at the oral presentation in the fall -- Kinder Morgan has assured us that their vessels are designed for heavy seas and open water. But this is not open water; it's closed water. And we all know the effect in closed water for a rushing seafront is much greater and much more devastating than it is in the open seas.

16047. And we still remain concerned that should an earthquake occur under Delta and Richmond, or Lulu Island, that it could still have this devastating effect creating an accident with the marine-tanker traffic that is proposed because our understanding is there will be, every day, at least one tanker in the Salish Seas.

16048. So if there is at least one tanker every single day, the potential effect of either Lulu Island, Richmond or Delta liquefying in an earthquake -- in a significant earthquake will cause -- will have potential cause -- adverse cause or a risk -- create a risk of spill and an accident with one of these vessels that will -- that we are assured are going to be there every single day.

16049. So one of the things I think that the elders would have wanted to point out to you is that in the Hul'qumi'num Treaty Group, which is a group formed to negotiate treaties -- and Lyackson is part of that group -- that we created lines on maps to serve the Treaty purpose. Our knowledge of our title and rights interests is far greater than the lines on those maps could ever represent and our interests are far more intense than they -- than can be described in a process such as the National Energy Board Process.

16050. Our interests are layered and they're layered under culture and tradition and history and memories that survive generations, memories and responsibilities that are handed down. As we said, there will be a Pahalicktun in 300 years and that Pahalicktun will carry all of the responsibilities that the Pahalicktun -- the Hereditary Chief of the Lyackson First Nation has taken up today.

16051. Those responsibilities are handed down. And if this project goes ahead, then the Pahalicktun of today has to take up responsibility for this project. And that responsibility carries own down the road.

16052. And we needed to make sure that that is really clear to you because that is an intense part of our traditions. We hand down our responsibilities with our names, with our songs, with our dances, with our masks. And the name, Pahalicktun, will survive and it will -- that responsibility will continue on past this

hereditary chief's roles and responsibilities ending.

16053. On page 29, we talk about the failure to respond to Lyackson's hearing evidence. And we're talking about the Proponent. Exhibit C-219-13-1, page 29.

16054. We haven't -- we are not trying to speak for any other nations. We understand that other nations have arrived at agreements with Kinder Morgan. We're saying we have never received any response, any clearly detailed response of issues that would mitigate the concerns that we have presented. And it's not just a matter of mitigation either. The first law of the courts is to avoid the impact; then the role is to go towards mitigation.

16055. But we haven't even had the discussion around mitigation, and we are -- the Lyackson First Nation is not only frustrated by that, they are angered that the Proponent has not come forward and has not attempted to work out any mitigation strategies with the Lyackson First Nation.

16056. We feel we have submitted enough evidence throughout this process that we could have engaged that discussion at a technical level for it to be submitted to the Chief and Council in the community long before this oral hearing took place. And that has not occurred. And we maintain that it should have, that it is part of the procedural aspects of the delegation of consultation to the Proponent and that it has not occurred to date.

16057. I have five minutes left. I think I only have two statements so I'll try to draw this part out.

16058. Lyackson maintains concern that the Crown itself has not responded to the concerns that we have expressed regarding this project and the potential effects to our Nation.

16059. I see my light has gone yellow finally.

16060. I want to end this on a discussion with the Chief. As this hearing neared its end, and as any Crown consultation or assessment of a project nears its end, the Chief sits down with me and he asks me what the bottom line is. So we asked, "Can I assure him that the project will not have lasting adverse effects?" This is on page 32.

16061. My response was that in a catastrophic event, the effects could last 20,

maybe even up to 50 years or more. It could even be forever. Pahalicktun wanted to know if I could make it right, can I put it back, can I fix it? And my response to that was that I didn't know.

16062. There are sensitive micro ecosystems on the Island throughout the Salish Seas. There are sensitive archeological sites that are currently being impacted, to the point where the First Nation is just saying no more impacts to archeological sites. Wherever an archeological site is within our traditional territory, my marching orders are to protect it.

16063. There are also important fishing sites and cultural sites. The importance of a cultural site is that it is pristine. That you can practise the cultural component there without pollutants around you, without distractants (ph) around you. Having these cultural sites affected on the east side of the island could be an adverse impact, it could be enduring.

16064. The Chief asked if Western Canada Marine Response Corporation could get there in time in the event of an accident, and my response of that is that it's not likely. It took them a half an hour or more to get to the accident that occurred right around the corner from them. Their deployment points are from Burrard Inlet and from Cowichan Bay or from Nanaimo.

16065. They told us that they would deploy from Burrard Inlet, which is over an hour away from Le'eyqsun Island. Should one occur in the Fraser River at this time, they're still over an hour away from the south arm of the Fraser River.

16066. Vancouver Airport Fuel Facilities Corporation has very kindly offered to allow a portion of their property be used by WCMRC so that they can deploy directly from there. And that is part of the commitment of the Vancouver Airport Fuel Facilities Corporation, is that they will deploy a spill response vessel every time a tanker is in the river.

16067. So when that occurs that will be great, but they are not there right now. So should a vessel have an accident in -- and it causes -- affects either, any effect that might result in an effect to Le'eyqsun Island or in the south arm of the Fraser River at this time, there is no quick spill response available for either of those two locations.

16068. I've got four seconds. Thank you. That was the end.

--- (A short pause/Courte pause)

16069. **THE CHAIRMAN:** In regard to your presentation, for which we thank you, you talk about the Crown consultation and you talk about our process and the time that's involved. You gave us a number of examples of time to produce evidence, to do studies, to get them into our process, and that you -- the lack of our process to allow some of that to be in, you know, in our process. And that you would, on behalf of Pahalicktun would be taking it to the Crown consultation stage.

16070. And I was wondering if you have any comments on -- because, as you know, once we make our recommendation and the number of conditions that whether it's approved or -- we recommend approval or not, we have to provide conditions. It's under our Act. And then the Crown consultation takes, as legislated now, three months.

16071. I'm just wondering if you have any thoughts on the structure of that considering all the things that you may indicate to take into that process that's outside our process once we've finished?

16072. **MS. JOHNNIE:** I just want to make sure I have your question right.

16073. So we talked about how long it takes to respond to the intervenor request, but we also talked about leading up into this process, how long it takes to do some of our own studies.

16074. In my recommendations to any Crown agency when you first hear of a project -- right now all the Crown agencies do is they propose you go and meet with the affected First Nations. And I find that insufficient to engage the First Nations.

16075. There are no guidelines around timelines for negotiating of an agreement with the Proponent for capacity funding. And we totally applaud Trans Mountain for connecting with us very, very early in the process, but it took us a year and a half to negotiate the Capacity Funding Agreement, which is a year and a half we needed to do the Traditional Use Studies.

16076. Traditional Use Studies are iterative; our elders don't think in linear, legalistic timelines. So as I said, just last week I had an elder come to me and say, "I fished in this area and that's an important area." I can't present that to you.

16077. But if we had the opportunity to do a Traditional Use Study in that first year and a half, it would have led us to understand that we then needed the Socioeconomic Study and we would have had more time to do the Socioeconomic Study. If we had more time in that first year and a half to understand some of the other implications around marine issues, we would have studied other things.

16078. But we also learned of other issues through other intervenors. I think you heard that from -- was it North Vancouver -- that presented this morning, that they learned of things from other intervenors that we really couldn't respond to because we were learning of it as they submitted it by the deadline. So we couldn't respond to those issues because they were already submitted and we didn't have time to include or incorporate that into our submissions.

16079. And in particular, for First Nations it's very difficult because we don't have the resources, as I mentioned. So in my ideal world for Crown consultation, the Capacity Agreement must be completed one year prior to submission of a project. The Use and Occupancy Study must be completed -- no, the Use and Occupancy Study should be completed one year prior to, or six months prior to, the submission of the actual formal application. The Capacity Agreement with the Proponent should be one year before that so that the First Nation can fully understand that.

16080. There should be other opportunities for unique issues that the First Nation may face. Our issues are not pipeline-related. We have a very principled group of elders who say, "We don't want to export our need on First Nations somewhere else." And that's fine. But the pipeline is still not our issue. Where it's extracted from the earth is not our issue; it's the marine traffic that's our issue. So we needed time to actually fully characterize that.

16081. So having that opportunity, we needed more opportunity to find out what the potential other issues are because we will never be able to hire the same group of people that Trans Mountain hired to review this kind of project. So we tend to rely on other intervenors to inform us. We tend to rely on sessions where the intervenors can get together in a group and speak what is their concern so that we can go, "Okay, we understand how that applies to us" or how that does not apply to us.

16082. And for Lyackson we're very clear about that. You know, where the pipeline begins and where it terminates are not our issue; those are other First

Nations issues. We'll support them in whatever way we can, but it's the marine traffic and we want to be focused on that.

16083. So in terms of the intervenor responses, for First Nations who don't have the technical staff to be able to deal with those issues -- I couldn't even afford to have our lawyer here today given the funding that we were provided in the Participant Funding. And I'm not complaining necessarily about that.

16084. For Lyackson I didn't want us to have a really legalistic response to you. But it would have been good if we had an opportunity to see those responses so that we could examine them and see how the issues contained within those responses may or may not have affected us so we don't have to hire and reinvent the wheels that have already been set in motions.

16085. Because we really don't want to do that. We don't have the staff to reinvent wheels; we don't have the staff to re-conduct studies. So through this process we picked and chose what we thought was key issues to us that we could understand. It was probably for the climate change issue -- it was one week after you said, "No" to reviewing that that I understood the full implications to Lyackson.

16086. So the process doesn't allow for that iteration that the courts have asked us to have in a consultation process. And I don't know how to do that in a hearing-type process. I don't have clear, easy answers for that except that in Environmental Assessment Reviews, the federal and the provincial ones, they quite often give us a bit more time after the public has made their submissions. They provide First Nations opportunity to respond after that.

16087. And I don't believe that's because they feel we need to review what the public has said. They just do it because we participate in what they call 'working groups' so that we can take a look at that iteration of issues that come out from local governments, from other First Nations, from the general public, and we become part of that group that reviews the Project collectively.

16088. So I don't know; did I answer your question?

16089. **THE CHAIRMAN:** Ms. Scott's got a follow-up to my question.

16090. **MEMBER SCOTT:** Thank you.

16091. You mentioned or you described Crown consultation and you indicated that the Crown would rely on the evidence in our process to the extent possible for Crown consultation. And then you went on to describe things that are happening outside our process between Lyackson First Nation and, I gather, other Crown agencies.

16092. And I know you're familiar with our process, that we will make a recommendation to Governor in Council. And as you describe it, there will -- and as the evidence from the Crown in this case is -- is that the Crown will continue to consult after our recommendation has been given. And if you assume for the sake of argument that it included -- or if you assume for the sake of argument that we were able to recommend the project proceed, there's a three month period for the Crown to carry out its additional Crown consultation.

16093. Do you have any other intervenors that have made comment about the adequacy about that three month time period? Do you have any observations or advice to offer us on that?

16094. **MS. JOHNNIE:** In this particular review I don't believe that the Crown will be able to meet that three month timeline given the number of First Nations that they have to meet with. I have not yet seen a schedule. And they could start now; they don't have to wait until you finalize your review. We're more than happy to meet with them at any time. We consider it fairly imperative that we do.

16095. Three months is small given the number of people that they will have to consult with. I would say six months they'd be hard-pressed to meet and nine months would be more realistic and a year would be the best review option.

16096. **MEMBER SCOTT:** Thank you for your observations. Just one follow-up.

16097. That time period post our recommendation, is that an opportunity as you see it for the issues that are not pipeline issues -- I think you described marine traffic issues as one of those issues; not necessarily a pipeline issue, but a matter of concern to Lyackson First Nation.

16098. Is that a time when Lyackson will have an opportunity to raise that matter with Crown? Is that an appropriate place for those concerns as opposed to pipeline concerns?

16099. **MS. JOHNNIE**: Well, I -- first of all, I'm not letting you off the hook because you included marine traffic in your review, so you're not off the hook in that assessment. There are other issues that -- and it isn't necessarily just marine traffic. It is -- there is a huge issue related to climate change for us and this type of product. So is three months enough for us to be able to engage that fully?

16100. Will our focus -- well, our focus has been primarily on this review in this process so now we have to change or focus to those particular issues. It would be more in our liking if we had four or five months to prepare those issues and then another two or three months to be able to communicate back and forth iteratively, or maybe even five or six months to communicate back and forth iteratively with the Crown.

16101. It's not the same as going and interviewing a scientist when you go to interview our community members, our knowledge holders. There's a totally different iteration of thought that occurs when you go to interview an elder or a knowledge holder. They're not sitting there thinking about the paper that they submitted for publication. They're not thinking about the 25 other papers that they researched for their paper. They're thinking about who verbally taught them what; who physically taught them what; and where they taught them those things.

16102. And it's not as easy to do in an office type of environment. For those knowledge holders it is much better to get them out to the sites and allow them the time to go, "Ah, I remember what we're talking about here. I remember who taught me this. I remember who taught me this here in this spot."

16103. The oral tradition is very different for First Nations and that's why the iteration is really important, because we have our own PhDs. We call them stetulnamut and that's our equivalent to the -- a PhD. They are knowledge holders. They have the equivalent knowledge of any PhD and maybe even more than a PhD does because their knowledge is not static in time. It's not a snapshot in time.

16104. So to create that iteration we always need a year and that's just our small 200-some -- 200 more or less people. That's what we need to be able to make sure that we have collected the information.

16105. We've been in this National Energy Board review and last week an elder came to me and talked to me about where he fished. Last week. And you

just sit there and go, okay, well I know I'm not going to be able to present that to you, but that's the kind of iteration that occurs with First Nations. They don't remember it in a set time frame. They haven't studied it in the same way that university students have studied it. Their study has been from when they were young and children to a full lifetime of experience. And that is a different environment to try and draw and glean information out of.

16106. Thank you.

16107. **THE CHAIRMAN**: With that, we thank you, Ms. Johnnie, for coming and presenting today on behalf of the Lyackson First Nation and for travelling here today from Vancouver Island. So with that we thank you and we will be considering your evidence that you have provided today.

16108. We'll just take a very short recess. We won't -- and then we can switch now and we're going to be hearing from the Independent Contractors and Businesses Association of British Columbia, so if they could just come forward and we'll proceed.

--- (A short pause/Courte pause)

16109. **THE CHAIRMAN**: Thank you. Mr. Hochstein. I understand you will be presenting oral summary argument on behalf of the Independent Contractors and Businesses Association of British Columbia. And I note that you are a resident of Burnaby, if I am correct, or the Association is.

16110. **MR. HOCHSTEIN**: Yes, my office is indeed in Burnaby, yes it does. Thank you for noticing.

16111. **THE CHAIRMAN**: With that, we're ready to hear your presentation. Thank you.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR THE INDEPENDENT CONTRACTORS AND BUSINESSES ASSOCIATION OF BC:

16112. **MR. HOCHSTEIN**: Thank you very much.

16113. My name is Philip Hochstein and I am the president of the Independent Contractors and Businesses Association of B.C. ICBA is one of the

largest construction-related organization in the province. We have 1,200 members and they are responsible for a work force of 20,000 British Columbians. Construction is the third biggest -- third largest contributor to B.C.'s Gross Domestic Product.

16114. ICBA members are involved in virtually all major capital projects in our province. They include high-rise residential buildings, office complexes, schools, retail outlets, hydroelectric plants and yes, even pipelines.

16115. ICBA is the single largest register of apprentices in British Columbia. We provide management and regulatory training to over 21 individuals -- 2,100 individuals each year. We also supply medical, dental and retirement programs for almost 14,000 employees.

16116. Our members and their employees place a high value on the safety in the workplace and the integrity of our work. We take seriously our responsibility to ensure that everything we build complies with all regulatory requirements, codes and environmental protection standards.

16117. The Trans Mountain expansion project is an exceptional opportunity to balance economic, social and environmental interests in a project that creates long-term prosperity for all Canadians.

16118. Our members and their employees would find opportunities during construction of the pipeline. According to Trans Mountain's application, the benefits of this $6.8 billion infrastructure development are spread throughout the country but are of particular importance to B.C. and Alberta.

16119. Let me tell you that the overwhelming majority of B.C. residents agree with us. Eighty-four (84) percent support responsible resource development. They understand that a resource-based economy creates jobs, not only in construction, but in almost every other sector of the economy.

16120. When a major project like this pipeline proceeds, businesses and their employees throughout the province are impacted. More money is spent on hotels, restaurants, auto dealers, after-school activities, recreation pursuits, to name just a few, because of the high-paying jobs that are created by the pipeline project.

16121. ICBA's own study last year, a poll, determined that there is exceptionally strong support for responsible resource development, that support

for resource projects crosses political boundaries and that opponents, while vocal, represent only 16 percent of British Columbians.

16122. The Natural Resource sector is 10 percent of B.C.'s GDP and 32 percent in Alberta. Pipelines are a primary infrastructure for sustaining and expanding these opportunities.

16123. Canada is a world leader in pipeline construction and operation and is home to one of the largest reserves of crude oil. Oil is our single largest export commodity. In 2014 crude oil shipped by pipeline from Alberta to markets in the United States accounted for almost one quarter of Canada's total merchandise exports.

16124. Canada is a world expert at moving energy products safely. According to the Canadian Energy Pipeline Association large-scale transmission pipelines safely transported 99.9995 percent of liquid products between 2002 and 2013 on 115,000 kilometres' network.

16125. The TMX Project application goes into great detail to explain how the company -- and its construction partners, my members, strengthened by the NEB's conditions for going ahead -- will meet Canada's high standards for responsible resource development. If we can't get the construction and operation of this infrastructure right in Canada and show the world, who can?

16126. We have the skilled workforce and the regulatory environment to lead the world by example on how to build, operate, and maintain pipelines.

16127. Getting it right is a priority for ICBA members. The so-called green economy has been creating business opportunities for our companies and our workers for many years. As I look back over the last decade, work in sectors such as renewable energy, energy-efficient retrofits of existing buildings, and construction of green infrastructure has been a driver of business for my members.

16128. In fact, the construction industry is the main mechanism for converting public concerns about sustainable development into the buildings and infrastructure projects that satisfy our objective of clean, green economy. About 70 percent of jobs that drive energy efficiency land in the construction sector, for example. We're experts on leadership in energy and environmental design, the LEADS Program and other green standards. We know how to deliver projects

that meet the highest expectations for safety, sustainability, and reliability.

16129. Our members build independent power projects that add more renewable energy to B.C. Hydro's clean energy grid and we're involved right now in the massive Site C hydroelectric project in northeastern B.C. We're conscientious about carrying out this work. That's in part because we're an experienced, well-regulated sector of the economy. But it's also because our members and their employees embrace the idea of minimizing our environmental footprint.

16130. Who is more likely to care about British Columbians' outdoor lifestyle than a blue collar worker who enjoys camping, fishing, snowmobiling, hiking, and canoeing? For our workers in many parts of the province, such as those along the pipeline route, that's the lifestyle that caused them to settle in those communities in the first place.

16131. As we look at the Trans Mountain Expansion Project Application we see these same values reflected in the company's plan for carrying out the work. The project right-of-way is mostly along an existing brownfield route which significantly lessens the environmental impact of construction. Only 10 percent of the proposed route would be new right-of-way. Seventy-three (73) percent of the proposed route would use existing right-of way, and 17 percent follows what Trans Mountain describes as "other linear infrastructure including existing highways, electricity, and communications properties."

16132. Trans Mountain's application details extensive plans to keep the project's environmental footprint to a minimum. Five of the eight volumes of the original 15,000-page application go into extensive detail on environmental and safety issues, and how the company will deal with them during construction, and then over the life of the pipeline.

16133. The environmental measures outlined in the project echo the construction industry's own commitment to responsible and sustainable development. They reflect Canada's strong regulatory structure, industry best practices, and voluntary standards.

16134. The company proposes that during construction environmental protection measures include regular mandatory briefing of all workers regarding sensitive environmental features to be protected during construction. There would be full-time environmental monitors working with construction crews to

make sure this happens.

16135. We understand that Trans Mountain has a strong commitment to construction safety and sustainability and sustainable construction practices, including minimizing the space within which construction occurs, mitigating soil erosion, and removing construction waste. Our contractors recognize the need to have all federal and provincial and municipal permits and authorizations before proceeding, and to meet all environmental commitments and permits requirements once they are underway.

16136. For the long term there are emergency preparedness measures, state-of-the-art pipeline spill prevention and protection technology, pipeline integrity monitoring, seismic risk mitigation, incident command systems in place for land spill response.

16137. Most of the environmental and land use issues on the project right-of-way are routinely encountered during the pipeline construction and they're considerations that ICBA members are typically familiar with. Mitigation measures which would take place where local environmental impact cannot be avoided are also encountered as a matter of routine. These are all very expensive conditions but it's the kind of approach that shows we in Canada can build and maintain this infrastructure correctly.

16138. Another of the NEB's criteria for evaluating Trans Mountain is whether it makes positive contribution to Canada's economy. The big numbers are there; a $6.8 billion project creating 123,000 jobs; 23 billion in new taxes to government that could pay for essential services such as health care, education, and social services. Over 20 years, 1.1 billion in property taxes to communities along the route to help keep the cost of housing -- home ownership down and still fund police, fire protection, and other municipal services.

16139. For construction workers, the project represents -- presents an opportunity to further their careers, particularly for people who may be relatively new to the workforce. Trans Mountain Expansion Project will keep thousands of workers employed during a two-year peak construction phase. That's long in terms of standards of the construction labour force. For young workers in particular it's stable platform for apprenticeships, employment, and skill development.

16140. The project also complements the urgent efforts of the provincial and

federal governments to prepare a new generation of skilled workers to replace those who are on the verge of retirement. Remember, training in construction is on-the-job training. So without projects like Trans Mountain's Expansion Project we cannot develop our country's construction workforce.

16141. A modern federally regulated oil pipeline expansion project allows Canada short- and long-term -- aligns with Canada's short- and long-term economic and social interests. The Trans Mountain would, as stated in the facility's application to the National Energy Board and as successive federal governments have indicated, increase the value that Canadians receive from this vital resource.

16142. It is to the benefit of all Canadians, even the small minority who object, that the National Energy Board award Trans Mountain the Certificate of Public Convenience and Necessity to proceed. Shovels should be in the ground, pipes set down, and as soon as possible.

16143. Thank you.

16144. **THE CHAIRMAN:** Thank you, Mr. Hochstein, on behalf of the Independent Contractors Business Association of British Columbia.

16145. And we will take -- we will now recess and reconvene at 1:30 when we will hear from the Wembley Estates Strata Council, followed by Lisa Craig, and concluding this afternoon with the City of Victoria.

16146. We are adjourned until 1:30.

--- Upon recessing at 11:53 a.m./L'audience est suspendue à 11h53
--- Upon resuming at 1:35 p.m./L'audience est reprise à 13h35

16147. **THE CHAIRMAN:** Good afternoon, and welcome to this afternoon's session in Burnaby, which is part of the National Energy Board's hearing in regard to Trans Mountain Expansion Project.

16148. We will continue to hear intervenor oral summary argument. And again, we acknowledge today being on the traditional land of the Coast Salish People.

16149. My name is David Hamilton and I am the Chair of the Panel. And with me to my left is Ms. Alison Scott and on my right Mr. Phil Davies, and together we are the Panel assessing the Trans Mountain expansion project application.

16150. And for those that were not here this morning, just one housekeeping item which is important. In the event that you hear a hotel fire alarm, the procedure will be to exit the hearing room using the entrance you came in. Of course once you are outside the hearing room, there are two evacuation routes. The first is directly to your left when you exit the hearing room, and the second is located beside the registration desk where some of you received your lanyard. Uniformed security guards will be at both locations to facilitate your exit. Please follow their instructions.

16151. Once outside the building, proceed to the hotel muster point located on the northwest corner of the Delta Burnaby Hotel and Conference Centre property where Sumner Avenue and Manor Street intersect. At the hotel muster point, please ensure all members of your party are accounted for and await further instruction from the Delta Burnaby representatives.

16152. As indicated in Procedural Direction 20, the Board has set time limits to hear oral summary argument. The time limit for intervenors is 40 minutes each. The time limit will be strictly enforced and they reflect that intervenors have had the opportunity to file written argument-in-chief prior to providing oral summary argument.

16153. There is a timer that will indicate a green light for the first 35 minutes, switching to yellow for the last 5 minutes of your speaking time. Finally, when your time is up a red light will come on. If necessary, the microphones will be switched off, although I will warn you before this.

16154. As you are aware, final argument as a whole is an opportunity to express your views and opinions about the project based on the evidence filed by Trans Mountain and intervenors on the hearing record. It is also an opportunity to make recommendations to the Board about matters within the List of Issues or any terms and conditions to which the project should be subject if it is approved.

16155. The Board will not give any weight to new evidence introduced during oral summary argument or any submissions made that do not address the List of Issues.

16156. With that, I think we are ready to get underway this afternoon. We will be hearing first from the Wembley Estates Strata Council, followed by Lisa Craig, and then followed by the City of Victoria.

16157. So I will maybe ask for the record and for those who are aware, if Trans Mountain would introduce themselves?

16158. **MS. OLENIUK:** Good afternoon. My name is Terri-Lee Oleniuk and I act as legal counsel to Trans Mountain. To my left is Lesley Matthews and she's the regulatory lead for the expansion project.

16159. **THE CHAIRMAN:** With that, then we're ready to proceed with the Wembley Estates Strata Council.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR THE WEMBLEY ESTATES STRATA COUNCIL:

16160. **MR. BUIE:** Good afternoon, Mr. Hamilton, Mr. Davies and Ms. Scott. My name is Matt Buie, and I am a resident of Wembley Estates, serving on the Wembley Estates Strata Council for eight of the 15 years living at Wembley Estates.

16161. Wembley Estates is a 28-unit townhouse complex on the corner of Underhill Avenue and Forest Grove Drive, and is roughly 50 metres bordering the Kinder Morgan Burnaby Terminal.

16162. I direct you to the City of Burnaby Fire Department Exhibit C-69-44-2 on page 68.

16163. So where the Wembley Estates is is literally right where it says "ignition potential". This illustration here shows the 26 proposed tanks. The new tanks are illustrated in green, and the old tanks are grey.

16164. So just to put in perspective as to why we're here, why our concerns -- and I'd like to also add that I'm a husband and a father of two children aged 14 and 10 years. Now my co-intervener and presenter John Clarke has lived within a few hundred yards -- around here -- of the tank farm for the last 45 years and has been concerned about the Trans Mountain tank farm for the last 10 years. He and I will present our arguments to you.

16165. John?

16166. **MR. CLARKE:** Good afternoon. My background is as an educator. I have taught in public schools; I have taught at the B.C. Institute of Technology and at the University of British Columbia. Along with that, simultaneously I have been president and vice-president of various companies. And I am still president of one small company as we are here.

16167. I have lived in Burnaby for 70 years. I can remember when the tank farm was built. I'm here because of my concern for the lives of my neighbours on Burnaby Mountain and 33,000 students, staff, and residents of the Simon Fraser lands and University.

16168. We fear for our safety because of the risk of an unplanned toxic spill and a fire at the Trans Mountain Kinder Morgan tank farm facility due to any of the following eventualities; mechanical failure, human error, ignition of stored leaked materials, seismic activity, act of God, terror attack and forest fire.

16169. We're also here because this review process established by the National Energy Board has failed us. It has failed us in the following ways. Hundreds of concerned citizens have not been allowed their right to participate in this process. The process of participation for those with limited resources has driven most participants to quit the process all together. I know several of these people personally.

16170. You only need to look around this room at the empty seats to verify that the public has in various ways been removed from this process. This is not participatory democracy. The process of this board has allowed Kinder Morgan to avoid answering our questions in a forthright manner. Many answers have been evasive at best. The answers we've received from Trans Mountain, and the refusal to answer questions outright with this Board's approval, have only served to heighten our fears and cast new suspicions on the motivations of this foreign-owned company.

16171. This behaviour has done nothing to allay our fears of the dangers of our neighbourhood and families. The answers to questions that have been answered with conspicuous omissions can only lead to the conclusions that Kinder Morgan Trans Mountain does not take safety or the present process seriously.

16172. The most obviously failure of this process is the fact that the Board has not allowed cross-examination of research results and assertions made by the Applicant in the answers to our questions. The principle of cross-examination is the keystone of any legal process. We are appalled that this most important process has been denied by the National Energy Board.

> *"Answers to our questions are often answered in a cursive way ending often with the words, 'to the extent practical.' The repeated use of this phrase constantly begs the questions; 'In [whose] opinion?' and, '[By] what criteria?'"*

16173. **MR. BUIE:** We'd like to present some examples of inadequate answers to Wembley Estates' questions of Kinder Morgan.

16174. So for example, an example of a concerning answer was -- and I quote Trans Mountain:

> *"Trans Mountain will use the recommendations in the assessments to inform the refinement of the detailed and operational maintenance procedures and practices. Any will be incorporated into updated risk assessments. The worst case scenarios will also be used to inform the development of emergency response plans and in human health risk assessments."*

16175. Now, this clearly indicates to us that "emergency response plans and human health risk assessments" have not been completed.

16176. This is even more concerning due to the fact that Kinder Morgan has in many instances refused or neglected to entertain what many intervenors have outlined as worst case scenarios. And again, I direct you to the exhibit from the City of Burnaby Fire Department of the potential for fire at the tank farm.

16177. So apparently Kinder Morgan wishes to create a safety plan after this project is approved. This is totally unacceptable to its neighbours whose lives would be at risk should a fire occur, spewing out significantly dangerous gases in the smoke that would entail. Is this Board prepared to give licence on the basis of a stated intent to such an important assessment at some future date after approval has been given?

16178. Now, many would say, as we have heard from Trans Mountain and Kinder Morgan, that the unlikely event of a tank fire -- well, I would direct you to Google "Ukraine tank fire, June 2015", less than eight months ago. And in that country they had to let the tank fire burn for four days.

16179. So another example -- and this is just to give a reference of what we had -- Trans Mountain's response to Wembley Estates' safety concerns. This is from us:

> *"Given that the Burnaby Terminal is located directly uphill from residential complexes […]recreation facilities and the upgraded terminal will hold as much as 5.6 million [barrels of diluted bitumen, aviation fuel and diesel], why has this terminal been excluded from a worst-case spill […] or fire analysis?"*

16180. Kinder Morgan's response was:

> *"With respect to spills, refer to the response to City Burnaby IR No. 1.08.05, which states: 'The seismic design of the proposed new storage tanks at Burnaby Terminal, including consideration of sloshing and other effects, will be in accordance with [industrial standards].'"*

16181. Now, we received that answer and we asked for further clarification of this response. And Kinder Morgan's response was:

> *"With respect to fires, a risk assessment for Burnaby Terminal is included in the response to NEB IR No. 1.98a (NEB IR No. 1.98a – Attachment 3). The assessment in Attachment 3 is for worst-case fire scenarios, without consideration of the activation of mitigation measures, such as foam deployment and other fire-fighting or emergency actions. The assessment shows that the risk for the residents of Wembley Estates will be within the Municipal Industrial Accidents Council of Canada […] even without mitigation measures, provided that appropriate design features and maintenance practices are employed to keep the probability and magnitude of releases low."*

16182. I can tell you, I've been living near this tank farm for the last 15 years and on a regular basis we smell sulfur dioxide emanating from it. And that's just with the existing tanks. Now they want to double the tanks and, including that, diluted bitumen.

16183. So in our opinion, this answer from Kinder Morgan was woefully inadequate because what they're claiming is that even without activating any mitigation methods such as foam deployment, other firefighting or emergency actions, the risk to Wembley Estates is minimal.

16184. So if we understand it correctly, if there's a fire in the tank farm and if they do nothing about it, we will be okay?

16185. The answer is also inadequate because it does not take into account that they are combining 13 old storage tanks with 13 new storage tanks in close proximity. We are concerned about the old storage tanks in the event of an earthquake and how they could potentially set fire to the new storage tanks should an earthquake, forest fire or terrorist attack occur. These tanks and secondary containment structures were designed to much less vigorous standards than the proposed new tanks.

16186. Another major concern to us is the inappropriate location of the expanded tank farm in a densely populated neighbourhood. Surrounding these tank farms -- and I'll show you it in the next exhibit -- is Simon Fraser University up to the northeast, and then surrounding neighbourhoods all in this area to a total population of about 40,000 people.

16187. Now, again I cite the City of Burnaby written submission 3.4.1 where it clearly states -- and this is from Dr. Ian Vince and Chris Bowcock, Deputy Fire Chief of Burnaby. And they detail the extreme fire risk posed by expanding the Burnaby Terminal tank farm in the current location. Mr. Bowcock concludes in his evidence:

> *"The Burnaby Mountain Terminal is not the appropriate location for the expansion of the Burnaby Mountain Terminal and densification of petroleum storage, given the subject terminal topography..."*

16188. This is on a mountain.

> *"...limited site area, limited site access, its close proximity to the [40,000 population surrounding it] and also to the highly sensitive and susceptible Burnaby Mountain Conservation area."*

16189. The City of Burnaby further stated in their submission to the National Energy Board that:

> *"These factors pose significant constraints from an emergency/fire response perspective, including but not limited to [the] safety of firefighters and effectiveness to combat fire; containment and extinguishment of fire/spill/release; evacuation of employees within the Burnaby Mountain Terminal [...] evacuation of adjacent [neighbours] as well as the broader areas [impacting] by release of sulfur based gases and toxic smoke plumes; and, protection of adjacent properties, including conservation lands."*

16190. So in increasing the tank density within the limited area of the Burnaby Terminal farm, the storage tank spacing is reduced. And by reducing the distance between the tanks, you're increasing the chances of one tank starting another tank on fire. And again, one merely needs to Google "Oil tank farm fires" and you'll see the result.

16191. Now, another interesting point that the City of Burnaby Fire Department and the City of Burnaby pointed out, is that the criterion for proper tank farm location is simply not met by this site. And it is useful to contrast the criteria put forth by Trans Mountain themselves in its 2007 and 2000 applications for expansion of the Edmonton tank farm. And Trans Mountain said they require:

> *"[A] level site; an industrial area surrounded by other refineries and; far from residential neighbourhoods; room for proper spacing [of the tanks]; safe geo-technical area; a well-developed road network suitable to emergencies; an on-site fire water pond."*

16192. I ask you, if these are the criteria to be applied to other facilities, specifically the Edmonton tank farm, why are none of these relevant in Burnaby? This site fails almost every rational criterion for proper tank farm setup.

16193. The location of the Burnaby Terminal tank farm in the current location in the 1950s, when all the surrounding area there was forest and not populated at all, is not sufficient justification for expanding that facility in 2016 to the unacceptable detriment of the public in Burnaby and the surround area.

16194. This expanded tank farm cannot be approved in its current location.

16195. We would also like to draw your attention to the risks of an oil tank fire, an oil tank boil-over as stated again in the final written argument of the City of Burnaby, January 12th, 2016. And I ask if we could see Exhibit C69-44-2, page 61. This illustration shows -- actually, this photograph shows the tank farm right where I'm pointing it with my laser. And it also shows the blast that an oil tank fire and oil tank boil over would happen in the surrounding area.

16196. And again, I direct your attention to Simon Fraser University with a population of 33,000 people, and the surrounding population in this area here, of the tank farm.

16197. And so I would also like to point out to you as well, being a mountain biker and knowing the mountain very well, the escape route, the only ---

16198. **THE CHAIRMAN:** I didn't mean to interrupt you, Mr. Clarke [sic], I just didn't quite -- whose evidence are you referring to? I know you gave us the reference number. I just wanted to clarify who filed this evidence on our record.

16199. **MR. BUIE:** This is provided by the City of Burnaby Fire Department in their submission to you.

16200. Something to point out is the escape route. So on Burnaby Mountain you only have two roads that go down. This road here goes to Hastings and this road goes down Gaglardi Way. Those are the only two exits points. The topography of the mountain on here is cliff, and in the back on the eastern side is a trail, where if a fire happens -- and the Simon Fraser University students and staff -- the only exit they have if they don't want to go by the tank form is to take a mountain bike trail down the east end of the mountain.

16201. So the City of Burnaby also goes on and says:

"Those not directly affected by the resulting fire may be

> *impacted by toxic smoke plumes, which are most likely to harm those with pre-existing chronic respiratory conditions, increased rates of asthma and cardiovascular illness. These effects may be substantiated in the case of a tank fire burnout lasting three to four days."* (As read)

16202. They further go on to state that given the fact that they would not be able to put a fire out that a potential tank fire boil over has the potential to result in molten crude spilling onto surrounding areas, and that's what this illustration is showing here, both the smoke as well as the crude. And it encapsulates the entire areas illustrated there.

16203. So the most frustrating answer that is repeatedly used in response to Wembley Estates' second information requests on this topic is that the requested information has been provided. This is from the National Energy Board:

> *"The requested information has been provided and Trans Mountain response is full and adequate. The response provides the Board with all necessary information pertaining to this matter. There is no further response required, and supplementing the original response will not serve any purpose. Trans Mountain notes that if the intervenor disagrees with the information contained in the response, it may contest the information through evidence or final argument."* (As read)

16204. Now this response leaves much to be questioned; however, it does make one thing very clear. And this response was allowed by this Board that:

> *"[…] if the intervenor disagrees with the information contained in the response, it may contest the information through evidence or final argument."* (As read)

16205. It also follows that the absence of information and answers to questions may be contested.

16206. John?

16207. **MR. CLARKE:** And here we are at final argument.

16208. We, and many intervenors, have questioned the inadequate response and are not receiving any appropriate or satisfactory answers from either Kinder Morgan or the National Energy Board, which is a representative of the Canadian government, and that has recently stated that they will be revamping the whole review process.

16209. It is frightening to us that Kinder Morgan has failed through their answers to questions from numerous intervenors to take ownership of the dangers posed by the tank farm, danger posed to employees and residents in a large area beyond their facility, as you can see from the illustration.

16210. Responses to questions related to dangers posed by the tank farm are almost always prefaced by the term "in the extremely unlikely event of". The last tank farm fire was in Kiev, Ukraine. It was a multi tank fire -- you're probably well aware of it -- in June 1915 [sic], less than eight months ago. And by the way, people had to be evacuated for a great length of time in a radius of eight miles.

16211. That would put us within the evacuation zone if that tank fire farm was to go into this situation.

16212. Kinder Morgan repeatedly stated that they are reliant on outside agencies to come to their rescue in a case of an unplanned event at the facility. They often speak of agreements with other groups, but fail to share the details. They have an assortment of base level firefighting equipment at the facility, but do not have the staffing capable to operate this equipment effectively.

16213. To expand upon this, on page 120 of the City of Burnaby written report, it was stated:

> *"In the absence of social licence and support from this municipality, Burnaby submits that the National Energy Board has a burden to assess the wisdom and the public interest in authorizing a proposed pipeline route through the core of this municipality, those whose citizens are opposed to the pipeline. Particularly, when alternative routes are outside of core municipal areas which do not raise such issues, and which have to date not been explored because of the failure of Trans Mountain to seriously examine ulterior routes and the inherent flaws of the process where the NEB does not require such*

examination of alternatives." (As read)

16214. And if I understood correctly when I heard one other submission the other day, it is required that the National Energy Board does require the Applicant to explain what they have explored in the way of alternate routes.

16215. To impose this pipeline and the expanded tank farm and marine terminal on an unwilling municipality is unacceptable and unnecessary. Given the failure of Trans Mountain to reach any agreements with Burnaby in respect to resources, which its application assumes will be available, there remain many unanswered questions which the National Energy Board must address before making a section 52 decision. Some of these include emergency preparedness.

16216. Trans Mountain's assessment of emergency preparedness, emergency services and emergency planning remains completely inadequate. In the absence of assumptions of equipment and material from outside agencies, Trans Mountain's application does not disclose that Trans Mountain has the capacity, the equipment, sufficient personnel or expertise to handle a large list of emergencies that the application considers credible in their own submission, including fire risk at the tank farm, pipeline ruptures, marine oil spills and other incidents.

16217. And then we get to evacuation. Trans Mountain's evacuation plans rely entirely on outside agencies. The risks of innocent residents in the absence -- or to innocent residents in the absence of an appropriate evacuation plan are unacceptable and potentially catastrophic in relation to some potential emergencies. The absence of an established evacuation plan is a fundamental failure.

16218. And in a response to questions that I have asked of Kinder Morgan, specifically of Ian Anderson who did not answer the question but had somebody answer it, Kinder Morgan is not responsible for evacuation plans beyond their property line. And when I asked what their evacuation plan was for Simon Fraser University, the answer was, "We have no obligation."

16219. When I asked what the evacuation plan was for the residents of Forest Grove, who are in dire danger here, they said, and I quote, *"When they have an evacuation plan, you let us know what it is."*

16220. In our view, it is the height of arrogance and entitlement for Kinder

Morgan to think that they create a dangerous facility that almost no one but the largely American shareholders want and somehow see it as everyone else's responsibility to come up with a plan to save our lives in a case of a catastrophe caused by the company.

16221. The volume of dilbit and other hydrocarbon compounds that Kinder Morgan plans to store on the side of Burnaby Mountain is 22 times the volume that escaped from the Exxon Valdez. How would you feel if you lived just below this tank farm and had 22 Exxon Valdez's parked just above you on a mountainside?

16222. It is also 137 times the volume of material that destroyed the town of Lac Mégantic.

16223. To attempt to store dilbit, an inflammable, toxic, carcinogenic compound on the side of a mountain above a densely populated area is nothing short of gross negligence.

16224. Concerns about the compounds of diluted bitumen; we know from -- we looked up what constituted diluted bitumen, and from the sheets, data sheets of the petrochemical industries, their own data sheets; one from MEG Energy, Material Safety Data Sheet, Cenovus Data Sheet, Federal Government Technical Report, that dilbit includes the following compounds which have been attributed to the following pathologies caused by the various additives, specifically:

16225. Benzene -- it's cancer causing aplastic anemia. Toluene -- developmental hazard, nervous system damage, unconsciousness. Xylene -- developmental hazard, nervous system damage, unconsciousness. Ethylbenzene -- respiratory and neurological effects. Hydrogen sulfide -- highly toxic, chemical asphyxiant.

16226. And by the way, that is the compound that was used in the First World War for chemical warfare that killed thousands and thousands of troops.

16227. According to the Material Safety Data Sheet for dilbit, Western Blend dilbit, one of the types transported by Kinder Morgan, identified the mixture as dangerous, able to damage lungs and able to cause cancer. The WHMIS symbols identify it as a flammable toxic.

16228. MSDS, Material Safety Data Sheets, also notes that if dilbit fumes are

inhaled, loss of consciousness can result.

16229. Dilbit also contains hydrogen sulfide, which can cause respiratory paralysis and death and is also carcinogenic. It contains Benzene which, as I've already stated, is proven to cause cancer in humans.

16230. We have additional concerns regarding the possibility of a tank farm catastrophe, specifically, mechanical failure. There have been many tank farm fire incidents throughout the world caused by the failure of mechanical components, all designed by humans. Failure of control systems and safety backup systems are often blamed for leaks of fumes, which have led to multi-tank fires in various locations throughout the world.

16231. And a tank farm facility is composed of thousands of mechanical components in the form of tanks, piping, valves, sensors, all with mechanical connections subject to physical stresses, fatigue and corrosion.

16232. All the best procedural matters can only account -- or manuals -- can only account for events that humans can predict. And given the 82 reported events that have taken place in the Trans Mountain system since 1961, they have been far less than perfect in predicting problems.

16233. Human error: human error is one of the most common reasons given for spills and fires at fossil fuel facilities. Accidents are unplanned events and no cleverly written incident response manual or safety procedure manuals can cover all eventualities.

16234. A perfect example of this is the Kinder Morgan Westridge catastrophe on July 24th, 2007, where in spite of manuals, one human error was compounded by another one when the wrong valve was turned off. This led to approximately 224 cubic metres of heavy synthetic crude oil being spewed on the 50 Burnaby homes and approximately 40 percent of the oil entered the storm drain and reached Burrard Inlet through the shoreline or at falls at Cass Creek.

16235. Crude oil leaks at Burnaby Mountain tank farm in 2009, about 200,000 litres of crude spilled from a storage tank on Burnaby Mountain in May of 2009. The leak at Kinder Morgan was spotted by a contractor, not alerted by any of their telemetry or anything that they used at the tank farm. It was sighted by a contractor. And the oil was captured in a lined containment bay surrounding the tank and there were no leaks into the surrounding environment. The company

said the spill was caused by a valve left open.

16236. Some of the gases released by unconfined dilbit, even when not ignited, are heavier than air and will permeate into our homes in Wembley Estates and the surrounding neighbourhood. We often smell sour gas from this facility. As a matter of fact, the other day I was driving over the MAS to work on this presentation and my wife and I came around the corner and said, "Oh my God." There was a putrid odour coming from the tank farm. We were driving up the road beside it and it had permeated Wembley Estates.

16237. So for anybody to suggest this is some, you know, flight of fancy in our imaginations, it just is not true.

16238. Okay. There may be many resources of ignition -- I'd like to just jump really quickly -- one of the biggest items that we feel is important here is the threat of terrorist attack.

16239. Like it or not, in a world where Canada has been threatened by both "home grown" and foreign trained terrorists, this must be a major consideration when attempting to transport and store large amounts of potentially explosive materials. Kinder Morgan's facility is possibly one of the most tempting targets in Canada.

16240. Kinder Morgan has expressed concern about Burnaby facility being a possible terrorist target as evidenced by the fact that they have had at least two residents questioned by the police for taking pictures near the facility and Kinder Morgan indicated they were concerned about security and terrorism.

16241. One rocket propelled grenade fired from the intersection of Gaglardi Way and Trans Mountain Parkway, on the top of one of the tanks could cause a massive fire and possibly a chain reaction resulting in a possible tank boil over. If tank farm fires elsewhere are any indication of the destruction, and they are, we could have an eight mile radius that we have to evacuate.

16242. There's also the potential of an incendiary device being placed on a tank dropped from a Drone or placed there. There is no need to bring explosives, just an ignition source.

16243. Thousands of innocent people could be suffocated by toxic and carcinogenic gases as they "shelter in place" at Simon Fraser University's

emergency plan suggests they do. The Burnaby storage facility in Kinder Morgan is ridiculously soft target, given its proximity to roads and well-used walkways. The large change in elevation within the Kinder Morgan property makes it an easy target from several locations.

16244. Kinder Morgan would have to initiate a massive, massive active and costly security program to mitigate its liability. Their response has been that it is not their business to initiate any evacuation programs from the Forest Grove area, Wembley Estates and the neighbours and the surrounding homes and residents.

16245. **MR. BUIE:** Okay. Another concern we have is with forest fire. This mountain, on this side here is a conservation area surrounded by forests to the east of the property. And given the history of extensive forest fires during the summer in B.C. and the fact that Burnaby Mountain is subjected to campfires started by recreational users, predominately teenagers and homeless people, it's not a far reach to be concerned about forest fires near a volatile tank farm. This problem is being exacerbated by the fact that fire seasons in British Columbia are becoming longer and hotter.

16246. Now, lightning strikes have also caused fires as several storage facilities throughout the world. In summary, I ---

16247. **THE CHAIRMAN:** Now you're going to summary. Yeah, I think you've noted that, thank you. Sorry to interrupt you.

16248. **MR. BUIE:** Not to worry. Thank you, Mr. Hamilton.

16249. We can contemplate no conditions that when placed on this application could mitigate the risks to human life associated with it. An expansion to three times the throughput capacity given the Applicant's design of the facility and the refusal or their inability to assess and define the risks involved would more than triple the risks to life of the surrounding residents, students, employees, and rescue workers.

16250. You, members of this Board, are members of the National Energy Board and you have a professional obligation and a moral responsibility to the public in overseeing our safety and wellbeing. Can you with clear conscience allow this expansion to go through as proposed in a heavily populated neighbourhood where people's lives are at stake? The 48 people of Lac-Mégantic Quebec who died as a result of an oil explosion due to the train going through the

town would expect nothing less than the Government of Canada doing its best to avoid another catastrophe such as that one.

16251. If you are prepared to allow this expansion to occur, it is reasonable to ask what is motivating you to do so given the overwhelming evidence presented by many highly reputable interveners regarding the inappropriate placement of the tank farm, and the preponderance of peer-reviewed scientific research demonstrating the dangers of the facility. It would be a travesty against the public and their safety to approve such an ill-conceived expansion project.

16252. My sister is a lawyer and a judge in Ontario and I was talking to her about this and she said, "You know what? You should mention to them Hurricane Katrina in New Orleans." Interesting enough the federal government, the United States Federal Government, the state as well as the municipal government recognized that they had low dykes and they had meeting scheduled two weeks after Hurricane Katrina to increase those dykes.

16253. I urge you in your consideration of this project; don't make the same mistake that they made. Perhaps you can alter this process and perhaps you can alter placing these tanks so I'm going to say not in my neighbourhood. It already is in my neighbourhood, can you please find an industrial neighbourhood to put it in if you have to.

16254. The transplant [sic] expansion should not be an option and as such we, the Wembley Estates Strata Council and all of our neighbours, respectfully request that the National Energy Board not support the Trans Mountain Expansion Project.

16255. Thank you for your consideration in this matter.

16256. **THE CHAIRMAN:** We're going to take a 10-minute recess to consider some questions for you.

--- Upon recessing at 2:18 p.m./L'audience est suspendue à 14:18
--- Upon resuming at 2:26 p.m./L'audience est reprise à 14:26

16257. **THE CHAIRMAN:** Thank you for your indulgence. If you care to answer some questions the Board may have. And Mr. Davies.

16258. **MEMBER DAVIES:** Thank you very much. I just -- I'm sorry; can

you hear me okay?

16259. **MR. CLARKE:** Yeah.

16260. **MEMBER DAVIES:** Good, thank you.

16261. I just wanted to touch two topics very quickly with you and those topics are -- you're welcome to sit down, don't -- please. Those topics are the lifecycle role that the National Energy Board plays when it comes to any of the facilities we regulate, and then the second is to talk briefly about three of the draft conditions, which perhaps address some of the concerns you've raised about the risks.

16262. **MR. CLARKE:** Can't hear you now.

16263. **MEMBER DAVIES:** All right. I bet if I put that closer it'll come better. Great, thank you. I don't always project as well as I'd like to.

16264. In any event, the question is on the first of those two, which goes to the lifecycle role of the National Energy Board, are you aware that this step that we're at right now is the first of many that the Board would go through were it to approve the application?

16265. **MR. CLARKE:** Yes, I am. I am. I'd like to point to out that that tank farm has been there and I've lived next to it. I actually was 10 years old when that tank farm was built. My father was in charge of safety for the part -- B.C. portion of the pipeline; he worked for the Workers' Compensation Board. And it may seem strange but even at the age of 10 years old he shared what was going on virtually every day.

16266. The National Energy Board has been responsible for that tank farm for a long time, and I can tell you we started out being able to -- that tank farm was left open. We used to ride our motorcycles up there. The kids used to go up there and play. We used to drive through there and jump off berms and so on with our motorcycles. And our children used to go up in there and in the summer they used swim in water pond up at the top end of the tank farm and in the winter we used to skate on it. So I ---

16267. **MEMBER DAVIES:** Mr. Clarke, please get to the question.

16268. **MR. CLARKE:** Okay. Well, if you're talking about a lifecycle and how you're custodians of the lifecycle. We have had repeated -- back in the 1990s we were awakened every night. In the summertime, we would open our window, be sleeping and be awakened by putrid odors coming from the tank farm, and the National Energy Board was in charge of -- that was part of the lifecycle of that. And we do not have faith in you being custodians of this.

16269. **MEMBER DAVIES:** Okay, thank you.

16270. The real thrust of where I was going was looking forward. The thing I wanted to do next was to ask you about some of the draft conditions that have been proposed. You've mentioned air emissions as an issue. Condition 23, in its present form; and remember, under section 52, irrespective of whether we recommend the project be approved or not we are required by law to articulate the conditions that would be imposed were the project to go ahead. So the conditions are important, irrespective of whether we recommend approval or not.

16271. So Condition 23 deals with air emissions monitoring plan for the facility which is something -- it's required to be approved before construction. Condition 47 deals with a fugitive emission management plan, and Condition 88 -- these are examples. Condition 88 deals with an issue that you've been quite concerned about and that is the adequacy of the emergency responsive planning, that starts a process about consultation were it to be imposed.

16272. So what I'm getting at is the concerns that you've raised are valid. They're concerns that do require a thoughtful response by this Board but we haven't heard any comments from you on them.

16273. **MR. CLARKE:** You haven't heard any comments from what?

16274. **MEMBER DAVIES:** On the conditions that are being proposed. Do you have any thoughts you want to share with us now?

16275. **MR. BUIE:** Well, we've had a good deal of discussion about this and trying to think if there were any conditions that we could recommend, and given the fear that we have of that tank farm being so close to us, there are no conditions that we could see. I think we said that in closing, that we couldn't see any conditions that would waylay our fears of this project.

16276. We have had pamphlets sent out to our door by Kinder Morgan which tell us that if you smell hydrocarbons and gases you're to immediately leave the area. Don't use your cell phone; don't start your car and leave the area immediately in an uphill direction. That's what the pamphlets sent out to the local business and residents have stated.

16277. **MEMBER DAVIES:** So your answer to the question is that you don't believe any conditions can alleviate the risk you feel is present.

16278. **MR. CLARKE:** No.

16279. **MEMBER DAVIES:** Good, thank you.

16280. **THE CHAIRMAN:** Thank you, Mr. Clarke and Buie, on behalf of the Board for your submissions today and your participation to date on this hearing.

16281. **MR. CLARKE:** Thank you for the opportunity.

16282. **THE CHAIRMAN:** With that, we'll take a short break. And our next presenter will be Lisa Craig.

--- Upon recessing at 2:32 p.m./L'audience est suspendue à 14h32
--- Upon resuming at 2:35 p.m./L'audience est reprise à 14h35

16283. **THE CHAIRMAN:** With that I think we'll reconvene to hear from Ms. Craig on her oral summary argument. Thank you, Ms. Craig.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR DR. LISA CRAIG:

16284. **DR. CRAIG:** Thank you for this opportunity to present my views on the Trans Mountain Expansion Project.

16285. First, I would like to speak to you as a citizen of Burnaby who lives, commutes and works along both the existing and the proposed pipelines.

16286. I've lived on Wynbrook Place in Burnaby for the past 11 years with my husband and my two sons. The existing pipeline runs down our street and past our house.

16287. With the Trans Mountain Expansion Project, the capacity of this 60-year-old pipeline will be increased from 300,000 barrels per day to 350,000 barrels per day. This increase in capacity will require that less viscous more volatile fuels be transported via this pipeline.

16288. Our house also lies directly downhill from the Burnaby tank farm, which will be doubled in storage capacity.

16289. Two or three days a week I run through the Burnaby Mountain Conservation Area where Kinder Morgan proposes to route a section of the new pipeline. Every time I run I stop and look out over Burrard Inlet where tanker traffic will be increased from 5 tankers per month to 34.

16290. I'm a professor and a research scientist at Simon Fraser University. My commute, whether by car or foot, is along the proposed route. Thus, I would be directly affected should this proposal go forward.

16291. Its construction would be enormously disruptive to the area in which I live and work, and in particular my commute. Construction will be destructive to the sensitive ecosystem of the Burnaby Mountain Conservation Area. I'm particularly concerned about the section of this conservation area that lies immediately below Burnaby Mountain Parkway and along the proposed new route where it exits from the tank farm. This small pristine rainforest that I walk through often and that my children play in, would be significantly impacted, possibly damaged by the construction of the pipeline.

16292. A pipeline rupture, particularly in one of the existing pipelines, has the potential to damage and destroy our homes and property and threatens the safety of my family and my neighbours. How large that risk is is indeterminate. Risk is a function of both the likelihood of an event occurring and the impact of such an event. While the likelihood of a significant pipeline rupture may be low, it could be disastrous, making risk calculation highly uncertain.

16293. A fire at the Burnaby tank farm would be highly destructive to the local environment and threaten the safety of many Burnaby residents, including children at Forest Grove Elementary School, which lies directly beneath this facility and the SFU community above it.

16294. A fire at this facility would be devastating and presents a serious

health threat beyond just the fire itself, but from the fumes and the released oil products. The chemicals used to dilute bitumen include benzene and toluene and butadiene, which are Class 1 carcinogens.

16295. Construction will negatively affect the property value of my house. We were not informed in 2004 when we bought our house that under our street ran a 24 inch pipeline that ran at anywhere from 100 to 1,700 psi pressure. Even 100 psi pressure is very high for a pipe with that diameter. We would likely not have purchased our house had we known this. We certainly would not have purchased it knowing about the Trans Mountain Expansion Project.

16296. I opposed this project when I first learned about it three years ago. I'm more firmly opposed to it now that I know the scope of the expansion and that the existing pipeline is not going to be replaced but will instead increased in capacity with more volatile fuels.

16297. The Burnaby area through which the pipeline travels is not the rural forest it was in the 1950s when the original pipeline was built. It's a densely populated region with thousands of homes, several schools and a university.

16298. Many of my neighbours, colleagues, friends and acquaintances share my opposition to this project. In fact, my colleague, Dr. Angela Brooks-Wilson, a professor and a health researcher in SFU's Biomedical Physiology and Kinesiology, bought a house just below the tank farm in 2014 and moved out a year later once she learned about the Trans Mountain Expansion Project, and thoroughly researched the risks, in particular, from acute exposure to bitumen diluents from a tank farm fire.

16299. I submit that both the expansion of the existing pipeline and the construction of the new pipeline in this region are unjustifiable given the risks.

16300. Second, I would like to speak to you as an engaged citizen of Canada. I note the responsibilities of the National Energy Board as outline in the Board's website are as follows:

> *"Regulating in the Canadian public interest means factoring economic, environmental and social considerations into our decision-making process. By considering all the evidence that is presented on […] record through the lens of these factors, the Board is able to make decisions that represent the ever-*

> *evolving interests and concerns of Canadians. This is critical to achieving our vision of being active and effective in Canada's pursuit of a sustainable energy future."*

16301. I argue that the proposed Trans Mountain Expansion Project is not in the best interest of Canadians based on economic, environment and social considerations, and that it does not meet Canada's vision for a sustainable future.

16302. The ever-evolving interests of Canadians have undergone a dramatic shift during the review process as follows -- number one being that Canadians *en masse* have awakened to the reality that fossil fuel consumption is directly responsible for irreversible and catastrophic climate change events. And number two, that Canada's dependency on the oil and gas sector has brought the Canadian dollar to its lowest value since 2003, a direct result of free-falling oil prices.

16303. The proposed pipeline expansion will increase the capacity of the Trans Mountain pipeline from 300,000 barrels per day to 890,000 barrels per day to supply Asian markets for the next 20 years. This expansion will lead to an increase in Alberta oil sands production, which is problematic in the following ways.

16304. Number one, fossil fuels produce about 65 percent of the world's greenhouse gas emissions. The Canadian government committed in 2009 to reducing greenhouse gas emissions by 17 percent by 2020 and by 65 percent by 2050 in order to prevent the Earth's global temperature from rising more than 2 degrees Celsius above pre-industrial temperatures.

16305. A new more stringent target of 1.5 degree increase was agreed upon at the United Nations Conference on Climate Change in Paris in December. Increasing the output of the oil sands is inconsistent with Canada's commitment to reducing greenhouse gases.

16306. Number two. The oil market is oversupplied. It does not seem necessary or wise for Canada to add to that supply. To expand oil sands extraction is to squander a valuable resource, particularly at current prices.

16307. Number three. The current oil glut has resulted in the lowest price per barrel for oil since 2003. Kinder Morgan argues that by shipping by pipeline, it will increase the value of the Canadian bitumen by permitting access to foreign markets. But this increase in income for oil producers and their shareholders will

also mean that we as Canadians will be paying higher prices for our fuel.

16308. Number four. The falling price of oil has resulted in a corresponding fall in the value of the Canadian dollar as an indicator of our overdependence on the oil and gas sector, which is highly volatile. The price of oil is set globally and mostly beyond our control.

16309. Number five. Providing more oil for foreign markets supports their dependency on fossil fuels and removes incentives to develop renewable energies.

16310. Number six. Oil sands expansion for sale to foreign markets will deplete a precious resource. Bitumen is a raw resource and Canada needs a long-term strategy for its management. We have seen how overfishing is depleting our salmon stocks, and how it decimated the Atlantic cod fishery. Our forest industry is healthy today because it is managed in a sustainable way.

16311. Alberta oil is unique in that extraction, no matter how carefully managed or limited, is not sustainable. The oil will not grow back, it will not recover. Because of this, the oil is our most precious of all resources and must be rationed and preserved for our own use as we gradually transition into a non-carbon based -- into non-carbon based energy alternatives. We need a national long-term strategy to manage our oil reserves, one that doesn't involve selling our oil to any market we can possibly access in the interest of commerce and jobs and not considering our future.

16312. Given these factors, projects such as the Trans Mountain Expansion Project are inconsistent with progress, economic growth, and a sustainable future for Canada.

16313. Kinder Morgan states on page 81 of the written submission of their final arguments that:

> *"...substantial economic and societal benefits that far outweigh any potential burdens and risks..."*

16314. Certainly the economic benefits to Kinder Morgan, an American company, are clear. What is less clear are the economic and societal benefits to Canadians. Kinder Morgan stands to gross upwards of 1 billion per year, $1 billion per year in pipeline tolls.

16315. Oil producers will also benefit, although not so much at the current prices. The amount of tax dollars returned to the communities along the pipeline and tanker routes doesn't begin to compensate for the risks we face with respect to pipeline leaks, storage tank fires, and tanker spills.

16316. Kinder Morgan purports to have signed Memorandums of Understanding with a number of communities along the pipeline route. These would provide benefits such as trail and playground upgrades, and tree planting, and amount to a total of $5.5 million, or approximately one or two days of operation for the Kinder Morgan Pipeline.

16317. If Kinder Morgan were truly serious about meaningful engagement with communities, they would offer real incentives such as a royalty to British Columbia to help mitigate the very real risks its communities face, or investments in developing alternative energies to help offset the increased carbon footprint due to increased oil production to fill the pipeline.

16318. While Kinder Morgan has endeavored to engage with communities, it has also treated the Canadian public with contempt. They have provided inadequate answers to many of the intervenors' questions. They have dismissed expert intervenors' worst-case scenarios as unrealistic, unlikely, implausible, and using their unlimited funds to counter these with their own easily managed spill and fire scenarios which are biased and self-serving.

16319. They have reported people to the police for questioning; simply for taking pictures of the pipeline and the tank farm while on public property. They launched a $5 million strategic lawsuit against public participation, a slap against a group of citizens, including two of my colleagues at SFU, for peacefully engaging in public discourse about the pipeline. No amount of trees planted or splash parks installed will undo the damage this company has done to the public trust.

16320. The National Energy Board claims to be active and effective in Canada's pursuit of a sustainable energy future. Given this, it is completely implausible that a decision on the Trans Mountain Pipeline Expansion Project could be made in the best interest of Canadians without taking into account the effects of carbon emissions on climate change, both from production of bitumen and the consumption of bitumen products.

16321. How can the NEB determine if a project is in the public's best interest

if it ignores the downstream effects of fossil fuel consumption?

16322. In its decision to reject challenges to the list of issues, the NEB states that downstream use of products shipped on pipelines are far too remote. Far too remote for the Board to reasonably assess and consider technically, in the context of the Canadian public interest.

16323. I can understand the NEB's decision to exclude the downstream effects of consumption of the pipeline products as you do not have the expertise to assess these factors, but there's nothing remote about the downstream effects of fossil fuel consumption. Its damage to the environment is irrefutable.

16324. If the NEB does not take these factors into consideration, it's imperative that the federal government do so to determine the merits of the proposal in the context of a sustainable energy future for Canada.

16325. The decision by the NEB to exclude oral cross-examination is also problematic for this review process. Without the ability of intervenors to cross-examine Kinder Morgan's experts, how can we ascertain the veracity of their claims?

16326. As the MP for Saanich-Gulf Islands and the leader of the Green Party Elizabeth May stated in her final arguments:

> *"The cross-examination phase of the review process is the equivalent of a scientific peer review process."* (As read)

16327. As a scientist, I can say that this review was not performed with scientific rigour. Critical questions posed by intervenors and commenters remain unanswered. Participants have been denied an opportunity to orally cross-examine witnesses for the Proponent, who have produced contentious claims or failed to address identified gaps in evidence.

16328. A science-based assessment considers all of the available evidence, pro and con. Moreover, science continues to evolve. It considers the most recent relevant data, not just that published before a certain date. Thus, the denial to permit entry into the record of evidence, such as the recent U.S. National Academy of Science report that bitumen sinks and there is no effective way to clean it up, means that relevant information has been arbitrarily excluded, which undermines the credibility of the review process.

16329. These deficiencies in the review have led to the defections of high-profile intervenors with valuable expertise, including Robyn Allan, former President and CEO of ICBC, who withdrew as an intervenor stating that:

> "*The continued participation endorses a broken system and enables the pretense of due process where none exists."* (As read)

16330. Or Marc Eliesen, former CEO of BC Hydro and the former Chair of Manitoba Hydro, Deputy Minister and seven federal and provincial governments who withdrew from the process, calling it 'deceptive and misleading,' citing the lack of detail and accountability in the written responses by Kinder Morgan; that the decisions made by the NEB are dismissive of intervenors and almost a complete endorsement of Trans Mountain.

16331. Despite these serious flaws pointed out by many of the intervenors, I'm glad to have been given an opportunity to evaluate the proposal, to submit questions, and offer my opinion. I have endeavoured to stay on top of the massive amount of material in order to make an informed assessment. I'm an educated person, I have a Master's degree and a PhD in Chemistry, but I have nonetheless found this process to be completely overwhelming due to the sheer volume of material.

16332. If not all of the 400 intervenors intervened and not all of the 1,300 commenters commented, it is not because they lost interest. It's because the process was too arduous and intimidating. Those people I have spoken to who are informed are galvanized in their opposition to the proposal and their distrust for the process.

16333. We are deeply troubled that Kinder Morgan wants to put a new pipeline into this densely populated and environmentally sensitive area through our neighbourhoods, near our children's schools, through our forest and our waterways. We are dismayed that the deal would see sizable profits for the Texas-based corporation, with little to no benefits for the Canadian communities that are put at risk.

16334. We are alarmed that people have been threatened and intimidated with lawsuits and police interrogations. People are frustrated with the NEB for restricting public comment of the proposal to only those directly affected, for the

exclusion of an oral cross-examination phase and for excluding the single largest factor of climate change from consideration. We're cynical that the outcome of this review has been pre-determined by a review board comprised mostly of energy sector executives.

16335. We are incensed that the former Conservative government for appointing a Trans Mountain consultant, Steven Kelly, to the NEB, for transferring the environmental assessment authority of the proposal from the Canadian Environmental Assessment Agency to the NEB and for promoting oil sands expansion and a Canadian petro-state, following oil interests instead of acting in the best interests of all Canadians.

16336. You can write off detractors of the proposal as a minority of uninformed, radical environmentalists, but we represent a broad swath of Canadians, young people and seniors, scientists, academics, students and teachers, First Nations and new Canadians, and many other engaged reasonable citizens who are concerned about their community and environment, about social justice and democracy and about the future of their children and grandchildren.

16337. We have been called hypocrites because we drive cars and consume fossil fuels ourselves. Yes, we consume fuel, and because we do, we understand how valuable, how precious it is. But we also recognize the damage this consumption is causing and want to live in a country that takes responsibility and leadership in addressing this immense problem that does not simply bury its head in the oil sands.

16338. The daily protests at Burnaby Mountain when Kinder Morgan was performing seismic testing were as much about the flawed NEB process and Kinder Morgan's multi-million dollar lawsuit as they were against the pipeline proposal and the company's work on the mountain.

16339. In particular, we were utterly shocked that a group of citizens could be subjected to legal action, the magnitude of the Kinder Morgan slap. That those named in the lawsuit could be compelled to spend tens of thousands of dollars in legal fees to defend themselves against the threat of financial ruin. This action was intended to silence and intimidate opposition to the proposal. People mobilized and rallied and protested in support of the defendants and in defence of democracy and freedom of speech.

16340. It is notable that over $40,000 were raised within a single week of a

fundraising campaign for the defendants' legal fees; $40,000 in after-tax dollars donated by people aghast at the lawsuit and feeling their own basic rights threatened.

16341. The NEB has been charged with making a recommendation to the federal government on the Trans Mountain expansion project. The NEB certainly has the expertise to properly evaluate the technical merits of the proposal, to assess whether Kinder Morgan has sufficient leak detection in place, to ensure that the pipeline is installed to the highest standards and to assess the economic feasibility of the project. But in reading the profiles of the NEB members, it is not clear to me that you are qualified to evaluate the environmental considerations, even the local ones.

16342. The Canadian Environmental Assessment Agency has been eliminated from the review process, effectively eliminating professional oversight on the critical environmental aspects of the project, leaving it up to individuals from the public, who volunteered to provide their expertise and who were approved by the NEB as intervenors.

16343. Thankfully, despite the monumental task of assessing the proposal, with limited time and compensation, experts did come forward, people like Dr. Andrew Weaver; climate scientist and MLA for Oak Bay, Gordon Head and retired Department of Fisheries and Oceans oceanographer, Dr. David Farmer. And the affected cities and First Nations tasked their own experts to propose worst case scenarios and conduct risk assessments.

16344. While immensely valuable, there's a randomness to this ad hoc environmental assessment which cannot replace comprehensive assessment performed by qualified professionals at an appropriate government agency and/or qualified third party professionals with expertise to objectively examine all of the potential environmental impacts of the proposal, both local and global.

16345. There are those of us who worry that the decision to approve the Trans Mountain expansion project has been made already, that it was made three years ago by the Harper government when they dissolved the giant review panel, giving the NEB sole responsibility to review the proposal; that the NEB made the decision three years ago when it restricted the list of issues, when it eliminate the oral cross-examination phase, when it excluded much of the public from the review process and refused to consider the downstream effects of fossil fuel consumption.

16346. My hope is that the rigorous efforts of the intervenors and commenters have been heard above the din of Kinder Morgan, that the NEB will recognize that the potential burdens and risks far outweigh the economic and societal benefits of the project, that it is not part of a sustainable energy future and it is not in the best interests of Canadians.

16347. This concludes my final oral arguments and thank you for your attention.

--- (Applause/Applaudissements)

--- (A short pause/Courte pause)

16348. **THE CHAIRMAN**: The Board have no questions, Dr. Craig, and we'd like to thank you for attending today.

16349. We'll take a short recess until 10 after 3:00, where when we'll be hearing from the City of Victoria. Thank you.

--- Upon recessing at 3:00 p.m./L'audience est suspendue à 15h00
--- Upon resuming at 3:15 p.m./L'audience est reprise à 15h15

16350. **THE CHAIRMAN**: Good afternoon. Welcome, Mayor Helps. It's nice to see the City of Victoria and the Mayor and Councillor, if I'm correct. Yeah.

16351. Welcome. I live in Sydney so I am quite well aware of where -- my -- a sister city to the lovely town of Sydney by the sea.

16352. So we'll welcome you and look forward to hearing your oral summary argument.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR THE CITY OF VICTORIA:

16353. **MS. HELPS:** Very good. Thank you for the opportunity to present and albeit to a neighbour in the Capital Region.

16354. Good afternoon, Mr. Chairman and members of the Panel. As has been indicated, my name is Lisa Helps, and I am the mayor of the City of Victoria. I have with me here today my fellow councillor, colleague Councillor Ben Isitt and the two of us together will present the City of Victoria's oral argument with respect to Trans Mountain's application for a Certificate of Public Convenience and Necessity for the Trans Mountain Expansion Project.

16355. Councillor Isitt and I will take turns presenting the argument. I will begin with an overview of our argument and then turn the podium over to Councillor Isitt.

16356. The City of Victoria has taken a very focused approach to our participation in this hearing. Of the 12 issues that the Board identified, the issue that is most relevant to the City of Victoria, and that has been the focus of the participation of our residents and businesses, is issue number 5, and I quote:

> *"The potential environmental and socio-economic effects of marine shipping activities that would result from the proposed project, including the potential effects of accidents or malfunctions that may occur."*

16357. So our presentation today will focus almost exclusively on this issue.

16358. Our lack of submissions on the other 11 issues identified by the Board doesn't mean that Victoria has no concerns related to those issues or with the broader issues associated with the project such as the project's contribution to climate change. Many participants in the engagement activities that we led in the City of Victoria did indeed focus on these issues, but again, to stay focused and present our argument.

16359. Our argument is very simple. It's clear from the evidence on the record that the Project is not in the public interest and Trans Mountain's application should be dismissed. The reason why the Project is not in the public interest? The risk to communities located along the tanker shipping routes far outweigh any potential benefits of the project.

16360. The public interest is defined in the Board's Strategic Plan as:

> *"The public interest is inclusive of all Canadians and refers to a balance of economic, environmental and social*

considerations that [change] as society's values and preferences evolve over time."

16361. Trans Mountain suggests that the Panel must not consider individual interests or the interests of directly affected communities in making its public interest determination, but must only consider the interests of the country's population as a whole.

16362. We respectfully disagree with this interpretation. It's clear from the criteria used by the Board in determining who was able to participate in this hearing, that the interests of individuals and groups, including the interests of municipal governments and our residents and businesses that are directly affected by the project, are important considerations in determining whether or not the project is in the public interest. Only those with a direct interest in the project or relevant experience were allowed to participate and present evidence in this hearing.

16363. So we submit that the City of Victoria and its surrounding municipalities have a direct impact and direct influence, therefore, on the expansion program.

16364. So I want to draw your attention to the map on the screen. It is from Trans Mountain's Exhibit B18 and 19 at page 39. And this map exhibits a very direct interest that Victoria has in the project.

16365. If the project is approved, the volume and number of tankers off the shores of Victoria will dramatically increase. And if we had a real close-up of this map, I would draw your attention to the blue line. It shows just how close the tankers would come to our coastline. The blue line closest to the shore is the outbound shipping lanes, which would include fully loaded tankers.

16366. Victoria residents and Victoria City Council are very concerned about the environment and socioeconomic impacts to Victoria, its residents and businesses from Trans Mountains proposed increase in tanker traffic, and particularly the impact of an oil spill. A marine oil spill from a tanker off the coast of Victoria will result in significant harm to the community's public assets and its economic, environmental and social wellbeing.

16367. Public engagement conducted for purposes of this hearing clearly show that Victoria residents oppose this project. On April the 30th, 2015, Victoria

formally expressed its opposition to the purposed Trans Mountain Pipeline Expansion Project in light of the substantial risk to our economy -- and Councillor Isitt will talk more about this -- as well as to our ecology.

16368. So with those opening remarks, I will now turn the podium to Councillor Isitt to review evidence relating to project risk from the perspective of the City of Victoria.

16369. Thank you.

16370. **MR. ISITT:** Thank you, Mayor Helps. Thank you, Mr. Chairman, Panelists, counsel for the parties and for the Board, and also members of the public and co-intervenors who are here today.

16371. My name is Ben Isitt and I'm a city councillor in the City of Victoria. I also serve as a director with the Capital Regional District, which did apply to intervene. That request was turned down, but the Capital Regional District has submitted a letter of comment adopting the same position of opposition to the project based on its incompatibility with the economy and the ecology of the region.

16372. In my portion of our presentation I would like to focus on the concept of risk.

16373. Risk is often expressed as the probability of an event multiplied by its consequences. Victoria's environment, economy and social wellbeing will be placed at great risk if the project proceeds. This is because the probability of a marine oil spill will increase significantly and the consequences could be catastrophic.

16374. Victoria does not agree with Trans Mountain's assertion that the marine oil spill risk will remain the same if the project is approved. It is clear than an increase in tanker traffic leads to an increased risk of a marine accident.

16375. Victoria also does not agree that the current level of risk posed by the tankers loading products from the existing pipeline is either acceptable or consistent with the public interest. If, as Trans Mountain suggests, the risks of an accident will be significantly reduced by its proposed enhanced risk control measures, those measures should be implemented now regardless of whether or not the project is approved.

16376. As I previously mentioned, risk can be thought of as probability times consequence.

16377. Turning first to the probability side of the equation, the evidence clearly shows that the probability of a marine oil spill will increase if the project proceeds. Trans Mountain's own evidence indicates the probability of a marine oil spill along the tanker route will increase significantly because of the project from one spill in 309 years to one spill in 46 years.

16378. Evidence presented by other intervenors demonstrates that even this anticipated sevenfold increase underestimates the increased probability of a marine spill if the Project were to proceed.

16379. An expert review of Trans Mountain's Marine Transport Risk Analysis, commissioned by the Cowichan Tribes, finds that:

> *"...key conclusions drawn from the analysis are incomplete and misleading."*

16380. The authors of the review identify a number of weaknesses associated with Trans Mountain's marine spill probability assessment, including the use of underlying data and inputs based on data and operating practices in the North Sea in the 1990s, rather than newer, local data, and a failure to consider higher probability/lower consequence incidents. They conclude that

> *"...risk in the system is likely underpredicted."*

16381. A report prepared for the Tsawout First Nation, Upper Nicola Band and Tsleil-Waututh First Nation compares spill risk estimates using various accepted methodologies and also concludes that:

> *"The tanker spill risk estimate [presented by Trans Mountain] is an inaccurate and unreliable estimate of tanker spill risk."*

16382. Turning to the consequences side of the equation, an oil spill along the tanker route will have significant, and potentially catastrophic, environmental, economic, and social impacts to communities in the vicinity of a spill.

16383. I will first review evidence that describes the general consequences of

an oil spill. I will then focus in on evidence relating to the specific consequences of an oil spill to the City of Victoria.

16384. Trans Mountain identifies the following impacts that would result from a marine oil spill: Environmental impacts on shorelines and near-shore habitats, marine fish communities, marine birds and marine mammal and their respective habitats; economic impacts, such as impacts on commercial fishing, tourism and recreation as well as property damage; acute and chronic impacts on human health; and impacts on community wellbeing, including psychological effects, impacts on cultural and heritage resources, impacts on Aboriginal culture and subsistence use and impacts on local infrastructure and services.

16385. The "Board Filing Manual" provides guidance to applicants in evaluating the significance of environmental and socioeconomic effects. The manual indicates that:

> *"Evaluating environmental and socio-economic effects consists of assessing: one, whether the effects are adverse; two, whether the adverse effects are significant; and three, whether the significant adverse effects are likely."*

16386. The manual goes on to state that the following criteria may be useful in assessing the significance of a project's adverse effects:

> *"Magnitude; duration; frequency; geographic extent; ecological context; and reversibility or degree of permanence."*

16387. Using the criteria outline by the Board in its Filing Manual, it is clear from Trans Mountain's own evidence that the potential effects of a marine oil tanker accident or malfunction are significant because they will be widespread, long-lasting, and permanent.

16388. Serious adverse socioeconomic effects identified by Trans Mountain include permanent loss of critical heritage resources. It its evidence, Trans Mountain states that:

> *"Heritage resources could be affected by a spill in a number of ways. Oil and clean-up activities can directly damage artifacts and sites or disturb their context, which may result in*

> *permanent loss of information critical to scientific interpretation."*

16389. Trans Mountain indicates that social impacts of a spill can persist for years and include an increase in destructive behaviours, such as drinking, drug abuse and domestic violence and an increase in serious medical conditions, such as depression, anxiety and post-traumatic stress disorder. The following quote comes directly from Trans Mountain's evidence:

> *"Research has shown that in the event of an oil spill, affected communities and individuals may experience a number of psycho-social effects. Culture is an important factor that affects the potential psycho-social effects of a spill. Documented effects include: declines in traditional social relations with family members, friends, neighbours and coworkers; a decline in subsistence production and distribution activities; perceived increases in the amount of and problems associated with drinking, drug abuse, and domestic violence; and a decline in perceived health status and an increase in the number of medical conditions verified by a physician including depression, anxiety and post-traumatic stress disorder. These effects may be short-term or persist for years in individuals or groups most directly affected by a spill."*

16390. The City of Vancouver commissioned independent expert evidence to provide an assessment of the potential economic cost of an oil spill in the Burrard Inlet on key ocean-dependent economic activities within the City of Vancouver. Professor Sumalia estimates that if a 16,000 cubic metre hydrocarbon spill were to occur in Burrard Inlet, Vancouver's ocean-dependent activities could suffer total losses of up to $1.2 billion in output value, nearly 13,000 person years of employment, and 757 million in Gross Domestic Product.

16391. Trans Mountain also identifies serious environmental impacts associated with a marine oil spill. For example, Trans Mountain indicates that death of fish, birds, seals, sea lions, whales and otters should be expected from a spill at Race Rocks, a provincially designated Ecological Reserve, which is located close to Victoria and right near the bottom of the tanker route depicted on the slide.

16392. Evidence from other intervenors supports the conclusion that the potential effects of an accident or malfunction associated with a project-related tanker would be significant.

16393. For example, Fisheries and Oceans Canada's "Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada" states that the impact of an oil spill on the killer whale population could be catastrophic.

16394. A report filed by B.C. Nature and Nature Canada shows that a catastrophic marine bird mortality event could result from a marine oil spill. Quoting from that report:

> *"[T]he Fraser River Estuary, which includes Boundary Bay, Roberts Bank and Sturgeon Bank, provides important habitat for hundreds of thousands of migratory birds during the spring migration period. If an oil spill resulted in oiling of these areas during the spring migration period, a catastrophic marine bird mortality event involving hundreds of thousands (or more) birds could potentially ensue. Further, many of the marine bird species involved in this mortality event would be species at risk."*

16395. The perception of members of the public also provides a useful measure of the significance of the environmental and socio-economic assets that will be affected in the event of a marine oil spill. Evidence presented by both Victoria and other intervenors demonstrates that members of the public highly value the assets that may be impacted by a marine oil spill and would consider any damage to those assets to be significant.

16396. In the fall of 2014, the City of Victoria hosted an engagement process to collect public feedback regarding the Project. Hundreds of oral comments and written submissions were received. Engagement activities included a public forum at Victoria City Hall and a survey. This engagement showed that Victoria residents are very concerned about the possible consequences of a marine oil spill. Top concerns were impacts to marine mammals and birds; impacts to fish populations; impacts to water quality; impacts to human health; and damage to cultural and historic resources.

16397. I would like to read to the Panel some of the individual comments the City received through these engagement activities, which I believe give a very

good sense of the public concerns associated with this Project.

> *"A spill could ruin our coastline tourism and all the economic benefits related to the ocean that we currently enjoy; nothing, no amount of riches or goods, can make up for losing the beauty and health of our home. It should never be risked. I have small children and when I think of what we are risking for the sake of the dollar it makes me very sad. We live in an ecological paradise and we're willing to throw it all away for [nothing]. Regardless of how much money this project brings in, once there is an oil spill the environment is destroyed forever. We live in the most beautiful area of Canada and tourism is an important part of our economy."*

16398. These examples I have referenced are only a small sampling of the evidence filed by the City of Victoria and other intervenors that clearly demonstrates the significant environmental and socio-economic impacts with a marine oil spill.

16399. Victoria disagrees with Trans Mountain's conclusion that these impacts are not significant because they are not likely. It is clear from the Board's own Filing Manual that the Board considers likelihood of an adverse effect to be a separate determination from the effect's significance.

16400. It is also clear from the language used to frame Issue 5, that the Panel is not restricted to considering only those environmental and socio-economic impacts that are likely.

16401. Issue number 5 is:

> *"[T]he potential environmental and socio-economic effects of marine shipping activities that would result from the proposed project, including the potential effects of accidents or malfunctions that may occur."*

16402. I will now review some of the evidence that describes the specific consequences of a marine oil spill to Victoria.

16403. Because of its extensive marine shoreline, sensitive marine ecosystems, and marine-based economy, Victoria is particularly at risk from a

marine oil spill. Although any spill in the waters off Victoria could have disastrous impacts, these impacts will be greatest if oil reaches Victoria's shorelines.

16404. I would like to have a map placed up on the screen, which is drawn from the city's evidence submission, Exhibit C84-2-2 at page 14.

16405. This map provides the Panel with a visual sense of the extent of Victoria's shorelines. Victoria's land boundaries are shown by the cream-coloured area, which encompasses most of the map. Marine shorelines within city boundaries include areas along the Straight Juan de Fuca as well as the shoreline of the outer and inner harbours and the Gorge Waterway. And as the previous map showed, the tanker route is located within a very short distance, a handful of kilometres from our southerly shoreline.

16406. As indicated on the map, Victoria has a total shoreline length Victoria has a total shoreline length of 24.2 kilometres, which includes natural areas and parks, homes, regional transportations facilities, businesses and industry. It is evident from Trans Mountain's oil spill studies that Victoria shorelines will likely be oiled if a spill were to occur at any of the three locations selected by Trans Mountain for its oil spill modeling: Arachne Reef, Race Rocks or the Strait of Georgia.

16407. Although Trans Mountain provides no further evidence specific to the impacts of an oil spill on Victoria, the evidence presented by Victoria clearly demonstrates that any marine oil spill would have a significant impact on the economic, social and environmental well-being of the community.

16408. Victoria is located in one of the most biologically rich and diverse bioregions in North America. The natural environment has a significant impact on Victoria's economy and well-being, as it does on the economy and well-being of our 12 sister municipalities and 3 electoral areas, which collectively constitute the capital region, with a total shoreline area of 1,200 kilometres, all of it located on the proposed tanker route.

16409. Victoria encompasses several sensitive shoreline ecosystems that may be particularly affected by an oil spill occurring off its coastline. This includes two sensitive "Coastal Bluff" ecosystems, which are considered ecologically important because they support a large number of plant and animal species that have adapted specifically to a harsh environment. Coastal Bluff ecosystems are

rare and contain highly specialized habitats for many species unique to these areas.

16410. Victoria's shorelines support several protected plant and wildlife species that may be impacted by an oil spill. The entire Victoria shoreline is included within the Victoria Harbour Migratory Bird Sanctuary, which was established in 1923. Two plant species protected under the *Federal Species at Risk Act* can be found along the shoreline near Beacon Hill Park.

16411. The waters off of Victoria are included in the federal government-designated southern resident killer whale critical habitat. This means that the waters off of Victoria have been recognized as being necessary for the survival of this species.

16412. Victoria's shoreline parks and other public spaces in particular are major contributors to the community's wellbeing, and also to the local economy, and these shoreline areas are placed at significant risk.

16413. As shown by red lines on the map, 11.3 kilometres, or nearly half of Victoria's shoreline, is located within city-owned parks. Oiling of park shorelines would not only cause harm to the natural environment and any shoreline archaeological features in these parks, but it would also significantly impact recreational use of these areas.

16414. The park that will be most significantly impacted by an oil spill is Beacon Hill Park and the accompanying parklands along Dallas Road that constitutes the southern border of our community. And this area is considered the crowning jewel in Victoria's park system, and it's indeed one of the most memorable locations in our region for anyone who visits there.

16415. Beacon Hill Park is shown on the map as the large green area facing the Strait of Juan de Fuca. Beacon Hill Park and its adjoining parks and beaches include approximately five kilometres of shoreline and are popular destinations for both residents and visitors for their natural environment, manicured gardens, recreational opportunities, and archaeological and heritage features.

16416. Victoria will also experience significant negative economic impacts from a marine oil spill. Victoria's economy is closely tied to its marine environment. Victoria's harbour is a prized asset and is a means to supporting green transportation, connectivity, vibrancy, and investment in the downtown of

the region.

16417. Victoria's tourism industry, in particular, will be decimated by a marine oil spill. Victoria's shoreline and marine environment are essential parts of its tourism appeal. Tourism is the second-largest private sector employer in Greater Victoria. It is a $1.9 billion dollar annual industry in Greater Victoria with more than 21,700 people directly employed in the tourism sector.

16418. The lack of sufficient, effective marine oil spill response capacity increases the possible consequences of a marine oil spill, both in Victoria as well as in other coastal communities along the tanker route. A variety of agencies are involved in responding to marine oil spills, including local government emergency responders.

16419. Victoria recognizes that Trans Mountain and Western Canada Marine Response Corporation are not solely responsible for marine emergency response in B.C. coastal waters and that any gaps in current marine spill response capacity cannot be attributable to, or resolved by, those two entities alone.

16420. Nonetheless, these gaps are relevant to the Panel's review of the project because they increase the potential negative effects of any oil spill from a project-related tanker.

16421. The only way to ensure an effective response to an oil spill is through comprehensive multi-agency planning and training, followed by testing and exercising to identify any gaps.

16422. None of these activities have occurred in Victoria. There are no coordinated oil spill response plans in place for Victoria's harbour or offshore waters. Even in light of the current volume of tanker traffic, exporting -- exported from the Proponent's facility in Burrard Inlet.

16423. Victoria's emergency responders have had no marine oil spill response training. Other than one marine oil spill tabletop emergency exercise several years ago, Victoria staff have not participated, in recent memory, with Western Canada Marine Response Corporation or the Province of British Columbia in any tabletop or on-water emergency response exercises.

16424. Other municipalities intervening in this hearing have also indicated that they have not been included as participants in marine oil spill response

planning, training or exercises, and that plans for responding to a marine oil spill near their communities are insufficient.

16425. The response to the April 8, 2015 Marathassa oil spill in Vancouver's English Bay shows how the lack of preparedness and coordination among all interested stakeholders reduces the effectiveness of marine oil spill response efforts. Evidence from the City of Vancouver and the North Shore Emergency Management Office show that the ability of local government emergency responders to launch an effective response to that incident was compromised by a lack of planning and coordination.

16426. I would like to conclude my portion of the presentation by reiterating some of the comments I made at the outset.

16427. The environment, economy and social wellbeing of Victoria and other coastal communities will be placed at great risk if the project proceeds. Evidence submitted by Trans Mountain, the City of Victoria, and other intervenors clearly demonstrates that the probability of a marine oil spill will increase significantly and that the consequences could be catastrophic.

16428. Mayor Helps will now conclude the City of Victoria's presentation.

16429. Thank you.

16430. **MS. HELPS**: Thank you, Councillor Isitt.

16431. So we all recognize that some level of risk is present with any project or activity. Generally as a society we accept a certain level of risk because we can see that a project or an activity has meaningful and tangible benefits.

16432. It's our submission that that is not the case with this project. Any benefits of this project are vastly outweighed by the significant risks. Trans Mountain cites a variety of general economic benefits to Canada, British Columbia, and Alberta associated with this project, including an increase in GDP, an increase in taxes, and an increase in job opportunities.

16433. Now, Victoria, as a city, is unable to comment on whether these anticipated benefits are realistic or achievable. However, it's clear from Victoria's evidence that the environmental, economic, and social values that are at risk from an incident or malfunction are of far greater significance and value to the

community than any purely financial benefits or job opportunities that will be achieved from the project.

16434. This disparity between risk and benefit is particularly true for coastal communities up and down the coast, including Victoria, that will bear all of the risk associated with a marine oil spill and yet receive no direct financial benefits from the project.

16435. Victoria asked Trans Mountain to provide information regarding the specific benefits that businesses and residents of Victoria and the Capital Regional District could expect from the construction and operation of the project. Trans Mountain was unable to identify a single tangible financial benefit that would accrue specifically to Victoria or to the region.

16436. In conclusion, in making its recommendation, the Panel must consider the potential environmental and socioeconomic effects of marine shipping activities that would result from the proposed project, including the potential effects of accidents or malfunctions that may occur.

16437. The potential effects to communities located along the marine oil tanker route are numerous and significant, as we've outlined. If the product -- sorry, if the project is approved, the volume of product and number of tankers off the shores of Victoria will dramatically increase. Victoria's environment, economy and social wellbeing will be placed at great risk.

16438. As Councillor Isitt indicated, tourism is our second-largest private sector industry. People come from all over the world to visit paradise, and this project poses a significant threat to that paradise.

16439. Because of our extensive marine shoreline, sensitive marine ecosystems and, as we've noted, our marine-based economy, Victoria and the region are particularly at risk of significant impacts from a marine oil spill, and as we've already indicated, there is a high probability that a marine oil spill from a project-related tanker would reach our shorelines, including more than 10 kilometres of park.

16440. As Councillor Isitt indicated, the lack of sufficient, effective marine oil spill response capacity increases the possible consequences of a marine spill, both in Victoria and in other coastal communities along the tanker route.

16441. If the project is approved, conditions must be put in place to ensure that Trans Mountain and Western Canada Marine Response Corporation address these gaps in marine oil spill preparedness, including working with emergency responders in coastal communities up and down the coast.

16442. We submit that the project is not in the public interest because the risk to communities located along the tanker shipping route far outweigh any potential benefits. Victoria itself, as we have stated, will receive no direct benefits while incurring significant risk. And we stand in solidarity with the Province of British Columbia, who has made significant similar arguments.

16443. For these reasons, and in conclusion, Victoria submits that the Panel must recommend that Trans Mountain's application be dismissed.

16444. Again, thank you for your time and consideration today, and we do welcome any questions that you might have. Thank you.

--- (A short pause/Courte pause)

16445. **THE CHAIRMAN:** Mayor Helps, Councillor Isitt, you said -- maybe I'll leave this question to the -- no, I won't. I'll ask it first before I go to marine spill.

16446. You said earlier on, Mayor Helps, in response to Trans Mountain, the balancing of local interests and national interests. And I wondered if you could give any advice to us, how do we do that? And when do you when that local interests give way to national interests?

16447. **MS. HELPS:** That is a fantastic question. I think two things. One, we need to -- or you need to -- balance those who benefit with those who are at risk. So those communities that will benefit somehow need to be balanced with those communities that are at risk. So that's number one.

16448. Number two, taking the broader national perspective, British Columbia is a jewel for Canada. British Columbia, coastal communities up and down the coast are in the national interest. So when we're talking about our tourism economy or our pristine coastline it's Canada's tourism economy and it's Canada's pristine coastline. People are not going to come from Japan, from Germany, from South Korea, from wherever they come to see a coastline where an oil spill has occurred.

16449. So I think the tourism industry -- and certainly it's a priority of this new government -- is in the national interest as well. We just happen to live in paradise so we get to speak for it more often than others.

--- Applause/Applaudissements

16450. **THE CHAIRMAN:** I think, yeah, by all means, Councillor.

16451. **MR. ISITT:** The direct national economic benefit of the tourism sector can be seen in terms of taxes off of the incomes of employees, taxes off the profits of businesses involved in the tourism sector, taxes off the sales of products and services relating to tourism.

16452. There's also the national picture of -- I think the national interest is an aggregate of those local interests. And I guess an analogy would be let's say you have a child in a middle school or high school who's getting beaten up by bullies. Well, if those bullies are on the football team or the rugby team, there might be a benefit to that rugby team. That might even have a benefit to the reputation of the school if it maybe wins the city championships and the provincial championships, but I think the impact on that child or the children who are bullied make that completely unacceptable.

16453. And not to suggest that Trans Mountain's a bully, but if this national interest were to, let's say, justify a marine oil spill that would devastate one community, I don't think we could see that as being compatible. So I think the national interest is the component of those local interests. And there's I think a minimum standard of care that's owed to every community in the country, whether a community in Alberta looking for employment or a community anywhere in Alberta or British Columbia located along the tanker route.

16454. And while it may be a bit of scope creep beyond the mandate of your Panel, I don't know how much of an interest there is to employees and families in Alberta by prolonging the life of a dying industry by a decade or a decade and a half. I think now is the time for the federal government to partner with the Government of Alberta and communities in Alberta to transition to sustainable sources of employment and income for those families.

16455. And so I think -- I don't think the national interest justifies this project from even a short or long-term perspective, in my humble opinion. Thank you.

--- Applause/Applaudissements

16456. **THE CHAIRMAN:** Just a brief clarification on the marine spill response capacity. And I know you addressed it, Councillor, with the comment that there's a variety of agencies involved in this, and again our ability to influence other agencies who have the responsibility to deal with responding to it and everything else.

16457. So in reading your evidence, I clearly understand there's been no engagement with any type of oil response in the existing system that we have now and so there is that need. Wouldn't you suggest -- I would suggest we need to fix that before we can be concerned about, you know, the number of increase in tankers. And it's not only Trans Mountain's problem; it's a number of shippers that go along that coast.

16458. Could you offer some advice again to us, how do we influence that, bearing in mind that it's outside our jurisdiction to do?

16459. **MS. HELPS:** Absolutely. Well, a good start would be to reach out to local emergency responders up and down the coast. Our fire department and others are ready and willing. They love our shoreline just as much as the next person. And so I think regardless -- and this is maybe, you know, tangential -- but regardless of whether or not this project goes ahead, we do need to do a better job as we submitted in our written and oral argument, about the tanker traffic and the emergency response that is in place. Because it's been acknowledged as deficient, so I don't know why anyone would consider expanding before we fix the problem before us.

16460. So the advice is reach out to local marine or local first responders, or through the Association of Vancouver Island and Coastal Communities, or the Union of BC Municipalities, which are the umbrella organizations. That would be one of the first places that you could go.

16461. **THE CHAIRMAN:** If, in assumption, this project doesn't go ahead, who do you think should lead that engagement to create -- to look at this? Should there be a -- is it federal government, would it be the BC municipalities, pressure politicians?

16462. **MS. HELPS:** Anyone who knows me knows that my answer would

be all of the above. In the 21st century we can't do anything alone so it's a shared responsibility between the federal government, the oil companies, the coast guard, WCMRC and our local first responders, and indeed residents. We've got a great team of volunteers that are ready to go should anything disastrous happen in our community.

16463. **THE CHAIRMAN:** Again, thank you. The Board thanks -- unless -- I would never -- I don't want to ---

16464. **MR. ISITT:** I am happy to see a representative of the Canadian Coast Guard here today based in the City of Victoria. And I think that is the place to start, because after many years of federal neglect I think the appropriate agency to lead the coordinated response that the Mayor referred to is a properly funded coast guard that has the authority to act.

16465. And also, I think Transport Canada taking its responsibilities seriously as the oversight body. It's everything from looking to ensure legislation and regulations are strengthened and then that they're enforced.

16466. And we had -- the head of the National Energy Board came to the Capital Region, and the presentation was very disconcerting. He kept saying, "It's not our role. As soon as those ships leave the terminal it's not our role, it's Transport Canada." And yet there were no officials from Transport Canada or the Coast Guard at that meeting with him. And so all of the mayors and councillors who were in that room felt -- we felt that our coast was even more exposed to risk than we did before that meeting.

16467. And so I think that point needs to be reiterated; that the current risk facing coastal communities is completely unacceptable. And regardless of what happens with this application, the shippers and the companies responsible for moving that resource to tide water have an obligation to reduce that risk immediately.

16468. Thank you.

16469. **THE CHAIRMAN:** Again, the Board does thank the Mayor and the Councillor for attending today. And we can assure you that your submissions, along with others, will be taken into consideration as we go forward.

16470. With that, we will be adjourned. And tomorrow morning, we will hear

from the Tsleil-Waututh Nation, the District of North Vancouver, followed by the Living Oceans Society and the Raincoast Conservation Foundation.

16471. We're adjourned until 9:00 a.m. tomorrow morning.

--- Upon adjourning at 3:58 p.m./L'audience est ajournée à 15h58