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Commission canadienne de sûreté nucléaire

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Kikinahk Friendship Centre,
320 Boardman Street,
La Ronge, Saskatchewan

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Commission Members present

Dr. Michael Binder
Dr. Moyra McDill
Dr. Sandy McEwan
Mr. Dan Tolgyesi
Dr. Ronald Barriault
Mr. André Harvey
Ms. Rumina Velshi

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M. Michael Binder
Mme Moyra McDill
M. Sandy McEwan
M. Dan Tolgyesi
M. Ronald Barriault
M. André Harvey
Mme Rumina Velshi

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M. Marc Leblanc

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Mr. Jacques Lavoie

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La Ronge, Saskatchewan

--- Upon commencing on Thursday, 3 October 2013 at 8:33 a.m. / L'audience débute jeudi le 3 octobre 2013 à 8h33

Opening Remarks

MR. LEBLANC: Bonjour. Good morning. Welcome to the continuation of the Public Hearings of the Canadian Nuclear Safety Commission.

The CNSC is about to resume the Public Hearings on the applications by Cameco Corporation for the renewal of the licences for the Key Lake, McArthur River and Rabbit Lake operations.

As was the case for the last two days, we have simultaneous translation. Les appareils de traduction sont disponibles à la réception, so you can go to the reception to get some translation devices. Please bring them back because we lost a few yesterday.

La version française est au poste 2 and the English version is on -- no, it changed today. The English version is on Channel 4; French is on 5; Cree is on 6 and Dene is on Channel 7.

I would ask that you please keep the pace of your speech relatively slow so that the translators have a chance to keep up.

This proceeding is being video Web cast live and the proceedings are also archived on our Web site for a three-month period after the closure of the hearing.

The transcript will be available on our Web site towards the end of next week or early the week after.

To make the transcripts as meaningful as possible, we'd ask everyone to identify themselves before speaking and, as a courtesy to others in the room, please silence your cell phones and other electronic devices.

Monsieur Binder, Président et premier dirigeant de la CCSN, présidera les audiences publiques d'aujourd'hui.

Mr. President?

THE CHAIRMAN: Thank you, Marc, and good morning and welcome to the continuation of the Public Hearing of the Canadian Nuclear Safety Commission.

Mon nom est Michael Binder. Je suis le Président de la Commission canadienne de sûreté nucléaire.

Je souhaite la bienvenue aux gens ici présents. And welcome to all of you who are joining us via the web cast.

For those who were not here yesterday, I'll begin by introducing the Members of the Commission, and on my right is Dr. Moyra McDill. We have Dr. Sandy McEwan on my left. I see Dan Tolgyesi on my right again. They are

really now confusing me. Dr. Ronald Barriault on my left again and monsieur André Harvey and Ms. Rumina Velshi.

We've heard from Marc Leblanc, the Commission Secretary, and we also have with us here today on the podium Mr. Jacques Lavoie, Senior General Counsel for the Commission.

So I'd like to start today with a presentation from the Sierra Club of Canada as outlined in CMD 13-H13.26, .26A, H-14.24, .24A and H15.23 and .23A.

I understand Mr. Bennett will make the presentation. Please proceed.

13-H13.26 / 13-H13.26A / 13-H14.24 / 13-H14.24A
13-H15.23 / 13-H15.23A
Oral presentation by
Sierra Club Canada

MR. BENNETT: First of all, I want to thank the Commission for giving us this opportunity to make the presentation.

I'd also like to congratulate the Commission, and especially the staff, for putting on such an impressive logistical display and for coming to La Ronge to hold this hearing; although it was much easier for me to walk across town, but I'm glad to be here.

The Sierra Club is the oldest environmental organization in North America. We were founded in 1892 with the goal of preserving our natural environment, and over the last 100 -- 120 years, we have done just that. We've been involved in many, many of this kinds of hearings and we hope that we have provided a perspective that has led to a healthier and safer world.

We believe that all industrial activity should be done in a sustainable way, and we think that to do that we need to have full environmental assessments of all projects. So we're here today to ask the Commission to require that there be an environmental impact assessment of this proposal before any licences are renewed or issued.

To speak to the specifics of our presentation, I'm going to turn it over to our legal counsel, Christine Elwell.

MS. ELWELL: Thank you. Good morning, Mr. President, Commissioners.

You have a wonderful opportunity in this proceeding to fulfil the hopes and expectations of Canadians for responsible resource development and the protection of environment and public health, so it's a wonderful chance to fulfil those expectations.

We have filed a substantive report in

response to the company's applications. I won't go into detail because I know the Commissioners will want to have a good discussion about the points we raise, however, I would like to make a couple of preliminary remarks and highlights, so I'm going to the highlight section of that report.

As my colleague, John Bennett, said:

> "We're of the view that given the total increase of production would be more than 33 percent each for each application and in view of the record we've seen, it would not be in the public interest to approve those applications at this time."

We show that the company's operations already admit an extraordinary and increasing amount of air and water releases that are a major source and pathway for pollution, both south and north. Many of these pollutants are not regulated at all and those that are established are often not enforced.

The Rabbit Lake facility, for example, is at 58 degrees latitude. That's just short of the beginning of the Canadian Arctic Region and is within the scope of Arctic Council and Arctic Monitoring Program which has a specific focus on uranium mining activities,

which have been identified as the second largest source of uranium to the Arctic and the first largest source of lead, cadmium and mercury to the Arctic. So it is within your power and duty to assess not only the impacts locally and to the south, but also to the north.

Before the Commission can approve these applications,it must ensure that the company has adequate provision for environmental protection and to protect the health and safety of persons and to require the implementation of international obligations for which Canada has agreed.

We would suggest that you would be out of compliance with your constituting statute, the *Nuclear Safety and Control Act*, as well as a number of international agreements, should you approve these applications without notice, without a thorough environmental impact assessment, without efforts to reduce and eliminate contaminants of concern.

We say that the standards for environmental protection are unprotective and inadequate. The only, and I repeat, the only standard to limit radiation to air and water is an inaccurate proxy that is used to protect workers and the public, that is, for the public it's one mSv per year. We say that this standard is not an appropriate proxy for environmental protection,

particularly air and water releases.

Even where there are standards, the company's not required to report airborne mercury emissions, and water borne mercury, uranium, and cadium releases are merely identified for affluent characterization and according to Environment Canada, these contaminants do not have specific limits. There are no limits or standards for groundwater contamination from uranium.

Despite the limits where they exist, we have noted in many cases that the company is allowed to wildly exceed those standards without consequence. With the greatest possible respect, we say this is a failure to regulate.

We calculate that should the Commission approve the Key Lake expansion application, we can expect an increase of almost 400 percent in airborne releases of uranium and radioactive lead from the yellow cake drying equipment at Key Lake alone. We are unable to calculate mercury or cadmium emissions from the air stacks as they were not reported.

Despite the failure of reverse osmosis treatment and ongoing sloughing failures at the tailings pond at Key Lake, the Saskatchewan Ministry of Environment permits the company to release water directly into

Horsefly Lake. The lake drains to Wheeler River, to Wollaston Lake, which goes to the McKenzie and to the Beaufort Sea. We found some very interesting maps that I think really paints the story.

Some of the highlights that we have revealed is arsenic levels at the tailings ponds exceeding the Saskatchewan water quality objectives. We see cadmium exceedances at the pond at an extraordinary, over 5,000 percent. We see radiation 226 and lead contaminations in excess of 1,000 and sometimes more percentages.

As I indicated, there are no Canadian groundwater standards for uranium. Cameco did report on the Deilmann waste pile, and according to a comparative standard in Arizona, that would have been greater than 1,190 times the Arizona standard. So we don't have standards and by comparible standards there's huge non-compliance.

At the McArthur River site, concentrations of arsenic, uranium and water affluent apparently after it's been treated exceeds the standards by 54 percent, 700 percent for selenium, and an astronomical 1,200 percent for uranium. There was no reporting done on mercury. Blueberries and fish are contaminated with uranium.

The Saskatchewan Government permits Cameco to directly discharge water from Shaft 3 despite these

exceedances. There's no information provided on the third air shaft that's proposed for McArthur. We're unable to provide any help to the Commission in how that impact might be.

With respect to Rabbit Lake, this is the longest operating uranium mine in Saskatchewan, and we see extraordinary increases of uranium contamination at Hidden Bay, for example. The sediment at Wollaston Lake is almost 10,000 percent increasing between 1992 and 2007. There has been an extreme increase in uranium concentration and lichen near the DZ pond. That is a 2,167 percent increase for uranium, and radiation at 3,400 percent increase between 1992 and 2007. It's difficult to find the right adjective to describe these extraordinary increases.

Cameco does not report on mercury, cadmium, lead, or radiation, including plutonium air releases from the yellow cake drying equipment on site. Cameco does not report groundwater quality as -- quote:

> "It's not a Saskatchewan Ministry of Environment requirement." (As read)

The fish around Deep Pond are contaminated with plutonium and radiation 226, yet the company says no more environmental impact assessments are required.

We've had no disclosure on the stat at

Rabbit Lake. Despite repeated requests from the club for disclosure on a number of important documents, particularly the stack at Rabbit Lake, we've been denied access to it. There is apparently an environmental impact assessment done for Key Lake, and again, despite repeated requests from our office to obtain a copy, we've been denied that. We've been told it's not relevant, there's some other proceeding that will look at this impact assessment. With the greatest respect, that's not appropriate. The purpose of this hearing is to consider the measures for environmental protection. How can one say an impact assessment that the company has provided is not relevant?

I must add the Saskatchewan Ministry of Environment has been very good in providing us with publicly available materials, and I would urge the commissioners to look very carefully at the Key Lake impact assessment.

So just to summarize, we have found it difficult to track the standards; the measurement units are not easily compatible, they're all in different pieces of legislation, both federally and provincially. I would urge the Commission to do a full canvass of relevant and missing regulations.

It would be a failure of regulation and

inconsistent with Canada's domestic and international obligations to not require a thorough vetting of this application in comparison to real standards that are enforceable. We call for a comprehensive impact assessment that considers both the environmental and public health matters.

And I think with those opening remarks, I'll pass it to the president. Thank you.

THE CHAIRMAN: Thank you.

Okay, you said a lot of things, and we'll open it up for discussion. Who wants to start?

Before we do that, I don't know if Cameco and staff want to do a first reaction to what you just heard.

MR. MOONEY: Sure. It's Liam Mooney, for the record.

I think we wanted to start by just an overarching statement that the submission from the Sierra Club lacks context and demonstrated a limited understanding of environmental issues related to uranium mining in Northern Saskatchewan and the performance of our operations and regulatory agencies.

Uranium mining is one of the most heavily regulated mining activities in the world. Cameco is in compliance with all regulatory limits established by both

federal and provincial regulators. *The Provincial Mineral Industry Environmental Protection Regulations* contain limits for uranium and treated mine affluent and releases, and all of our operations are well below that limit.

THE CHAIRMAN: Staff?

MR. JAMMAL: Ramzi Jammal, for the record.

CNSC exists for and has a very clear mandate, it's the protection of the environment, the public, and the workers. I find it unacceptable on the allegations being presented before you. But Staff is ready in order to respond any questions you may have to put the proof in place.

THE CHAIRMAN: Okay, thank you. Who wants to go? Ms. Velshi.

MEMBER VELSHI: So I'll start off with Staff then. You're sitting here, you're here. The licensee is saying they are in full compliance with all regulations. The intervenor is saying exceedances that are in the thousands of percentage. But that also that the standards and the regulations are either incomplete or yeah, they're just not comprehensive enough.

So let me start off the first question if Staff can comment on the adequacy of standards and we heard that there are many contaminants for which there are no standards. So can you provide sort of a picture of how

comprehensive the requirements are and where the gaps are and how you suggest those get closed?

MR. JAMMAL: Ramzi Jammal, for the record.

First I would like to start with an overview of the process and will pass it on to Mr. McKee.

The CNSC and the applicant, any applicant must present to the CNSC an environmental monitoring program and this program takes into consideration and is reviewed by Staff using the precautionary principle, taking into consideration the best practices, best available standards and the most stringent requirements.

So what's being presented of non-existence of standards is not correct, is not adequate nor is factual. So the CNSC staff review the environmental program and the licensee has helped that program and our staff do verified compliance in the field and we have monitoring programs in place.

I'll pass it on to Mr. McKee in order to provide the details with respect to standards.

MR. McKEE: Malcolm McKee with the Directorate Environment and Radiation Protection and Assessment.

First I'd like to start with the issue of environmental assessment for each of the facilities. Every one of these facilities has undergone a minimum of

one environmental impact assessment either under the federal/provincial panel process in the late 1990s. Most of them have undergone additional environmental impact assessments since the coming into force of the *Canadian Environmental Assessment Act.* So every one of these facilities has already an environmental impact assessment through federal and often environmental -- Ministry of Environment to Saskatchewan.

With respect to standards limits, first of all we have to define the difference between licence limits, standards which are legal entities and objectives such as surface water quality objectives and guidelines.

We start first with the treated water systems. The uranium mines are regulated with a number of licence limits on the liquid effluent releases. They are addressed either within the *Saskatchewan Environment Mineral Regulations* or under the *Metal Mining Effluent Regulations*. If we run quickly through them, there are specified and specific licence limits for arsenic, copper, lead, nickel, zinc, radium 226, total suspended solid, PH, unionized ammonia, thorium 230, lead 210, selenium and total uranium, sorry.

The licensees are and have been in complete compliance with all of those limits and as you've heard previously, the uranium mining sector actually is the best

performing sector under the *Metal Mining Effluent Regulations*.

MR. BENNETT: May I have a response?

MEMBER VELSHI: Before you respond, the intervenor specifically said, I think it was mercury and cadmium, for instance, for which there are no standards and according to the intervenor that we should have. So if you can even address, do you from your perspective see any gaps in regulatory requirements?

MR. McKEE: With respect to any gaps that may actually exist within, say federal or provincial legislation on contaminants, that’s an issue that the CNSC specifically addressed with their environmental risk assessment. Review process for mines and the use of those risk assessments to identify contaminants that have been gaps and we have acted on those. For example, molybdenum is an analyte. It does not have a licence limit in federal or provincial legislation. However, Staff based on the risk assessments, determined its releases were not acceptable for molybdenum and required treatment process to be installed, which actually has resulted in dramatic reduction of molybdenum.

Now the Commission Staff has not put specific licence limits on that substance. We’ve done it through the action level process which is meant to ensure

that the treatment system that was required to be installed was performing and functioning properly. The Commission has discussed this before during Commission hearings about licence limits for substances that don't actually have them in legislation anywhere and has made it clear to Staff that if we are controlling a substance or requiring the control of a substance that you would like to see licence limits and we actually have a process in place going through the public discussion document phrase for defining a clear methodology for putting licence limits in place, developing and putting licence limits in place for those specific substances that aren't covered under any legislation. That's been going through a public review process for this year and will be coming out with a methodology for that in 2014.

The mercury is a good example where there is not an actual licence limit in federal or provincial for those. However, we monitor. It is covered under the *Metal Mining Effluent Regulations* with monitoring requirements. We monitor mercury in the effluent releases. The mercury in the effluent releases is at or below the method detection limit and that method detection limit is actually below the surface water quality objective limit for mercury. So mercury releases are monitored in the liquid effluent at the site and they are

-- the effluent releases themselves are below the surface water quality objective.

The cadmium is monitored in the effluent and it also not only in the receiving environment but in the effluent itself meets surface water quality objectives, corrected for hardness.

So the only place you would be looking at adding new limits, you have a new limit that doesn't actually exist in other federal and provincial legislation, is for contaminants that are a concern to you. If you are already meeting the surface water quality objective you don't necessarily have a limit, though from a public optics perspective, it might be better to place these things in so they exist and that's one thing we're discussing in the public discussion document process.

THE CHAIRMAN: Look, I really would like some short and quick replies to direct questions. Where is the mercury and cadmium data? Can somebody answer? If you're monitoring, where is it? It's not in any of the reports that I've seen.

MR. MOONEY: Liam Mooney, for the record. I'll ask Kevin Nagy, our Director of Compliance and Licensing to provide some more detail in that regard. But it's important to note on mercury that we look at the ore that we put through our facilities and it's very, very

low. We don't use mercury in part of any our processes for extracting uranium or concentrate from the ore. So it's not there as a source to begin with, we're not adding as part of our processes so it's not a concern for these operations. But I'll let Kevin expand a little bit on the information in that regard.

MR. NAGY: Thank you, Liam. For the record, my name is Kevin Nagy.

The environmental assessments conducted for our operations did not identify mercury or cadmium as elements of concern that you would expect to see in significant concentrations in our effluent.

We do monitor all our treated waters for those parameters. We monitor for a wide range of parameters. The monitoring for mercury and cadmium show concentrations in our treated water released to the environment below Saskatchewan surface water objectives and as Mr. McKee pointed out, at or below method detection limit for those parameters.

So, the monitoring is reported quarterly, annually to both the CNSC and the Saskatchewan Ministry of Environment and the monitoring bears out the predictions and the environmental assessments that those parameters are low and pose no risk to the environment.

THE CHAIRMAN: So let me understand. You

do a report on mercury and cadmium, I guess not in those documents? And, what I'm trying to understand, where did the intervener -- where did you get this data that, you know, that you supposedly the reading is totally unacceptable limits?

MS. ELWELL: Sorry, everything we are reporting is from either the company itself or from annual reports or from Commission staff. And we have documented extensively our references. I brought a sampling. In the company's response to our reply, they say: "We just don't understand what we're talking about and we're in full compliance." I brought some examples of their own project descriptions, where they admit they're above Saskatchewan drinking water objectives. I could walk you through this.

THE CHAIRMAN: Can you just -- I'm too obtuse. I want to focus on mercury and cadmium because it's pervasive, so at your presentation and I didn't see it in Cameco and staff. So I'm trying to understand.

MS. ELWELL: Okay, thank you. Let me address mercury and cadmium and lead in particular, because we do have obligations both to the Arctic Council and to the UN community, to reduce those pollutants.

There was no testing for mercury or cadmium at the stack at Key Lake. So, you're not seeing the numbers because they weren't reported. There was no

reporting of mercury or cadmium at the raise water, at the Deilmann water pond.

THE CHAIRMAN: Sorry, sorry to interrupt you, but I just heard that they are reporting. I'm just trying to understand the differences in here, in who's reporting what to whom. Because you're saying they are reporting because that's where you're getting the data from.

MS. ELWELL: Well in -- I have a couple of examples where they have. I've got two reports on cadmium. What -- let me, Mr. President, we've reviewed everything that they filed for this application, their project descriptions. We've reviewed every one of the state of environment reports going back to at least 2000. We did the 2000 to 2009. We haven't been able to get access in many cases, to the most recent data. But we have reviewed every piece of documentation that's been filed. And in our report, we've referenced where they have reported. We've referenced when they haven't.

We have a nice table for you that's very succinct. Table 3 that highlights our major findings. It's at page 24 of the report.

No testing for mercury or cadmium at Key Lake. No testing at the raise water at McArthur. Here's on water effluent.

THE CHAIRMAN: Can you give us a chance to understand one thing at a time. You just told us that they're reporting. You got it from a report. I'm trying to understand which report is she collecting the data from.

MR. MOONEY: It's Liam Mooney for the record.

We have struggled to understand the basis of some of the allegations in Sierra Club's submission. It creates an entirely false impression of our operations and their performance. I'd like to ask Kevin Himbeault to perhaps give you some context in relation to the performance of the Key Lake operation and the treatment in the water that is being referred to, as far as what ultimately is discharged to the environment.

MR. LeCLAIR: Mr. President. Mr. President? Jean LeCLair speaking.

I just want to bring back a few things just to provide some clarification, to touch on the very issues that you're talking about and then I'll allow Cameco to proceed, if that's okay?

We need to go back and I'm glad you asked for the clarification, because I've also been trying to figure out where the mercury and cadmium concern came from.

I appreciate now where they're saying it’s coming from this Arctic Council. We have to go back to what the whole basis of environmental assessment and ecological risk assessments, which are done for any major projects and are done across mining.

You have to go back to the beginning which is, what exactly is it that you're trying to do? In this case they're looking at mining uranium.

An ecological risk assessment requires you to understand what is in the ore. What is the characteristics of that ore? What are the contaminants that might be available? I can go through the periodic table and I can start listing off every element on the table that could potentially be hazardous. There's no denying cadmium, mercury and lead can be hazardous to the environment. But you need to then look at, what is it that is being proposed? And I think Cameco touched on it. Mercury and cadmium are not an issue in uranium ore.

We focused on molybdenum, selenium and uranium and the other elements that Mr. McKee already went through, because we know that from the characteristics of the ore and the characteristic of what's being done.

If you want to talk about mercury and cadmium from smelting operations, for instance, which is another kind of milling activity, where you're actually

burning the ore, those are situations where mercury and cadmium can be become quite a significant issue.

So to bring it back, ecological risk assessment defines what it is that you're trying to manage, allows you to identify what are the contaminants of most concern, the ones that are going to potentially cause you an issue. You then look at the mitigation measures that are going to be done in order to control it. You then monitor those elements that are of greatest concern. You look at what's happening in the environment. Based on what you see in the environment, you then go back, you readjust and you look again. It's a cycle. It repeats itself and looks at itself.

So the situation on uranium mining and milling, is mercury and cadmium are not an issue. They were ruled out when the environmental assessments were first done, when the ERAs were done. The monitoring results are in fact, confirming that they're very, very low. They're very, very low because they're not there to start with.

THE CHAIRMAN: Okay. Thank you for this clarification, but I'm still coming down to a very simple question.

It's alleged that they don't measure, that's in Key Lake, mercury. Yet, there are reports that

the intervener actually says: "Well we reported the mercury".

I'm trying to understand what is the difference here? If they are reports, you must be measuring. If you are measuring, to whom those reports go. You said today, environmental staff. So I'm just trying to understand. Do you measure for mercury or not?

MS. ELWELL: Mr. President, sometimes they do and sometimes they don't. It's complicated. I find this discussion is all over the place. I think we should go step by step. I mean there's some specific points that need to be addressed.

THE CHAIRMAN: I understand that and we will. And I must interrupt it. Maybe Ms. Velshi, maybe you'll have better luck to understand some this. I just interrupted you.

MR. MOONEY: Sorry, President Binder, it's Liam Mooney for the record.

And I think one of the fundamental misunderstandings here is about the water management at our facilities. So the water management, the treatment and release, the water that is treated and released, is measured and reported on, with respect to cadmium and mercury.

The internal workings of the Key Lake

operation, which I was going to invite Kevin Himbeault to describe, there are different water processes on that facility, but ultimately it's being discharged from a mill water treatment circuit and an RO plant, both of which, meet all regulatory requirements, including cadmium and mercury.

MS. ELWELL: Okay, just to -- may I have response to that specific point.

Let's take water. Let's take Rabbit Lake. Let's take Link Lake at Pow Bay. They're own documents show that as of 2010, there was between 347 and 776 percent increase higher than the Saskatchewan water quality objective. That's uranium, that's something clearly a problem with uranium mining. It's in water. It's after it was treated. And we still show, over 700 percent increase above the Saskatchewan standard.

THE CHAIRMAN: Okay. That's very specific. Who wants to comment on that?

MR. MOONEY: It's Liam Mooney for the record.

I'll ask Kent England to provide more detail in relation to the upper Link Lake issue.

MR. ENGLAND: Kent England for the record.

There is no active discharge of effluent to the Link Lake drainage. So, I don't know how to answer

that question.

THE CHAIRMAN: Okay. Thank you for that. Ms. Velshi we still ---

MS. ELWELL: Here's -- here's ---

THE CHAIRMAN: Excuse me. Let somebody else ask questions.

MEMBER VELSHI: Right. So my first question on adequacy of standards, and thank you for describing the whole process and identifying contaminants of interest and I just want confirmation. I think I've got that from staff, that from your oversight role, you have confirmed that where you have contaminants of risk, those have been identified and you’re monitoring and confirming the adequacy of that initial assessment.

So, you’re right, you’re not going to monitor every element in the periodic table, just to confirm, so that’s good.

So the second part was what we’re now getting into, our exceedances. Which I think from -- as I read the Sierra Club report, is extremely alarming to think that we’ve got thousands of percentage of exceedances. But just from that one example, it seems like we’re actually comparing the results to a standard that probably doesn’t apply to that, that the standard is for probably release to -- it’s a release to water, or

whatever.

So maybe if you can explain, and we can take a couple of exceedances that Sierra Club has identified and say, “You make a statement, Cameco, that you are in compliance with all regulatory requirements. And there’s a slightly -- not a slightly, a very different picture presented here, and how do we reconcile the two?”

MR. MOONEY: Liam Mooney, for the record.

I’ll ask Kevin Himbeault to describe the performance of the RO plant, which is one of the questions that has been raised about its performance and it’s been improperly characterized as a failure at the Key Lake operation, when we see it as being a very high-performing water treatment system that delivers quality treated water.

MR. HIMBEAULT: Thank you, Liam. For the record, my name is Kevin Himbeault.

I just want to, I guess, provide an overview of water treatment at the Key Lake facility.

So, as Liam mentioned earlier, there are two, I guess, treatment processes that we have. One is the reverse osmosis, the other one is the mill water treatment facility.

The reverse osmosis facility treats about two-thirds of the water that we manage at the Key Lake

operation. I found it interesting sitting here to notice that the water that we're drinking today is created from reverse osmosis technology. So very high-quality, high-purity water, produced from this technology.

The reverse osmosis, what -- or the water collection and the water management for that facility is associated with the Deilmann Tailings Management Facility in the Gaertner pit. So the water from those areas, we have numerous collection wells, dewatering wells, groundwater management wells, surrounding those facilities.

The water from those wells is collected. And we call it the "draw-down cone," or it's sometimes called "the cone of depression," but it's a draw-down cone generated around those facilities because of those dewatering wells basically pulling and preventing any water from getting -- going out to the environment. It all comes towards those wells.

We gather that water, collect that water, that water is transported to the reverse osmosis plant, treated and discharged. We discharge about 20 -- around 20,000 cubic metres a day of high-quality water out into the Horsefly drainage -- or the McDonald Creek drainage through Horsefly Lake.

The reject water, or the water that's not

released -- because when you treat water, there's impurities left over -- that water is sent over to the mill facility along with water that comes from the raised water. Which is the water that is pulled out of the bottom drain of the Deilmann Tailings Management Facility. That water is collected, pumped up to the mill for treatment up there. And I'll talk more about that treatment in a minute.

Other waters, such as the seepage or the run-off water that comes off our mineralized rock piles or storage pads, that water is collected and also taken to the mill facility for mill water treatment.

So getting up to the mill water, there's the process that takes place as well. We generate water at the end of the day there. We pull the uranium out, and there's waste materials associated with that, that needs to be treated and removed for the formation of the tailings that we send back to the tailings facility.

So we remove the solids through a sort of solid-liquid separation, using pH adjustment and pH control within the mill water treatment facility. Basically, what that does is we're adjusting the pH to drive certain metals to precipitate out, come out of solution, and go into solids. We collect those solids, we thicken those solids, and that's what becomes the tailings

that gets pumped back as a solid form back to the Deilmann Tailings Facility.

The water remaining from that has levels of -- is monitored. We send that to our monitoring ponds. We evaluate that. As we're filling our monitoring ponds, we take measurements of the quality of that water from the mill water treatment facility.

We compare that quality of that water to our effluent discharge criteria, our discharge limits, our administrative and action level limits with the CNSC and our licence. And if they meet the requirements, we will release that water to the environment; again monitoring that as we're releasing that water to ensure that it maintains the high quality that we want to have.

If it doesn't meet the requirements for release, we recycle that water back through the mill water treatment plant, and retreat that water until such time as it meets the requirements for discharge.

So the examples given, and I'm left, when I see comparisons to raise water to surface -- Saskatchewan surface water quality objectives, I'm left looking at that going, "Well, why would we ever make that comparison?" That water is not being released to the environment. It is part of the water management that we do at site, it is controlled, it is managed, and it is treated prior to

release.

THE CHAIRMAN: So I just want to understand. So let me simplify in my language what you just said.

The two types of waters that you are measuring, there is before treatment and after treatment. Did I get this right? Where you expect that the effluent is before treatment, and that would be a high concentration of contamination. And then you clean it up and you release it, that’s the after-treatment.

MR. HIMBEAULT: Yes, Kevin Himbeault, for the record.

Yes, it’s -- I wouldn’t say before treatment is effluent, because that term is used for after-treatment water, is effluent. What we measure before treatment, that’s our feed water, that’s our inputs to our treatment facilities. Our processed water, our collected, basic, it’s contaminated water, and we admit that.

THE CHAIRMAN: Okay, so could there be a confusion in -- I’ve just used the wrong terminology, to use “effluent” rather than “release”. So I can see how there can be confusions if you have two sets of data. One is for the feeding, and the other one is for the release. Is that what we’re facing here?

MR. MOONEY: Liam Mooney, for the record.

And I think you're -- you've identified is potentially the issue, but we -- and we come back to in that regard, as staff said at the outset, we do comply with all of our regulatory limits.

So when the question was asked by Commissioner Velshi about exceedances, our response in that regard is, our treated water that we discharge to the environment had not had any exceedances.

MS. ELWELL: Mr. President, may I respond?

We're not confused about which water to report to you.

Let's go back to our specific example, Rabbit Lake, Link Lake. We say there's up 700 percent exceedances in uranium in the surface water at Pow Bay Link Lake. I'm quoting from Cameco's own document, June 2011 project description, page 3-8, Link Lakes, Pow Bay Watershed Surface Water, so that's after treatment:

> "...the mean concentrations of many constituents, including arsenic, copper, lead and uranium were above applicable water quality (standards)."

I then go to SENES, who did the 2005-2009 annual reports to that lake, and what do they say? They say in particular -- at their tables -- there is

exceedances of water quality for several metals, and radionuclides in particular, concentrations of arsenic, copper, uranium, lead were measured over the stated environment period and exceedances respecting water quality and radiation 226 and thorium were exceeded as well.

So that's quoting both their own document, their consultant on water after treatment that's surface water. That's --

THE CHAIRMAN: Okay, can you stop here? And I'd like to hear an answer from Cameco on that particular observation.

MR. MOONEY: It's Liam Mooney, for the record. And I'll ask the manager of safety health environment quality for the Rabbit Lake operation to give you that context around Link Lakes.

MR. LAMONT: Kirk Lamont, for the record. Just to clarify and to reiterate what Mr. England said earlier. The Link Lake system is not an active drainage system. Our effluent is not discharged to the Link Lake system.

The effluent -- the treated water from Rabbit Lake is discharged at the Horseshoe Creek drainage system. And as we've heard earlier in these proceedings, the Link Lake system is currently a specific area of

active reclamation and study for the Rabbit Lake operation to ensure that the work and reclamation that we do going forward with Link Lakes is protective of the environment.

Also, studies have shown that Pow Bay is protected -- excuse me and therefore the Wollaston Lake system is still protected from -- in that area.

THE CHAIRMAN: Staff? Are you in agreement with what we just heard? What ---

MR. McKEE: Malcolm McKee, for the record. The Link Lakes system was contaminated back in the first operating years of the Rabbit Lake facility open-pit. At that time back in the eighties there was -- contaminated mine water was pumped directly through to that system and there was some other source terms.

At present -- that is now part of the reclamation activities at the site. Presently there are no releases to the Link Lakes system. There are including any possible waste rock pile, drainages or anything, the system has been isolated. The Link Lakes system is now part of a reclamation plan.

The system has been studied extensively. We’ve done -- sampling throughout the system for benthic invertebrates, fish and so on, as part of the reclamation activities.

And presently the water quality in Lower

Link -- in Pow Bay meets surface water quality objectives -- Lower Link Lake meets the surface water quality objectives with the exception of total uranium. And then Upper Link Lake is the one that requires the more extensive remediation and that will be addressed through the remediation plans.

THE CHAIRMAN: Ms. Velshi? Anybody else?

MS. ELWELL: Madam Commissioner, I've given you one concrete example of many. We could take the time and go through it but, you know, these bald generalizations and denials on the company's side are just unacceptable and if we took the time I could walk you through that pile of paper to prove it to you.

THE CHAIRMAN: Dr. Barriault?

MEMBER BARRIAULT: Just briefly, what I'm hearing really is that indeed Link Lake is contaminated and yes it will be reclaimed. But in the meantime what is the drainage of Link Lake going to and what's happening downstream from there?

MR. McKEE: Malcolm McKee, for the record. Link Lake is two shallow lake systems linked together that then feed out into Pow Bay of Wollaston Lake. As I said, surface water -- there's sampling throughout the drainage and out into Pow Bay itself.

And I said the surface water quality

objectives are met for all analytes in Pow Bay. And in the Lower Lake system for the latest dataset Surface Water Quality Objectives are met for everything with the one exception of total uranium which we expect.

And as the other thing to remember is that Surface Water Quality Objectives are not standard, legal standards or limits. They are means of assessing whether a substance is something that needs to -- merits further monitoring and attention and assessment as to the risk they pose to the environment.

MEMBER BARRIAULT: So could you conceivably drink the water from Pow Lake?

MR. McKEE: Pow Bay?

MEMBER BARRIAULT: Uh Pow Bay, I should say.

MR. McKEE: Well you shouldn’t be drinking water that’s not been chlorinated and so on, but does it meet Canadian drinking water standards? I would say yes.

MEMBER BARRIAULT: No, well leave the chlorine out.

MR. McKEE: Pardon?

MEMBER BARRIAULT: What I’m hearing really is that there is problems really with lead, radium, arsenic in that area?

MR. McKEE: Within the Link Lake system?

That’s why there’s reclamation plans for the Link Lake system. With most of the focus being restricted on Upper Link Lake.

MEMBER BARRIAULT: Thank you. Thank you Mr. Chairman.

MS. ELWELL: Mr. Commissioner, the Link Lake system drains into Wollaston Lake, Wheeler River and these lakes -- the drainage goes both north and south. It’s a huge problem and that’s just one example.

THE CHAIRMAN: Dr. McDill?

MEMBER McDILL: Thank you.

MR. MOONEY: Sorry it’s Liam Mooney, for the record. And I wanted to be a little more clear in the response in relation to the Upper Link Lake system and Pow Bay and Wollaston Lake, and confirm that Wollaston Lake, Pow Bay are protected. And there is an effort underway to look at reclamation activities in the Upper Link Lake.

THE CHAIRMAN: Dr. McDill?

MEMBER McDILL: Thank you. I think examples are good in some respect because it’s something the community can understand.

I’m going to pick one sentence on page 33 of 65. Sorry, can you hear me at the back? Is it okay? Thank you.

This is about tailings and you say, and

this is Sierra:

> "A mean annual radium 226 concentration of 148 becquerels per litre…"

And then it goes on and says:

> "…shockingly above the Saskatchewan surface water standard."

So my question to staff is, is it reasonable to compare tailings to surface water standards?

MR. LeCLAIR: Jean LeClair, for the record. No, that would not be reasonable because this is water prior to treatment. It is a waste facility. It's expected that the water quality. That's why it's contained. That's why it needs to be managed. That's why it needs to be treated. And it is treated prior to release. So in this case this is an example actually where we're talking about the water prior to treatment.

MEMBER McDILL: Could I ask Sierra, why did you use the word "shockingly above" for that? I agree it's above. I'm trying to understand why you would say "shockingly above" when it's not water that has been treated.

MS. ELWELL: It's the concept of 'what you put into something helps determine what comes out of something'. So if you have a situation where you are

dealing, at the front end, with a situation that is extraordinarily contaminated, it goes without saying that no matter what type of treatment that body of water will be faced with, it’s likely not going to make it drinkable at the end.

So like what you put in you get out. So the only standards available to compare it to were surface water quality standards. And I think it’s also important to note that the numbers are just so high.

It’s inconceivable that you could have something that’s 10,000 percent above a standard and in the end it’s going to meet the standard. Especially when your own staff has identified that reverse osmosis has been a failure, at least in one or two circumstances.

So the treatment that’s being used to reduce these contaminants is not always effective. And the surface water result at the end proves it.

THE CHAIRMAN: But you just told us that you know the difference between pre-treated water and after? This statement does not indicate that you understand the difference.

You are measuring -- you are comparing drinking water standard with tailing, which by definition, are not drinking water standard.

MS. ELWELL: I’m saying what you put into

something has impact on what comes out.

THE CHAIRMAN: I heard what you said. That’s not correct.

MS. ELWELL: Right. So I don’t think it’s inappropriate.

THE CHAIRMAN: To compare the two completely different -- you don’t compare sewage water to drinking water. Dr. McDill?

MEMBER McDILL: Thank you. My concern is for the community which reads this and will be frightened by it. I would be. But if this is then treated and released clean then that is something the community can rely on. And I would like to know -- this is radium 226. So let’s continue, when this is treated, what are the numbers for radium 226 at the end for the community?

MR. MOONEY: Liam Mooney, for the record.

I will perhaps ask Kevin Himbeault to give you some further details, specifically in relation to that contaminant.

MEMBER McDILL: This is just one example. So I think it’s worth carrying it through to the end.

MR. HIMBEAULT: Kevin Himbeault, for the record.

I don’t have those numbers right at my hands here, but certainly ---

MEMBER McDILL: Staff says they have them, so let's flip over here.

MR. HIMBEAULT: Okay ---

MEMBER McDILL: Let's get the number for the people who are sitting in the back of the room.

MR. HIMBEAULT: Oh, sorry.

MR. McKEE: Malcolm McKee, for the record.

MR. GATES: Okay, I'd like to draw the attention to staff CMD 13-H13 on page 27, the annual means table for treated effluent released to the David Creek system and this is a good example of ---

MEMBER McDILL: It's very hard to hear you up here. I'm not sure about the people at the back.

MR. GATES: Sorry, I'll just move this forward.

I'd like to draw attention to -- my name is Tom Gates, for the record.

CMD 13-H13, page 27. This is staff CMD on the Key Lake project. And in that table under radium in Becquerels per litre, you can see that the limits for radium for treated effluent is .37 and from 2008 we see a decrease from .06 down to .04 and I'll repeat the limit is .37 for protection of the environment downstream.

So those are the numbers, very, very low.

MS. ELWELL: Madam Commissioner, I don't

have access to that document. I can't comment on that.

MEMBER McDILL: It's a CMD. It's over there. Maybe we could get that document for the intervenor because I think it's important.

THE CHAIRMAN: And it's available to anybody who wants it, I understand.

MR. HIMBEAULT: Kevin Himbeault, for the record.

That information is also provided in our annual reports. So that's our water-treated discharge values from our effluent discharge release stations. It's documented in all our reports.

MEMBER McDILL: And next page, there are examples like this throughout the document and I think I would have been very grateful is Cameco or staff had -- if we had had the time to look at some of these things before and after because it's for the community that we want the numbers before and after.

MR. BENNETT: With respect, that's why we're asking for an environmental assessment.

MEMBER McDILL: But I think the numbers already exist for all of these things.

MS. ELWELL: We have quoted them. We quoted the annual report 2011. That's where we got our numbers from.

MEMBER McDILL: The CMD that came out that's in front of us has the -- just as the table was just given, and these are the numbers that the community needs to have.

MS. ELWELL: But the numbers we're quoting are from Cameco themselves, their project description and their 2011 annual report. So our numbers on 226 should be the same as what you have in yours, but I'm not sure of that.

MEMBER McDILL: But the numbers that you have given on page 33, I think it was.

MS. ELWELL: Yes, 33.

MEMBER McDILL: Those are tailing values before treatment. Are they not in a contained basin, if you like?

MS. ELWELL: Well, I could give you many examples where there's leakages from that pit. It's not just the water that's treated at the end. It's the slouching. It's the groundwater releases.

These pits are not self-contained forever. There's leakage many, many times.

MR. MOONEY: Liam Mooney, for the record.

And in this conversation there's been some very opportunistic quotes on where water samples are being compared. And again, the Key Lake example that we walked

through with the Commission earlier speaks to the points of discharge from those facilities.

We take some umbrage of their characterization in relation to those tailings management facilities. Those are state of the art engineered tailings management facilities that are closely monitored and carefully managed. And we do meet the release requirements for our treated water at all of our facilities.

MEMBER McDILL: I would like to ask one more if I can.

This is another question that the community raised yesterday. It's on page 31 of 65 of Sierra's document. The date's a little old. It's 2005, with respect to bog cranberry, and a number is given for micrograms per gram of uranium.

I was going to ask staff to comment on that number and whether there's more recent sampling and the health relevance of that number or the two numbers -- there are two numbers we have. What does ---

THE CHAIRMAN: Sorry, could you repeat it again? What number is it?

MEMBER McDILL: It's page 31 of 65.

THE CHAIRMAN: Right.

MEMBER McDILL: Fifth paragraph, it's under

A. Radiation Deposition to Plants.

THE CHAIRMAN: M'hm.

MEMBER McDILL: And it’s the first sampling from Wollaston Lake. Has staff found it?

THE CHAIRMAN: M'hm.

MEMBER McDILL: What are the health implications of that number and any new sampling number that we might have, because yesterday we were told there was sampling of country foods. Thank you.

MR. McKEE: Malcolm McKee, for the record.

I can’t confirm exactly where that specified number is from. As we discussed yesterday, the Human Health Risk Assessment is done site specifically for the facilities to indicate that country foods are safe to eat.

The Eastern Athabasca Regional Monitoring Program that we’ll hear about later today has monitoring, modelling of country foods that the communities themselves are participating, which indicates that the country foods are safe to eat.

THE CHAIRMAN: I understand maybe this is a good time -- I understand that we have a representative from the Saskatchewan Environment Department here with us, no? Dr. McCullum?

THE CHAIRMAN: And we have also Tim Molding

on the phone. So maybe, I don't know if you can add some facts and data about some of the vegetation and recent assessment.

MS. ELWELL: Thank you.

We're quoting from Key Lake ---

THE CHAIRMAN: I'm sorry ---

MS. ELWELL: Project description, page 318 ---

THE CHAIRMAN: I heard you. There's a question. I'd like an answer to.

MS. ELWELL: Oh.

MR. McCULLUM: Merci. For the record, Kevin McCullum with the Ministry of Environment.

MEMBER McDILL: Can the people at the back hear the -- no? So, thank you. If you can't hear, wave your hands or something so we have a better idea. Thanks.

MR. McCULLUM: It's for the record, Kevin McCullum from the Ministry of Environment.

Our Department is tasked with the Boreal Watershed Management Program. And one of the pieces of that program is Eastern Athabasca Regional Monitoring Program.

That data is all accessible online in the CMD that was presented and will be presented later today. That information is publicly available, open and

transparent.

And so I would encourage people to go onto the web site. They can look at the reports. The data is there, interpreted, as well as all the raw data is there as well.

So if there's a piece that's questioned, all the raw data is available for that.

THE CHAIRMAN: So did you have a chance to actually read this intervention and specifically, do you have any more recent data about vegetation, berries, food, traditional food and there, is there any accidents in those food items?

MR. McCALLUM: I don't want to pre-empt the presentation this afternoon, but all of the data that we had found so far in the 11-12 report, there is nothing of question that we were concerned with.

It was comparable to supermarket foods and we're working with Dr. Irvine to actually make that program better and more comprehensive working with several of the communities to try and encourage more sampling and identify a much more robust program.

THE CHAIRMAN: Thank you. I think ---

MEMBER McDILL: I think Mr. Jammal has some numbers, thank you.

Will there be a table this afternoon that

shows cranberries from Manitoba or somewhere else versus the cranberries -- bog cranberries here? You say supermarket, but from where?

MR. McCULLUM: Kevin McCullum from the Ministry of Environment.

No, I had 10 minutes for the presentation, so I was trying to keep it very quick. But all of the data is publicly available. So we have it all online.

People can take a look at it anytime.

MEMBER McDILL: I think checking things online can be problematic if you live in some of the more remote communities. It can be tricky when you're in the Best Western in Saskatoon, as well, but ---

MR. JAMMAL: It's Ramzi Jammal, for the record.

Dr. McDill, you asked the question previously. "Where did the information come from 2005, and is there a recent report?" I'm just going to quote and we will get the information from the results of the Saskatchewan Eastern Athabasca Regional Monitoring Program investigating country foods and designed with community involvement concluded -- and this is word to word of the report and you asked how recent. It's the recent annual report 2013 and I'm just going to quote:

"That parameter of potential concern

in country foods were generally low, within available regional reference values, and/or comparable to supermarket foods."

So we will get the exact numbers off the net and then we will start to compare the values if you're wishing to do so, but the recent data shows no impact.

MS. ELWELL: Madam Commissioner, may I respond?

MEMBER McDILL: Sure.

MS. ELWELL: Thank you.

MEMBER McDILL: Please do.

MS. ELWELL: You asked where we got our numbers ---

MEMBER McDILL: No, no, I can see where ---

MS. ELWELL: --- for the parameters.

MEMBER McDILL: --- it came from. I asked if other ---

MS. ELWELL: Okay. And I wanted to say we did ask for updated information from Key Lake and were denied access to the most recent environmental impact assessment, so I apologize if I'm quoting 2005 numbers, but it's the best we have.

And if you look at McArthur River, we quote 2009 numbers showing blueberries are also

contaminated.

THE CHAIRMAN: Who did you ask for the information? I'm sorry. I'm trying to understand who denied you. We just heard from the Ministry of Environment that it's on the web.

MS. ELWELL: Well, we asked for the most recent ---

THE CHAIRMAN: Who did you ask?

MS. ELWELL: The Commission, you. We asked for the most recent environmental impact assessment on Key Lake ---

THE CHAIRMAN: No, no.

MS. ELWELL: --- and were denied access.

THE CHAIRMAN: You ask now a different question and we're talking about the berries ---

MS. ELWELL: Well, but the ---

THE CHAIRMAN: --- the data with the berries.

MS. ELWELL: --- data on the berries would have been in the impact assessment.

THE CHAIRMAN: The environmental impact is something else completely if I understand correctly.

MR. LeCLAIR: Jean LeClair, for the record.

So just to clarify, the EA report that the Sierra Club is referring to is the Key Lake extension

EA which as we've now said we talked about it over the last few days is not part of this licensing decision today. The EA's currently underway. The report hasn't been finalized yet. It'll be posted for a 30-day review period. It's part of a joint federal-provincial EA, so the report was not appropriate for this because it wasn't part of this Commission hearing decision.

Once the report is complete, it will be posted for a 30-day review period at which point in time Sierra Club, like any other organization or individual, can review and provide input as part of that EA.

THE CHAIRMAN: Okay.

Dr. McDill?

MEMBER McDILL: Thank you.

Will that quote appear anywhere today? Maybe we could put it up on the screen so that the people at the back can see it with respect to -- because yesterday there was a question about bog cranberries and other country food, so I think it's important that we can actually see it.

You've read it, but it's -- I think it's important to be able to see it.

MR. MOONEY: It's Liam Mooney for the record.

That report that Mr. Jammal read is

precisely the subject of Mister -- Dr. McCullum's presentation to come from the Saskatchewan Ministry of Environment.

MEMBER McDILL: Maybe it will surface there, but we did have a comment that it was only 10 minutes so it's --

That's it for now, Mr. President.

THE CHAIRMAN: Okay.

Anybody else? Monsieur Harvey?

MEMBER HARVEY: Merci, Monsieur le Président.

I would like to come back to page 9 of your document. That page is full of numbers, percentage exceedances. So I would like the staff to comment some of those figures. I would stop at the fourth paragraph when you mentioned that we can expect an increase of almost 40 percent of the airborne release of uranium and radioactive lead-210. So I would like the staff to comment, to start there. But there is, in the bottom paragraphs, many extraordinary percentages, so could the staff comment those numbers, those figures?

MR. LeCLAIR: I'll ask Tom Gates who's the Project Officer for the Key Lake project if he could --

MR. GATES: Tom Gates, for the record.

For clarity, so that we have an

understanding of the air quality modelling and the sources at the site, first off there's -- the source we're talking about is the yellowcake calciner stack which emits uranium and its precursors into the environment and also the products of radon gas which decay.

As it leaves the stack, it disperses out into the environment and we measure the levels in the environment to determine if those levels remain at very low levels.

Now, we're talking, at his time, about the environmental assessment that was done in 1979 and in 1979 the anticipated yellowcake emissions were 50 grams per hour and this is out of the Key Lake Mining Corporation EIS, 1979, Volume 1, Table 6.2-1, page 6-3.

In comparison, the average emissions for 2000 - the year 2000 to 2012 for the period - from the stack were 14.43 grams per hour with a maximum of 70 grams per hour in 2011. And so the average that would be dispersing out into -- the average from the source -- the average source level is 15 and the emission of 50 grams per hour is the level where there'd be trivial or minor effects in the environment. So we're well below that level where there would be effects.

THE CHAIRMAN: Again, are there limits -- regulatory limits on such emission and are they within

those limits?

MR. GATES: The licensing basis is 50 grams per hour on average and as set by the environmental assessment and that is included in our LCH, the licence condition handbook.

MR. MOONEY: It's Liam Mooney, for the record.

Commissioner Binder, I'd like to ask Les Yesnik to give you a bit more detail in relation to the plan to Key Lake in respect of that calciner as well.

MR. YESNIK: Thanks Liam. Les Yesnik, for the record.

Certainly, my observation in my 10 years with Cameco is this company certainly is very committed to the environment and certainly to reduce our environmental footprint and you know, the -- speaking of the improvements made to air, the recent work that we've done with our acid plant and reducing the SO_2 emissions is one great example.

Now, we're also replacing this calciner facility and the new calciner will be electrically-fired compared to the existing unit which is propane-fired, so just by design there is improvements.

We will not have any combustion gases. The combustion gases of burning propane will be eliminated

since it'll be indirectly fired by electricity, so we're going to see a reduction in the volume of processed gases going to the environment before scrubbing and we are putting in place state of the art scrubbing technology that of course will remove particulate as is being done with our current scrubber, but of course scrubbing out also ammonia and SO_2 emissions and the SO_2 emissions we expect will be, you know, very low as well.

So you know, Cameco -- certainly we are committed to reduce our environmental footprint and some outstanding examples that I personally am very proud of that we've achieved at the Key Lake operation.

MS. ELWELL: Commissioner, may I respond?

MEMBER HARVEY: Yes.

MS. ELWELL: Thank you.

We're relying on a 2010 report by the Saskatchewan Research Council that was done for Cameco on its stack emissions at Key Lake and the numbers they quote are high and extraordinary on uranium; an increase of 421 percent since last year, so in one year, an increase of 400 percent.

On lead, an increase of 394 percent in one year. There was no testing done for mercury or cadmium despite obligations at the Arctic Council in that regard. And to say that the uranium industry is not responsible

for mercury, cadmium and lead admissions flies in the face of the evidence otherwise.

MR. MOONEY: Liam Mooney, for the record.

And I will ask Kevin Himbeault to respond in relation to that particular report. But again, I wanted to come back to first principles that we don't have mercury and very low levels of cadmium associated with the ore.

So if we don't have it as part of the input, we're not using it as part of our processes for extracting uranium ore concentrate, it's not there.

So I'll turn it over to Kevin now about the specifics in relation to the performance of the calciner.

MR. HIMBEAULT: Thank you, Liam.

Kevin Himbeault, for the record.

I guess, looking at the data – and I think Tom – Mr. Gates gave a very good summary of our stack performance through the years here, and we have been well below the design basis for the operation on an average of 14 grams per hour for uranium release.

I think the interesting thing is the comparison that's being made here from 2011 and 2010. So yes, in 2011, when we were doing the measurements that we have, we have a value of 70 grams per hour that we released at the stack.

From the monitoring data, and this is the reason why we monitor, so that we understand the performance of our systems, we identified that we had a problem with our air emissions that year. So we put corrective actions in place, made repairs to the scrubber unit, and brought those emissions levels back down to where they've been, back down to about 13 grams per hour released.

So I look at that information and say that demonstrates the transparency of Cameco. We've published the data. It's there. It's available to look at. The 70 grams per hour was a value that triggered us to do additional work and bring us back down into the levels that we expect to operate in.

THE CHAIRMAN: Thank you.

Monsieur Harvey.

MEMBER HARVEY: Okay. So I'm coming back to the staff for the bottom of the page. The fourth paragraph from the bottom and, well, three other paragraphs, you've got many figures there.

So could you comment on those numbers and percentages?

MR. LECLAIR: I just want to clarify. Jean LeClair, for the record.

So starting with "As of 2010, water

releases", that one?

MEMBER HARVEY: Yes.

MR. LECLAIR: Just give me a second here.

MR. McKEE: Malcolm McKee, for the record.

As was mentioned by Dr. McDill earlier, this is an issue where a waste stream that is required to report to treatment, it is being compared to standards that are just completely not applicable to it.

Water from the tailings management system report to treatment before being released in the environment. After they're treated and meet acceptable levels, they are released.

And to go back to, for an example, with the question about radium, for radium-226, from all three mine sites, in 2012 the effluent itself was below the maximum acceptable concentration for drinking water for radium.

THE CHAIRMAN: Okay. I think we've dealt with this particular issue.

The next one starts, "There is no Canadian groundwater standard for uranium."

Can somebody deal with that particular statement? Staff?

MR. McKEE: Malcolm McKee, for the record.

This statement was tied to the water drainage from one of the waste rock piles, which is

captured and reports to treatment. So right now, within the system they're talking – as was mentioned earlier, there is the zone of – cone of – all of these waters are captured and report to treatment.

In terms of a groundwater value for a requirement for uranium, if this water was reporting offsite to groundwater, then we would be looking at whether that groundwater was – contamination was acceptable or not. If it was for potable water systems, it would be compared to potable water requirements. Otherwise, the pathway would be modelled and determined, the potential of reaching surface water, and then it would be compared to surface water quality objectives to see if further monitoring and assessment and evaluation was required.

THE CHAIRMAN: I didn't understand this. Is there a groundwater standard if you were to release to a lake? I thought there is one, and also there is a toxicity level standard.

MR. McKEE: Okay. Again, we're using the word "standard" and objective. There is a potable water – drinking water standard in Ontario. There's the Canadian Drinking Water Guideline objective for uranium for drinking water.

There is a surface water quality objective

for uranium for the protection of aquatic life.

THE CHAIRMAN: Okay. That's all I wanted to hear. So there's a numerical value?

MS. McKEE: Yes, there is. We were dealing with the terms of whether something is a standard, which is a number in legislation that is legally enforceable or whether there were objectives or guidelines for evaluation purposes.

THE CHAIRMAN: The intervenors are shaking violently.

MS. ELWELL: Mr. President, he's giving you a number for potable water in Ontario. When I checked both the effluent regulations, as well as the Canadian standards, there was no standard for uranium in drinking water. And to deny the link between groundwater and surface water and drinking water is to deny the hydrology of water.

THE CHAIRMAN: I'd just like to clarify. So you're saying there is no limit for drinking water ---

MS. ELWELL: That's correct.

THE CHAIRMAN: Uranium in drinking water?

MS. ELWELL: In groundwater.

THE CHAIRMAN: In groundwater. Okay.

Somebody can answer that? I think there's somebody in the back here.

MR. GATES: Yeah, I've got this. This is Tom Gates, for the record.

I used to work for the Government of Saskatchewan, Ministry of Environment, and there are municipal drinking water quality objectives that are generally applicable to groundwater supplies.

So during environmental assessments, what we do is we look at those objectives with respect to human health downstream. If somebody was to draw groundwater at a particular area, or the surface water that would – it would discharge into. So from those predictions and models, we can assess whether or not there will be effects.

So there are standards or objectives for -- drinking water quality objectives that could be applied.

THE CHAIRMAN: So in your licensing process, do you impose a particular standard on the kind of water management that goes into those facilities?

MR. LECLAIR: Jean LeClair, for the record.

We certainly do. In this particular case, the water is collected and treated prior to release. I think we need to come back. It comes along the question previously said. We're dealing again with a source of water that's captured, treated prior to release.

So it's an interesting discussion to talk

about standards, but in this case, again, this is a case where the water is collected and treated prior to release.

THE CHAIRMAN: So the final bottom line here is it's compared with the Arizona standard. So if you compared the released, after treatment, is it comparable with the Arizona standard?

MR. McKEE: Malcolm McKee, for the record.

All I can say is that the uranium concentration at both release points at Key Lake is below the Canadian drinking water objective for uranium of 20 micrograms per gram.

THE CHAIRMAN: Thank you.

Monsieur Harvey?

MS. ELWELL: But, Mr. President, the company said they didn't have to report the groundwater numbers. I'd like to be able to tell you what the numbers are, but the company says it doesn't have to because it's not a Ministry of Saskatchewan Environment requirement.

THE CHAIRMAN: Cameco?

MR. MOONEY: Liam Mooney, for the record.

For the record, we conduct extensive groundwater monitoring at all of our facilities with information regularly supplied to the regulatory agencies.

THE CHAIRMAN: Thank you.

Monsieur Harvey?

MEMBER HARVEY: Just to complete with the McArthur – the paragraph before the last, there is-- again, is it the same thing? Are we comparing data from water that will be treated after or is it different? It starts:

> "At the McArthur River site, concentrations of selenium and uranium in water effluent have exceeded…"

MS. ELWELL: Mr. Commissioner, this is ---

MEMBER HARVEY: I'm asking the question to the staff and you will be able to comment after.

MR. McKEE: Those waters released from that point meet all of the effluent limits, and that was the list of limits which includes those analytes, that we mentioned so far, those analytes, the effluent meets all those limits. And within the receiving environment there, rapidly meet the Saskatchewan surface water quality objectives. Though at that point is a very near field sampling station right where the water first enters, and they do have exceedances periodically of the surface water quality objectives at those points.

MS. ELWELL: Mr. Commissioner ---

MR. McKEE: They are not legal limits. They indicate those things need to be monitored and assessed.

MS. ELWELL: Mr. Commissioner, this is water effluents, so this is after alleged treatment at McArthur. So this is not before treatment, this is after treatment, and after treatment, according to their own documents, as well as an environmental impact, or State of Environment Report 2005-2009 by EcoMetrix, we show 54 percent increase above the standard for arsenic, 700 percent on selenium, and 1,200 percent for uranium. There was no reporting on mercury. So this is after treatment, their own data, and they admit they're above the standard.

MR. MOONEY: Liam Mooney, for the record.

McArthur River is fully compliant with all federal and provincial regulatory limits. The treated water discharge from those -- our operations is of excellent quality with all parameters well below regulatory limits. Mercury in our treated water is sampled on a monthly basis and reported to provincial and federal regulators on a regular basis. Mercury contained within the treated water is consistently at or below laboratory detection limits.

Monitoring has shown that blueberries and fish sampled near the McArthur River mine do not pose an environmental risk. It's important to note that the results from the terrestrial programs have indicated that concentrations return to background levels as you approach

the surface lease boundaries of our operations.

THE CHAIRMAN: So what is the intervenor quoting from?

MR. MOONEY: This goes back to an issue that Commissioner McDill had identified earlier. These are standards that are not appropriately being applied to treated water that is being discharged from our facility. The appropriate standards to be applied are those that are found in the metal mining effluent regulations and in our license conditions.

MS. ELWELL: This is the not the pit before treatment, this is the water that's released after, because ---

THE CHAIRMAN: Where is it -- where are you getting this data from?

MS. ELWELL: I'm getting the data -- may I direct you, please, to page 40 of our report:
"The following review is taken from McArthur, Status of Environment Report, 2005-2009, prepared by EcoMetrix Incorporated on December 2010, State of Environment Report, as well as Cameco's McArthur Technical Report dated August 31, 2012."
This is the water after treatment. This is huge numbers above the standards, they're own data and consultants say so.

They can deny it all they want, but the facts speak for themselves.

THE CHAIRMAN: It's their report, so ---

MS. ELWELL: Exactly my point.

THE CHAIRMAN: --- I'd like some clarification.

MR. MOONEY: Yes, and we're not disputing the numbers, we're not disputing the quality of the water that's discharged, we are disputing the application of the standards in question. We do satisfy the applicable limits and regulatory conditions in that regard.

MR. McKEE: Malcolm McKee, for the record.

If I could just clarify that these mines are operating in the headwaters of very low, very small drainages. The part of the environmental impact assessments that were completed for these sites specifically identified and recognize that in the near field there would be exceedances of surface water quality objectives. The ones that would be -- result in potential exceedances are the key elements of our monitoring and our biological effects monitoring program and surface water monitoring program to ensure that we don't exceed any of those predicted near field impacts.

THE CHAIRMAN: So I'm trying to understand. So is that old data or it was done something before? I'm

trying to understand how recent is this observation.

MR. LeCLAIR: Jean LeClair, for the record.

Again, just seeking to clarify, the effluent releases meet all CNSC provincial limits. We don't measure effluent releases to the surface water quality objectives. Surface water quality objectives are applied in the receiving environment after some mixing. It's all part of the ecological risk assessment, it's all part of the assessments that are done.

So comparison to surface water quality objectives is not appropriate in this particular application. You have to look at it against the license limits that are set out based on the effluents at the discharge of the pipe. And all those limits are met and they have continued to be met.

THE CHAIRMAN: Okay, thank you.

Next question, Dr. McEwan.

MEMBER McEWAN: On page 9 of 65, the first bullet, you've bolded a statement that I don't understand, because again, it seems to me that you're comparing a dose -- an annual dose, absorbed those measurements, with protective regulatory limits. You're mixing two different concepts.

Could you explain to me what you mean by that, or have I misunderstood?

MS. ELWELL: I'm sorry; your question is why are we citing that standard?

MEMBER McEWAN: Why are you saying it's not appropriate? What is the appropriate standard?

MS. ELWELL: The appropriate standard would be one that measures and limits radiation releases to air and water in its own right. What we are using here, what the Commission uses here is a proxy to human health, the exposure of radiation to the public of this amount. And when one looks at the documentation by the company and the Commission about radiation releases to the environment, it's always in comparison to a standard that's about human health, rather than protecting the environment in its own right.

And we're not the only person or group to identify this. I refer you to a 2009 radioactivity report by the Arctic Monitoring Protection Program, which also goes into some detail, talking about human standards for the -- using human standards to compare to protecting the environment, air and water releases is not an appropriate standard, that releases to air and water of radiation ought to be regulated in its own right.

And so the reference to that 2009 discussion, I would encourage you to review, because it's a conceptual void. It's not appropriate. You're

comparing apples and oranges. What a worker gets inside a plant of radiation exposure is not the appropriate standard to measure radiation into the air or into the water. Those standards for radiation exposure to the environment are unique and independent of this exposure that one would set for humankind.

MEMBER McEWAN: But is it not correct that there is environmental exposure to radiation which varies by geography, which varies by altitude? So that seems to me, again, is a measurement that defines the amount of radiation that a person or an animal is going to get from that environment.

MS. ELWELL: As well as what is natural background. I agree, I'm not saying it isn't complex. And if you look at the human health standard, it's also separated between workers who are exposed daily and as well as the general public. You could -- the weighting factors for radiation exposure also distinguish between men and women and different ethnic varieties.

So the radiation standards are unique and they're different depending on the recipient, and our general comment is we looked in vain for radiation limits to the air and to the water and were not able to find any. The only reference standard is that one mSv MSL standard that we referred to.

MEMBER McEWAN: But ---

THE CHAIRMAN: You know ---

MEMBER McEWAN: Sorry.

THE CHAIRMAN: You know you're making such outrageous statement. The whole ICRP, the whole international community is -- I think now it must be 100 years of research into the one microsievert is -- or millisievert, is being protective of everything, including the environment. I assume that protecting human beings would be more conservative than protecting anything else, and you can work backwards from one millisievert into actual becquerel release.

So I really don’t understand why you would make it where all regulators in the world are using this one millisievert, including the very unfortunate Fukushima. Remediation of communities is based on this kind of measurement. So why would you make such a statement?

MS. ELWELL: Mr. President, we go into some detail of this at page 60 of 65, and quoting the Arctic Monitoring Program, which also identifies the disconnect between a general public health standard and the radioactivity standards that should be achieved for air and water protection. On the point that the -- your standard is the world recognized one, our review of the

Pickering matter showed that indeed the European studies in particular, show that that standard is not protective, and indeed at least two to three times less protected than the international norm. We could have that debate again, that'd be fine.

THE CHAIRMAN: Staff?

MR. McKEE: Malcolm McKee for the record. I'd just like to clarify. We have to make sure we're talking about the same things. The one millisievert per year limit that we're discussing is for doses to members of the public. It's part of the human health protection system. There is a different -- the CNSC is actually -- and the *Nuclear Safety and Control Act* has actually led the nuclear world in forcing environmental protection from radionuclides, and we have been modelling the dose to non-human biota with respect to risk from radiation.

We have been working -- we know our radio-ecologists and other specialist staff know specifically and have worked with the people, that the Sierra Club is referring to from the AMAT 2009 report. There have been numerous IAEA European Union studies on calculating dose to biota. Staff have kept up with that science. Staff -- if you look at the environmental impact assessments, there are whole sections devoted to the analysis of dose to non-human biota to ensure that none of the present release

systems that we allow pose an unreasonable risk.

THE CHAIRMAN: Dr. McEwan?

MEMBER McEWAN: So can I just follow up on that? So for the absorbed dose to non-human biota, is there a statutory, or a recommended, or an objective?

MR. McKEE: Through the -- there's recommended modelling approaches right now. The IAEA has just come out with a proposed discussion document. But the European Union itself has been ahead using the latest project phase. It was a project called ERICA and ERICA modelling, and so for -- through the European Union there's guidelines of -- for example, we generally screen against 100 micrograys per hour as being considered a dose threshold for certain biota. There is an increasingly agreement on what the benchmark criteria are.

Because those benchmark modelling approaches and criteria vary, we actually use in our EAs a range of them for comparison and we make sure we're below those thresholds.

MEMBER McEWAN: So the current EU recommendation is an hourly dose rate; is that right? Did you just say that?

MR. McKEE: Yes, because for wildlife, your non-human biota, you're more concerned with the deterministic effects and less concerned with, you know, a

long-term committed dose and cancer generation. Simply because the natural populations tend not to live long enough for those to be the criteria that you're concerned about, and you're more concerned about the protection of population rather than individual.

MEMBER McEWAN: So if I just follow that, do we have data from around the mine sites for micrograys per hour to the biota in that area?

MR. McKEE: We have for all of the mine sites, that risk assessments contain the full radio-ecological dose modelling data to a range of valued ecosystem components. So doses calculated and modelled to benthic invertebrates, ducks feeding; the standard ecological risk assessment for hazardous substances. We've modified and incorporated the radio-ecological calculations as well.

MS. ELWELL: Mr. Commissioner, may I respond? We have -- in all of those words the answer was no. There is no air or water radiation standards on emissions. We triple checked and no, we did not find one.

MEMBER McEWAN: I just heard yes.

MS. ELWELL: You heard benchmarks and their thinking about some.

MEMBER McEWAN: I heard yes, that there is an accepted EU standard for dose rates to biota of 100

micrograys an hour, I think you said. So there is.

MR. BENNETT: Is that the legal standard or is that a way of assessing a situation in itself? Your question was, was there a standard? And I thought the answer I heard was we do a lot of things but we don't have a standard.

MEMBER McEWAN: I heard an EU standard.

MR. McKEE: I want to be clear. I did not use standard, and as I said, it's an assessment objective and that's why it's important that when the Sierra Club has used the term standard for surface water quality objectives, that is not appropriate either.

MS. ELWELL: Mr. Commissioner, biota as I understand it are animals. I'm talking about air emissions. I'm talking about water emissions, and if we want to talk about animals, I direct you again to our report. The Arctic Monitoring Program has extensive studies on the contamination of radioactivity to wild animals in the arctic, caribou in particular.

That's the first point, and the second point is you don't just need to worry about our animals because they don't live very long. You need to worry about them because of the trans-generational impact of radiation on these animals. So it's not just now, it's the damage we're causing through the generations.

MR. McKEE: If I could just respond to the AMAP 2009 report and the discussion about radionuclide monitoring in the arctic.

In fact, the -- one of the best databases of lead 210 is actually from the Canadian Yukon station, which is an extremely tight database which shows very little variability; and it's been proposed that should uranium mining be -- occur in the north or any other activities such as that in the north, that this database would actually be able to detect deviations. And it's noted that right now there are no deviations in the database that could be attributed to contributions from uranium mining from that -- the south in Saskatchewan. It is indicated that that would be a tool if there was in the Arctic.

MEMBER McEWAN: Okay. So can I just ask one very simple question? As you prepared this, have you had expert radiobiological advice in the preparation and in the interpretation of the data?

MS. ELWELL: Ian Fairlie, Dr. Ian Fairlie.

THE CHAIRMAN: Dr. McDill, you want to add something else?

MEMBER McDILL: Thank you. A quick follow up, because the intervenor mentioned caribou, and I know we've had this discussion previously on caribou. But

again, because the community is here, could staff talk about natural meats, woodland -- country foods for caribou and lichen as we've heard before?

MR. McKEE: As has been mentioned - oh. Malcolm McKee for the record.

As we've mentioned there's been a number of studies. There's been the human health risk modelling from the sites themselves. There's been the studies mentioned about the Eastern Athabasca Basin that have measured meat and so on, and country foods are safe to eat.

MS. ELWELL: I wanted to mention this specifically though, that the caribou migrate and they eat lichen, and the lichen is naturally uranium bearing for example. So I think it's important that the community hear this.

MR. McKEE: If a caribou diet, because of the shortness of the pathway between atmosphere lichen and caribou, caribou are -- a caribou diet is naturally high in radionuclides.

If you take those calculations, for example, from the Northwest Territories, you can see that the Inuit and Aboriginal peoples that have been eating a natural, healthy caribou diet, can get -- have lived for generations eating this diet that will give them a dose

ranging between 2 to 12 millisieverts per year.

MEMBER McDILL: My colleague just pointed out that perhaps Saskatchewan Ministry of the Environment will be presenting this data this afternoon, so we have one more.

DR. DEMETER: Dr. Demeter, for the record.

I just wanted to add, and this is part of Dr. Irvine's discussion yesterday, the importance of continuing to eat traditional and country foods, and that this has been a tradition for decades, and the uranium found in caribou based on natural uranium, based on the lichen that they eat, has been part of their natural diet for ages, and it's very important to remember the dietary importance of maintaining natural and country foods as a diet, versus some disastrous effects of changing diets to non-country foods.

MS. ELWELL: Madam Commissioner, may I respond?

MS. VELSHI: Well, I was taking a follow-up from a colleague, so let the Chair ---

ME. ELWELL: Well, please, just a short -- thank you.

Page 59 and 60 of our report, we quote the arctic monitoring assessment of 2002 on heavy metals, showing that the loading of cadmium (sic) in the arctic

basin, shows the highest concentration is in ring seals, beluga whales, and polar bars, are reported in eastern Canadian Arctic and Northwest Greenway, with enough that maybe could cause kidney disease and damage to humans.

The 2009 arctic monitoring report, on radiation at page 60, cites that the increase of radioactivity into the...

"...The average exposure to individuals in indigenous arctic populations in Canada and Greenland could cause the consumption of larger amounts of radiation exposure 50 times higher than the average in the national population for the consumption of caribou and reindeer."

So 50 times the exposure to indigenous population in the Arctic from eating caribou and reindeer.

MR. MOONEY: Liam Mooney, for the record.

And Commissioner McDill is right, that Dr. McCullum will be presenting later on the eastern Athabasca regional monitoring program, which includes a country foods component. Similarly, the Athabasca working group monitoring has country founds, and it encourages community members to submit samples of food, including caribou, and both the AWG and the EARMP program confirm that that food is safe to eat.

THE CHAIRMAN: Well, what I'm trying to understand is, are you suggesting that the one

millisievert, plus the regulatory limits that our regulator applies, is not sufficient? And you're making the link of this between what emission comes out in the arctic? How do you make this connection?

How the cause-effect relationship here is, this possibility of increase in caribou, et cetera, how do you relate this to the uranium activities? That's what I'm trying to figure out.

MS. ELWELL: Because the arctic monitoring program has identified that a source and pathway to heavy metals and radiation contamination in the arctic, including in the foods, can be traced back to industries such as uranium activity, uranium mining.

THE CHAIRMAN: I thought it was more to the ambiance of previous, I don't know, nuclear bombs and things of that nature, rather than uranium mining. So I want to understand if there was somewhere, epidemiologically, or studies actually made the linkages between uranium mining in Canada, and observe the increase in radiation in our country.

MS. ELWELL: I can give you that. I would refer you to the 2002 heavy metals in the arctic assessment by the arctic monitoring program, at page 59 of the report where it says uranium mining is the second largest source of mercury in the arctic countries ---

THE CHAIRMAN: We just heard all about mercury. It doesn't exist ---

MS. ELWELL: --- and the first largest ---

THE CHAIRMAN: --- that's why I'm ---

MS. ELWELL: --- and the first largest for arsenic and cadmium. So, the first largest source is uranium mining.

THE CHAIRMAN: We just heard that it doesn't exist in the ore, and therefore it doesn't -- so I'm trying to figure out where ---

MS. ELWELL: Well, you heard from that from the company.

THE CHAIRMAN: --- where it's coming from. Staff?

MR. JAMMAL: Okay, Ramzi Jammal, for the record.

A couple of things first. Is the relevancy of what's being discussed right now, to uranium mining is non-existent, I'll pass it on to Mr. McKee.

In addition, we have to go back to the EARMP, which is the Athabasca regional monitoring report that really demonstrates -- and, again, it's in front of me, it's on the web, and the concentration's below minimum detectable levels for the meat of the caribou that's been acquired by the communities.

And if there is no impact on the proximity of the communities, proximity to the areas in the Athabasca region, well, you conclude that there is no impact further down or far away from it.

But I will ask Mr. McKee to go on in a bit more detail, but definitely there is no relevancy to the uranium mine of what's been stated with respect to the arctic.

MR. McKEE: The monitoring programs demonstrate that the mercury and cadmium levels are below detection and so there's no -- we're not seeing a linkage between the watershed through to the arctic, for mercury and for cadmium.

Dr. Binder, you're correct, the majority of the modelling from the arctic region with respect to increased dose to residents in the region is due to -- is from cesium, atmospheric cesium deposition.

THE CHAIRMAN: Thank you. Dr. McEwan?

MEMBER McEWAN: Just to go right to the cesium 137 and strontium 90, the Sierra quote on page 61, is that associated with uranium mining?

MR. JAMMAL: Mr. Ramzi Jammal, for the record.

Cesium 137 is not associated with uranium mining; it's a fission product.

MEMBER McEWAN: Yes.

MR. JAMMAL: It’s got nothing to do with uranium ---

MEMBER McEWAN: And strontium 90, the same?

MR. JAMMAL: Pardon me?

MEMBER McEWAN: Strontium 90?

MR. JAMMAL: No.

MEMBER McEWAN: So why --if we’re talking about uranium mining, why did you include cesium 137 and strontium 90 in the report?

MS. ELWELL: Because I was -- I was providing the information on the radiation, radioactivity report done by the arctic monitoring program. It was part of the context.

THE CHAIRMAN: Dr. Velshi?

MEMBER VELSHI: In your opening comments you talked about not getting access to information, and the one piece that you mentioned was for Key Lake extension, their environmental assessment report that’s currently underway, and staff explained why they didn’t share that with you.

And I know all of us Commissioners take the importance of providing access, and transparency has been very critical. So I want to -- and we’ve heard that a lot of the information is available on web sites, or in their

annual reports.

And a lot of the information that you have presented is rather dated -- you know, 2005, 2007 -- and I wondered how much you persevered to get more timely information, or get more current information. Or when you got resistance did you just sort of back off and said, “Well, this is the best I have.”

MS. ELWELL: Madam Chair, the Key Lake staff report is dated 2010. The annual reports, project descriptions, 2010, 2010. I have state of the environment reports up to 2009. We’ve done the best we could. There’s been no slacking on our part.

MEMBER VELSHI: No, I’m -- it’s not a question of slacking, it was a question of access, and whether you had issues around that. Because even in the CMDs, in the annual reports, we have seen 2011-2012 numbers, and I wondered why those were not reflected in here.

MS. ELWELL: Well, you know, we did make disclosure requests. We did our best to find the most current information available and we made best efforts, Madam.

MEMBER VELSHI: Thank you.

And on page number 9, it’s a question for Cameco. On page 9 of 65, the fourth bullet around -- that

starts with “Despite failed reverse osmosis treatment...”. And we’ve heard how critical the reverse osmosis treatment is to make sure that the effluent that gets released meets all the requirements.

And I know yesterday when we had the Saskatchewan Environment Society, we talked a little bit about some challenges with the reverse osmosis treatment. But can you comment around the statement on, “Despite failed osmosis treatment...” and particularly, does -- you know, is it not reliable? Is it not effective enough?

And should one be concerned that this may compromise the treatment before the water is released?

MR. MOONEY: It’s Liam Mooney, for the record. We would dispute that characterization of the RO plant. As discussed by Mr. Himbeault earlier, the RO plant delivers excellent quality water and has been functioning admirably at the Key Lake operation since it was put in place and since it has been expanded in scope.

So the characterization as anything other than an excellently performing facility is inaccurate.

MS. ELWELL: Madam Commissioner, we quote the CNSC recent staff report, performance of uranium mines in Canada, in its review of Key Lake and a number of reported incidences and a significant one involving failed RO was reported. We are quoting your own staff.

MEMBER VELSHI: Staff?

MR. LeCLAIR: Just to make sure everyone knows, I believe the report they're referring to actually is the annual staff report, which we presented in October 2012. That was the most up-to-date information that provided performance across all the uranium mines and mills. So that's very recent information.

I'd like to ask Tom Gates if perhaps he can elaborate a bit more on this issue of reverse osmosis.

MR. GATES: It's Tom Gates, for the record.

I'm not aware of any failures of the RO plant at this time. Is Cameco aware of any failures? We review the data on an annual basis and I'm not sure where in that report -- I don't have that report handy at this time. Staff could endeavour to have a look at the report if we knew which report we're talking about and come back with a reasonable answer.

MEMBER VELSHI: Thank you. That would be helpful.

THE CHAIRMAN: Can I ask you, you have obviously done extensive research and that's great. What I'm curious about, did you ask for the CMDs, the documents that we have right here in front of us, which is the latest data that staff presented? Why didn't you ask for that? That's available.

MS. ELWELL: When was that prepared, Mr. President?

THE CHAIRMAN: When was -- this report has been available since ---

MR. LeCLAIR: As is commonly done, as part of the normal licensing process, the CMDs were made available 60 days prior to hearing, which allows for a 30-day review by intervenors to provide them an opportunity to support their interventions. The routine process ---

MS. ELWELL: I had no notice of it. I would have loved to read it.

THE CHAIRMAN: There is a notice on our Web. We invite all intervenors. In fact, I think we gave you some financial assistance here. And I was hoping that you can actually review the staff document and take a look at the most recent data. It’s a shame.

MS. ELWELL: We had no idea about it.

THE CHAIRMAN: It’s a shame ---

MS. ELWELL: Sorry, how would we know?

THE CHAIRMAN: So anyhow, it’s a practice. I’m sure you’re going to be around for a long time. It’s a practice of CNSC in all our hearings that our documents are available on request.

MS. ELWELL: What in particular in your document would you like me to address? Perhaps I can do

it right now.

THE CHAIRMAN: No, it's I think 3-400 pages long. You're not going to do it right now.

MS. ELWELL: Well, if there's something pressing, I could do my best.

THE CHAIRMAN: There's all kinds of tables with data, et cetera, that you can compare, et cetera.

MS. ELWELL: I love data. I'm just teasing, but thank you.

THE CHAIRMAN: Okay, where were we? Ms. Velshi, have you finished?

Mr. Tolgyesi?

MR. MOONEY: Sorry, Commissioner Binder, I would like Kevin Himbeault to come back on that RO plant discussion in relation to the operation of it.

THE CHAIRMAN: Go ahead.

MR. HIMBEAULT: All right, Kevin Himbeault, for the record.

MS. ELWELL: And we'd like to comment as well, thank you.

MS. HIMBEAULT: Excuse me, I've got the mic here right now. Kevin Himbeault, for the record.

The RO plant has been working, as Liam pointed out. It's been functioning for us in an excellent way. In fact, it's been vital for us over the last

several years to help us manage the Deilmann Tailings Management Facility and complete the project, which we heard about in our presentation on the west wall stabilization to control that sloughing.

In order to do that, we needed to maintain the water levels lower in that facility, and that is through the reverse osmosis plant. We have been maintaining those water levels at a controlled level consistently since we expanded the RO plant in 2007, and that system has been functioning as a fantastic water treatment facility for us.

THE CHAIRMAN: Thank you.

MS. ELWELL: Mr. President, if there's an undertaking to be fulfilled by staff or the company about RO, we'd be grateful for an opportunity to comment as well.

THE CHAIRMAN: By all means.

MS. ELWELL: Thank you.

THE CHAIRMAN: Okay, Mr. Tolgyesi?

MEMBER TOLGYESI: Merci, Monsieur le Président.

On page 9 of submission from Sierra Club, the last bullet, he is saying that:

> "The Saskatchewan government permits Cameco to directly discharge water

from Shaft 3 into the environment despite exceedances in both mercury and cadmium releases."

What my understanding is that there is no mercury or cadmium in the mine. Am I right to ---

MR. MOONEY: Sure, it's Liam Mooney, for the record.

There have been no mercury exceedances in the Shaft 3 discharge. Again, mercury is not associated with any of the processes at our operations and is therefore not a parameter of concern.

Routine monitoring has shown mercury levels are at or below laboratory detection levels in the receiving environment. Measured concentrations of cadmium are at or below laboratory detection levels as well. At this time the lab detection limit for cadmium is higher than the SSWQO.

Extensive monitoring of the downstream environment has shown no mine-related adverse effects.

MEMBER TOLGYESI: So from where do you have the first of questions, exceedances, that is showing that there is no or even difficult to detect, page 9.

MS. ELWELL: Page 9 refers further into the report, so I'm trying to get you the exact details for you.

(SHORT PAUSE/COURTE PAUSE)

MS. ELWELL: There was no reporting for mercury in the mine water effluent. The uranium levels in the effluent were 1,200 percent above the Saskatchewan water quality objectives, for arsenic 54 percent, selenium 700, but you're quite right. Given the failure to report mercury, we're unable to establish the exceedances.

MEMBER TOLGYESI: So that's why you are saying there is no report that -- so it's despite exeedances, what you are saying.

MS. ELWELL: Despite -- there was a failure to report. So it was a misstatement to say there's exceedances if there's no reporting.

MEMBER TOLGYESI: Okay. The second is ---

MR. MOONEY: It's Liam Mooney, for the record and I want to respond to that to indicate that we do report in relation to that. What we have again is the instance of someone selectively applying Saskatchewan surface water quality objectives to a discharge point that is approved by the CNSC and Saskatchewan Ministry of Environment and satisfies the *Metal Mine Effluent Regulations* as well as any limits prescribed in our licence.

MEMBER TOLGYESI: Now I'm coming back to the same point. The question is direct discharge of the

mine water to the environment. Do you do a direct discharge? My understanding was that you collect the surface water and you pass it through a process.

MR. MOONEY: Liam Mooney, for the record.

The water from shaft 3 is very clean. It doesn't come into contact with any of the mine water workings. I'll ask Ken England to give you some details in relation to that approved discharge point.

MR. ENGLAND: Ken England, for the record.

Water from shaft 3, as Liam mentioned, does not come into direct contact with my workings. An application was submitted to Sask. Ministry of Environment and the CNSC and both approved that. They are -- the waters are discharged are within surface water qualities and baseline of the area.

MEMBER TOLGYESI: So this is water coming from where?

MR. ENGLAND: My understanding is -- I'll pass this to Kevin Quesnel actually. I think it's intercepted groundwater that we want to keep clean.

MR. QUESNEL: Kevin Quesnel, for the record. Shaft 3 water comes from naturally occurring water into the shaft. It is collected at the bottom of the shaft in a separate sump and then pumped directly out of the mine. It is clean shaft ground water or rock

groundwater.

MEMBER TOLGYESI: That's why you have a permission to discharge directly from Saskatchewan government?

MR. QUESNEL: That's correct.

MS. ELWELL: Is that a groundwater standard? How can we be sure it's clean?

MR. MOONEY: Sorry, it's Liam Mooney, for the record.

It is very clean water and it is clean enough to even satisfy, as Ken England outlined, not just limits but also some of the objectives that we have been discussing here.

MEMBER TOLGYESI: Okay, and I'm coming back to one more. It's on page 38. We are talking about the shaft and ventilation. There is a statement in 7.2, travel and air, second line:

> "Cameco may have its application approved to increase production and construct a fourth air shaft to the north of Polluck without the need to conduct an environmental impact."

Could you comment on that? Is it possible to increase the production rate without any verification or study and what's the process, what is CNSC using?

MR. LeCLAIR: Cameco has not made an application for building of a fourth shaft. It's part of the submission they were talking forward looking as some things they may be looking at doing as is normally done if and when Cameco chooses to apply to construct a fourth shaft. CNSC staff will request an application that requires a review, an assessment of the proposal that covers off potential risks to health and safety workers, to the public and to the environment. Part of that we then review, look at what it does related to the original assessments that were done and this informs any final decision.

So we don't allow Cameco to proceed with any major changes to the facilities without going to through a thorough review of what they're proposing and ensuring they have the right measures in place.

MEMBER TOLGYESI: So when you are saying the Sierra Club may have its application approved, you are aware that application was presented or it's just --

MS. ELWELL: Our information from reading the Mining Facility Licensing Manual, December 2012 was that the company was considering putting in a fourth air shaft and we were flagging for the Commission's attention that this would be a matter of significant concern given the numbers that are coming out of the air stacks at Key

Lake.

So, you know, it was an urging that should an application be made that a full environmental impact assessment and details on that fourth shaft be made publicly available.

MEMBER TOLGYESI: So it was clear in your mind that it was no application but it's consideration?

MS. ELWELL: I'm anticipating it, yes.

MEMBER TOLGYESI: Okay, it's not what you are saying but I understand what you explain.

I'm going back just one page, the last line, page 37 of 65, mining methods 7.1, last line.

"Typical control used at the McArthur River future, the low cost approach to direct exhaust ventilation in the many dust and radiances areas."

Could you comment on that, Cameco?

MS. ELWELL: Yes, I found ---

MR. MOONEY: Sure, it's Liam Mooney, for the record. I'm going to ask the general manager of McArthur River, Kevin Quesnel, to respond to that assertion but I wanted to again reiterate our commitment to environmental protection as well as the safety and health of the people at all of our operations.

MR. QUESNEL: For the record, Kevin

Quesnel.

Could you clarify the question for me?

MEMBER TOLGYESI: The intervenor is saying that McArthur operations future, the low cost approach of direct exhaust ventilation, which means that probably it's a cost saving and it contains dust and radon in the exhaust. So if it's a cost, the dust and radon how do you control it and if it's a low cost approach or could you describe what you do for ventilation, what are the methods and the systems?

MR. QUESNEL: All right, for the record, it's Kevin Quesnel.

I dispute the fact that they say that it's a low cost approach. Part of our radon control, radiation control and dust control in the mine is based on ventilation and there is a specific design and planning that's gone into the whole ventilation system within the mine. So it's part of our whole process and it's part of our mining method and we use substantial amount of ventilation within the mine.

THE CHAIRMAN: Can I jump on this. You do measure the actual emission through the stacks in all your operations, the mills operation, et cetera, don't you?

MR. MOONEY: Liam Mooney, for the record.

We have ambient air quality measurements at

our facilities as well as specific point source monitoring.

THE CHAIRMAN: So in your submission, not the intervenor submission, I found there was no reporting on what those readings are and whether they are within limits.

So first to you and then to Staff, why don't we see it in the reports? I'm talking about air emission. You talk about water. I assume you measure air water and actual ground.

MR. MOONEY: Liam Mooney, for the record.

And I'll perhaps ask Kevin Nagy to give a bit more of a feel on the reporting world that we inhabit in relation to that but I wanted to emphasize that the work that's done in relation to our operations, including the ecological risk assessments that support environment assessments, looks at all of those things, much as Mr. McKee and Mr. LeClair outlined earlier.

MR. NAGY: For the record Kevin Nagy, Cameco.

Liam mentioned the environmental assessments for our facilities. Those drive what we monitor and how we monitor and with respect to air emissions, we identify the primary point source emissions to the atmosphere. We had a lot of discussion about the

calciner stack at Key Lake, that’s why we do the annual monitoring on that facility at Key Lake.

We also monitor the ambient air concentrations at our facilities. We monitor total suspended particulate and the particulate that we do collect. We also analyse for radionuclides, as well as the metals, again identified in the environmental assessment that we would expect to see in those emissions.

With respect to the ventilation exhaust, that is how we monitor the performance and the emissions. We use the ambient monitoring for that. We have high volume air samplers that measure the particulate in the air. Those are located downwind of these facilities, where we would expect to see these emissions. That monitoring is regularly reported, to both the CNSC and the Saskatchewan Ministry of Environment and the monitoring that we do. As well we also monitor radon as well. I forget to mention that.

So the monitoring that we do and then report on, shows that, by the time you get to the surface boundaries of our surface lease, that the quality of ambient air is similar to background. And the monitoring that we do, and as described in the status environment reports, demonstrate that we are not having an impact on regional air quality from our operations.

So to answer your question, probably the reason we don't necessary highlight that in our submissions is the -- it's performing as expected and we're not having a measurable impact on the environment.

THE CHAIRMAN: It's funny that you think they shouldn't report when things work well and you feel that you report only when things don't work well. It doesn't compute. Staff?

MR. LeCLAIR: Mr. President, Jean LeClair for the record.

Perhaps part of that issue and similarly, we didn't it include in the CMD. I've actually got an example of an annual report here, that are produced annually. This is the Key Lake Annual Report. And just to give people an idea of the -- just to give people an idea of the size of the binder.

We analyze a tremendous amount of data all the time: ground water; streams; lakes; sediments, many, many things. We've tended to focus on those things that were here, issues of concerns, issues that have been raised. We go back to the previous hearings. What were the things that we were hearing? What -- where was the emphasis? And we try to focus on those things.

All this information is available in all the annual reports. It's readily available for people.

And perhaps, just to give you an example, I'll ask Sara Eaton, if she can actually talk about radon as an example of what the results are at McArthur River and then perhaps Dr. Demeter can then provide some sense of what the relative significance of that is, from a health point of view.

MS. EATON: Thank you. So it's important to remember that we require atmospheric monitoring to occur and these requirements are captured in the License Condition handbook, which was presented as part of a hearing.

So our McArthur River example for radon, the background in the areas anywhere between 37 to 74 Becquerels per metre cubed. And McArthur River reports, as Jean said, annually and also quarterly on their results. And we're seeing results anywhere from 0.3 to 40.7 Becquerels per metre cubed, so well within the range of the natural background.

THE CHAIRMAN: And as Dr. McDill keeps saying, I think it's also very important that the community, staff, people actually hear this. And that's strange that it's not reported.

MR. JAMMAL: We will ask Dr. Demeter, Sandor Demeter to give it from health perspective what the numbers mean.

DR. DEMETER: Dr. Demeter for the record.

To give you a sense, there is a span of radon levels in Canada ranging from less than 5 in Vancouver to 60 to 70 in Winnipeg, Regina and Saskatoon, and personally knowing, 200 in my basement in Winnipeg.

To put this in some perspective, the Health Canada level for residential public is 200. So that puts in some perspective the levels that you're hearing of 0.3 to 40.7 from the areas around McArthur.

I also want to put some sense of perspective for health risk. Although the vast majority of lung cancer is due to smoking, it has a 90 to 95 percent population attributable risk. That means 90 to 95 percent of lung cancers can be related to smoking.

There is a five to ten percent that's not. And some of that is related to radon.

So the International Commission on Region Protection, publication number 115, talks about lifetime risk of lung cancer based on radon levels, to put this in perspective. So if the radon levels are 0 and you're a non-smoker, it's a .4 percent risk, but if you're a smoker it's a 10 percent risk. And if the levels are at 100, it's a .5 percent risk for non-smokers and a 12 percent risk for smokers.

So, although there is some -- there is a

link between radon and lung cancer, the predominant confounder or effect is still smoking. And so the Health Canada level at 100 for residential dwellings is a level of safety and you can see that the levels in the areas around the mines are well below that level of safety.

THE CHAIRMAN: Thank you. Thank you very much. And by the way, this data that you mention, a lot of it you did mention, is available on the Web sites.

MR. JAMMAL: Ramzi Jammal for the record. I'm not going to speak on behalf of Cameco, but I believe it's their report and they post them on their Web site.

THE CHAIRMAN: Thank you. Mr. Tolgyesi?

MS. ELWELL: May I respond?

THE CHAIRMAN: Go ahead.

MS. ELWELL: Thank you. Our reference to low cost protection of the atmosphere is related to the fact that there is significant reliance on just the release of contaminated air to the environment. The reference to total suspended particles has been identified by the 2002 artic monitoring program on heavy metals, as being an ineffective measurement. TSP is too general of a standard to assess health and atmospheric protection. One really needs to differentiate between the different contaminants one is trying to measure and to feel comfortable with.

And finally, the fact that levels may be within the natural background, speaks to the lack of doing appropriate cumulative impact assessments. What's background has to be placed in the context of the five other mines and other mills in the area. The background is part of the cumulative loading from the other facilities. So just because it's within natural background, doesn't mean it isn't contributing to cumulative impacts.

MR. JAMMAL: I'd just like to make a correction for the record. Ramzi Jammal.

I said: "Cameco's report is available on the Web site." I'm not going to speak on their behalf. I just would like to reconfirm the fact that it's available from the CNSC upon request, for anyone request's to do -- for the report.

In addition, we do post. In the future, as part of the CMD process and the annual report, so that information will be available again for the public through the request of the CMD process.

THE CHAIRMAN: Okay, thank you. Mr. Tolgyesi?

MEMBER TOLGYESI: Cameco wanted to say something?

MR. JAMMAL: No, it's been clarified.

MEMBER TOLGYESI: Oh, okay.

My question was about -- my last question is coming back to this dust from the shaft. Do you measure what's a dust -- the dust particles which are coming from that shaft and how it compares to the standards?

MR. MOONEY: It's Liam Mooney for the record.

And, I wanted to emphasize in relation to the ventilation of the McArthur River mine, that the workplace radon gas concentrations are controlled both by ventilation but also by elimination, when possible, by grouting off water inflows, prior to mine development. So, there are various layers of defence in relation to radon.

On the control of dust, exhaust vents -- ventilation on process equipment and good housekeeping practices are the primary controls in that regard.

MEMBER TOLGYESI: There is no dust or particles from mining workplace, like blasting or raise boring et cetera.

MR. MOONEY: Liam Mooney for the record.

And I'd ask Kevin Quesnel to give you a bit more detail there. Again, it's -- the shafts, we'd see a fair bit of water being produced by them. So it's a

wetter environment of which contributes to lowering the dust in the mine workings themselves.

MR. QUESNEL: This is Kevin Quesnel for the record.

So dusting in the mine is controlled as well by keeping everything moist and wet, so that on the blast -- the drill and blast cycles, we wet down the mud piles so that the dust is controlled as well. So the amount of dust that comes out of the mine is minimized.

THE CHAIRMAN: But you did say you do measure the ambience of uranium dust?

MR. NAGY: Kevin Nagy, for the record. That is correct, we do monitor total suspended particulate in the ambient air around the site.

THE CHAIRMAN: Thank you. Dr. McEwan?

MEMBER TOLGYESI: You were talking about backgrounds. Where is the background measured from?

MS. ELWELL: I'm sorry, could you repeat the question?

MEMBER TOLGYESI: What is, you know, we were talking about background measured, compared to the background. What is measured, the background?

DR. DEMETER: Dr. Demeter here, for the record. Background radiation levels in Canada vary from two to three millisieverts. And that is -- the

contribution of that is from space, and from ground, and from radon.

So the background levels that I talked about before, about less than five from Vancouver, and 60-70 becquerels per metre cubed for radon, were based on the presentation yesterday from Dr. Irvine and another publication's -- on background levels of radon in the air in becquerels per metre cubed.

And so the incremental -- in fact, southern Saskatchewan has much higher background levels of radon than northern Saskatchewan. And the numbers that we heard from around McArthur of 0.3 to 40.7 becquerels per metre cubed is less than the average outdoor background level in Saskatoon and Regina, which are at 60-70 becquerels per metre cubed.

I'm sorry, does that answer your question? Thank you.

THE CHAIRMAN: Okay. Dr. McEwan?

MEMBER McEWAN: Sorry, this is just – I'm – as you know, I'm new to the Commission so I'm on a learning curve.

Back to your radiobiologist, because I'm very concerned about a couple of the comments that you made with respect to background radiation and its impact on biological effects. What university does he work at

and what's his area of research expertise?

MS. ELWELL: I'm sorry. Could you repeat your question?

MEMBER McEWAN: I think you said that Dr. Fairlie is your radiobiologist advisor. What university does he work at and what is his area of expertise?

MS. ELWELL: Oh, excuse me. Commissioner, I have provided you with at least 20 scientific assessments that have been done by both the Arctic Council and UNAC. It's -- the concern that you have that there isn't a link between radiation and the environment, I just ---

MEMBER McEWAN: Bear with me, bear with me, please. Bear with me.

MS. ELWELL: You would need to be specific.

MEMBER McEWAN: I'm just concerned that some of the comments you have made don't make sense in terms of radiobiological science. So I just want to know who the radiobiologist is and what his background is. That's all. Because it helps me understand where your opinions are coming from.

MS. ELWELL: Well, I'd like to know what specific comments you think are confusing for you. Yes, we're happy to provide him your C.V. But you know, really ---

MEMBER McEWAN: That's what I was asking.

MS. ELWELL: Thank you.

THE CHAIRMAN: Anybody else? Anything else? I have one thing we haven't spoken about. You made some substantial comments about international obligations.

MS. ELWELL: Yes.

THE CHAIRMAN: I'd like, first of all, to hear from staff and maybe Cameco actually has an opinion. What are the international obligations that we have with respect to the arctic and some of the other comments made by the intervenor here?

MR. JAMMAL: Ramzi Jammal, for the record. The comments that -- made by the intervenor with respect to the arctic, I'm having very difficult times to find the words in order to find an acceptance because I find it a little bit outrageous to link the mine that is within Canada, 300 kilometres away from the Arctic Circle, to be linked to a convention.

So it's a small mine, small area within Canada, and the allegation to extend it towards the arctic is unfounded because the Commission exists for the protection of the public, the environment and the worker. The environment is very well protected by the CNSC and there is no relevancy from physical, geographical or legal aspect to the arctic.

So the convention does not apply to the CNSC. And again, let me repeat it again, the demonstration of no impact to the environment speaks for itself nationally within Canada and there is no relevance into the arctic. Which I find it very hard to accept from an intervenor's perspective on expanding a non-linked convention and render in strong language that CNSC is not in compliance.

That, I do not accept. That is, as a matter of fact, an inaccurate allegation that is being proposed in the public.

THE CHAIRMAN: Cameco, have you thought about this particular allegation?

MR. MOONEY: It's Liam Mooney, for the record. Rather than respond to the international legal framework that's put forward, as you know we're a corporate entity, so in public international law, we don't have standing in that conversation.

But I do think that we wanted to comment that our operations are not a major source of pollution north or south. They are thoroughly regulated by the CNSC and by the Provincial Ministry of Environment as well as Environment Canada.

Air and water emissions from our operations in northern Saskatchewan are extraordinarily low and are

declining due to renewal of production facilities and improved water treatment at all of these operations. Extensive monitoring programs are in place at each operation and those results are reported on a regular basis to provincial and federal regulators.

So that gives us comfort that we are not having any of the effects alleged by Sierra Club in the arctic.

THE CHAIRMAN: Okay, thank you. You have the final words.

MS. ELWELL: Well, if I could respond to your question to my friends. First of all, with the 1991 Declaration for the Protection of the Arctic Environment, that's at page 56 of our report, that Canada signed, indeed we hosted the first meeting of the Arctic Council.

Under that declaration, Canada and the seven other nations agreed that under the Arctic Monitoring Program, the circumpolar nations have undertaken to monitor the levels of, and assess the effects of, human-made pollutants in all components of the arctic environment. That is the purpose of the convention that Canada signed and ratified.

Also I would point to the 1991 Espoo Convention, where again Canada undertook to ensure that in accordance with the convention, Environmental Impact

Assessment is undertaken prior to the decision to authorize or undertake an activity that is likely to cause significant trans-boundary impact.

And in that convention specifically, under Appendix I, those activities that go to produce or enrich nuclear fuels, including major mining site extraction and processing of ores are covered by that convention. There is an obligation to do impact assessment of trans-boundary effects from nuclear production fuel extraction and processing of ores.

The 1997 -- and in particular the Arctic Guidelines on Environmental Impact Assessment recognized that even if the activity isn’t strictly within the 60 degrees latitude of the arctic circle, if the facility or activity has an impact on the arctic, then they are duty-bound to do an Environmental Impact Assessment of it.

And Canada, as the new chair of the Arctic Council, should be showing leadership in fulfilling these obligations and commitments we’ve made. We’ve got the largest uranium mines in the world hovering just south of the arctic. The science is clear that those -- that activity is having both atmospheric, and water, and food impacts, on the arctic and the arctic peoples.

You’re obliged, Mr. President, under the *Nuclear Safety Control Act*, to put in measures to fulfill

international agreements that Canada has signed. And you, the company, are obliged as an Applicant to put in measures that would support those international obligations that Canada has made. Your duty bound to do a proper and comprehensive environmental impact and public health assessment that would include cumulative impacts, not only to the local, regional, but arctic environments.

THE CHAIRMAN: We understand our legal obligation. We don't see yet -- I assume you're going to the authorities, which in this case would be the Ministry of Environment and Minister of, I think, Indian, Northern Affairs, whatever it's called nowadays, to argue the case, and we will check to see if we have any legal obligation. Because we don't see any legal obligation ---

MS. ELWELL: Well, Section 3 ---

THE CHAIRMAN: --- in there.

MS. ELWELL: --- and 24 of your Act.

THE CHAIRMAN: We have our own lawyers, and we'll talk to them. So thank you for your presentation.

And I think we are now due for a little break. We will take a break for 10 minutes. Thank you very much.

--- Upon recessing at 11:11 a.m./

L'audience est suspendue à 11h11

--- Upon resuming at 11:31 a.m./
L'audience est reprise à 11h31

THE CHAIRMAN: Okay, we are ready to proceed.

The next presentation is by the Athabasca Basin Development Limited Partnership, as outlined in CMD 13-H5.8, H14.7, H15.6. I understand that Mr. Gay will make the presentation. Please proceed.

13-H5.8 / 13-H14.7 / 13-H15.6
Oral presentation by
Athabasca Basin Development
Limited Partnership

MR. GAY: Okay.

Good morning and thank you to the CNSC for holding this hearing in La Ronge. I think that's an important step for the north to have this here.

I'm pleased to have the opportunity today to speak about the renewal of Cameco's license for McArthur River, Key Lake, and Rabbit Lake mine sites.

My name is Geoff Gay, and I'm the CEO of Athabasca Basin Development Limited Partnership, and I've been in this position since the company started over a

decade ago. The company, which is owned by the seven Athabasca communities, was started as a way so that communities could partner and build wealth for the long term. We own 10 different companies that primarily serve uranium companies and we've had an impressive track record to date. In 2002 when we started, we had just over a million dollars in revenue. In our most recent fiscal year, we had record revenues of 145 million.

The success we have achieved to date would not have occurred without the support of the uranium industry, and in particular, Cameco. Since day one, Cameco's culture within their management team has pushed northern business and maximization of employment within their company. In my letter to the Commission, I stated that Cameco was an important part of our success to date, and I would like to elaborate on that further.

One of our goals is to create a sustainable long-term company that future generations can benefit from in the Athabasca Region. We know that it is not a proper business plan to have 100 percent of our revenues occurring in one geographic area and in one commodity. With Cameco's commitment over the past 10 years, we've been able to leverage that commitment and expand our business to borders beyond Northern Saskatchewan to the point where our companies now do work in the Northwest

Territories, Alberta, Southern Saskatchewan, Ontario, and Newfoundland and Labrador.

I have no doubt that our companies, the skills they're possessing from doing work in the mines, will eventually take our company, all of our companies across Canada, and some will go international.

In addition to relying on just one commodity, uranium, we now are providing work to commodities such as potash, oil, gold, diamonds and iron ore. And while our companies have become very skilled at doing work within the mining sector, Athabasca Basin itself has become very good at investing. And what that means is that we possess the skills within our company to purchase business and that does not mean they have to be from the uranium sector, it doesn't mean they even have to be from the resource sector, it simply means that we have the ability to create a long-term future generation company that will expand beyond the borders of just the commodity sector.

In the coming weeks we will be announcing our largest ever corporate donation by Athabasca Basin Development. This donation will benefit the residents of the Athabasca region and it will provide much needed infrastructure. This is only one example of contributions that we've made to initiatives within the Athabasca

region. In the past, we've also contributed to health, recreation initiatives, and also into youth gatherings.

In addition to our donations, we also for the past seven years have provided a consistent distribution to our communities that own us. These communities have then turned around and used them for various causes, including reinvestment; they've used them for equipment, for youth gatherings, and more. We're very proud of our ability to make small impacts on a region that obviously needs much more.

Whenever we talk about our story we always get asked about employment. There's no secret that the employment in the Athabasca region in the north is not at an acceptable level. Our companies are under constant pressure to continue to improve the employment within our companies, and not only from Cameco and the various mine sites, but also from management teams, from our board of directors, and from the residents. Employment is very important. The communities endure a high cost of living, so maximizing employment from the Athabasca and the north is very important.

At last count we had 440 northerners employed within our ten companies, of which 180 were from the Athabasca region. We feel this is a successful number, but of course, we know that we have to do better

because there still is poverty within the region and we're motivated to continually improve these numbers.

For many of the residents within the Athabasca region, it's quite possible their first job might be working for one of our companies. We realize that our companies are usually doing work that is short-term, seasonal, and cyclical, so it's very possible that our clients might pick these workers up for full time and permanent employment.

Over the past three years, one of our companies, Points Athabasca, has had their clients hire 100 of their workers. We don't see this as a detriment, we see this as a success that we should celebrate, that we were able to create employment for 100 workers and now they are now working for companies which will hire them for the very long-term.

For each one of these stories of the 100, many of them have had to overcome obstacles, and in one case in particular, Denise Boogy, who we just featured in our recent newsletter, six years ago she was incarcerated for drugs. Today, she is a fourth year electrical electrician and she's working within one of our companies at this time. And to quote Denise:

> "It's a wonderful feeling to be proud of yourself, of who you are, and what

you accomplish."

Again, once we talk about employment successes, the next question we get asked is what about senior management; what are you doing to ensure that Athabasca and northern people are participating in the management within our company? Today, I'd like to talk about three success stories, and obviously we have more, but I'd like to bring these three forward.

The first is Dean Desjarles, who is from Ile-a-la-Crosse and a Black Lake First Nation band member. Before he came to work for us, he was working within government in the non-profit sector. Today, he is the controller for Team Drilling, a company which recently did 65 million and is working in multiple provinces. He's responsible for implementing over 15,000 entries, handling changing accounting standards, and dealing with exchange rates as we purchase things in and out of the country.

Next is Ron Higgin, Jr., who is the CEO of Athabasca Basin Security and a Lac la Ronge Indian band member. Basin Security is a fast growing industrial supplier to eight global companies in Fort McMurray, Southern Saskatchewan, and Northern Saskatchewan. Ron has a very strong planning background and he's someone that we want with the company for the very long-term.

Last but not least is Brad Darbishar. In

the 1990s, Brad completed his journeyman mechanic status in Saskatchewan and came to Points Athabasca as one of its first employees. Today, he is the CEO of the company and this year the company will record revenues of over 60 million and the company has several hundred employees. In addition, Brad was the key person that led the company in discussions for us to expand our partnership and partner with the tribal council down in Regina that involved 11 bands. Today that partnership is doing very well in the potash sector.

Obviously we have more talented people in our company and the way we will create more talent and grow more management successes is our ability to grow in the future. The way we will do that obviously is to participate in the resource sector and we fully expect for Cameco to be a big part of our future even though we know that we have to diversify and not be fully reliant on Cameco and the uranium industry.

The uranium industry is providing us with an opportunity and it is up to our company to take that opportunity and leverage it and create more opportunities for the region in the future.

In closing, I want to emphasize that we are committed to building a long-term success story that will benefit future generations. We’ve experienced much

success in our first 10 years of operation and we are committed to growing our operations in the next 10, 20 years and beyond.

We expect uranium to be a big part of our future opportunity to help us fuel our growth and continue building a future through investment.

Cameco has been an important partner for us in the past decade and we support their initiatives to continue their mining activities in the North.

Thank you very much and if there’s any questions, I’d be pleased to answer them.

THE CHAIRMAN: Thank you.

Questions? Dr. Barriault?

MEMBER BARRIAULT: Just a brief one. Your organization, are you involved with education of Northerners, for example, and co-op programs and trade schools and this sort of thing? It seems to be one of areas that was identified that -- it’s a little weak.

MR. GAY: Geoff Gay, for the record.

All of our companies take a different approach to maximizing employment. Some of our companies will initiate and coordinate training programs and apprentice programs with agencies such as Northlands College.

One of our companies, in particular, has

taken the route where instead of providing off-the-job training, they will simply hire a third person to work on a drill, for instance, and pay the extra money to train that person on the job.

So every company has a different approach, but our approach is the board is pushing us to maximize unemployment. The residents want to see that. The leadership wants to and all our companies know this and are doing what it takes to maximize employment.

MEMBER BARRIAULT: Thank you.

Thank you, Mr. Chairman.

THE CHAIRMAN: Any other? Mr. Tolgyesi?

MEMBER TOLGYESI: Thank you.

So what you are saying that Athabasca Development is a kind of conglomerate of smaller companies, okay. So there are lots of presidents to deal with.

MR. GAY: Geoff Gay, for the record.

Yes, that’s an accurate statement. We have a board of directors that oversees our company. Athabasca Basin has only 7 employees and we in turn own 10 companies all of which either have a board of directors in place ---

MEMBER TOLGYESI: M’hm.

MR. GAY: --- or a joint venture committee to oversee it.

The reason that model is successful for us is because we have people in those companies that live and breathe that topic every day and for us, it's been very successful.

MEMBER TOLGYESI: Tell me, you said you have about 1,400 employees. They are mainly -- what kind of work you are executing? You are talking about drilling? Do you have other one which are used in the industry?

MR. GAY: Okay. Geoff Gay, for the record.

So we own 10 companies. We have an underground mining company. We have a surface and underground drilling company. We have a logistics company, security, aviation, construction. We have a plant in Saskatoon that builds modular structures for the resource industry and I think that covers it.

MEMBER TOLGYESI: I'm glad to see this diversification.

And how many have a trade or are general labour?

MR. GAY: Geoff Gay, for the record.

I don't have those stats on hand. I know that we -- I go through the employment results every month that are sent to us and look to see if we're maximizing on all the opportunities out there. So we maximize an

opportunity such as security guards, operators, labourers.

When it comes to trades, we need work in that area. That is one area where we need more people from the North and the Athabasca to achieve their certification, but there is progress being made in those areas.

MEMBER TOLGYESI: And my last question is: How do you feel about and what you do to educate communities, Northern communities, about mining, but also to attract them to work? And you were saying that you are working in diverse jurisdiction, so other provinces. This is to some extent unusual for natives because they are attached to the land and the region and the way of traditional way of living. So how do you do to introduce this new dynamics to the Northern Region?

MR. GAY: Geoff Gay, for the record.

So within each of our companies that are working outside of the province, each of the management teams will make best efforts to maximize employment in those local areas. Obviously if an Athabasca or Northern person is mobile and happens to be living on -- in those areas, we certainly would be encouraging that, but for the most part, labour mobility is obviously one of the challenges that occurs.

And yesterday I was watching some of the

presentations and I made the observation that in order for the North to fully maximize on the opportunities - Cameco and the uranium industry is only so big - we need to encourage labour mobility.

MEMBER TOLGYESI: How do you manage with traditional way of living? We are talking about hunting, fishing seasons, et cetera. How do you manage with your working schedules and what's your turnover? And I stop there.

MR. GAY: Okay. Geoff Gay, for the record.

In terms of our turnover, I'm quite proud of the turnover record we have. I know that in security, for instance, that the typical service company will turn over a hundred percent within a year and we are in between 10 and 20 percent, so every company has their own way of handling turnover of course.

One company, in particular, encourages their employees to obviously send an application early if they know that they're going to be going on a caribou hunt or to a winter carnival or other cultural activity to make sure they get those requests in early so that they can be accommodated.

THE CHAIRMAN: Thank you.

Dr. McDill?

MEMBER McDILL: Thank you.

I’m going to go to the back of the room just for a second and come back.

I think we have I’m guessing a high school class and blue hat and blue jacket are the teacher? Perfect. Thank you for coming.

So my question goes back to the speaker. What about part-time employment for the youth who have -- who care enough to come today?

MR. GAY: Geoff Gay, for the record.

Out of our 10 companies, I would encourage people to look at the drilling industry. To me that is an industry that we have not fully maximized. It’s an industry that requires a strong back, a good work ethic and the ability to go in the bush for a week to two weeks at a time and it’s something that I’m confident that Northerners can be very good at.

THE CHAIRMAN: But just to understand -- but you did say you are now have 118 -- did I get the number right, 118 Northern workers?

MR. GAY: We have 440 Northern workers throughout our 10 companies; 180 of which are from the Athabasca.

THE CHAIRMAN: Oh, I see.

MR. GAY: One company in particular, our drilling company, could obviously use more applications

for strong backs being from the North.

THE CHAIRMAN: Thank you.

Dr. McDill?

MEMBER McDILL: I just wanted to let the students know that ---

THE CHAIRMAN: They're looking -- They're looking for people again.

MEMBER McDILL: Applications, yeah.

MEMBER HARVEY: At the exit.

THE CHAIRMAN: Anybody else?

MEMBER McDILL: But I think it's lunch time for high school students right now.

THE CHAIRMAN: Just out of curiosity, you are based in Wollaston?

MR. GAY: Our head office is -- Geoff Gay, for the record.

Our office is in Wollaston Lake. I am based in Prince Albert primarily because a lot of our companies are based out of Saskatoon where the resource sector has their head offices. So in order for our companies to manage on a day-to-day basis and secure contracts, they have to be close to where the opportunities are.

THE CHAIRMAN: I'm just intrigued. You know, we really don't have an economic mandate, but we are

really curious about some of the governance model.

So you are owned by OF partnership with seven communities; how does it work? Are the communities invested in you? They have equity partnership? Is the revenues flows back into the community? How does it work?

MR. GAY: Okay. Geoff Gay, for the record.

So the model that we follow, if you look at the Harvard model in the States, it showed that if you separate business from politics you have a five times ratio of success over those that do not.

So the seven communities of the Athabasca region own Athabasca Basin Development. They appoint five board members from the region, of which I report to the board of directors.

In terms of their investment, their initial investment was $10,000. They receive the equity pick-up on our financials every year, and they are to bring it into their own community entities.

In addition to our distribution employment, they're also doing -- they're also receiving that equity that is being picked up on an annual basis, to the point where their shares were $100, when they started out, per unit, and the shares are now worth $600,000 each.

THE CHAIRMAN: Wow.

MR. GAY: So the growth has been

exponential, but it has been because we focus on reinvestment and diversification.

THE CHAIRMAN: Okay, thank you. Anybody else? Thank you very much.

MR. GAY: Thank you.

MR. LEBLANC: The next item is a dual presentation by the Snake Lake group of companies, and Mr. Clarence Natomagan, as outlined in CMDs 13-H13.16, 14.14, 15.13, 13.25, 14.23, and 15.22. I understand that Mr. Rene Rediron and Mr. Clarence Natomagan will jointly present, and welcome, and please proceed.

13-H13.16 / 13-H14.14 / 13-H15.13
Oral presentation by
Snake River Group of Companies

MR. REDIRON: Thank you, Mr. Binder, and Commission members.

My name is Rene Rediron. I'm from Pinehouse Lake, Saskatchewan. I am the president of the Snake Lake group of companies which has operated roughly around 23 years, with the mining industry.

I'm also a commercial fisherman and a trapper, and I still do some commercial fishing to this day.

There are many interventions in support of the applications for Rabbit, Key Lake, and McArthur River, and there are others who want to see things differently, or in come cases do not support the industry and want it to be closed. These groups and individuals usually do not benefit in any way from industry, so can argue for closing of the mines. I do not work like this. As long as Cameco protects the land and the people, we need to take every opportunity to capitalize on potential benefits.

In hearing the Sierra Club of Canada talks about atrocities being committed in the environment, yet pick and choose whatever points or information that supports their opposition -- they talk about cadmium, yet never mention that cadmium can be found about -- just about anywhere, including fertilizers. So does that mean we should quit farming?

And you talk about fish contamination in Lake Athabasca. From what I understand, the drainage of these mine sites doesn’t flow north, and shouldn’t be part of that blame, to go into the -- shouldn’t part of that blame go to the mining of the tar sands in Alberta? There was a recent documentary on tar sands that clearly showed their air emissions into the snow, and subsequent spring melts, contribute heavily to the watershed and is impacting the fish population.

The Sierra Club provided a lot of technical information that I won’t pretend to fully understand, but I do believe is -- is that their intervention doesn’t make direct linkages to any of the mine sites for potential impacts for plants, land, water and animals.

The Sierra Club must have financial resources to carry additional studies, if they believe strongly enough in the potential impacts. Why do they want the industry, or the governments, to carry more studies, and then turn around and contest or contradict those findings, too?

The roads to the mines have opened entire new hunting and fishing areas opportunities for our people. Friends and families continue to hunt near the mines. There are trappers in the same regions where these mines operate.

There are studies done by professional consultants. Engineering codes and ethics obligates these companies to report accurately site-measured plants, water and air, and compare data to other remote sites. I haven’t heard of a mass contamination yet.

People talk about transfer rates and blame the industry. Wasn’t there a cohort study done around here that disproves that? I understand the CNSC had members in that study group.

Yes, I agree, we still use our land for traditional activities. I still like, you know, to hunt moose and fish, and, you know, I'm not afraid to eat what we get from the area.

Cameco has done a good job, in my opinion, in protecting the land and the people. There are many hundreds of employees in this industry. I employ a couple of hundred people at any given time, which puts millions of dollars into our economy. My community of Pinehouse has a business arm that also puts significant wages into our community.

We, the people that live around here, and we must capitalize on every economic opportunity that comes our way, but, of course, not to the expense of our -- the environmental impact.

This was just -- I wrote down, just to be on line -- but if you allow me I'm going to put a little bit of my views, as a trapper and a fisherman. I grew up in a family which the only means of surviving was trapping and fishing.

I'll start with the trapping a little bit; it will be short. Trapping kind of faded away, and I think the reason for that is the prices went up significantly on fuel, snowmobiles, and what-not. So people just kind of started to stay away from it, and, of

course, you know, the animal rights group has virtually finished it off, anyway.

But I'll speak quite highly about fishing, because I've done a substantial amount of commercial fishing, and that's where I grew to learn my -- like I -- the word is right on the top of my tongue here, but I can't say it -- entrepreneurial experience, that's the one. The first one -- when I was out there as commercial fishing, I finally started to go up north, and that's how I got to know the mining industry.

I followed the roads for hunting and trapping, exploration roads, and around the mine, and I was very observant when I did that, you know. I was always watching out, if they were doing these stuff that I hear, you know, to our environment, and I was quite surprised -- it was kind of the opposite, you know.

They let us go through their mine sites, and help us in any way they can, and even the trappers that are impacted, are trapping right in the area, I've seen they were given fuel and -- free fuel, and free mechanical help, and stuff like that.

And that's how I got to be interested in working with the mining industry, particularly Cameco, because they were around -- Pinehouse is the next door neighbour of Key Lake and McArthur.

So I, in thinking as an employer in the smaller scale of commercial fishing, I had dreams of that -- that that was not what I was going to show my children. I knew there was no future into it, but I did see a future because it was right there -- the scholarships that Cameco put for the students and what not, you know. And then I follow that example, you know, helping the people out, training with my own dollars, training hundreds of people that are now working in high-paying jobs for Cameco.

And helping out with elders going out to the pilgrimage that has been going on for 100 years in Alberta. And helping people out, homeless people.

These are the things that I can do as an individual that I'd never dreamed of doing as a trapper and a fisherman. So the opposition I hear in the last two days, I haven't heard one thing as an alternative for us people, an alternative to say to the mine, we're not going to work for you anymore.

What does that mean? Do we go back and sit in our home and wait for a welfare cheque? It's just not enough. It's just not -- I don't want to be a person, a role model for my children and the people of my community to sit home and collect a social services cheque because this is 2013. And I strongly believe in a traditional way of life, but nowadays, young people don't want to live

like that.

I'm an employer. I deal with people. I know it. I deal with schools. I deal with a lot of young people and what not. They all want to come and work because if they work for me, chances are good they'll be ended up in working for Cameco.

As far as commercial fishing, if I want to give them a job as a fisherman temporarily, the wages are very small. It's very hard work. You can't plug your iPod in a noisy snowmobile. So they're not going to go. Believe me, they're not going to go.

So that's the thing. That's the only thing we can depend on. The logging industry, I was involved on a very very small scale, that's gone.

So I guess all we have to do now is focus on working hand in hand with Cameco Corporation and other mining companies because they've proven to us that they want to work with us. They helped us in so many ways for the socio-economic benefits for northern Saskatchewan.

We don't have very much of a choice. We want to see our children go to high school. I'm glad to say my son today is going -- worked for me at the mine and decided, no, I want to go back to school. I want to be a civil engineer.

I got two people from my community, young

boys that went to school with the help of Cameco. They're journeyman electricians, you know. That's what we want to see.

We don't want to sit at home and be a financial burden to the government anymore. We were given an opportunity. Yes, we're concerned about the environment. Yes, we'll ask 10,000 questions if we have to.

But the professional people that are against the uranium industry, with their $50 words here that I couldn't understand one damn thing they're saying, why don't they come to Pinehouse or Beauval or Patuanak or -- explain to us in a little bit of lower class English so perhaps maybe we can understand something of what they're trying to get at, you know.

Everybody has a right to his own opinions and thoughts, you know, but I'd like to get them to come and explain to us and then we make a decision where our support will go.

Right now, we don't have a choice because we don't understand. We get intimidated by these professional people, well-educated people that tell us these horror stories, but we're stuck. We need to continue to try and provide for our children, you know.

Hopefully, they'll get educated and

continue to go work. Not necessarily for the uranium industry, they can go work anywhere else in Alberta, in Canada, for that matter. So you know, we have to focus on education.

And I've lived and rolled in the ground, in the snow and around these mines and believe me, that's what I call first-hand experience. That's why I'm talking the way I'm talking. I don't want to hire a high-class consultant to come and speak for me here. I'm going to speak from the heart.

You know, I've suffered and froze my fingers off 10 miles out of Key Lake, fishing and stuff like that. You know, I drink the water from the lake and believe me, you know, I'm still here.

So I'd like to tell you what I know as a person that's been through it all because I know the Commission has a very important role here. And in all fairness, they should hear it from the person that's been through it all, you know.

Hopefully, you know, you'll take my intervention, you know, into consideration because what I'm telling you here is the way it is.

Thank you.

THE CHAIRMAN: Thank you very much.

I think we're going to hear -- are you

going to speak now or ---

MR. C. NATOMAGAN: If you want to ask questions, we should finish it off in that process.

THE CHAIRMAN: Okay, let’s go into the questions then.

Dr. Barriault?

MEMBER BARRIAULT: First of all, I’d like to say I really appreciate your candor and your honesty in your presentation. I also appreciate where you’re coming from in terms of fishing commercially and hunting. I’m from a country background also, so I can appreciate that.

But one question I have really is that, have you noticed over the last, say 10 to 15 years, a progression towards more education on the part of the younger population or are they still hanging back and seeing a lot of unemployment on the reserves?

MR. REDIRON: So Rene Rediron, for the record.

I have seen a considerable amount of education that young people are going to high school and SIAST and taking training with one goal in their mind, to go to work for the mining industry.

And we do encourage, like I myself, a young person from Beauval, Saskatchewan, a young fellow, just finished his heavy duty mechanic apprenticeship. I helped

him through there. Now he’s going to be a journeyman and he’s heading to work in Key Lake.

There is a lot of young people that are excited. And I’d like to say thank you to my community of Pinehouse because they are aggressively working in that approach to try and steer these young people, to try and show them there’s hope, you know, but you need education first. Don’t try and go there as a labourer because there is greater potential out there, but you have to get your education.

And speaking of education I must add, with workers my age, a lot of them are working at the mine site, will be able to afford to help their children go to the cities; people that are not covered by First Nations. People of Metis ancestry will be able to afford to help them out at least for rent and what not.

Because a lot of us failed. I went to school in Prince Albert and in one month I had to come home. I was starving to death with $10 a month and there’s no way I could have made it. But now people with good pay cheques will be able to help their children.

And us, as employers, try our best to help them through scholarships, guidance. We need to give them guidance. They see hope when they look at us. If this guy can do it, if this guy’s an electrician, this guy’s an

employer, this guy's a plumber, I can do it too.

That's the role we'd like to show our young people.

MEMBER BARRIAULT: Thank you. Thank you, Mr. Chairman.

THE CHAIRMAN: Mr. Harvey?

MEMBER HARVEY: Merci, Monsieur le Président.

As a fisherman, trapper and businessman, would you say that your thinking, your position, is representative of the community in the Northern Saskatchewan?

MR. REDIRON: You know, I'll -- Rene Rediron, for the record.

I must apologize. My hearing is not as good as it used to be. I've been around equipment a little too much, but I think what you are asking me is about the trapping and the fishermen; how many people are still into it or somewhat.

MEMBER TOLGYESI: No, my question was: Do you think the majority of the population has the same point of view than the one expressed here; the same conviction and the same goals, targets and that the majority of the communities would say the same thing here than what you said?

MR. REDIRON: Rene Rediron, for your record.

Absolutely, there is a lot of people that are trying to follow our example, that are proud that an Aboriginal person could go this far on his own without any federal or provincial assistance.

But I must admit that a company like Cameco would only do so much. I'm speaking on behalf of a -- from a contractual point of view. Like they can only have so many contractors in the mines I mean.

But from there -- from me, as I grew, because I do a lot of different kinds of work for Cameco like construction -- heavy construction and building and from there I turn around a lot of times and I subcontract to the small contractors from Northern Saskatchewan, even here in La Ronge. I subcontract a lot of the smaller guys because in order to be working for the mining industry, there's a lot of different things you have -- you know, you have to go through safety is number one and experience and you know, safety of your workers.

So it took me a long time before I qualify for different programs on safety and whatnot and for a young, small contractor that's starting with say a couple of trucks, a loader or something, it's hard for Cameco to say, "We'll give you this contract." But that's where I

fit in. You know, I can give them some work and you know, it just goes on and on and on for opportunities.

In saying that, it's not necessarily for only Cameco. I'm in a position today that I can go work for the potash company. I've had offers to go work for the potash company or the government, but my hands are pretty full most of the time, so I've kind of never went to that. I did a little bit of work for some reserves for water and sewer projects.

But as an example to your question there, excuse me, the smaller contractors see hope when they see us and my colleague there that just spoke, you know, Mr. Gay, and see the people building themselves up. They're -- we'll never -- we ain't going to be around forever, so you know, they're the ones that can kind of take our place.

In saying that, that is why, you know, we need to continue on to work with industry that's given us this tremendous opportunity.

THE CHAIRMAN: So let me try to piggyback on this question. So how do you explain there is a significant opposition, even in the community, so -- to mining; particularly to uranium mining? There are a significant number of people who don't agree. They like to go to the, you know, traditional way of life and I'm

struck by your perception there is no alternatives. So how do you explain that this opposition that we heard some of it here the last couple of days?

MR. REDIRON: Rene Rediron, for your record.

I'll -- again, I will tell you the real facts of that opposition. That opposition is just a handful of people, disgruntled people that are there for political gain or personal vendetta. I know for a fact. I know I speak on behalf of my community.

You know, that is why I've never been involved in politics. I really have nothing against politics, but I don't really believe in them anyway. But I know for a fact and I can challenge it anywhere that this unnecessary game that's being played by the opposition used the mining industry as a tool in a negative way.

I can tell you today with my head up that my community of Pinehouse is very, very proud and a majority of my community is very proud of the new -- the agreement that they just signed with Cameco. You know, our mayor is a very active person that I was the one that hired him and took him to the mine site and he came back and he seen the opportunity and he got voted in as a mayor and he start working and now, you know, they're

struggling, but they're -- you know, they're on the right track.

So as far as the opposition is concerned, we're not entirely too worried about it because the opposition don't take into consideration who they're sacrificing. They're sacrificing everybody; the elders, especially the young people that want to pursue their education. Perhaps I understand a little bit of the opposition from a scientific level. I've argued a lot of them over the years in front of boards, commissions like you, down in Saskatoon, here in La Ronge and I've heard comments made about a thousand years from now.

Well, board members, I understand a thousand years from now is a thousand years from now, but at the rate we're going with technology and whatnot, you know, I'm very optimistic. Maybe one of these days scientists will find out how to deal with nuclear waste and whatnot.

But in the meantime in that thousand years, I'm quite concerned about the young people today and my children and my grandchildren, about the next 50, 60, 70 years, 100 years, because I know they're not going to survive in a traditional way of life. They're not, believe me. I grew up and working for myself and I know how hard it is. They are not interested, will never be

interest.

Perhaps maybe there’s a handful out there that do that. I know for a fact, there’s a lot of elders that do that for traditional. You cannot make a living out of trapping, neither just on fishing. You can’t because commercial fishing; everybody wants to use that resource in Canada, tourism.

So we have to look at the opportunities that are being presented to us, we have to take advantage of them.

We have to think about the future for our children, and trapping and fishing ain't going to cut it. It's education and good high paying jobs. We've suffered enough as Aboriginal people. We've suffered enough. Like I said a little earlier, we want to be part of society, we want to contribute to society, we don't want to be a financial burden.

THE CHAIRMAN: Okay, thank you.

Anybody else?

Thank you. Thank you very much for your presentation.

MR. C. NATOMAGAN: Is it my -- what's that?

THE CHAIRMAN: Are you -- you want to add some things?

MR. C. NATOMAGAN: Yes, we're doing a joint

presentation on the same theme, same general theme.

THE CHAIRMAN: Go ahead.

MR. C. NATOMAGAN: All right, thank you.

13-H13.25 / 13-H14.23 / 13-H15.22

Oral presentation by

Clarence Natomagan

MR. C. NATOMAGAN: Clarence Natomagan, for the record.

Thank you for the opportunity to present again.

I've been to all the hearings now for Cameco, at least been at the last three. I am one voice in most cases, but I believe I represent one in many people, especially for those that work in the industry and those that believe that uranium mining is safe.

I am originally from Pinehouse Lake. My academic background includes health and safety from the University of Alberta. I have an environmental and radiation certification from Northlands College here in town and a radiation certificate from the Pacific Radiation Institute from the U.S.

I spent 24 years in this industry, and Cameco has been a loyal supporter of my continued

education and career up until this year. I have worked in this industry from sweeping floors, production of uranium, health and safety management, and finally, was the superintendent of environmental protection, licensing and compliance.

I've noted before in other hearings that I have spent nine, just over nine years with the Canadian Nuclear Safety Commission at the Saskatoon Office as project officer of various facilities, which included the successful licensing and decommissioning of one of our northern sites at Cluff Lake.

I have been part -- I've been a member of the teams, I have written the programs for part of this licensing and manage the environmental systems in McArthur. I have intimate knowledge of the protocols, requirements and obligations that this company must adhere to.

I know and believe in the public involvement program and what Cameco commits to and adheres to. During my time with Cameco, I spent much of my time addressing regulatory commitments through various processes to ensure that Cameco remained in compliance as well as other licensing and compliance officers during the next licence period.

I am a strong believer in the legislative

powers of the CNSC and a strong believer of the authority that the CNSC has. I have enforced CNSC legislation; I've also been on the receiving side of those regulatory licensing requirements.

There isn't really anything a licensee can do without CNSC knowledge or approval that would significantly impact the health and safety of persons and the environment. Time and again, Cameco has made licensing commitment. It then becomes the responsibility of both the CNSC and Cameco to ensure that those commitments are carried out through to completion.

CNSC staff and the Commission, through its licence condition, continue to have the authority to ensure that any licensee remains in compliance with this licence program to ensure that the people and the environment are protected. The CNSC has the authority to impose additional obligations should monitoring show that there is a change in health and safety or environmental conditions.

Cameco continues to show that its working personnel, the public, and the environment continue to be protected. I have carried out many inspections in areas described in Cameco's Application, along with various other agencies, such as the Ministry of Environment and Environment Canada. My experience with Cameco's

management systems, both as an officer with the CNSC and with Cameco, has shown me that these systems are robust.

The licence programs are consistent from site to site. It is with this knowledge that I support the application for the issuance of a 10-year licence to the site. It is my opinion that a 10-year licence will afford the proponent the opportunity to continue in implementing its designs and its programs effectively while managing their facilities.

The 10-year licence will allow the CNSC staff to focus on ensuring that the licensee remains in compliance with its management systems, through inspection, rather than spending months re-evaluating programs and systems and historical data so that they can -- we can hear the same information over and over again.

Cameco has, in my opinion, a proven track record on compliance to federal and provincial legislation. The CNSC has a recorded track record on ensuring its licensees maintain compliance to its legislation.

The CNSC has historically used shorter license terms to ensure enhanced compliance to bring licensees back to the table to report on that performance. But the licensees now have sustained environment performance in their internal reporting, and there are

internal reporting mechanisms.

Therefore, it only makes sense that the Commission increase the licence term. This will allow all stakeholders to focus on ensuring that licensing commitments are effectively implemented and followed up.

That said, and this is not all, you know, roses for me personally, the CNSC states that it has a reporting mechanism onsite performance and that they will continue to inform the public on CNSC activities.

I believe this is not the best way to do things. Reporting on CNSC activities really limits the opportunity for the public to be heard. Will the internal reporting provide opportunities for the public to effectively comment?

Internal reporting to the Commission should not have been eliminated. The 10-year licence effectively eliminates the PFP for 10 years at a time, and the CNSC must figure out how it will continue to allow the public to effectively participate in any intervention.

And finally, I realize it has been a topic for many people, for many contractors, that socio-economics is not in your mandate. But I'd like to inform Cameco that it is their commitment to socio-economics that allows companies, such my hometown businesses like PBN in Snake Lake, to participate in opportunities.

It is Cameco's commitment to hire qualified Aboriginal people. I do not understand why a qualified contractor, an EMS-certified auditor such as myself, was the first to be cut from those types of opportunities, while the company continues their relationship with some other organization.

With that, I thank you for the opportunity to speak to the Commission.

THE CHAIRMAN: Thank you.

Questions? Dr. McDill.

MEMBER McDILL: Thank you. The 10-year licence is new for this kind of facility. How are we -- how is the Commission going to make sure that local communities can participate over that 10 years?

MR. JAMMAL: Ramzi Jammal, for the record.

In my opening remarks, we talked about the 10-year licence and the frequency of review. Even though the intervenor spoke about mid-term review, the mid-term occurred, as a mid-term, on average between three to five years, but frequency roughly three years.

The plan, is on the 10-year licence is to put forth to the public, on a yearly basis, a performance report of uranium mines and mills, allowing the public to intervene through the process of the Secretariat.

So that's where the frequency is

increasing, on a yearly basis. And the report itself is not just a report on what's being done; it's a report with respect to follow up actions of the conditions of the licence or the licence condition handbook.

So collectively, the report is putting the industry, uranium mine, together where the public will have a comprehensive view at a more frequent basis. So the 10-year licence term, as a matter of fact the annual reporting, has increased the engagement of the public through the annual reporting.

MEMBER McDILL: Do you think the communities, not just this community, but do you think CNSC's community as a whole will understand how they can participate on an annual basis?

MR. JAMMAL: Ramzi Jammal, for the record.

The intent of the annual report is to –- well, the process of the Secretariat with respect to publication of the annual report and we will be going out to the communities on a periodic basis. When I say periodic is the commitment from Staff to the Commission is, we will be visiting the communities that are in the proximity of the licensed facilities

So for example, we might be back in Saskatchewan, in a matter of hypothetical, three to four years, based on the rotation. We could be in Port Hope

area communities and so on and so forth. So we will be -- the intent of the plan is to visit the communities that are in proximity of the licensed areas.

MEMBER McDILL: Maybe I could go back to the intervenors.

MR. LeCLAIR: I'm sorry, Jean LeClair for the record.

I also wanted to note as we presented on, it's now a couple of days ago, but CNSC staff also visit the communities on at least twice a year, roughly once or twice a year. We also come to meetings with the Environment Quality Committee where we always communicate with them what is going on. Part of those communications will be discussing the annual report and the results of the annual report and at the same time we make sure that we remind people how they can participate through the intervention process.

MEMBER McDILL: Thank you. Now I'll go back to the intervenors.

MR. C. NATOMAGAN: So I too as a CNSC inspector have been involved in many of those trips to northern Saskatchewan conveying the message that the performance of the companies is well understood and well handled.

The difference between that exercise and

the exercise of providing the necessary funding to individuals, as myself or any other group being it the band council or mayor and council from different communities, is that most of these people work and it's going to take them a few days to review annual reports so that they can effectively participate in any intervention or any type of performance reporting that the CNSC will submit on an annual basis.

I mean I can take that three inch binder and read the data and provide effective questions to the Commission. Me, sitting in front of the explanation from the mining companies or CNSC staff does not give me that opportunity. Ten year licenses effectively takes away the program funding that the CNSC currently offers.

MR. JAMMAL: Ramzi Jammal, for the record.

As we stated, obviously the intervenor is looking at the impact of the ten year licence with respect to the participants funding of the program.

Again, this program is under review. The Commission is looking at all avenues, to ensure -- Because transparency is our paramount, the engagement of the public, and the process with respect to the PFP program. Or I can tell Clarence to stay tuned; I will update him accordingly.

MEMBER McDILL: This program is being

reviewed but are you out for consultation in the communities about how that review can go forward? I'm getting a nod.

MR. JAMMAL: Ramzi Jammal, for the record.

Yes, we will do. Again it's for benefit but it's not -- the existing process and we have to evaluate and make sure that there is an added value to the Commission from the participants from the program, and, that's the key point here is the added value with respect to the decision-making of the Commission and the input for staff and the Commission in general.

THE CHAIRMAN: Questions? Ms. Velshi?

MEMBER VELSHI: With a fairly unique situation that you're in where you worked for the licensee, the regulator and a member of the community, is there any recommendation that you would make to us Commissioners on what additional things could the licensee or the CNSC staff do to better address the concerns that we have heard from members of the community around radiation or the mining industry? What additional things could be done to address their concerns?

MR. C. NATOMAGAN: Well first of all, there is very limited understanding of the technical and scientific information that is produced from both sides, the proponent and also from the Commission side, the

Commission staff. You know, I've worked in the industry for that long and already have that understanding through practice and experience.

The current process right now that's being utilized by the Commission is the Commission staff have a list of impact communities. The Commission staff have a list of, you know, intervenors who are always there, intervenors from the Saskatchewan Environmental Committee, Sierra Club.

So if we develop this process or if we undertake this ten year licence, a PFP is being reviewed so we don't know what that outcome is. It's nice to say you can send a three inch binder full of scientific and technical information to band and council at every reservation and every municipality and expect them to read the information for free or, you know, take time off their job to review.

Unless they have a significant interest in it, you're going to have very limited public input because they're just going to sit there. I've sent them out too, as an inspector. I've sent that information out and received only comments from people who had a vested interest and those are the people who oppose the industry.

So how do you fix this? We need to sit down and say, seriously look at your PFP because right now

the PFP gives a lot of opportunity for community such as Pinehouse. It gives me the opportunity to intervene and it gives other organizations, PBCN. They get that opportunity to review that by putting together a committee and putting together maybe an advisor/consultant who does that work for them but they can't do it for free.

And essentially that would be an analogous, they're saying you're going to do this for free because now it's a ten year licence, we're reviewing the PFP, there's no definitive answer in that process.

MEMBER VELSHI: I wasn't very clear in my question. Mine wasn't so much on the intervention process, it was more on the awareness education.

What kind of impact is the mining industry having on the environment or the food that's available, the country foods and so on. And as you've heard over the last couple of days, there is a certain segment of the community that is quite anxious and concerned about it and how can we better address those concerns?

MR. C. NATOMAGAN: Therein lies the challenge because you need to develop that trust in the community in order for community members to believe you. And outsiders, they don't garner that trust just because they come and tell you what the performance is of the company or what, you know, what parameters are in our

foods, in our country foods, what parameters are in our plants or in our waters?

I know the presentations are usually quite short and they describe that, you know, they describe parameter levels for the food and the water but the majority of the people that are listening do not understand that type of information.

The only thing they can do is for somebody to convey it in a way where people can see, not just hear, can see what it is that's happening to the water. If it's still good, alright, you have to show the individuals but therein lies the challenge.

So it's people who understand the process. It's people who can go and garner that trust to try and convey the message that the mining companies are not contaminating our food. The mining companies are not contaminating our water. But also identify that if there is some risk developing, don't sugar coat any of those because you lose your audience.

THE CHAIRMAN: Dr. McEwan?

MEMBER McEWAN: No, those are my questions.

THE CHAIRMAN: Okay, just to follow up on this, to both of you, if the community doesn't trust the outsiders, that means Cameco, CNSC, Saskatchewan government, who do you trust when you have to deal with

highly technical issues such as radiation? Radiation is by nature technical and complicated. So how do you explain the nature of radiation in uranium mining to the community and who are the best-trusting kind of messenger?

MR. REDIRON: Rene Rediron, for the record.

I wouldn’t honestly say that we don’t trust Cameco. I think, you know, from my knowledge over the years, I think Cameco did a good job, you know, bringing in these different studies and community meetings, and, they regularly come to the communities.

And like I said earlier, we have to ask some questions in not on a very professional, highly educated way. But we do get our message across. And I don't really see any fear in a majority of people concerning the environment, because I'll speak for the people that work in the mine site. We're there, we see our own people monitoring the water and what not. Different kinds of monitoring.

And even when they come back home, I myself really haven't heard: "Boy, you know I'm really concerned about this. I'm really concerned about that." Like, so, for us to be very worried about it, no were not. Because you know, like, I wouldn't waste two minutes of my time if I sensed there was something not right. I would get to the bottom of it. Like I'm not afraid to speak. So, and

I know the right department to get a hold of if my questions are not answered satisfactorily.

THE CHAIRMAN: Thank you.

MR. C. NATOMAGAN: I don't disagree at all with the idea that we're afraid to do anything with what we have in Northern Saskatchewan. I hunt. I spend a lot of time hunting with my kids and I've hunted down the Key Lake road. I've hunted right next door to Key Lake and McArthur and I've harvested food from those areas. I have no worries about that kind of stuff.

The actual -- the idea of submitting technical information to a community and expecting a response, an effective response back or commentary back to the Commission, so that they can utilize that information. That's where the breakdown is in terms of communication, dissemination if you want to call it that, alright?

You've got to work with the community leaders in terms of how can you address this? And I'll pick Pinehouse for example.

If the mayor has that information, he's not going to go out and hire a consultant and spend all that money out of his own pocket, I'm assuming that, or from their general revenue.

There has to be a process in place which you currently have for this hearing, for effective

interventions where people, community leaders and other people can work with advisors or somebody else so that they make it -- the information understandable and presentable to community members.

THE CHAIRMAN: Okay, look, thank you. We have to break for lunch.

MR. WILLY: One second Mr. Binder. Sean Willy for the record.

I want to add to Clarence Natomagan. With the newly signed collaboration agreements, there is funding that could be available for the communities to apply for the -- you know, work with the documents prior to the release of the annual reports.

THE CHAIRMAN: Okay. Thank you. You have the final words.

MR. REDIRON: René Rediron for the record.

In closing, I kind of saved this for the last. On behalf of all my workers from across Northern Saskatchewan and some from Southern Saskatchewan, we fully support the three applications before you and we're very confident that Cameco will continue to protect our environment. Thank you.

THE CHAIRMAN: Thank you, thank you very much. We are going to break now for lunch, for one hour, which will bring us back at around 12:45? At 1:45 p.m.

sorry.

--- Upon recessing at 12:44 p.m./
L'audience est suspendue à 12h44
--- Upon resuming at 1:49 p.m./
L'audience est reprise à 13h49

THE CHAIRMAN: Okay, we are ready to proceed. The next presentation is by the Committee for Future Generations, as outlined in CMDs 13-H13.24, 13-H14.22 and 13-H15.21.
I understand that Ms. Debbie Mihalicz, I'm not sure I'm pronouncing it right, will make the presentation.
Please proceed.

13-H13.24 / 13-H14.22 / 13-H15.21
Oral presentation by the
Committee for Future Generations

MS. MIHALICZ: My name is Debbie Mihalicz. I'm here representing the Committee for Future Generations.

Our committee is a cross sector of the population of Northern Saskatchewan, in terms of culture, heritage, knowledge, skills. We're also a cross sector in

terms of approaches to a sustainable job creation, to sustainable economic development.

So I would like to address the prior intervener. We are never stuck. We always have a choice. And if we get a chance to express ourselves, we get to share that knowledge and develop a truly sustainable, economical future for our people.

We've heard a lot, in the past couple of days, about how important jobs are. We've heard statistics, in terms of environment, in terms of effluents, contaminants.

What our committee is here to represent today, is to address the elephant in the room, which is the ongoing continued abuse of human rights, which is the only way that this industry is advancing its agenda. When I say abusive human rights, I'm talking about withholding of information and supressing the voice.

If you're familiar with the term "lateral violence", industry has become a vehicle for the lateral violence in our communities.

What we've learned on our journey, is you can't have environmental abuse without human rights abuses happening, paving the way.

I'll quote directly from the Declaration of Indigenous Peoples Rights and Freedoms, article 29.2.

> "States shall take effective measures to ensure that no storage or disposal of hazardous materials, shall take place in the lands or territories of indigenous peoples."

These last five words, are what we are demanding.

Without their free, prior and informed consent, if this is so safe, why is there such a concerted effort to be suppressing the voice of the people in the communities?

What I'm referring to, when I say suppressing the voice and withholding information. There have been two supposed collaboration agreements signed, Pinehouse and English River. I live -- personally, I live an hour away from each of those communities.

Our committee is made up of members of those communities. They have firsthand -- unfortunately, they have firsthand experience of what it means to have the spirit of your community ripped to shreds.

Proponents were in and engaging with -- not with the community. I would ask Cameco to never use the word “community”, or the CNSC, when you’re talking about who you’re engaging with. These collaboration agreements happen behind closed doors. They started years before the

signing. Industry engaged with the administrations of those communities, without the knowledge of the people in the communities.

For example, the collaboration agreement in Pinehouse was signed on December 12th, 2012. The first community meeting at which the public was informed of that agreement was on November 13th, less than a month prior. And at that time, they were told the signing would be December 31st.

When the members of the community, certain members, attempted to express concern, to ask questions, those attempts were, quite frankly, quite cruelly put down in public. When they saw they could get nowhere that way, an attempt at an injunction was made just to buy some time, to have some time to understand what was going on. The signing got moved up to December 12th.

In English River, the signing happened on May 31st, 2013. The first public meeting held to inform the members of English River was May 22nd and 23rd.

A member of English River First Nations wrote directly to Cameco's CEO, Tim Gitzel. I have a copy of that letter, if you would like it. She explained to him, very clearly, "If you go ahead and sign this agreement, it is without the knowledge of the people in this community. We have not been consulted. We need

time.”

That letter was replied to by Mr. Gitzel. We know he read it because he replied directly to the vice-chief, totally circumventing the writer of the letter. And the signing went ahead.

Again I repeat, if this is such a safe operation, why is there such an attempt to exclude community members? That’s all they were asking for, was their right to free, prior and informed consent. Why the rush?

Through those collaboration agreements, Cameco can sit back now and watch the people police themselves. Because what’s at stake now? Jobs. Promises of money that are mostly going to contractors.

Also, we find it no coincidence that these collaboration agreements were signed with communities with administrations -- I’m sorry, I’m -- with administrations who are also in site selection process with the nuclear waste management organization.

It’s in Cameco’s best interest, isn’t it, to get a repository in the ground? The nuclear industry is in a pretty sorry state globally right now. There is no such thing as a deep, geological repository yet operating in the world. And if they don’t get that, they might not be able to continue producing that most lethal

substance. They want it out of sight, out of mind or, even better, reprocess it into plutonium.

So with the collaboration agreements, there's the jobs in the mines. Now the people -- of course, the nuclear waste management organization is being painted with the same brush now in terms of the average person in the community. "I'd better not speak out against nuclear waste coming here, because I might lose my job in the mine."

And my first -- I have videos here of members of our community, of our committee, speaking to this now. Can I have my ---

(VIDEO PRESENTATION)

MR. SMEREK: (Inaudible) of the northern uranium development that Cameco has set forward. It is the nuclear fuel cycle. The nuclear fuel cycle means that there will be storage or reprocessing of nuclear waste.

What we've noticed here in the community is that NWMO has come into the community three years ago and done a profile on all of us, asking us about health issues, economic growth, and so on. The package that was put together we feel has been delivered to Cameco at this point, and they show a vested interest to be able to move forward with the storage, the nuclear waste, and that's where we believe that they have come forward and financed

the collaboration agreement with our community.

(VIDEO ENDS)

MS. MIHALICZ: The next speaker is also a member of our committee, speaking to what this treatment by a corporation does to a community. This is Dale Smith of Pinehouse.

(VIDEO PRESENTATION)

MR. SMITH: A company, or a corporation to come in and say, “We want to make a difference.” And they pride itself in making a difference in our community. And I look at its fruits when it comes to environmental impact, safety. And the things that I hear from the workers, for the last how many years, I got two brothers that work there, I have four brothers that at one time worked at the mines; I hear stuff on a very personal scale.

And this what we hear, and yet to be able to process that information and say that they want to continue, what guarantee do we have that there’s safety when things are happening in our community that are way beyond our capacity to understand, and still have a community spirit?

MS. MIHALICZ: The next speaker is an elder who has been attempting to express his opinion to the nuclear industry. And you can hear what he says about

what happens. Okay, I'm sorry, it doesn't look like that one is going to work.

The next one up is another attempt of the community -- could I have a tech person here, please?

(VIDEO PRESENTATION)

MR. PEDERSON: If we teach our young people about protecting and preserving and respecting their land, we -- any one of us elders that go with that, are not respected no more because we are stopping something they don't want us to do.

Today I'm past 70 years old. I have lost that respect from these people. That -- not everybody, but from the people that are trying to keep us quiet about respecting the land, preserving the land, protecting it and whatever.

I have been spending all summer putting signs up on the road; putting signs up with the logo of saying no to nuclear waste, no nuclear waste storage in Saskatchewan. This is my freedom of right. That's taken away from me because every time I put a sign, somebody from that area will go up over there and pull it down. I went through five signs already; I'm going on number six now.

(VIDEO ENDS)

MS. MIHALICZ: The next member of our

committee speaks to what is happening with our youth in our communities.

Oh, I'm sorry. This is a public meeting where the petition against nuclear waste is being presented to the administration.

(VIDEO PRESENTATION)

MS. MISPONAS: You'll acknowledge you're evil based on something. They said, "Wait a minute. Hold it. The model used to be that it would be, you know, not only scientific evidence (inaudible). Let's listen to them first." Look at this agenda. You stacked it. You stacked an agenda so that you are hoping that nobody would ask about it. That no one would think to ask about nuclear waste.

(VIDEO ENDS)

MS. MIHALICZ: I will -- if you're not aware, over 50 percent of the people in Pinehouse signed a petition against the nuclear waste. But it's proceeding being the gun is greased, so to speak, with the collaboration agreement because no one dares speak out against it now because of the jobs with the collaboration agreement.

The next is speaking to the impact on the youth. If we're speaking about jobs, this member of our committee speaks to that.

(VIDEO PRESENTATION)

MS. DOCKEN: What I would like to see the CNSC do is to protect the rights of our youth because at the present time, they're being bombarded by all the propaganda of the uranium industry.

Cameco is in our schools. They're in our universities, our hospitals, our airports, sport and recreation facilities. They're everywhere. They come into our schools and do aptitude tests for jobs in the mine and they make promises about good paying jobs and benefits. And while that might be true, the students aren't given all the facts about the radiation that they're going to be exposed to.

You know, I've been working for almost 30 years. I have my degree in education and a diploma in management and some of these youth leave without even a grade 12, become labourers at the mine and they come back with higher paying jobs than I've ever had.

And why is that? Is it because they jump a plane and they go to the mine and work for a couple of weeks? No, it's because they're facing risks and those risks are health risks. But most of them don't even realize it. Most of them aren't even taught about those risks.

The gestation period of ingested radiation

can be up to 20 years. And these youth, they go to the mines; they'll only be in their mid-40s with the possibility of getting cancer. So is that fair?

(VIDEO ENDS)

MS. MIHALICZ: The next member of our committee to be on this video is a First Nations who's primary -- his priority is the water.

There was talk earlier that the water is cleaned up before it's re-entered into the environment. Our question is, where did the contaminants go then?

The contaminants will be with us forever. Just because you bury them under waste rock, the time will come when those are no longer monitored and we will be living with that. Our grandchildren will be living with those contaminants. So regardless of how clean your water may be once you treat it, those contaminants are with us in our environment forever.

So our next member of our committee speaks briefly to the importance of water in the First Nations culture.

(VIDEO PRESENTATION)

MR. MORIN: Water is sacred. Water is the element of life and it sustains us. It keeps us alive.

I've learned these teachings from our elders. And our elders, they say that it takes quite an

amount of water to process this uranium and that it sits in our tailings ponds and it leaks. It leaks into our aquifers, our environment.

So for the sake of our animals, our fish, our future generations, please save our water.

(VIDEO ENDS)

MS. MIHALICZ: So my closing comment, just before I play you the last couple of members of our committee making statements, you can talk jobs, you can talk safety for seven days straight. What's missing here, if you miss this -- the CNSC, you're about safety, if you respect the Aboriginal traditional knowledge, the ATK, safety is holistic. Safety isn't just physical. It's spiritual. It's mental. It's emotional. It's social.

If you could see the impact happening in our communities just because people are not being given a voice. If you miss this, this spirit of this -- the way this happened could happen to any community. Is that what we want? Is that the legacy we want to leave?

So our last two members of our committee will speak to that.

(VIDEO PRESENTATION)

MR. PAUL: There was a woman who was a seer amongst our people. Her name was Gaichei (phonetic) or heart of the berry branch.

She told some prophecies which warned us. This warning is also for all of the businesses that want to make a living, that want to make technological gains at the expense of the nature because with the elements that they call uranium and that our elders call the black stone, we'll have some powers that no one can control.

And those powers, once released, will bring a lot of sickness, a lot of death, a lot of destruction and it has already impacted on us as people because our people know -- they know and understand the science of the natural world much more intimately than western knowledge.

MR. SMEREK: With that process in mind, it has removed the people's rights and freedoms to ask questions, speak out, on the collaboration agreement is when industry leaves this area, they will leave a burden for all generations to deal with, health issues, environment issues and the cost of cleanup.

The dynamics of the community has changed Pinehouse that there is a scramble and there is a silence on talk of future that I've never known before like this. And this is from my own people, my own community.

And it breaks that companies can come in and do this without adequate consultation at all levels. We are left out of the whole process. Just a bunch of information we're given.

But what do we do with it when no one is listening?

MS. MIHALICZ: The Committee for future generations is opposed to the relicensing and expansion of the three Cameco uranium mines due to the fact that the people were not consulted.

THE CHAIRMAN: Okay, thank you. Thank you very much.

Who wants to start the line of questioning here? Dr. Barriault?

MEMBER BARRIAULT: Thank you for your presentation.

Did the people who signed the Collaborative Agreement, are they your elected Chiefs or is it just a committee of Pinehouse, for example? Are they your elected people?

MR. SMITH: They are elected. I'd like to go more into, but it's difficult to speak on matters that are personal coming from the community because the leadership, like the mayor is my brother-in-law. So it's tough to -- I ran against him on the last election.

So dealing with the information we're receiving and trying to present it here today and keep my emotions intact, I look at the leaderships in all communities and just like what Sierra Club just presented

and I just ask him a question. Has any of the leaders anywhere asked you anything about what you're presenting and for him to say no.

At least, curiosity, well, if somebody threatens my child, I have instincts as a father to protect my child. And even information like that now, to react to it, while this stuff is happening, grass roots -- these are berries that I picked with my family.

Last summer I picked blueberries within sight of the mine site of Key Lake and I've been feeding this to my children. So hearing information about contamination and trying to understand millisieverts and tailings, I have to educate myself as a parent.

We're all trying to do that in our communities. So we want information that is relevant, that is real because this is real. This fish, it's real now. It impacts me now, my body, my children, and I look at my leadership, not on how legitimate they were put there, but do they understand the information?

Is it getting to us? I am a fisherman and wild rice grower. I chose not to go to the mines as my employment as hard as it is to make a living being a fisherman. My wife is the license holder, but I fish. I work in the packing plant in Pinehouse.

So I see the effects and we hear stuff from

workers because they're young. They want to know. They want information when they go there. Yes, nobody wants to really talk about the fear they have of exposure.

So we want to understand it. We don't often get the right information, that's true. And this is the language of industry and safety. And I just want to eat and feed my children and know that it is safe now.

My mom died of cancer twenty-some years ago. My dad's fighting it now. I don't want it. I don't want it for my children. I'm here today to say, is this safe now?

Can you convince me? We want a relationship with industry based not just on money or economy or to be self-sufficient, but what we have now here in Saskatchewan, this land that we have is so beautiful. I fell in love with it ---

THE CHAIRMAN: Okay ---

MR. SMITH: I just want to finish by saying ---

THE CHAIRMAN: I just want to answer some of the questions you're posing here as you go along here.

MR. SMITH: Thank you.

THE CHAIRMAN: We have a regulator and we're going to here from the Ministry of Environment. They're not industry. They're regulators.

So if they tell you it’s safe. Will you believe it or not? We’ve heard -- we’re going to hear in two hours from the Ministry of Environment. I’m just trying to figure out, who do you trust to give you information that you will believe in?

And one other thing, I’d like you -- we do not want to get into a debate -- the political debate in your communities between your leaders and you. This is really not our mandate.

What we are interested really is in the facts that you are asking. Is it safe to eat the berries? Is it safe to eat -- that’s what we really would like to talk about.

MR. LEE: I’d like to thank you for the opportunity to speak here today. My name is Bryan Lee. I’m the local President of the Fish Lake Métis and a member of the Committee for Future Generations. I’m also actively involved with a group in Prince Albert called RPIC, Renewable Power Intelligent Choice.

I’d like to offer just an opinion or an expression on your question that you’ve just posed to Dale in asking him if he would trust the reports of the CNSC staff or the reports of the Ministry of Environment.

I would suggest that we’d be way ahead of achieving that trust if in fact we had scientific

independent research accomplished on this whole issue of pollution of the uranium fuel chain.

THE CHAIRMAN: Okay, that’s something that we can actually maybe address. Where do we get the specific data and who measures it? Are they done through a third party and verified?

Staff? Mr. Gates?

MR. GATES: EcoMetrics produced the Status of the Environment report in 2010 for Key Lake and they compared the data on the high volume samplers which have a filter in them that collect for 24 hours air circling the mine site -- or, the mill site, mine site, the old mine site. So that is information that would allow us to determine how much radionuclides are being deposited from the site into the natural environment. And basically, I’m just going to read what’s in the report here. It says:

> “The Key Lake Status of Environment Report done every five years was prepared by Ecometrics...”

That’s 2010, e-docs number 3659506.

> “...and still shows that the original 1979 environmental assessment predictions of minor or trivial effects from air emissions remain valid for the high volume sample data

collected at five locations."

And that's basically if you went around the wind rose for this site, north, east, west, south, that's where those would be located, and one near the mill.

The conclusion is based upon comparisons between the normal background airborne concentrations for the long-lived uranium series and the decay products of radon. And the comparison was to the 1988 United Nations scientific committee on the effects of atomic radiation report on sources, effects and risks of ionizing radiation.

And the 2011 data also show on the high vols that, for example, lead 210, which is the end of the chain for radon that gets deposited onto the plants and the berries out in nature, I guess, that the levels are at background or below. So we have this data, it's just -- it's in the reports, the status of environment reports.

So the terrestrial environment, we know, is protected. And then every animal in the food chain, including man, is protected at those levels because they are at background. And we also know from the effluents that are treated that the treated effluent that is released to the environment, the levels are very, very low for the radionuclides. So the aquatic environment is being protected downstream of these mines.

So there's an example of a United Nations committee and comparisons that are done by an independent third party, Ecometrics 2010.

MS. EATON: Sarah Eaton, for the record.

The other thing I would like to add is that we also have the Eastern Athabasca Regional Monitoring Program, which collects country foods and analyzes country foods. We will hear from Dr. McCullum today, he'll be able to talk to that.

And also, we've also discussed over the last two days the Athabasca working group, which also collects community samples of country foods and those are analyzed. And those reports are available online or you can contact our office at any time and we can help you interpret those reports.

THE CHAIRMAN: So I think what you just said is all of this is to say there was studies, independent studies, and concluded it was safe.

Back to you.

MS. MIHALICZ: May I ask a question? How many tonnes of tailings collectively are there in Northern Saskatchewan at this moment?

THE CHAIRMAN: Okay, you asked another question. I will get to that in a minute.

MS. MIHALICZ: Because if we're talking

about safety, these are results for today. The tailings will be with us forever. What guarantee -- Dale held up this fish and said, “What guarantee?” We’re also talking about our future generations’ fish. What guarantee ---

THE CHAIRMAN: Okay.

MS. MIHZLICZ: --- can the Cameco give us that 200, 300 years from now, after the monitors are gone, we have buried hundreds of thousands of tonnes of tailings, radioactive, that are now totally accessible by groundwater, potentially? The only constant is change. What guarantee do we have that the tailings that Cameco mines are leaving with us will never get into our groundwater?

THE CHAIRMAN: Okay. So I would rather ask -- I don’t know if Cameco can give it a guarantee, but the regulator better give you their guarantee. So what is the answer to that question?

MR. LeCLAIR: Jean LeClair, for the record.

So all tailings management facilities, there’s detail modelling that are done for performance for those tailings facilities in the long-term. I think it’s important to remind people that the material, those tailings are actually the radioactive materials that were already present. So they’re not created.

Understood that they’re in a different

form, so it’s important they be managed in the long term. That’s why there’s very extensive engineering that’s done to design the facilities to contain the tailings. And there’s a lot of research and work that’s done to study the performance of those tailings.

So those are part of the environmental assessments that have been done in the past and all the modelling work that’s done to ensure that the environment continues to be protected.

THE CHAIRMAN: Okay. Questions? Dr. Barriault, I thought we stopped at you last?

MEMBER BARRIAULT: No, I’m fine. I had my answer, thank you.

THE CHAIRMAN: Dr. McDill?

MEMBER McDILL: Thank you, again. I’d like to start by saying this is an entirely magnificent and beautiful part of the world. This is my second time here.

Whenever we hear the community is split, or disrupted, or struggling, divided -- thank you -- we hear it. We understand that many of us have families that are divided or struggling. So we understand at a personal -- sorry, maybe the people at the back can’t hear. We understand at a level of the heart what you’re saying.

I think I’d like to ask staff to try and -- the fish and the berries, I think we’ll hear something

more about in a little while -- to talk about the tailings a little more, the water, the clean water. We had a question about the tailings and where does it go. I think we can try and answer that a little better for the community.

It's difficult for us to know how to address your feeling about not being consulted. That's really a challenge because this is a community decision, isn't it? I don't -- you say it's not.

So maybe then I can ask -- I'll ask, okay. I'll ask you to reply to that. But maybe I can ask staff one more time to try and talk about the tailings and some of the other concerns this group has brought forward today.

So Sierra Club, let's go back to the one example I mentioned earlier, where we came out with 226. Then I'll go back to the intervenor.

MR. GATES: Tom Gates, for the record.

And I'll use Key Lake as an example. There's two different types of tailings areas at Key Lake. The first area where the tailings were deposited was in an above ground tailings management facility. And the way that is constructed is they take till or earth and they add bentonite clay to it and they line the bottom of -- on the surface of the land with that. And basically, that

stops any water going through, so as it gets wet, it stops.

And they do the same thing after that's down, they put a berm around it, a very tall berm with bentonite added to it also, which is a clay. It's used to seal things.

And then on top of that is a layer of sand with pipes in it. And this is very general, the way I'm talking about it. And those pipes collect any liquids that come out of the tailings as they're deposited into this square bermed area.

And that water, or the contaminated water reports -- it's called pore water -- reports to a sump and the sump pumps it to the mill for treatment before it's released under highly strict regulatory limits out into the environment. And so the concept there is, this fills up with tailings. As the tailings get old and they're -- they lose the water in between the particles, and that's drained off through this bottom drain system, and any other precipitation or rain that goes on top of it, the same sort of thing.

And then at the end of the operation when this is filled up, they go into a decommissioning reclamation situation where they'll put a layer of sand on top another layer that stops liquids from going through

into the tailings so that there’s no water to carry away any of the contaminants.

And then on top of that, of course, is earth so that trees and plants can be grown. And the concept is to create gullies and armour those gullies with rock so that those gullies stay, like streams would stay in a dried-out stream.

So it directs water off the top of it, out into the natural environment, and that water won’t be contaminated because it’s drained off the top. And they’re looking at landscape designs and objectives for that so that it looks like the natural habitat. So that’s how that system works.

The other question, of course, is radon gas, which comes out of the tailings and into the air. It floats across into the natural environment and the levels of that when it decays and is deposited on the berries. And we talked about the levels of radon earlier, and they are at background, very close to the mine site, if not at the limits of the lease.

So that’s how the radionuclides are contained in that facility. And radon gas, with the cover, doesn’t come out of this system very well at all. It will attenuate or decrease the amount of radon gas coming out.

So the environment’s protected from the above-ground tailings management facility throughout its -- through its lifecycle, up to decommissioning.

After decommissioning reclamation, the province -- if the CNSC releases the tailings area to the province and is assured that it’s in a stable state, the province has what is called a fund for monitoring and maintenance of the facility for a long time. And I won’t go into the requirements for that fund because I’m not an expert in it.

There’s also another fund called a maximum failure fund, and that has to be a financial assurance that’s put to the side for future generations.

So those funds are also going to be established for the in-pit tailings management facilities after decommissioning and reclamation.

With the in-pit tailings, if you can imagine a mined-out area where they’ve taken uranium ore out of the bottom of the pit, what they do is they fill the pit with tailings. But before they fill the pit with tailings, they put in what is called and under-drain, which is a pipe. And on top of the pipe is filter of rocks, et cetera, to stop the tailings from going into the pipe.

But the pipe pulls the water from the

bottom of the tailings so that the pore water is out of it at the end of the life of the facility. And that water of course is pulled off and goes to the mill for treatment.

Now, coming towards the end of the life cycle of the pit, the in-pit tailings management facility, what happens is the pressure of the tailings on itself pushes all of the pour water out. And then on top of that, they put a two-metre layer of sand. And they also have a water cover.

And as they put the sand on top of the tailings, through the water, it grabs the radionuclides out of the water. And in the first year most of the contaminants are gone. And it takes up to about 13 years for the radium that’s in that water to get to Saskatchewan surface water quality objectives for the protection of aquatic life.

At that point, the tailings management facility has a water cover on it, it’s just like a lake. And during this whole process, any groundwater that is around -- and this is also during the operation -- any groundwater around this pit is drawn down through a ring of groundwater wells and it’s pumped and treated through a reverse osmosis system that is dumped into Horsefly Lake. And its ultra-pure water.

So that pumping system remains for another

15 years after the water is cleared up in -- on the surface of the tailings management facility. And at the end of that time, it's hoped that they can turn off that pumping system and release the tailings management facility to the Government of Saskatchewan.

And that's my tailings story.

THE CHAIRMAN: Okay.

MEMBER McDILL: I have one more before I go back.

The intervenor said that she doesn't believe that there are any deep geological repositories. I wonder if I can ask staff to state, tell me, at this stage, where is Finland on their DGR? For fuel.

MR. JAMMAL: It's Ramzi Jammal, for the record.

Just to answer the question, multiple DGRs exist in the world. I'll name Sweden as one of the countries, Finland is one, and Germany has one. And then the DGR process, with respect to Finland, with respect to high-level fuel -- I'm going by memory now, so I don't have the exact accuracy, but they start to put, from a design perspective, it's complete. And then they are working towards the storage of the fuel in the DGR.

MEMBER McDILL: The intervenor's question was on fuel, not on -- your comment on DGR was on long-

term fuel, storage of spent fuel.

MS. MIHALICZ: See, what you need to understand here, I started out with the elephant in the room. If people had had a chance to be involved in these agreements, these questions could have been asked before the administration signed.

Now that the agreements are signed, we're getting whipped by both ends of the nuclear fuel chain now, because of the jobs and that that are getting promised. It's not just the tailings to worry about. Now it's the threat of nuclear waste coming.

THE CHAIRMAN: Can we get something clear? The licence renewal has nothing to do with the cooperative agreement. This mine has been operating -- those three mines have been operating for years. They just came to the end of a licence, that existing licence.

All of the cooperative agreements is Cameco negotiating with those communities; it is nothing to do with whether their operation of the mine is safe, which is the purpose of this hearing. And it's continuing the discussion of an existing operation that's been going on for years.

So I don't try to minimize the difficulties you have in your communities to come to a consensus. All I'm trying to share with you is that we are looking for

the safety dimension of whether we can feel comfortable in allowing Cameco to operate the way they've been operating for the next 10 years.

MS. MIHALICZ: The way they've been operating?

THE CHAIRMAN: Right.

MS. MIHALICZ: Did you see the video of the signing of the English River? Those agreements obliged the people in those communities now to support any existing and future projects.

MR. WILLY: Just for the record, Sean Willy. I want to make it clear on the record that these collaboration agreements build off of 25 years of working with these local communities. They codify, formalize, and better an engagement process. They are in no way tied to then nuclear waste management process.

The Pinehouse Metis agreement is publicly available. There's not a mention of the nuclear -- NWMO process with -- on that agreement, or with any agreement Cameco has ever done.

THE CHAIRMAN: Okay. We've got to move to another line of questioning. Ms. Velshi?

MEMBER VELSHI: Actually, maybe it's still the same line of questioning.

Do the collaboration agreements require the

communities to support the licensing process for the uranium mines and not express any concerns with the operations of the mines?

MR. WILLY: Sean Willy, for the record.

The communities agree within the collaboration agreements to continue to support Cameco and AREVA's existing projects and activities that take place in the applicable traditional territories, so long as Cameco and AREVA continue to meet our consultation, our regulatory and legal obligations.

So, for instance, we continue to engage the Environmental Quality Committee. We continue to engage on project specific engagements through EAs. We continue to do our annual northern tours. We continue to engage with our community liaisons.

The communities, of course, retain all the rights of their leaders and members to raise concerns of any kind to the companies through dispute resolution process now outlined within these collaboration agreements, to the regulators or to governments and to seek to have those concerns meaningfully addressed.

THE CHAIRMAN: Thank you. Anybody else?

MR. WILLY: Could I say something or ask a question?

THE CHAIRMAN: Sure.

MR. WILLY: One of the things that I'm wondering about is I've never been involved in a process like this, so I've got a lot to learn and as such, I am hearing -- I watched some of the live stream yesterday and today I've been here present, so one of the concerns from some of the intervenors is such that this real licensing application go forward to enable them employment. And then, of course, on Cameco's side for this to go forward it's for them to make money to make profits, otherwise they wouldn't be here, there would be no interest for them. They're a corporation.

So I guess there's a bit of a two questions, maybe one for you, the Commission, and one for Cameco. For you, the Commission, has your decision of the CNSC already been made? Is it already a foregone conclusion that you're going to extend the relicensing for ten years?

And then for Cameco the question is, in the event that you are not allowed a relicensing, your relicensing, you did not achieve that, how would that affect your corporation, your corporation's bottom line, if you will?

THE CHAIRMAN: So you want to take it first or you want us to go first?

I'll answer first. The way the process

works, Cameco, the applicant is coming and asking for a licence renewal because the licence expires sometime in October. Our staff analyzes their request, reached their own conclusion and makes recommendations. Our hearing here is to listen to all sides, including you and then make a determination as to a) whether the licence will be approved and if so, whether there is any condition attached to that particular licence. And in the decision you'll hear all the rationale for their decision, including your input.

MR. MOONEY: It's Liam Mooney, for the record.

Again, we are here in front of you today seeking the application on the basis that we put forward based on a strong safety health environment performance and our commitment to continue over the next ten year period.

As a corporation we are publicly traded and disclose our various risks as part of our annual information form, our management discussion and analysis and other required filings and those risks are clearly laid out for the corporation.

THE CHAIRMAN: Thank you. Question? Dr. McEwan?

MEMBER McEWAN: So one of the themes that

we've heard over these last two days is, if I can use the word, the translation of information from very high level scientific or engineering to a format that can be understood well by the communities. And as I've listened it's clear that some of the issues I think relate to that gap in translation.

If you had your wish, how would you see the information that you've heard today and you heard on the web stream yesterday be presented in a way that would be better able to be understood by your communities?

MR. LEE: I would appreciate being given the information or having access to it, being presented to myself as a local Métis leader and kind of maybe summarized in layman's terms if you will.

I agree with the earlier intervenor that his reconcile or his understanding of all of the discussions put forward by experts and so on and their results, all of that, it is difficult to understand for a lay person such as myself, and so I would really appreciate finding scientific discovery that is factual of the existing conditions of the uranium mine tailings.

One of the things, and the reason I say that and I express that independent, two days ago I attended a film put forward by the nuclear industry in Saskatoon and one of the things that they reported in the

film was they discussed the incident at Chernobyl and apparently the World Health Organization reported there were only 56 deaths at Chernobyl as a result of that meltdown, but in fact there were about 96,000 deaths as a direct result of Chernobyl.

So it’s quite a difference there in terms of human impact and I guess it depends on who you are going to listen to. If you’re going to listen to the industry, their interests will be put forward certainly. They are not going to jeopardize their intent or their going forward with their corporate agenda.

THE CHAIRMAN: Let me just say, I agree with you. It’s very complicated. If it was really a simple kind of a matter, you wouldn’t need a regulator. I can assure you of that.

The problem is and it’s back to my question, whose data and opinion you trust. Our mandate is to look at scientific evidence and the Chernobyl argument, I should tell you is classic. There are huge debates and fights amongst various communities and if you go on the Internet, you can see the number of people who died ranging from 56 to a million.

So the question is, who do you trust? The World Health Organization seems to me like a pretty independent kind of united nation body. You quoted the

UN. That's their argument and you have to make up your own mind.

All I would say, if you're interested in a nuclear, we have a pretty good web site, the CNSC web site, and I invite you to not only read it but when you figure it's too complicated, send us some email so we'll try to simplify it.

Still, anybody else who would like to? You have the final words.

MR. WILLY: On our consultation plans, and we've heard this loud and clear through this relicensing. Sean Willy, for the record.

Over the 25 years we've designed our consultation engagement programs with this very thought in mind, about this high level technical information and the approach of communicating to communities. And we utilize community members, elders, our liaison officers, and obtain their knowledge in Dene and Cree languages to describe the technical nature of this and bring them involved in technical workshops.

We've honed this process over 25 years so now we feel that the capacity and the knowledge within communities when we're doing consultations has increased dramatically and will continue to increase the more we work and communicate with these communities.

THE CHAIRMAN: Okay, thank you. You have the final say.

MR. SMITH: It is our desire to trust you, to trust CNSC. It is our desire to trust Cameco. When we as a community desire a future, we want to envision a future that we can live now, that the values that I am learning and practicing, whether it’s a traditional lifestyle or a mining job, I understand the challenges. We understand. We know, basically everybody understands the desire for life, for a better quality of life.

When we as a community -- $200 million sounds like a lot of money and if corporations have the freedom to collaborate and put a confidentiality clause to the leadership preventing them from discussing details to the community such as Pinehouse.

We had meetings because we wanted to know. There was public meetings, but very vague and -- vague answers. There was words that came out like "milking the cow", that this industry has been around and now is our time to milk it.

I, as a fisherman, when I don’t see any documentation inviting us to this process and I attend the trappers' meetings and there’s no paperwork, no invitation -- if I had a letter to present, I would. None from the fishermen, none from the trappers, none from the wild rice

growers.

So three years this took, from Cameco officials to ours, the leadership, and they finally present us with a document, a summary agreement, one month before the signing. And here we were, we had 15, 20 minutes. This was one of the wording:

> "Pinehouse promises to make reasonable efforts to ensure Pinehouse members do not say or do anything that interferes with or delays Cameco ore resource mining or do or say anything that is not consistent with Pinehouse's promises under the Collaboration Agreement." (As read)

That's what we received on a community level. And without going into all the details of how that meeting went, we desire to trust our own leadership, the companies that come here to secure a future, to create economic stability for the region, not just for us now, but countless generations, and yet ensure safety and quality of life.

We desire a right spirit from these companies, a spirit that is already real in our communities. And when we see words like this come to us,

yes, we do get emotional because when I read that, I looked at my dad and it says he has to make reasonable efforts to ensure I shut up and not oppose. We police ourselves?

Who has authority to even write that? And that -- this was a three-year process that this document changed hands 12 times, according to our Mayor, what he told us in a public meeting.

And we're having to -- I'm in a lawsuit because I'm suing my own community, my own Métis local. I've never known this language of how to collaborate and speak out such as places like that. I never dreamed I would be here.

And I don't desire it on anyone what I have to go through when I go back to my town. Yes, I'm at a loss at times, but we adapt as native people. We've had to adapt.

So we expect fairness from this hearing. And we thank you for the opportunity. I wish things could change. And you're the ones to do it.

Thank you.

THE CHAIRMAN: Okay, thank you. Thank you very much for this presentation. Thank you.

I'd like to move to the next presentation from Ms. Scansen as outlined in CMDs 13-H13.28, 14.26 and

15.25.

(SHORT PAUSE/COURTE PAUSE)

13-H13.28 / 13-H14.26 / 13-H15.25

Oral presentation by

Kirstin Scansen

MS. SCANSEN: Good afternoon, Commission.

I want to welcome the community here as well. I know there's a lot of people behind me from La Ronge, people who are interested in the outcome of these hearings.

I'd like to begin by introducing myself. My name is Kirstin Scansen. I'm from the Lac La Ronge Indian Band. I'm a graduate student at the University of Victoria in the Indigenous Governance program.

La Ronge Band is part of a larger Nehithaw Woods Cree Nation. That's the territory that we're standing on today.

Cameco, our territories which, in addition to Denesuline territories, you call your northern heartbeat, are absolutely central to who we are as peoples. While you believe this land exists to pump money through the arteries of your corporation and into the veins of your stakeholders, we are here to say that the

land is worth much more than that.

To be clear, I am unapologetically against the expansion of the world's already largest uranium mines and mills on Nehithaw and Densuline territories. We need to end the global expansion of the nuclear industry due to safety, health and ethical concerns.

To start, Commission, I'd like to refer to Section 24 of the *Nuclear Safety Commission Act*, which states that the Nuclear Safety Commission must ensure that licence applicants such as Cameco have made:

> "...adequate provision for... [environment protection and] the health and safety of persons and measures required to implement international [agreements] [...] to which Canada has agreed."

So first ---

MR. LEBLANC: Ms. Scansen, sorry. We have three translators in the back. They cannot follow you. If you could just have the pace a bit slower?

MS. SCANSEN: Okay, okay.

MR. LEBLANC: Please. Thank you.

MS. SCANSEN: So first and foremost, your mandate states that you must commit yourself to human and social justice. That said, as we have heard this morning

from the Sierra Club of Canada, according to Cameco's own data, there are very alarming release exceedences of arsenic, lead, cadmium, selenium, molybdenum and gamma, alpha and beta radiation into the water and air systems of Cree and Denesuline territories.

Effluent from the mines, despite being treated, is contaminated with radioactive material and other hard metals that harm the health and safety of indigenous peoples, not only in Northern Saskatchewan, but as we saw in the report, in the Arctic as well.

I'd like to speak briefly to the current colonial situation of Canada today. Modern Indian bands created through the *Indian Act* are administrative bodies confronted with the contradictory task of representing a nation of people that have been devastated by colonialism while remaining tied up in the oppressive, unjust regime of the colonial framework.

Although our nations signed binding spiritual treaties with your ancestors, Chief and Council leadership is trapped into relationships of forced dependency with the provincial government of Saskatchewan and the federal government of Canada.

As a band -- sorry; I mean the La Ronge Band -- we have our own businesses, yet the majority of the revenue is confiscated by the province and the federal

government.

I learned this from my own leadership as well, who explained to me the financial outlook of my people.

Because of this injustice, in order to provide basic social necessities such as health, education and housing, we are increasingly becoming forced to make our lands readily available for resource extraction.

To the Canadian Nuclear Safety Commissioners, as a so-called regulator and licensor, you play a direct role in that process.

And to Cameco, it is into this socio-political disaster that you find yourselves seeking to have your uranium mining licences re-issued and your production on Nehithaw and Denesuline territories expanded by 33.3 percent.

I won’t sugar coat or make light of the threat that your presence has on this land and on lands far removed from here. Uranium is a deadly substance that has no benefit on the whole to humanity.

Cameco’s actions in northern Saskatchewan can be linked to a global nuclear system that we are witnessing before our eyes as reckless, dangerous, toxic and fatal.

Here, I am talking specifically about the

direct connections between Saskatchewan’s uranium and the Fukushima nuclear disaster, depleted uranium weaponry in the Middle East, the proliferation of nuclear weapons worldwide and the consistent release of alpha, beta and gamma rays into the atmosphere at each and every stage of the uranium energy process.

So how does the Canadian Nuclear Safety Commission’s licensing process replicate colonial relationships of power and control? I’d like to take some time to talk about the concept of consultation to the Canadian Nuclear Safety Commission.

In the truest sense of the term, consultation implies a dialogical process whereby one party works in partnership with one or more other parties to develop some sort of product, a plan or a decision.

In the case of the relicensing process that the CNSC undertakes, for example, true consultation with indigenous peoples would involve meaningfully engaging with these groups while remaining cognizant and sensitive to the asymmetrical power struggles which influence their capacity to act as self-determining peoples in the modern colonial framework.

Most importantly, true consultation would involve respecting the rights of indigenous peoples to say no to resource development.

The CNSC has not yet demonstrated that it has the institutional or moral capacity to respect the rights of indigenous peoples to act in self-determining ways, which by the way are laid out as rights in the United Nation Declaration on the Rights of Indigenous Peoples, which was signed by Canada.

And to that I'd like to add another question afterwards for the presenters about whether or not they've ever rejected a licence and if they could explain to me what happened in that situation. And as well I'd like to have addressed the recent approval of the Matoush mine licences, despite the jurisdictional complexities between the James Bay Cree and the Province of Quebec.

So I'll have you guys explain that to us; how that worked, and whether or not you feel that you even have the capacity as an organization to respect the rights of indigenous peoples.

On August 20th, 2013, I attended the information session hosted by the Canadian Nuclear Safety Commission here in La Ronge, Saskatchewan. I sat and listened as your representatives explained to me how you would never compromise safety. I'm here to tell you that the Canadian Nuclear Safety Commission has already compromised the safety of people all over the world.

At this time, 18 to 20 percent of the world’s uranium comes from Saskatchewan, so at this time, 18 to 20 percent of the world’s nuclear meltdowns and future meltdowns are the fault of Saskatchewan uranium.

We can’t separate the uranium coming out of the ground at this location with the problems of the nuclear system worldwide. There’s no way to separate that. Eighteen (18) to 20 percent of the radiation that consistently leaks out of nuclear power plants worldwide comes out of Saskatchewan. That means that 18 to 20 percent of the global increase in harmful background radiation comes out of Saskatchewan.

I am personally responsible, as somebody from this area, to end these injustices. We are personally responsible, as people involved in this process, to end these injustices.

It was clear during the information session recently that the focus on the reduction of impact on Aboriginal rights is there. When asked -- when I asked the Commission why they used the terminology “reduce” and whether or not they could speak to me about eliminating the effects of -- the effects on treaty rights of uranium mining, they mentioned to me that they would sometimes allow indigenous people to maintain their trap lines surrounding the largest uranium mines, which they wanted

me to feel like was very benevolent of them.

Now, I was here yesterday, President Binder, I listened in as we mentioned -- or we were discussing Japan and TEPCO. The fact that you spoke of your inability to ensure that the end product is used safely is ludicrous.

Your ability, Commission, to answer so many questions with honesty and truths -- truth reveals to me your inadequacy as a Commission. The fact that your set up for this hearing entails that I sit a metre-and-a-half below you and speak up to you is ludicrous as well.

I'm here to let the CNSC, Cameco and its associate corporations know that the complicity of the Chief and Council of the Lac La Ronge Indian Band and other local peoples in the uranium mining industry is not representative of indigenous perspectives at the community level. I'm here to let you know that the uranium mining industry has gone on too long without being effectively challenged.

As the pace of uranium extraction on Denesuline and Nehithaw territory increases, we find ourselves working increasingly closer to fight against the destruction of our territories.

I'd like to thank the Canadian Safety -- sorry, the Canadian Nuclear Safety Commission for

listening and hearing my words this afternoon.

There’s no doubt in my mind that you’re aware of how problematic the uranium mining industry is. I’d like to remind you to uphold your ancestral treaty responsibility because we’re all treaty people; to respect the people of this land and your treaty commitments to protect the integrity of the territories as well.

One thing I was taught was that when we made treaty with your ancestors, we took you in as family and we gave you responsibilities for you to have access to living on this territory. Your people agreed.

The responsibility was at all times to ensure that destruction of the territory did not occur. Your treaty right to be here depends on that responsibility and you are not upholding it.

Thank you.

THE CHAIRMAN: Thank you.

Who wants to ask questions? Anybody?

Well, Mr. Harvey?

MEMBER HARVEY: There has been some question asked about Matoush and maybe the staff could answer those questions.

THE CHAIRMAN: I wouldn’t spend a lot of time on Matoush. This is not the topic of discussion, but just a quick reply please.

MR. JAMMAL: The Matoush was -- it's Ramzi Jammal, for the record.

The hearing was conducted for Matoush and it was a -- in order to assess safety. And that was the mandate of the Commission, so the hearing was focused on the mandate of the Commission itself.

And then as, in any other facilities or mines, there is always the interconnectivity with the provincial role with respect to a decision. So we spoke before of a Joint Review Panel with respect to environmental assessment and a political decision was made in Quebec with respect to the Matoush -- And the way forward with respect to that project.

So again, regulatory processes at the federal and provincial level took place and decisions were rendered. The decision of the Commission is based on the safety of the operations of the facility.

THE CHAIRMAN: For somebody who showed a great interest in uranium, did you read the decision? It's posted on our Web site in all its glory, with all its detail, with all the intervenors. Feel free to actually read it anytime.

MS. SCANSEN: Okay, I'll go back and I'll read through that.

THE CHAIRMAN: That will be good.

Question?

MS. SCANSEN: Can you speak though specifically about the complexities? Like, I'm asking you a question.

THE CHAIRMAN: No, I do not want to speak about the complexity.

MS. SCANSEN: As the President, you can't speak about the complexities involved in the jurisdictional ---

THE CHAIRMAN: We have enough problem dealing with the three mines here; I don't want to talk about Matoush now.

MS. SCANSEN: Are you able to respect the veto of indigenous peoples to say no to uranium mining on their territories? Are you able to do that and have you ever done that? When people have spoken up and said no, have you ever respected that?

THE CHAIRMAN: We are analyzing the safety of a proposal application -- proposed application. We have turned down applications. We have said no to operation in nuclear and it is based on the science of the application.

MS. SCANSEN: How did that science differ from the science that we heard this morning from the Sierra Club.

THE CHAIRMAN: Excuse me. We are here to ask the questions.

MS. SCANSEN: You're on my territory and you're speaking to a Treaty 6 woman. I'm asking you a question and I deserve to ask questions.

THE CHAIRMAN: You can ask the questions that relate to the safety of the Application in front of us.

MS. SCANSEN: I'm asking what the difference is between the safety of the Application in front of us and the Matouch.

THE CHAIRMAN: The Matouch ---

MS. SCANSEN: I'm sorry, the ones -- sorry, the ones that you rejected. Where is the difference? How bad does it have to get before you reject it?

THE CHAIRMAN: We did not ---

MS. SCANSEN: How many thousands of percents does the hard metals and radioactivity limits have to exceed before you say no?

THE CHAIRMAN: We do not approve Applications that don't abide by our regulatory safety limits. And it is not on, necessarily on mines. It's on nuclear activities on -- maybe you can give an example, a quick example of a particular rejection of a particular -- or stoppage of activity, of an order.

MR. JAMMAL: Sir, Ramzi Jammal for the record.

There are a couple of things, as it's been mentioned, safety is paramount.

So first of all, if an Application comes in, it must meet all the requirements with respect to the safety standard and insuring. Because our mandate is minimal impact to the environment and no impact with respect to the health and safety of the workers, the environment and the public.

We have the powers as inspectors, and I've got my colleagues here who are project officers from the Saskatoon office and right across Canada. CNSC -- sorry -- I've got to keep my mouth on the mic here. So I'm just going to look this way.

The CNSC issues orders and inspectors have the powers to shut down operations. So, we did shut down operations from small facilities to large facilities.

And in addition to shutting down the operations, the licensees will be brought before the Commission in order to justify their qualification and why they need to continue to be licensed. That's one of the processes.

And in this licence renewal is the same processes where the applicant and us, the staff, will have

to provide our data and factual information to the Commission in order to render its decision.

So the powers of the inspectors are very powerful and it's based on the safety and the facts that's being presented before it.

THE CHAIRMAN: Okay. Somebody? Any other questions? Mr. Tolgyesi? Dr. McDill?

MEMBER McDILL: Going back a number of years, maybe you could go back to the AECB and Pickering as an example of what the Commission, or the predecessor to this Commission at least, ruled. It's a very strong ruling, that one.

MR. JAMMAL: Sorry I need -- Ramzi Jammal for the record.

Sorry Dr. McDill, precision on, with respect to the AECB for the -- sorry I need some ---

MEMBER McDILL: A little more. I believe under Agnes Bishop.

MR. JAMMAL: Yes. Thank you. It's Ramzi Jammal for the record.

As a matter of fact there were a couple of situations where the -- just a bit more detail. The AECB, the Atomic Energy Control Board, the predecessor of the CNSC has rendered a decision, as a matter of fact, shut down a whole -- just deviate -- but its facility that was

producing nuclear substance for medical purposes and the fact that was mishandling of the situation in accordance to our act and regulation. The Board at the time shut down and stopped the licensing process.

With respect to the nuclear power plant facility itself, the information became available and we, staff, came to the conclusion that certain parts of the operation was unsafe and the Board, at the time, or the Commission did shut down the operations accordingly.

Again, I've got to respect the time factor here without going into details, but I'll be more than happy to share with the intervenor any depth information she would like to know on the safety aspect of shutting down an operation.

THE CHAIRMAN: Any -- anybody else?

I'd like to ask you -- you want to shut down all uranium mining because it's not needed, et cetera. What do you say to electricity generation in Ontario? Fifty two (52) percent of electricity produced in Ontario, not to mention all the nuclear, the 400 nuclear power plants who are producing electricity, emission free electricity. What do you say to them?

MS. SCANSEN: Are you trying to convince us of the moral feasibility of your industry based on the size of your industry?

THE CHAIRMAN: I'm trying to understand, what would you say to Ontario residents now that get electricity out of uranium.

MS. SCANSEN: Sure. Okay, so obviously we can talk about renewables then. This is just a question. Is there anybody here from the Commission who has a background, a scientific or technical background in renewable resources who can speak to -- okay, so nobody has a background in the science and technology renewable.

Now does anybody on the Commission have a background in oil and gas? Your background is only in nuclear? Nobody has ever worked for different kinds of corporations or anything like that?

THE CHAIRMAN: We all have -- we have all different degrees. We have a mining engineer. We have all kinds of people here with all expertise. What is your question?

MS. SCANSEN: My question is why we're not having a discussion about renewable resources. Why there's no technical expert. If you guys are regulators and you're supposed to remain neutral, why not make it a fairer debate?

THE CHAIRMAN: We are nuclear regulators.

MS. SCANSEN: For the future. For the future. Okay, but so analyzing what other kinds of energy

resources might be more effective should be an integral process -- sorry an integral part of this process, obviously. We're looking at nuclear versus other things. And it's worth it to look at ---

THE CHAIRMAN: No we’re not.

MS. SCANSEN: So we're looking at nuclear or nothing, apparently to you.

THE CHAIRMAN: Okay, listen.

MS. SCANSEN: But that is not representative of what's going on on this planet. There are other options for us.

THE CHAIRMAN: Absolutely. There are wind and there's solar and there's all kind of others and the government policy, where they want to invest. So you should go to the government policy and make a presentation about doing wind and solar and other renewables.

MS. SCANSEN: Okay, so what you've expressed to me is that neither anybody on the Commission, nor me, I'm just a student, but nobody on the Commission has the technical capacity to talk about renewables?

THE CHAIRMAN: We do it with ---

MS. SCANSEN: There's nobody here to explain it to us. How are we -- how is anybody supposed to make a good decision?

THE CHAIRMAN: I guess you're not

listening.

MS. SCANSEN: I’m listening.

THE CHAIRMAN: Our mandate is nuclear only. We are not ---

MS. SCANSEN: Nuclear or nothing.

THE CHAIRMAN: We do not have any mandate to do trade-off between other alternatives. Okay, that's another policy matter.

MS. SCANSEN: No, this is interesting because I had this conversation as well, when the Commission was here before, about the capacity of your Commission. So what you're expressing to me is that you are very limited in your capacity. Now ---

THE CHAIRMAN: I guess you're not --- you know you should go back ---

MS. SCANSEN: --- when you can come back to my community and express to me how we might work together to look at new energy sources ---

THE CHAIRMAN: You can start by reading our *Act*. Thank you for your representation.

MR. LEE: May I make a couple of comments here?

THE CHAIRMAN: Sure.

MR. LEE: Thank you. Brian Lee, Fish Lake Metis.

Ms. Scansen referred to neocolonialism in her presentation. We must all understand that The Supreme Court of Canada has very recently made determinations in the aspects of duty to consult and accommodate.

Now, our local, as a local Metis leader, I have been contacted by just the provincial government on about 15 different, separate matters of duty to consult. I have posed questions to the premier of this province on the Cameco's activities and so on in Northern Saskatchewan.

One of the things, and I want to try and get everything in here in a short time. One of the things that you mentioned and you asked earlier was what would it take for you to have trust? And I think there was a reasonable answer to that -- to your question.

In March of this year, the premier of Saskatchewan, speaking to a bunch of his supporters in Prince Albert, Saskatchewan, was asked the question of programs for First Nations and Metis in Saskatchewan. And his answer was no programs at all. The only thing for our First Nations and Metis in Saskatchewan is Cameco.

Now, I as a local leader got together with some other Metis people in Prince Albert and some First Nations people and we held a press conference. And we took the premier to task on that statement. But the

premier, in his position as premier of this province, is absolutely on the side of Cameco. He calls -- references Cameco as a wonderful corporate citizen.

Now, going to our Prime Minister of Canada, I'm sure -- I don't know if that's actually who appointed you President of the Commission? Okay.

Now, the Prime Minister of Canada has been going around the world selling Saskatchewan uranium, and he has talked to India, he has talked to China. So he is definitely on the side of more, greater production of uranium here in the Province of Saskatchewan, essentially by Cameco and Areva.

Now, with the Premier of the province in love with Cameco, and the Prime Minister of Canada thinking Cameco is just great for economics and jobs, growth, and all of that, when we come into duty to consult, my concern is how do you have an effective, educated consultation with Aboriginal people when your elected leaders of the country and of the province are already on-side with the Proponent?

THE CHAIRMAN: We can talk about this for a long, long time, so let me try to be a sort of final answer to this.

The Prime Minister does not promote uranium mining or Cameco. He promotes trade agreements, okay?

Trade agreements are, for example, in many, many countries, with China, et cetera. He also promotes, as you know, with the U.S., with Europe, et cetera.

Then each project that has to come under this particular internal agreement has its own approval process with a duty to consult issue, safety mandate, and those are the mandate of regulators.

So I differentiate between policy of government to ask regulators executing in a very narrow mandate. So that's the reality of the way the framework works.

MR. LEE: Back to my concerns about the Premier of the province, I had written him a letter, he wrote me back, and the discussion was on Cameco's future millennium project. And his response letter told me, said to me, that the government, the Ministry of Environment, if you will, of Saskatchewan, is waiting for Cameco's own environmental impact statement. And, once that is complete, then the government will determine whether or not to trigger duty to consult.

And going back to the issue of trust, when the corporation does the environmental impact of their intended project -- well, we're not that naive.

THE CHAIRMAN: Well, let's not -- again, this is not the process, and they get tasked with the

provincial -- it’s a joint environmental assessment between CNSC and the Ministry of Environment. We’re going to talk about that later on.

And Cameco is instructed in terms of putting up an environmental statement that -- that goes to the rigour of science, public hearing, et cetera, et cetera, and you -- hopefully you will get a chance to participate in that.

Anyhow, we’ve got to move on, so thank you for your presentation. You’ve got one minute to wrap up, and a final say.

MR. MARIUS: Okay. I’ve got one more minute left to live? Thank you. Safety, the old people said,

(SPEAKING IN NATIVE LANGUAGE)

That’s what they said. In other words, they are going to dig, and using that, make atomic weapons. And that’s what the reactor business is. We know that. We’ve done our research. I went through the whole policy, the policy regarding indoctrination, assimilation, everything. I went through that.

But at the same time, I can still listen to my old people, and they’ve got a science you guys didn’t, and will never get. We do. I speak it.

(SPEAKING IN NATIVE LANGUAGE)

You guys don’t understand that. You never will. So that’s the science that I come from. So when you guys are talking about safety, blow more weapons, WMDs; that’s coming from these guys, and those guys. That’s where it’s coming from.

THE CHAIRMAN: Okay, thank you very much.

MR. MARIUS: Yeah.

THE CHAIRMAN: Thank you very much for ---

MR. MARIUS: Yeah, yeah.

THE CHAIRMAN: --- your presentation.

A 10-minute break? Thank you.

--- Upon recessing at 3:28 p.m./

L'audience est suspendue à 15h28

--- Upon resuming at 3:44 p.m./

L'audience est reprise à 15h44

THE CHAIRMAN: Okay, we are ready to proceed? The next presentation is by the Kitsaki Management Limited partnership, as outlined in CMD. 13-H13.20, 14.18, and H15.17, I understand Mr. Roberts will make the presentation. Please proceed.

13-H13.20 / 13-H14.18 / 13-H15.17

Oral presentation by

Kitsaki Management Limited Partnership

MR. ROBERTS: Thank you. And I can assure you my presentation won't be as long. I've timed my speech, it's about five minutes, so...you're welcome to ask as many questions as you like afterwards.

Thank you for the opportunity to comment on the proposed licence renewal, prior to the finalization.

I would like to acknowledge and recognize the elders present, panel from CNSC, Cameco representatives, Lac La Ronge Indian Band leadership, and community members.

I did have elder Joe Roberts joining me, from Stanley Mission. He had to depart on personal business, so I just wanted to recognize him because he was here a lot of the day, to participate.

For the record, my name is Russell Roberts. I'm the CEO of Kitsaki Management Limited Partnership, and a proud member of the Lac La Ronge Indian Band.

Kitsaki performs the for-profit economic development activities of the Lac La Ronge India Band. We invest in several sectors, including transportation, road construction, insurance, environmental, hospitality, and of course mining.

Kitsaki's focus is on long-term sustainable businesses, where we examine many potential business

opportunities and select only the view that meet appropriate profitability, risk, and employment criteria.

Lac La Ronge Indian Band is the largest First Nation in Saskatchewan, and one of the largest in Canada with nearly 10,000 band members. While there is much work yet to do, we wish to speak in support of Cameco Corporation and their contributions to our communities to date.

As you probably already heard from Lac La Ronge Indian Band, recent years have been difficult for our membership. Income per capita is low; overall job growth within our communities has been minimal.

However, I'll provide some real examples of successful partnerships that continue to service corporate role models for other northern Aboriginal, and for non-Aboriginal businesses, for that matter. These businesses are strong and growing, thanks to the excellent commitment, cooperation and leadership from Cameco Corporation.

On behalf of Kitsaki and, specifically, two of our entities, Athabasca Catering Limited Partnership and North Resource Trucking Limited Partnership, I'll provide the following comments.

First, NRT's owners include many of the impact communities, as has been a hot topic of discussion throughout the hearings, and many other communities as

well, in northern Saskatchewan, and representing over 36,000 people.

The owners are Hatchet Lake; Fond du lac; Black Lake; Montreal Lake; Peter Ballantyne; Clearwater River; English River; Cumberland House; Ile Lacrosse; Buffalo Narrows; and, finally, the Lac La Ronge Indian Band, which also includes six different reserve communities. In total, NRT is 71 percent Aboriginal-owned.

NRT has a long-term record of success in providing safe transportation in Northern Saskatchewan serving the mining industry. Cameco was NRT's largest customer and provided Kitsaki and the Lac La Ronge Indian band with one of our very first opportunities many, many years ago. Since then, the partnership model has expanded to include many northern businesses, many northern communities rather and has grown in terms of capacity, employees and profitability. Without business from Cameco, the benefits that go to our partners, our employees and trainees would not be possible. Other notable points for NRT include, we currently employ today 150 people. Since 1994 NRT has paid in excess of $52 million dollars in salaries and contractors pay to residences of Saskatchewan's north.

NRT has a training school in La Ronge that offers training and classified licenses, class 3 and class

1A, school bus endorsements and forklift certification. It has 5 SGI certified trainers and we have trained hundreds of northerners over the years. These graduates have found jobs in mining with our company, with our clients and in their home communities using these skills. Next is at the Basket Catering Limited Partnership; it also has a wide ownership base representing almost 17,000 people in northern Saskatchewan. The five owners are Black Lake, Hatchet Lake, Fond Du Lac, English River and the Lac La Ronge Indian Band and we are the managing partner.

We provide food services, housekeeping and janitorial services for several customers and Cameco is our largest customer. ACLP is a rare example of 100 percent First Nations owned and managed cap catering business that provides many jobs. Depending on the activity of Cameco and our other mine sites, we can employ as many as 750 employees on any given day. A large majority of the jobs and 100 percent of the profits got to aboriginal people and their communities. We have sponsored scores of training programs to help aboriginal people in all areas including senior management, chefs and supervisors.

ACLP employees also benefit from Cameco’s policy of 7 days in and 7 days out, work schedule with numerous pick-up points throughout northern Saskatchewan.

Other notable statistics include the following, currently ACLP today, I guess as of yesterday, employs 735 people, 487 of which are aboriginal and 491 are residents of Saskatchewan's north. Over the past 10 years, our total wages in Athabasca catering exceeded 100 million dollars and over 75 percent of that went directly to residents of Saskatchewan's north.

Our employees are the heart of our organization; we invest heavily in our employees by offering them training in a wide variety of programs which will enhance their career prospects. In summary, over the years, NRT and ACLP have paid tens of millions of dollars in wages and dividend distributions to northern Aboriginal communities that we just discussed. This money has been used to make new business investments and to support much needed social projects for communities such as seniors homes, playgrounds, youth and adult programs and even home renovations.

First Nations and Métis communities have had very little discretionary government money and the investment income generated for these Aboriginal communities is vital to improving their future. The jobs and profits from businesses like NRT and Athabasca Catering are the foundation for a brighter future for Aboriginal people. Cameco remains very supportive of

these efforts and is well aware of the magnitude of the challenges facing Lac La Ronge Indian Band and many other northern communities. At Kitsaki we fully support the renewal of Cameco's uranium mining licenses for the full 10 year term requested.

In turn, this will provide the same stability for our businesses and the hundreds of employees that rely on Athabasca Catering and Northern Resource Trucking. So as promised, that's about five minutes. Thank you for considering my comments and we look forward to a prosperous future for Cameco and the many northern and Aboriginal companies they support. That concludes my presentation for today and I would be open for comments or any questions that you might have.

THE CHAIRMAN: Thank you. Question, Monsieur Harvey?

MEMBER HARVEY: Thank you, merci Monsieur le Président. In conclusion of your presentation, when you say that Kitsaki, we fully support the renewal of Cameco's uranium mining license, would you say that the, I think 11 community owners of Kitsaki have the same full support to Cameco's renewal?

MR. ROBERTS: Well certainly from the perspective of Kitsaki management. Kitsaki's 100 percent owned by Lac Ronge Indian Band and just to clarify, many

of our companies, we've got 8 of them in total currently that are active. Each of them have its own partnership structure. NRT as an example has a total of 12 including ourselves; Athabasca Catering has five communities that belong to that partnership. So each individual company does have a different partnership structure, but in my experience overall, certainly from the business perspective and from the communities that we support, the employees that we provide opportunities to, I certainly think the support is there.

I certainly speak for myself and the company I represent and that's been my experience.

MEMBER HARVEY: Yeah, I understand about the employees and the administration but I was thinking about the communities itself. So, what's your feeling?

MR. ROBERTS: And again, I'm from the north; I was born and raised in La Ronge as I mentioned, I'm a proud member of the Lac La Ronge Indian Band and the experience, from my perspective is that there's genuine support for the license and for Cameco overall. That's been my personal experience. Of course I can't speak on behalf of anybody else, but certainly that's my view.

THE CHAIRMAN: Thank you. Just to follow up on this and again, we're not -- we're just trying to understand the mood of the community, but do they -- is

there an understanding that you pity -- the largest customer you have is Cameco and should Cameco not get a license and there are going to be some repercussions, consequences. Is that what I understood?

MR. ROBERTS: I am not sure if I understand the question. Are you asking me if I feel that there's going to repercussions to our companies?

THE CHAIRMAN: I'm trying to understand if the community itself, they focussing on Cameco and there's some opposition for license renewal. How catastrophic would it be to you if the license is not renewed?

MR. ROBERTS: Well again, representative Kitsaki CEO and an individual band member from La Ronge, my perspective is it would be -- it certainly would have an impact. You know, I didn't really get into the detail of our -- the remainder of our companies; we are very well diversified; we are represented in several different industries. Uranium happens to be one of them. You know, I agree with the comments earlier on today with Athabasca that part of the strategy is to continue looking at diversifying your interest beyond one client and one industry; that's just smart business. But certainly, a good number of our benefits, our contracts, our ongoing relationship with Cameco is very, very important.

You know, percentage wise as far as

business goes, it’s a substantial amount. If you’re asking me, what would the result be if the business was lost with Cameco, it would be devastating to our company, certainly.

THE CHAIRMAN: Thank you. Question, Mr. Tolgyesi?

MEMBER TOLGYESI: What’s the part of business from outside of Northern Saskatchewan and outside of Saskatchewan; do you have any contracts outside of this Province?

MR. ROBERTS: Yeah and I guess depending on the entity, we did, even with catering we had some involvement with different clients with SAS Power, with the Gold Mine and Gold and Band Resources. Certainly we have had experience with Shore Gold and the Diamond Mining Industry down just, I guess if you’re from Southern Saskatchewan it would still be north, but that would be in the Fort de la Corne area, the diamond development, we did some work there. And it’s certainly part of our strategy to start looking beyond the borders of northern Saskatchewan. Some of our other companies who also do work for Cameco, including Can North Environmental Services, we do work all the way around the world. It’s very much one of those companies that started off with an individual client, did a significant amount of work for Cameco but now all our list of clients include First

Nations, Governments, other industry partners and we've done some work as far as Panama and we're looking at work for Cameco but now our list of clients includes First Nations, governments, other industry partners and we've done some work as far as Panama and we're looking at different interests in Chili.

So those are just some small examples of a small company that started off in northern Saskatchewan with one or two clients and now we have easily in access of 80 clients where we do work all the way around the world.

MEMBER HARVEY: So you could say that what 80 percent of your business is in Saskatchewan and 20 percent outside, including overseas.

MR. ROBERTS: Yeah, I think that would be pretty close, perhaps a little bit higher in Saskatchewan. Again, not reliant on necessarily one client, but yeah, probably around 90 percent in Saskatchewan and roughly ten percent outside. If I was to put a number to it, I really haven't done the actual calculation but that's just off the hip.

MEMBER HARVEY: Do you have a high turnover?

MR. ROBERTS: Again, depending on the business. Some of our businesses have little to no

turnover at all; some businesses do experience a certain turnover ratio that most times is indicative of what you would see in that industry.

As an example in hospitality, we'll use Athabasca Catering as an example, we have 735 people, as I mentioned up to 750 with just that one company. As you can imagine a lot of people who come and enter into this type of work sometimes it's their first job.

What we end up finding too is that when people do come in and establish themselves within the mine sites in any one of our other nine clients, it's a matter of getting started.

You know, once they do start, they experience the workforce, they do well. They increase capacity. They become very much in demand to other clients, to other contractors. So we do see a natural progression of people coming in, getting started and then moving on and we encourage that. You know, it's a big part of what we do.

We like to be able to say that a lot of the people who grew up our ranks from initial general help or housing manager or janitorial that they come through the ranks and they end up in a supervisory position with Cameco; that's a huge success for us.

MEMBER HARVEY: And my last, what happens?

You know, your business? You're saying that in NRT there are six or seven communities who are participating. What's happened if one of the partners, one of the community do not agree with some part of business, say I don't want to do this for some reasons or we don't agree for some reasons. Well, what happens, how do you take the decision then?

MR. ROBERTS: We very much pride ourselves in keeping our corporate governance separate from our political. We do a lot of our activities based on partnership agreements, unanimous shareholder agreements. They do have very specific terms and references in how we communicate and coordinate our relationship with our partners. What individual community people believe and what interest they have is certainly their -– it's really their issue and their responsibility to bring that forward.

We don't always agree. That's certainly true. You know, in business I think that's true in every facet of what we do. You're not going to get 100 percent consensus all the time. So we don't necessarily get involved in the political framework. We just do as best we can. We do our job. Hopefully we provide a good quality of service. We do it safely at a competitive price and continue operating within our contract and

continue to provide those jobs. That's really the kind of way we operate.

MEMBER HARVEY: Okay, thank you. I'd like to move on. Okay, thank you.

THE CHAIRMAN: Thank you very much. That was easy, right?

The next presentation is by the Pinehouse Business North Development Inc. as outlined in CMD 13H13.19, 14.17 and 15.16. I understand that Ms. Wriston will make the presentation. Over to you.

13-H13.19 / 13-H14.17 / 13H15.16
Oral presentation by the
Pinehouse Business
North Development Inc.

MS. WRISTON: Thank you. Good afternoon, Commission, Cameco and members of the gallery. I would like to thank you for listening to our submission this afternoon.

My name is Julie Wriston. I am a Métis mother of two and the Chief Executive Officer of Pinehouse Business North Development, also known as PBN.

I am here today on behalf of Pinehouse Business North to make an intervention in favour of the

ten year relicensing of Cameco's Key Lake, McArthur River and Rabbit Lake Operations.

Pinehouse Business North is wholly owned by the northern village of Pinehouse Lake, an historic Métis community located on the southwest shore of Pinehouse Lake on the Churchill River system. The village has a population of 1450 people who exercise traditional activities such as hunting, fishing and trapping.

Pinehouse is the closest northern community by road to the Key Lake and McArthur River Operations which are situated on Pinehouse traditional territory.

After years of Pinehouse residents working for Cameco, community members and leadership recognized a business opportunity. In 2007 leadership made a critical decision to get involved in the uranium industry by sending a group of employees out to find work and not come back until they had some and earn their way.

Today Pinehouse Business North operates successfully in the uranium mining service industry. We employ over 80 Pinehouse people and have exceeded revenues of 8 million in the year of 2012.

The company is a northern supplier, preferred northern supplier status and operates from offices in Pinehouse and Saskatoon.

As noted by other colleagues today, such as

Geoff Gay and Russell Roberts, PBN has often been used as a springboard for long term employment of Pinehouse people into Cameco positions and positions with other companies.

Today we are proud to say that we are offering full package benefits to our employees and long term sustainable employment that they can come back home to and we're very proud of this.

In December 2012, Pinehouse and Kineepik Métis local signed a collaboration agreement with Cameco to enhance and build upon the cordial relationship that exists between the people of the community and the mining industry. The agreement provides the principals between and the framework for a long term working relationship. It also recognizes the importance of the environment and the traditional territory of the rights-bearing Métis community of Pinehouse as represented by Kineepik Métis local.

In the collaboration agreement, Cameco commits to provide various benefits and collaborate with the village and Kineepik. The terms of the agreement are aimed at enhancing the quality of life in Pinehouse, building capacity to take advantage of employment and business opportunities in the mining industry and generally to support Pinehouse residents in pursuing their dreams and aspirations.

The collaboration agreement is structured around four pillars. The first pillar is community investment which commits Cameco to make regular contributions to community development projects. These payments are made to a community trust established by Pinehouse and administered by an independent trustee, directed by a board consisting of Pinehouse residents and a representative appointed by Cameco.

The second pillar is workforce development through education, training and employment opportunities with the objective of building capacity and improving the baseline employment of Pinehouse residents with Cameco.

As well, it gives preference for village residents in hiring decisions at the Key Lake and McArthur River Operations.

The third pillar is business development to assist Pinehouse with building long term sustainable businesses, to deliver services to Cameco’s operations.

Again, preference is given to Pinehouse businesses or joint ventures for applicable contracting opportunities and in collaboration to identify future opportunities to provide goods and services to Cameco.

And the final pillar is the community engagement and environmental stewardship which sets out how the parties will work together to ensure the village,

Kineepik and residents are engaged in ongoing and proposed Cameco projects and activities and can ensure the environment is protected for generations to come.

For the avoidance of any doubt or confusion, it is important to note that the contribution agreement does not in any way bind individual residents of Pinehouse or members of Kineepik from expressing or voicing concerns related to Cameco’s projects.

The contribution agreement will be in place as long as the signing parties continue to honour their commitments and Cameco continues to operate in northern Saskatchewan. However, nothing prevents the leadership of either the village or Kineepik from choosing to no longer support Cameco projects and activities or to oppose Cameco projects or activities, that’s potentially a daily agreement.

The parties have also agreed to hold a substantive review of the contribution agreement every five years to consider amendments that are deemed necessary to ensure the agreement works to optimal efficiency and effectiveness for all parties.

The agreement also outlines terms for the Joint Implementation Committee established with appointed representatives from all parties and meeting on a regular basis to monitor and oversee the effective implementation

of the collaboration agreement.

The village recognizes Pinehouse Business North as its primary vehicle for creating economic wealth in the community and therefore a large part of the agreement will be executed between PBN and Cameco through the business pillar of the agreement.

PBN is working in conjunction with Cameco to implement the business development pillar. While the community investment will improve health and create opportunities in the short term, it is the economic development that will provide long-term sustainability for the community.

Reaching an agreement in December 2012 is one of the milestones. It is implementation where the work truly begins. The implementation of the business pillar has not moved as quickly as PBN had expected. The Millennium Project has been delayed and Cameco’s internal business processes are not aligned for efficient implementation of agreement terms.

However, Cameco is working to change internal processes and implement streamlined systems that will result in cost savings, improved safety and centralized information.

All parties are exploring the opportunities and feasibility for filling the employment and contracting

gap left by the Millennium Project and support the successful implementation as per the spirit and intent of the agreement.

The contribution agreement outlines the business development opportunities for general contracting and evergreen contracts including waste management to build sustainable business services for the duration of Cameco’s operation.

PBN is prepared and ready to provide waste management services for Cameco’s operations as outlined in the collaboration agreement: schedule E, section 8, subsection C. Cameco will contract with an eligible business for all applicable environmental waste management services required by Cameco in relation to Cameco’s operations. A meeting with Cameco senior management representatives is scheduled to discuss implementation of PBN’s waste management services.

Waste management is important to the Pinehouse community. As Metis people, we have a relationship with the land and the environment. We have a social and cultural responsibility to ensure our traditional territory and environment are healthy, clean and sustainable for generations to come.

We look forward to taking on this new business opportunity with PBN and to work in conjunction

with Cameco to support their ongoing and end-game environmental protection and oversight plans.

PBN's relationship with Cameco is important to ensure the legacy of Pinehouse's success lasts well beyond the operational life cycle of the mine sites. The continual growth of secured contracts will create steady revenue streams, provide employment for Pinehouse residents and lead to increased community capacity and entrepreneurship.

Overall from a business perspective, the impact of Cameco's operations on the community has been positive. As a community-owned business, PBN looks forward to the benefits afforded by a stable, long-term relationship with Northern Saskatchewan's mining industry.

Thank you for the opportunity to present Pinehouse Business North development's intervention in support of a 10-year relicensing to Cameco Lake -- Cameco's Key Lake, McArthur River and Rabbit Lake operations to you today.

THE CHAIRMAN: Thank you.

Question? Dr. McEwan?

MEMBER McEWAN: Thank you.

One of the things we've heard over the last -- excuse me -- couple of days is the importance of trying to accommodate those members of the community who wanted

to marry a traditional lifestyle with working in an industrial environment.

How easy is that to achieve for the people who work for you?

MS. WRISTON: I believe it’s up to each individual to strike the balance between working with and for industry and using traditional methods in their lifestyle. I think that the people of Pinehouse are very proud of both their entrepreneurial spirit and their ability to live their historic lifestyle.

I think that Pinehouse is a great example of a progressive community that sees the need to advance in the current environment that they live in as well as protect their traditional habits.

I do believe that each person has to create that balance for themselves. And I think that it does work well for many of our employees.

MEMBER McEWAN: Can PBN help that? Do you help that?

MS. WRISTON: We help in the sense that we provide as much support and assistance to keep people in their home community and working. I think one of the major detriments to pursuing career options for Northern Saskatchewan residents is the fact that they have to leave home.

And so having an economic vehicle in Pinehouse that can provide work where people can stay home and raise their families in their traditional communities is that support. And I believe that yes, PBN does that very well.

THE CHAIRMAN: Dr. Barriault?

MEMBER BARRIAULT: Thank you, Mr. Chairman.

I guess the questions that I'm concerned about in signing the collaborative agreement, did you have a lot of people who were against it, not supportive or felt that they should have negotiated different deals?

MS. WRISTON: I was actually very fortunate to be a member of the negotiating team for the collaboration agreement. My experience in the community leading up to the signing as well as now after the signing has been most people in Pinehouse are supportive of the agreement. There is a small group of opposers. I believe that a colleague this afternoon did mention that there are some self-serving motives by some of those people.

I also believe that there has been little to no effort to look at the opportunity realistically and collaboratively with leadership. I think it's been in an odd position from the get go. I believe that if leadership had chosen not to enter into collaborative negotiations with Cameco, that the opposition would have

gone after them for not doing so.

MEMBER BARRIAULT: Thank you.

Thank you, Mr. Chairman.

THE CHAIRMAN: This is really personal interest. It's got nothing to do with our mandate, but some intervenors say that there's an election coming up and in which this issue will be a big part of the ticket. Is that true and when is the election?

MS. WRISTON: As a matter of fact, the election has come and gone. The leadership are actually elected in for an additional four-year term. And that happened just recently, so the ---

THE CHAIRMAN: Maybe I was thinking about the English River I guess. It's not in your ---

MS. WRISTON: No. Full support for the leadership from the community at this time.

THE CHAIRMAN: Question?

Let me ask you, we hear so much about the uncertainty about safety. You are obviously a proponent of continuing liaison and discussion and collaboration with Cameco. Where do you feel you get the best information about the safety cases?

MS. WRISTON: I believe that it's my responsibility to educate myself with all data that's available to me. Of course I will look to my colleagues

at Cameco when I have concerns. Cameco goes to great lengths to be present in the community as often as possible to discuss environmental safety issues. They are an open door and have been, in my experience, to be able to ask questions of them of that nature.

I also believe though too that it's my responsibility to educate myself on the uranium industry, which I have done, to understand how highly and strictly regulated the uranium industry is and compare that to other mining and resource industries in our country. And I think that the onus is on each individual to take that perspective and that step for themselves.

THE CHAIRMAN: But are you doing any kind of educational or factual information sharing in your own community, your own employees?

MS. WRISTON: Leadership has taken that responsibility to date. This is something that we are looking at from a PBN point of view now and how we can assist in information sharing, in expectation setting and being ahead of the communications circle rather than following behind.

One of the things that I would like to mention is that PBN is quite a young company in comparison to some of the other companies that you've heard from today, having only started in 2007 and having been led

primarily by leadership until 2010, when the separation of business and politics was implemented.

We're now just starting to look at PBN as a more mature, structured company. And certainly one of the criteria for that would be looking at what our mandate is to communicate and how we communicate information, what information we communicate to the community and to our employees.

THE CHAIRMAN: I'm intrigued with your statement that in 2007, you actually sent some community members to look for a job and don't come back. Is that real? And how many were there? And did they succeed?

MS. WINSTON: Yeah, probably my favourite story to tell.

Yeah, May 17th, 2007, a pickup truck of five to six people with paintbrushes and hammers drove to one of the Cameco mine sites to look to paint handrails and build walkways and were instructed not to come back for a month because no one could pay them.

And that's the story of how PBN got started. It's a classic entrepreneurial story of just having the grit to get out and do it, and in that, building the relationship with industry that we see today, which is really in a very short time of revenues in excess of $8 million.

THE CHAIRMAN: Okay, thank you. Thank you for this presentation.

MS. WINSTON: Thank you very much.

(SHORT PAUSE/COURTE PAUSE)

THE CHAIRMAN: The next presentation is by the Saskatchewan Ministry of Environment as outlined in CMD H13.21, H14.19, H15.18.

And I understand that Dr. McCullum will present this submission.

Please proceed.

13-H13.21 / 13-H14.19 / 13-H15.18
Oral presentation by the
Saskatchewan Ministry of
Environment

DR. McCULLUM: Thank you very much.

I would like to thank the Commission for giving us the opportunity to show some of the positive aspects of the monitoring programs in the Ministry of Environment.

Some of the pieces that we’re working on is joint partnership monitoring, and this is where we’re going to outline some of the partnerships that we’ve identified. One thing that we definitely strive for a

personal motto as well as a work motto is that you cannot manage what you do not measure. So it’s something that we really strive for.

The history behind the Boreal Watershed Management Strategy started off in the 1990s with a joint panel hearing starting the CEM project, the Cumulative Environmental Monitoring project.

From there we looked into the Northwest Study, where we were looking at effects from the oil sands potentially.

As it grew from there, we started looking -- instead of just looking in pockets, rather look at the entire Boreal region, the entire Northern Saskatchewan.

One of the pieces that I will highlight is the Eastern Athabasca Regional Monitoring Program that I think you’ve heard lots of so far.

The background that we have is the Boreal Region of Saskatchewan is defined as a portion of the province between the edge of the commercial forests and the northerly provincial boundary. It’s just the context to show that we’re encompassing everything.

We’ve heard it again. The region contains some of the highest quality freshwater in the world. It’s this freshwater reserve of significant water quality and availability are dependent upon the integrity of our

watersheds.

Some of the baseline -- the projects that we're dealing with, it was broken into three main components.

The first component, we deal with the baseline conditions. We want to assess the current state. What is the key components in the environment across the entire Boreal region?

We want to look at the monitoring of change, measure changes in time over the key environmental components brought about by either natural conditions or human-caused influences.

We want to evaluate the thresholds in the regions and see if there is, as we have multiple stresses on the effects and multiple stresses on the land and the cumulative effects that comes with them.

The last piece is the assessment of integrity. We want to evaluate the key components of the environment in terms of the responses to these stresses and model predictions, and constantly go back and correct the models to the stressors that facilitate some of the development and resource allocation decisions.

The important thing that we want to highlight is the collaboration with the partners. We want to ensure the program is consistent and gathering the

right scientific data and we want to make sure that it’s done in the most efficient way.

Some of the project strategies I’ll highlight at a very high level is the clean water management strategies which encompasses our lake sampling, some of the paleolimnology work which is the lake coring and the sediment work, the aquatic ecosystem health work, and that’s primarily dealing with the stream health, some of the otter sampling.

The clean air management strategies that we have throughout the north, that includes our snow pack sampling, our dendrochronology, the tree coring work; our land management strategies, which includes all the soil sampling and the remote sensing that we’re working on.

Also the terrestrial ecosystem health, this is where we’re going to talk more in detail about the Eastern Athabasca Regional Monitoring Program.

We also include First Nations and Métis traditional knowledge, trying to gather as much information as possible and make sure we have an open dialogue.

And then, the hardest piece, of course, for most jurisdictions is the legacy data review when we have terabytes worth of data that we have to sift through and make some sense out of it.

For lake sampling, we have sampled in the north approximately 250 headwater lakes, and we continue to sample them as we go forward, but this is in partnership primarily with the Federal Oil Sands Monitoring Program.

We move into lake coring for our paleolimnology. We are trying to ascertain the history of the water quality through the sediment cores. We can go back through history. We've done about a hundred years' worth of history approximately through the sediment coring.

Stream health has been one of the more complex ones that we've worked on. There's been several studies that we've looked at and we continue to look a great deal into this. We talk about the Benthic Macroinvertebrate studies and these are ongoing in several different locations throughout the north.

We've also looked at different ecological indicators including dragonflies. We look at the aquatic ecosystem health using some of the APECS predators. We look at the otters.

Right now, we've teamed up with the Saskatchewan Trappers Association. From there, we've collected over 200 carcasses and it's being analyzed by four of our partners, the University of Saskatchewan, the

University of Regina, the University of Michigan and Environment Canada.

The air quality study that we're continuing across the North is also in context with the Federal Oil Sands Monitoring Program. We are putting several stations, including dry deposition, wet deposition and several of the higher end air monitoring equipment, starting in Buffalo Narrows and working all the way across to Island Falls.

Also on the air quality, water quality, we're looking at snow pack sampling. This will give us the indication of what's come out during the wintertime. We'll typically look at it after a six-month period. This is another program that we've teamed closely up with universities and the federal government.

Our tree coring sampling program has been quite interesting. We've had almost 500 tree cores that we've taken. Staff wanted to cut the trees down, but I insisted no. We have to just take the cores. So it's been harder for them to analyze, but we've had analytes of almost 140 years' worth of tree cores to look at the history of what's happened in the past and can we construct it going forward.

Our remote sensing and our footprint mapping has been one of the highlights that we've worked

on. Being able to look at such vast areas throughout the North, can we determine water quality issues? Can we determine air quality issues without having to do physical monitoring?

The intent is to look at hot spots that we can then move in and take a look closer and more detailed scientific analysis. The human footprint mapping or the anthropogenic mapping, as you’ve heard, is one of the more complex to identify where there’s been disturbances on the land, has it come back in time? So it’s one of the more difficult ones to look at.

Our soil quality sampling program is unique when you consider that for the amount of activity that’s been going on, we have very little soil quality data throughout the vast North. We have it around specific sites when work is being done, but to actually look throughout the entire north, this gives us a baseline level of about 200 background sites, full chemical analysis, full horizons.

The program that everyone’s been talking about, the Biodiversity Program, the Eastern Athabasca Regional Monitoring Program; it’s been one of the bigger programs and it’s been one of the biggest successes that we’ve had.

This is a program that’s been going on for

three years now, since the Boreal Program started. We've teamed up with Cameco, Areva, as well as CanNorth to prepare this program to bring it forward to everyone.

I have a second presentation to talk in more detail about the year-round programs, so I'm going to finish up this one if it's okay, and then I'll step into the next program.

Just at a high level, the program is really designed to study the water, the fish, the berry, the soil and the mammal chemistry.

The results of the study are available on the Web site. It's actually both .ca and .com, just to be on the safe side. One thing that was raised earlier was that not everyone will have access to the Web site, and the availability, and we understand that. We're trying to make sure that the data is open and transparent to everybody, and so that was one of the highlights, and I'll get into the presentation that's done to the communities.

Program highlights is primarily broken into the two main areas, the community program, which is the traditional food or the community foods program, and that one was designed to include a collection of foods identified from the community members as being important, traditional, harvest foods. This currently includes berry and bog cranberry, lake trout, lake whitefish, and moose or barren-ground caribou.

Communities that have been involved include Black Lake, Uranium City, Camsell Portage, Fond du lac, Stony Rapids and Wollaston Lake.

Based on the assessments completed in the 2011 dataset, the community program established the parameters of potential concern in country foods were generally low, within available regional reference values, and/or comparable to supermarket values.

Involvement of the community members has been critical in this program in planning and conducting a year-round community program. Without the local help, this program would not be possible.

At this time, I would actually like to thank all the community members who have participated and continue to participate in this program, and we actually open up and hope that more communities will be involved.

The technical program, which involves more of the water, the sediment and the fish, this one is more specific dealing with the sediment column data, the benthic macroinvertebrates, the fish chemistry includes more fish, lake trout, northern pike, lake whitefish, white sucker, Longnose sucker, and it’s a full chemistry data, tissue, bone, et cetera.

Sampling locations include Cochrane River outlet from Wollaston Lake; the Fond du lac River outlet at Wollaston Lake; the Cracking Stone River inlet of Lake

Athabasca; and Waterbury Lake. The (inaudible) reference locations, because all of them are based on reference and exposure sites, is Cree Lake, Ellis Bay of Lake Athabasca, and Pasqua Lake.

To continue on with the entire program, we have legacy data that’s also been done with the Ministry of Environment. This has taken all the datasets that have ever been collected in the ministry, which, you can imagine, is a huge undertaking, and digitizing everything into an ARC GIS platform, so currently we’re the first in Canada where we’ve taken all the environmental assessment data and have compiled it all into an ARC platform. So any history is in there, including, as we go forward, more data as we keep finding them.

The point that I want to raise is that the continued effort is expected to result in a state of environment report on the ecological integrity of the northern watersheds of 2015. That was the design time of the plan.

As we’ve grown this plan, since 2011, more and more programs are evolving as we see more and more partnerships engage. Some of the highlights that have also included, is we’ve engaged with school groups, and so we started off with two schools, now we’ve moved up to five schools this year, to encourage them in sampling

programs, to demonstrate the ability to sample and using the water samplers.

We continue to work with the programs to identify and coordinate cooperation. We work with the bear program. We discuss programs with northern communities, and if there’s additional things that we should be looking for.

We work with universities to identify cumulative effects through different monitoring tools. We continue to work with new and emerging models and to train staff and inform people.

We continue to work closely with the caribou file, and we continue to work closely with our forestry partners in the boreal forest.

I would just flip over to the other presentation. This presentation, and it was actually based on the question that was asked earlier, so I wanted to include it, was how do we display this information? How do we present this information to the northern communities, in an ability -- I don’t want to go into the community and speak at the PhD level, so this is one of the programs we’ve designed as a communication program.

We have CanNorth working on this with us, and Ryan goes to the communities and he does this presentation. I won’t go through each of the slides; I’ll go through some of the highlights.

He identifies what the year-round program is; he identifies who his funding partners are, and who is involved with them. He identifies the objectives of the program, to monitor the safety of country foods in the Athabasca communities and monitor for potential cumulative effects. The approach is two programs, the community program and the technical program, as we talked about.

He identified what cumulative effects are, at a very high level, what are the changes in the environment that have caused (sic) by an action in combination with other past, present and future human activities.

What are the samples tested for? This is a little bit higher level, but it’s identifying all of the material that’s tested, so uranium, selenium, copper, cadmium, molybdenum, lead, nickel, aluminum, iron, zinc, et cetera, just to demonstrate that it’s a full scientific sampling program.

The community program is identified with an objective to monitor the safety of traditional harvest country foods, from seven other communities. The approach is to rely on community members to collect and submit samples for testing.

When the program was originally designed, it was to have staff from the ministry to go and collect

the samples, and we disagreed with that. We wanted the communities fully engaged with the sampling protocol.

I wanted foods that was going to be eaten to be picked up and analyzed, so we're taking the right food. The samples collected include the water, the fish, the blueberries, the cranberries, the moose and the barren-ground caribou.

We've talked with Dr. Irvine several times, and talking about making the program more resilient, better, so we may include rabbit next time, we may include some of the others. But, the intent is, is that this is an ongoing program and it will modify as we go forward.

The community involvement involves the community members from each of the Athabasca communities to complete the sampling. Training is provided, so that they know how to collect and ship the samples, and the traditional knowledge is used to identify what we want to collect. We don't want to collect the wrong sample for the wrong reason.

Our community study areas that's identified, how many samples are collected in each community, the community program data analysis was actually found from each one of them, and what it's compared to, and the community program results, it's put in very plain language -- Water, no concerns to freshwater aquatic life or drinking water quality; fish,

concentrations were low within the range of reference values and supermarket fish values; berries, concentrations were very low and within the range of reference data and supermarket berry values; moose and caribou, concentrations were very low and often below the laboratory detection limits and supermarket meat values.

Overall, the results indicate the levels of metals and radionuclides in country foods are very low and similar to those in supermarket foods consumed by the general Canadian population, in plain language and hoping that it’s explainable.

The technical program, the same thing, steps through the program to identify the objective of it, to monitor the cumulative effects downstream of the mining operations, the approach to rely on collecting technical samples from seven locations in the basin. Samples, to collect water samples, sediment samples, fish and benthic macroinvertebrates - aquatic bugs.

We look at a comparison of exposure and reference sites. The one point that I have to do raise with all the sampling program, the year-round program is a self-program, so when we sample the benthic macroinvertebrate program for that program, that doesn’t relate to the stream data that’s also done in the overall boreal management program. So there is multiple sampling programs going on in multiple different locations.

Our technical study areas, we have our exposure studies and we have our reference sites, and so it’s one of the ones that we look at upstream and downstream effects, near field and far field effects.

We want to explain it the same way, what are we comparing the samples to? For example, fish -- compared to the mercury consumption guidelines from Saskatchewan Environment, and reference locations. So when we actually look at the results, we’ll say the fish, similar, between the exposure and reference data, and below the mercury guidelines, so that if there’s any questions at this point, the community is fully aware and can ask the questions.

The year-round communication has been one of the points that we try to make sure it gets out to the news events. We posted -- there was an excellent article in Opportunity North that highlighted it last -- late last year. And we’ve got the web site where all the data’s on there, plus more data, as we go on.

Thank you again for taking the opportunity to present this.

THE CHAIRMAN: Thank you. Thank you very much. It’s too bad that many of the intervenors that I think would have benefited from this presentation are not here with us. But nevertheless, for us, it's been -- to me at least, it's been very useful. And we would like to

continue to ask you some questions and put him on the record.

So, with an introduction, who wants to go first? Monsieur Harvey?

MEMBER HARVEY: Just -- your very last presentation, I suppose that was quite general. I mean the -- you are talking of fish, of caribou, et cetera, et cetera.

When you visit communities with that, I suppose the people there, the communities want to know what is very specific to their environment.

So taking into account this vast region, are you working with average or you've got, for specific a community, all the required information?

MR. McCULLUM: For the record, Kevin McCullum.

Right at this point, we are working with selective communities in the area. But there's also, as communities engage, as we put more publicity out with the Web site, as we put more publications out, we engage with more and more communities to discuss. Talking lots with Dr. Irvine and putting into ways that's easily explainable. You can have this much meat to eat, because it's well within the guideline limits. Things like that.

To put it into a very basic, basic

messaging that we can get across, that's not complicated, not fear mongering, but rather this is what it is.

THE CHAIRMAN: But so, just to try to help us, are you able now to say whether it's safe to eat berries in Key Lake and you know, the actual mines that are under consideration right now?

MR. McCULLUM: For the record, Kevin McCullum.

I can speak to the samples that were collected in the various locations in the reference and exposure sites, and those ones were safe to eat.

THE CHAIRMAN: So are any of those sample sites near those mines? I know -- I don't want to put you in a -- I don't want to extract a statement you don't feel comfortable to say. But there were some people around here that said, they went to Key Lake and I took those berries and I want to know, can I eat them? So ---

MR. McCULLUM: Again, I would say definitely with the samples that we've collected, we could say that in those areas where we sampled, they were safe to eat.

THE CHAIRMAN: When will you be able to be more definitive, in terms of you finish your comprehensive sample and now you have a very good assurance that that sample is good enough to be more definitive in your

answer?

MR. McCULLUM: For the record, Kevin McCullum.

For the sampling that we're doing, this was year one of the sampling program. Year two we have in draft right now and year three is ongoing right now.

As any good scientist, I would hate to comment on year one of data, but as we go forward, we're definitely going to have more definitive.

The hopes is this is an ongoing program and we'll get more and more of the gaps collected and we will identify that it is safe to eat.

THE CHAIRMAN: You say hope that it will be an ongoing program? I sure hope that you have the resources to make sure it will be an ongoing program.

MR. McCULLUM: It’s government agencies. We know how it goes from fiscal to fiscal year.

But the intent is that this program will continue and with the way we positioned it, with the partnerships that we continue to move forward with, not one of these projects is ever handled alone. We have partners in every other projects that we're working on, in every one of them.

THE CHAIRMAN: Monsieur Harvey?

MEMBER HARVEY: My last question. With

your site, Internet site and maybe other means, are you able to evaluate the majority interests of the people, the communities?

MR. McCULLUM: Kevin McCullum for the record.

That is one of the points that we've looked at as well, to try and get as much feedback and questions. So if we can get more of the questions of what's a concern, we should be looking at closer in certain areas. That's what's really helped out so far.

MEMBER HARVEY: And not just the program with those answers and then there was such evaluation. You will be able, in the future, to adjust the program to the -- and the wills or the hopes of the citizens.

MR. McCULLUM: Often we look at sampling programs as an adaptive monitoring program. So we want to always adapt it. We don't want to keep it static to the point in which we, say for instance, we’re looking at an element or we were not looking at an element that we should be looking at. We want to make sure that we include it in the future.

So there's things like that that we want to make sure we include. So as we find gaps, we definitely want to close those gaps.

MEMBER HARVEY: Thank you. Merci.

THE CHAIRMAN: Thank you. Dr. Barriault?

MEMBER BARRIAULT: In your sampling, I never noticed if you did water fowls at all, ducks and geese or, have you done any of those?

MR. McCULLUM: In the year-round program, no. In a different program that we've just started this year, yes. We were actually looking at a test right now. So we're testing the methodologies. And so once the methodologies have been proved, then we'll move into the sampling program.

MEMBER BARRIAULT: Thank you.

THE CHAIRMAN: Ms. Velshi?

MEMBER VELSHI: One of the concerns and recommendations we heard, or it may have been from more than one intervener, was the importance of independence from the licensee and the proponent for monitoring. And I see one of your funding partners is Cameco.

When you go out to the community and make presentations, is that concern expressed and have you considered revisiting your funding arrangement as a result to just give greater credibility and comfort to the community?

MR. McCULLUM: For the record, Kevin McCullum.

With the sampling program, it is all

independently reviewed by scientists, by universities and so forth. We make sure that all of the data is fully credible so whether it's funded by us, whether it's funded by an independent party, whether it's funded by a partnership.

Even when we have Environment Canada funding in a joint partnership program with us, we still have it independently reviewed by university experts that will give us that independent review, and straightforward answers.

MEMBER VELSHI: Right, so my question wasn't the independence. My question was more on the optics and the risks associated with that and have you assessed that and said, well you know, we may get greater credibility if we didn't depend on the licensee to provide a part of the funding.

MR. McCULLUM: I guess my point is, I have history in a lot of the air shed monitoring throughout Alberta and Saskatchewan, and that's a public-private partnership type funding. So it's constantly being funded, if we want to call it, polluter pays principle.

And so the one thing that we want to make very clear in the optics is that who are the funding partners? We want to make sure it's not hidden to anyone that no, no one's paying for this, it's just the

government paying for it. We want to make sure that it's very clear that there's partners involved with this. And one of the other partners involved with this is the health region. We have Dr. Irvine involved with this.

And so we make sure that there's lots of transparency and that -- and you are 100 percent correct, the optics, sometimes, come into play. But we want to make sure that we're open and transparent about it.

THE CHAIRMAN: Any questions? Mr. Tolgyesi.

MEMBER TOLGYESI: You were saying that you were presenting, in the first year results, you were presenting to communities, did you?

MR. McCULLUM: That -- this is the results. This is the presentation from the first year of sampling.

MEMBER TOLGYESI: And did you go to communities to present them this?

MR. McCULLUM: We have. CanNorth, that does the communications for us, so Ryan's been one of the players, or one of the participants that has gone to the communities and done the presentation.

MEMBER TOLGYESI: And my question is that, how it was received? With some skepticism, some enthusiasm? So when you say that the berries are with low risk, how was the acceptance of these results?

MR. McCullum: The interesting thing is there's actually quite an acceptance for knowledge, what's happening. Even when we talk with the Trappers Association, they want to know what's coming back from the otter program. So there's just been a thirst for knowledge to get that communication back to the communities, to say we've sampled, this is what we found, this is what it is.

Bear in mind it's year one of the sampling program. As we move forward we'll see how things change and how they improve. Because part of a whole cumulative environmental effects monitoring is you want to look at temporal change, sampling over time. And, we've just really started.

MEMBER TOLGYESI: And my last question ---

THE CHAIRMAN: Sorry, before that, did you find -- while I remember I -- did you find any exceedance, even in your first year sample?

MR. McCULLUM: Yes, there were some exceedances.

THE CHAIRMAN: In the food?

MR. McCULLUM: In sediments. Benthic macroin-vertebrate, sediments, is where I'm thinking primarily.

THE CHAIRMAN: Okay, so then you point out

that that particular area requires some attention.

MR. McCULLUM: That is correct. And then we want to go back and make sure we look at that site again in scrutiny.

THE CHAIRMAN: Okay.

Mr. Tolgyesi?

MEMBER TOLGYESI: My last question, you were saying that there is multiple programs which are doing these samplings. So is there some correlation? Did you see some matching of that they are answering a similar way or there is quite divergence in results?

MR. McCULLUM: The goal of that one is actually the 2015 year. So right now, it's actually compiling all the information together. We're hoping to find similar to like the tree core data, are we seeing any changes in some of the elements that we've identified over the last 140 years in the trees throughout the Boreal region versus the water quality versus the sediment quality.

And that was where some of this program born out of, as it was originally looked at just the water column of data, and you can't look at anything in isolation. So we had to look at a bigger picture. We had to look at more the confounding factors to see where there is overlap, where there is potential issues.

THE CHAIRMAN: Staff, you wanted to say something?

MR. JAMMAL: It's Ramzi Jammal, for the record.

First, I would like to thank Dr. McCullum for adding the presentation because I personally asked him to make the presentation to the Commission on the monitoring program itself and the country food.

Just to assist Dr. McCullum, I believe it was you, Mr. President, who asked the question about the sites. Are there exposure sites in proximity of licensed facilities? If I point you to page number 3 of the CMD 13-H13.21 submitted by the SME, the picture has a legend. It says "reference, exposure, communities and uranium operations". And just for the record that the exposure sites are in proximity of uranium mines.

THE CHAIRMAN: I was going to ask at the end as to how the CNSC staff interact with all of this work that's being done by the Ministry of Environment?

MR. LeCLAIR: Jean LeClair, for the record.

So of course we work closely with the province of Saskatchewan. Any anomalies that would be identified that could potentially be associated with the mining operations, giving it to the Government of Saskatchewan, the Ministry of Environment Saskatchewan,

the provincial regulators would be informed. We work closely with them.

That would then lead to discussions with the licensee that would be closest to the location. Probably through discussions, we would determine whether some investigations are necessary in order to assess and determine whether what's being observed could be associated from the mining operations or whether it's something else.

THE CHAIRMAN: Thank you.

Questions? I got tons of questions, but I'm going to try to restrict here.

First of all, a couple of quickies, did you mention that the data is available on your Web?

MR. McCULLUM: For the record, Kevin McCullum.

The data for the year-round program is available on that website, the earmp.ca or earmp.com. The data is available there from the year-round program.

The rest of the data is being compiled together into individual reports that will feed into the 2015 State of the Watershed.

THE CHAIRMAN: What about the Arc GIS? I know it's a huge database, but is it available to academia and people like this to go and do some number crunching?

MR. McCULLUM: We currently have that open to our branches and our other ministries to have a look at it. And there has been a few academics that wanted to take a look at it, so we've opened it up to them to start to do the investigation on that data set. And so yes, to answer your question, some of the academics do have access to it already to start doing the data mining on that project.

THE CHAIRMAN: I also noticed, in your slide deck, I didn't see any mentioning of mercury and cadmium. You know that was a hot topic by Sierra Club.

Do you monitor that?

MR. McCULLUM: The interesting thing is the entire apex predator, the otter study, that's been the highlight of it. It has been a mercury sampling program, so both mercury and methylated mercury. That's where we had to send it to the University of Michigan as a partner because that's where the primary ---

THE CHAIRMAN: In your slide, I didn't catch mercury and cadmium.

MR. McCULLUM: I was keeping it at a 10,000 foot level.

THE CHAIRMAN: But it is then part of the monitoring data.

MR. McCULLUM: We could go into PAHs were

also part of the gallbladder study for that one as well, so yes.

THE CHAIRMAN: Okay. What ---

MR. MOONEY: Sorry, it's Liam Mooney, for the record.

I thought I did see on the slide, in relation to the ARMP, cadmium and also, on reporting the results, they were being compared to the mercury guidelines. So I just wanted to clarify that. I might ---

THE CHAIRMAN: Okay, maybe I missed it. He went through it relatively quickly. But in the list of the metals, I don't think I saw mercury in there. But I could be wrong. That's the one.

MR. JAMMAL: Okay, Mr. President, it's Ramzi Jammal here.

We can assist the Commission by tabling this report to the Commission because it's available on the site and to assist, again, Dr. McCullum is -- the metals of interest, the whole list is present in the report off the net. And we're more than willing to print it out and table it to the Commission.

THE CHAIRMAN: Okay. I'm just going through my list here quickly. Remote sensing, you think that's a potential? I'm particularly interested in before

and after.

You know, we have now tailing ponds and they're going to be remediated. I wonder whether one will be able to detect some of the before and after.

MR. McCULLUM: For the record, Kevin McCullum.

The interesting thing is we started looking through all the LANDSAT history and that was part of where we were looking to see some of the disturbances. It actually fell under the anthropogenic footprint mapping, where we were looking at the disturbances and how it's changed over time.

It wasn't as much on the mine sites that we were looking up, but rather some of the larger disturbances, on linear disturbances.

THE CHAIRMAN: But on the mine side, will it catch actually contamination level, radiation level, things of that nature?

MR. McCULLUM: For that, no. What we're looking for is, in that case, any disturbances on the land throughout time. From the other disturbances, there are certain parameters that we were bringing it back to. Such as the ozone monitoring instrument, where we could look at the NO2, the SO2, the particulate and compare that back. And this is primarily particulate 2.5, so the fine

particulate fraction.

Where you're looking at that one in relation to your signal from space versus what we're seeing on the ground and making the correlation there.

THE CHAIRMAN: My last question on my list is a 100 years of water quality history? You actually have data on that? And you can actually project from how it was to now?

MR. McCULLUM: If we want to start talking about artificial neural network modeling and things like that, we could have fun. I'm a data person too. We have history in certain water parameters. I don't want to go into too much detail of it, but we do have some data going back. Even water temperature, we have data going back into the late 1800s.

So it's pulling all that data forward to see what are we seeing for changes over time. We've just finished doing all the meteorological data and that was 1875 to 2012 with all of the MET data throughout the entire prairie provinces.

THE CHAIRMAN: So your bottom line assessment on a report card on Cameco operation in terms of impact on the environment. What would you say?

MR. McCULLUM: I would say at this point, they've been open and transparent to everything that we've

been doing. They've been good to the communities when we deal with these programs and they've been a good partner in the work that we're doing.

And we have not seen anything that stands out if it is similar to what's been said. If we see something that stands out of anomalies, we definitely will dig into it further.

THE CHAIRMAN: Mr. Tolgyesi?

MEMBER TOLGYESI: Following what you were asking, the history, you are doing tree coring. Do you do a sediment coring also and what are results and is there something what you could predict?

MR. McCULLUM: The sediment coring that's been done, there was two different kinds. One was the benthic sediment coring, so in the rivers, that were done. That was projected back approximately 100 years of laid sediment throughout time.

And that's what raised a lot of questions. We were trying to determine as just the water column chemistry, there was more here to answer. So we wanted to see more, get more information.

For the soil sediment data, it was a full chemical sweep that was done on all of the data. We have approximately 200 -- I want to call it virgin sites across the north, where we have never had any samples done in the

previous times.

So we can determine from there our baseline, how do we go forward, and then see what the impacts are. We used that data for acid deposition models, for time of effect models and just keep rehashing these models.

MEMBER TOLGYESI: You are talking about 100 years, but you know when you are talking about 10,000 years and more in paleontology, you are talking about, you know, with core, you -- you could determine a carbon sample testing, you could determine what's happened 1,000's and 1,000's of year back.

MR. MCCULLUM: The unfortunate thing was some of our sediments, we sometimes will have our core that's quite deep and that we can see quite a large history and some of the rocky bottoms that we deal with, we don't have much history; the sediment is scored right off. So there's not much laid there that we can actually determine, so it's a fine balance between finding the right spot, getting the right data and going forward. We are continuing coring sampling an entire program with that; we've teamed up with Queen's University and the University of Regina to continue that forward.

THE CHAIRMAN: Anybody else; anything else? Thank you, thank you very much for have this very

informative and we'll continue to monitor.

MR. MCCULLUM: Thank you again.

THE CHAIRMAN: The next presentation is for Mr. Little as outlined in CMD 13H13.15 and H14.13 and H15.12. Mr. Little, the floor is yours.

13-H13.15 / 13-H14.13 / 13-H15.12
Oral presentation by
James Little

MR. LITTLE: Thank you. First of all, I would like to thank the CNSC for allowing me to speak to you all on behalf of Cameco's Rabbit Lake operation. I'd also like to commend you on holding the hearing here at La Ronge. This is definitely one of the impact communities of the licensed operations that we're reviewing. Basically, the reasons I have asked to speak in front of you is to share with you how Rabbit Lake and other operations have impacted my career and as well as, can we go into how the northern sites benefit the north as a whole.

So a little background on myself, my name is James Little, I'm a senior mining engineer at Rabbit Lake where I've worked for the past 11 years. I'm forty years old; I live with my wife Nancy and her son

Erin who is now 18. I'm proud to say that I -- La Ronge is my home and I've been living here for the past 20 years and I'm also a Lac La Ronge Indian Band member and one of only a few engineers who have been lucky enough to finish their degree and are now accredited as a professional engineer.

So basically my story begins at the young age of 19 where at Key Lake I was first employed with ACLB as a dishwasher, so as much as I like that, it was kind of the stepping -- the reason that I decided to go back and do -- pursue post-secondary education. So after that, I enrolled into a GEO technician program in La Ronge and it led to a job at Cameco's Contact Lake which was a gold mine that used to operate in Saskatchewan and I was employed as an assistant assayer. After a few months of bucking at contact I was transported to Rabbit Lake as a geological technician and that was much better for me, fit for me because that's what I was trained in.

However, working in geology for a while, I felt that I would be better suited in engineering and that started my push towards an engineering degree. I enrolled in a mining technology program out of BCIT and completed that, however, the industry was not in the best shape so instead of looking for work, I decided to continue my education in Montana, at Montana Tech. I

attended for two years and completed my third year and upon completion I decided that I would go back to work and make a little bit of money, pay some bills before I completed my degree.

So I was hired on with TMCC and actually got a job at -- in Carter River and then following that, I got a job at Steel Water Mine in Montana and worked there for about a year. This was right around the time of 9/11 so shortly after 9/11 and due to the political climate, I decided to come back to Canada and look for work here and that is when I was rehired at Rabbit Lake and I've been there ever since; so that's 11 years now and that was in 2002. So back then I was hired as a surveyor and the next year I was promoted to senior mine technician and with the support of the chief engineer and one of Cameco's Northern Development Program, I went back to school and finished my degree and upon finishing my degree, I was working in the engineering department for three years as an intermediate mine engineer, where I gained valuable experience and got my accreditation from APANX (phonetic).

Shortly after that, there was an opportunity to move into operations which I took; general format of the mines special projects and that's where I kind of learned the ins and outs of middle management. So

I worked in operations for four years then I transferred back into the engineering department as a senior mine engineer and that where I am now, currently.

I’ve been doing that for over about a year and a half. I’ve already had a pretty long extended career in mining already and I’ve been allowed to attain a lot of my goals and the big reason for this success that I have enjoyed is because of Cameco and the development programs that they do have and the opportunities obviously at their northern sites.

Rabbit Lake has not only been a great place for me personally to work and advance my career, but it has also served as a second home. The one thing that I can confidentially say is that we have one of the best Camp settings in Saskatchewan’s North and probably beyond. It is an older camp but somehow we’ve maintained to keep a good camp culture and that does go a long way to keep a happy and healthy work force. Rabbit Lake is a great example of how our core values, being Cameco core values, are influencing our workforce.

The safety culture at Rabbit Lake is very strong and the Environmental and Awareness Protection is second to none, as they are always trying to improve on the current practices. So why is Cameco good for the Norht? Well, in my opinion, I’ll mention a couple of

reasons that really stand out to me. Cameco has committed to hiring from a northern communities before looking elsewhere and is trying to maintain or better of 50 percent northern residents employment rate.

At Rabbit Lake, preference is given to the Athabasca communities and then to the Saskatchewan north and then elsewhere. And by doing so, they have been able to maintain high northern residence employment rates. Another good reason why they're good for the north is the time and the money they invest in the north. A perfect example of this is the SaskTel Chemical and SaskPower venture where they're going to be running fibre optic cable up to the northern sites; and what this will allow them to do is offer a high speed communications and high speed broadband to the north. A project like this would never ever be feasible without the support of Cameco.

So I just wanted summarize that I'm a strong supporter of Cameco and the northern operations and truly believe that their presence in the north is a benefit to all. Stories like mine are quickly becoming the norm because of Cameco's development and the commitment to develop the northern employees and it has never been stronger than it is today. Thank you.

THE CHAIRMAN: Thank you. Question, Dr. McEwan?

MR. MCEWAN: Thank you. We've heard some discussions today over people who are very supportive of the renewal of the license and some people who are less so. If you look around your friends and your colleagues and in your community, what's the general sense and the general tenner of the feeling about the relicensing and the feeling about the company?

MR. LITTLE: James Little for the Record. As far as far my influence and my area of friends, I would say it's very positive. Mind you, I cannot maintain a, I guess mining strong base of friends. As far as communities concerned though, it is positive as far as I can tell, I don't see too much negative comments, at least not in front of me.

MR. MCEWAN: And your son, you said I think was 18 so there's good educational opportunities for families and he's sort of built into that environment?

MR. LITTLE: That's correct. He's in high school now and with plans to carry along his education post-secondary.

THE CHAIRMAN: Question, Mr. Tolygesi?

MEMBER TOLGYESI: Do you have yourself or friends who want trap lines because what we learned today that the trap lines are from generations; transferred from generation to generation; so as a native, do you have

something like this yourself or your friends?

MR. LITTLE: Yes, I do. Actually, I am a voted in trapper, however I don't practise as much as I should. But I have friends and family that are trappers and the ones that I do have are supportive of Cameco.

Now mind you, it is in the area around La Ronge, so they're not directly impacted by the northern operations.

MEMBER TOLGYESI: My question was the following, that how they see those who are trappers and have trap lines, how they perceive mining operations there. It's something which is seen as something negative because they are disturbing the trap lines and what not?

MR. LITTLE: No, like I said, because the trap lines are in the La Ronge area, we're not directly affected by the northern sites. They remain neutral. They don't really say if it's a good thing or a bad thing.

THE CHAIRMAN: I have two quick questions. First of all, I wanted somebody who actually -- are you doing the seven days in, seven days out?

MR. LITTLE: That's correct.

THE CHAIRMAN: Do you like it?

MR. LITTLE: I wouldn't have it any other way.

THE CHAIRMAN: I'm trying to get my mind

around, you know, some of you in some of the submissions said it’s a very good way of doing business. You don’t find it disruptive, family-wise, et cetera?

MR. LITTLE: For myself, I guess when I first started working in a fly-in fly-out operation, it was a little bit disruptive with the family. However once you get used to it, I find it’s a lot easier to work seven days in. That’s all you do is worry about work. And when you come out, it’s -- you worry about family.

And it does take a little while to get used to that schedule, but it is a good one once you get used to it.

THE CHAIRMAN: Maybe a question for Cameco also. Are you kind of campaigning with SaskTel to push telecommunication to the north? Fibre is more expensive than putting microwave and cell towers. So are you having -- you have a plan to put cell towers in those communities that you’re dealing with?

MR. MOONEY: Liam Mooney, for the record.

We’re not in the business of infrastructure. We do take advantage of opportunities that are presented. And the example that’s been shared a couple of times during these proceedings was one of those opportunities.

THE CHAIRMAN: So does that mean -- does

SaskTel pay attention to your needs and opportunities where there are mining activities, there should be communication, I assume?

MR. MOONEY: It's Liam Mooney, for the record.

And we do have that cell phone service for our mine sites, yes.

THE CHAIRMAN: But you're not trying to get them interested in extending it into some of the communities -- your nine communities. That's what I'm driving at.

MR. WILLY: Through our negotiations and our agreements, we're moving to a structured community investment where communities can make those decisions about where to allocate where they feel community infrastructure is needed.

THE CHAIRMAN: Well, you know that, again, there's some who believe that communication is almost like a human right. If you haven't got communication, you cannot be connected to society at large.

So I'm just wondering, in whose agenda, I know it's not necessarily your mandate, but are you trying to convince the powers to be about communications?

MR. WILLY: Sean Willy, for the record.

We do work with SaskTel and SaskPower and

other agencies to almost act as an intermediary between our northern communities and working in conjunction at these partnerships. But as I mentioned before, because we are moving to this agreement-based approach, there will be funds allocated to the communities, and if the communities deem that they want to invest that money into communications infrastructure, then they will go down that path.

THE CHAIRMAN: Okay, thank you.

Anything else? Thank you. Thank you very much.

MR. WILLY: You're welcome.

THE CHAIRMAN: Okay.

MR. LEBLANC: This completed the oral interventions. We have two written submissions to go through. We have a written submission from the Johnson-Shoyama Graduate School of Public Policy as outlined in CMD 13-H13.9, 13-H14.8 and 13-H15.7.

13-H13.9 / 13-H14.8 / 13-H15.7
Written submission from the
Johnson-Shoyama Graduate
School of Public Policy

MR. LEBLANC: So I'm going to ask if the

Members have any questions with respect to this submission.

THE CHAIRMAN: Questions? Anybody? No? Dr. Barriault?

MEMBER BARRIAULT: Just one brief question really. She expresses -- or the intervenor, I should say, expresses a common trend really about the concern with the tailing problems. And the intervenor is wondering really whether we're sitting on a potential release in the future, whether -- so I think what we're looking for is reassurance that ---

MR. MOONEY: I'm sorry. Which intervention are we looking at?

MEMBER BARRIAULT: Okay, sorry, sorry, sorry. I'm at 13.10.

THE CHAIRMAN: Okay.

MR. LEBLANC: The second written submission is one that was supposed to be an oral presentation, but Mr. Tavio Morin was not able to make it yesterday because of some road obstacles. So it's CMD 13-H13.4.

13-H13.4

Written submission by

Tavio Morin

THE CHAIRMAN: Oh, that's totally out.

MR. LEBLANC: Yeah, this was scheduled to be early on yesterday.

THE CHAIRMAN: Thirteen point four (13.4). Give us some time to find it.

MR. LEBLANC: Yes.

(SHORT PAUSE/COURTE PAUSE)

MR. LEBLANC: So do the members have any questions on Mr. Morin's written submission?

(SHORT PAUSE/COURTE PAUSE)

MR. LEBLANC: So Mr. President, this concludes the written submission. You may want to now ask the members if they want to proceed with a second round of questions or, in fact, the first round of questions of items that have not been asked through the intervenors and the first presentations.

THE CHAIRMAN: Absolutely, I think we have some questions. Now is the time to change books and get back into the beginning.

(SHORT PAUSE/COURTE PAUSE)

THE CHAIRMAN: Okay, we are now going back to the submission by Cameco and staff that was presented Tuesday evening and it's time to ask those questions and I'm starting with Mr. Tolgyesi.

MEMBER TOLGYESI: Thank you. I'm just

finding my question. I have two. One, we were talking this morning about, you know, the number three shaft and dust abatement and you were saying that shaft number three is exhaust shaft; that's what you were saying?

MR. MOONEY: Liam Mooney for the record. Shaft number two is an exhaust shaft.

MEMBER TOLGYESI: Is?

MR. MOONEY: Shaft number two is an exhaust shaft.

MEMBER TOLGYESI: No number three.

MR. MOONEY: Shaft three is not an exhaust. Sorry. Yes. It's both, an intake and exhaust shaft.

MEMBER TOLGYESI: Uh-huh, because what you were saying that water is drained from -- pumped from number three shaft to the surface and rejected to the environment without any treatment and this is because the water do not contact any contaminants or anything in the mine except the dust which is coming out.

Now, if it's contacting the dust which is coming out, there should be some, I would say some dust collection. It acts maybe like a scrubber. Some dust will stay in the water and that dust, could it contain some material which is contaminated? So therefore it probably should be checked.

MR. MOONEY: Liam Mooney, for the record.

That water is regularly monitored before its release. As part of our monitoring program, it is regularly monitored and I think the important part in relation to that shaft three water management is that keeping it separate from the mine workings, it's basically groundwater that's being moved up the shaft and discharged.

When we say it's not treated, we're not saying that it's directly released without any monitoring. There is monitoring in relation to that discharge location. So the monitoring lines up again with the regulatory limits and our licence conditions.

MR. NAGY: For the record Kevin Nagy. I'll just add a little bit to what Liam has said.

At the bottom of the shaft we actually do monitor that water for PH and total suspended solids before its pumped. Those two parameters are actually interlocked with the pumps and if in fact we have a problem with either one of those, the pumps shut down, water gets diverted to the water treatment plant for treatment before it's released to the environment.

MEMBER TOLGYESI: And my second question, I tried to find out, it's regarding the diamond pit. What you were doing there, you removed 2.4 million cubic metres of sand to reduce the slope and what you are doing now,

you are installing rock -- how do you call that, rock toe buttress of rock and that toe buttress is stalled there because of protecting the sand from water, which is with the waves to not be washed or it is installed there to increase the stability of the slope?

MR. MOONEY: Liam Mooney, for the record.

I'll ask Les Yesnik, the General Manager of Key Lake to give you the details on the toe buttress.

MR. YESNIK: Thanks, Liam. Les Yesnik, for the record.

The purpose of the toe buttress is for the reflooding of the pit. So after we're complete with the slope stabilization project, we'll put together a plan for allowing the water levels to recover to a certain extent. And, of course, during the life of the facility, we will continue that point of depression so we're continuously drawing in in any contaminants until we have finalized the reclamation plan. We will let the water level recover to a certain extent and the toe buttress will provide stability primarily during that water level recovery period. After that it will add some stability, some factor of safety but it's primarily for the reflood.

MEMBER TOLGYESI: My question was if you will not have to continue that rock placement as the water level is rising?

MR. YESNIK: Les Yesnik, for the record.

No, the elevation that is currently in design will not need to be extended.

MEMBER TOLGYESI: And my last, you were talking about that eventually the water level will overpass the limit of bedrock. That means it will enter into contact with sandstone. Is there any risk that there will be kind of seepage or whatnot?

MR. MOONEY: Liam Mooney, for the record.

I'll ask Barry Esford, who is a manager at Geo-Environmental Engineering to provide the details on how the Key Lake Extension Project speaks to Cameco's commitment to protection of the environment and the health and safety of workers.

MR. ESFORD: Barry Esford, for the record.

So with the expansion of the tailings facility, we will be placing tailings potentially to an elevation as high as 505, which is up into the outwash sand. During the operating phase we continue to collect all the water through the dewatering system so there's no risk of contamination then and post decommissioning, we've also assessed the performance and placing tailings above that level doesn't impact the long term performance.

The basic design concept is the outwash sand is highly permeable and the tailings are fine

grained, so there's enough contrast in hydraulic connectivity that the
Groundwater preferentially flows around the tailings rather than through them so it minimizes interaction.

MR. MOONEY: I was just going to jump in there. I should have probably prefaced that remark. It's Liam Mooney, for the record, again.

That is part of the Key Lake Extension Project and is subject to the federal/provincial environmental assessment that we have discussed earlier that has to be reviewed and approved in that context.

MEMBER TOLGYESI: I suppose that they will come back to the Commission for licensing.

MR. JAMMAL: Ramzi Jammal, for the record. That is correct. We had this discussion with Cameco. Cameco submitted the EIS and the work is underway with respect to the assessment and then the decision from Staff's perspective.

THE CHAIRMAN: Can I ask a question on that one. In Cameco's presentation it says that Cameco submitted project description on the extension in 2010. We're now talking about end of 2013. I'm trying to understand why it took four years to get where they are now in the EIS. Is there any issue here?

MR. JAMMAL: Ramzi Jammal, for the record.

I'd like Cameco to start with the answer and then we'll complement it if we need to.

MR. MOONEY: Liam Mooney, for the record. That's been the process that's been taken to satisfy the regulatory requirements. We like it to have been faster, absolutely, but it's taken the time it's taken to get us here and we want to see the project proceed on a timely basis going forward but the project has taken the time it has to do the necessary technical analysis to support the EIS.

THE CHAIRMAN: You are being diplomatic. We now, as you know, signed up to a two year kind of a limit for environmental assessment. I'm just trying to figure out where the regulatory bottlenecks are.

MR. MOONEY: Liam Mooney, for the record.

In July last year when the new *Canadian Environment Assessment Act* was brought in, this was one of the EAs that was continued under the federal process by direction of the CNSC, so we followed along with that.

Again, part of the changes that we've seen under that federal regulatory reform and the Staff moved to the Licence Condition Handbook, we would anticipate that similar projects would be able to be effectively managed solely under the *Canadian Nuclear Safety Control Act*.

THE CHAIRMAN: Thank you.

MEMBER HARVEY: Merci, Monsieur le Président.

My first question is addressed to staff and page 9 of the -- their CMD for Key Lake.

This is the relevant safety and control areas. It's not the first time I'm talking about that, but I've got an example here. There is the table at the bottom of the page, and it's the rating is satisfactory for all the control and safety area. And -- but there is some, in the trend, trend column, some three, in fact, three areas that are operating trend.

So would it be legitimate for the Commission to understand, to hold that for the next evaluation, that the evaluation could be or should be fully satisfactory? My question is would it be possible right now for the Commission to identify the gap between the satisfactory and fully satisfactory and the actions to be taken, then the licensee would have a target and maybe that could be a motivation to get to that point?

MR. JAMMAL: Ramzi Jammal, for the record.

I'm going to have to give you a bit of a long answer.

The ---

MEMBER HARVEY: Not a long one, but short

one, that's fine.

MR. JAMMAL: Okay, let me start with satisfactory is what we measure is the performance of the licensee.

So the licence condition handbook has in it now the compliance verification criteria, so we moved into clarity and transparency on the license reform. The licensee -- the history of the licensee is, they had to put in place improvements in order to become satisfactory over the time of the licensing period. The question is what does it take to have fully satisfactory.

The performance of the licensee will have to surpass the minimum requirements of the expectation of the CNSC, which is a regulatory expectation. In addition to it, they will come up with, let me call it, best practices. So in other words, they're not being pushed by the regulator to make these improvements. They will put enhancement in place that will become the new industry standard or best practices.

So in conclusion, satisfactory is meeting the regulatory expectations with the trend, moving upwards, but the licensee performance that indicates how they are doing and can they achieve fully satisfactory.

Now, moving it towards the annual compliance review, report on the performance of the review

on the annual basis, then the licensee we can have a much more informed discussion on the performance of the licensee, are they approaching fully satisfactory or they aren't satisfactory.

But the compliance verification criteria in the LCH is clearly -- and transparency determine the expectations of the CNSC. In addition, we provide guidance where we highlight some best practices and best practices that exist somewhere else, and then the licensee will implement those best practices.

MEMBER HARVEY: My question -- well, I know that when it's satisfactory it's okay, but my point was just to have a target. If we don't have any target, then it appears, which is not the truth, but it appears to be at the pleasure of the -- okay.

My second question is addressed to Cameco. It's on page 19 of the same CMD. It's right at the bottom of the page.

THE CHAIRMAN: Sorry, listen, we've got six ---

MEMBER HARVEY: Nineteen (19), always for Key Lake. This is the staff CMD, page 19.

THE CHAIRMAN: Okay.

MEMBER HARVEY: Okay.

The last sentence of the page:

"Liners and ponds are routinely inspected and repaired to prevent leaks to overburden and groundwater."

I just wanted to know how liners are verified? What is the method and how can you guarantee that the liners are okay? And how -- my second question will be to the staff -- how you can verify that?

MR. MOONEY: So it's Liam Mooney, for the record.

And I'm going to ask Kevin Himbeault to talk about that specific question.

MR. HIMBEAULT: Kevin Himbeault, for the record.

The -- I guess, for liners and sumps, I mean, there's a variety of ways that we do inspections and testing on these facilities. Liners themselves are visual inspection that are done. So we'll bring in a third party to come in and take a look at the conditions, we will clean the area, make sure that there's no material down there. They will go through, do visual inspections on those liners. If they identify any failing areas within those, we will patch those, and typically our liners are HDP liner, and they'll fuse material back on there to ensure that there's containment -- solid containment in there.

Things like sumps, we will do hydrostatic testing on them. So we brought in a third party engineering firm to basically fill the sumps with water, measure whether or not there is any leakage in those sumps. If there was, there was a priority put on those sumps to upgrade those facilities, and that's a process we've been going through, and it's based on risk and based on the type of material that could be released to those sumps in a potential upset condition.

MEMBER HARVEY: When you say it's a visual inspection, if my comprehension of liner is correct, it's -- you've got an amount of material over the liners. So it's not -- what you're talking -- it's not the bottom of your ---?

MR. HIMBEAULT: Yeah -- Kevin Himbeault, for the record.

The liner inspections I'm talking about is in our monitoring ponds and in our reservoirs. So these are facilities where there -- basically you can drain the water out of them, you can clean the sludge material ---

MEMBER HARVEY: Oh, it's only under the water?

MR. HIMBEAULT: That's correct.

MEMBER HARVEY: Oh, okay.

MR. HIMBEAULT: Yeah.

MEMBER HARVEY: I thought it was liners and you got material over the liners. So it doesn't mean the same -- okay.

MR. HIMBEAULT: That's correct.

MEMBER HARVEY: I understand. Thank you for that.

Okay, I've got my answer on that.

THE CHAIRMAN: Okay.

MEMBER HARVEY: We'll come back?

THE CHAIRMAN: Two questions.

MEMBER HARVEY: Okay.

THE CHAIRMAN: Ms. Velshi.

MEMBER VELSHI: Thank you.

I'll start off asking the question to staff and then Cameco may want to add to it.

So one of the items in front of the Commission is to accept the revised financial guarantees for decommissioning. And for all three facilities the decommissioning estimates have increased fairly significantly from the last time they're estimated.

And I know we've had some discussion around the decommissioning plan, but I was hoping you could give a bit more detail around that on what the preliminary decommissioning plan contains, particularly around -- does it provide enough detail as to when things are going to

get, you know, reclamations is complete, decommissioning is complete, and now it's ready for turnover for institutional control or it's now a green field site, or whatever, and are there dates for that. Is that the level of detail that the PDP is and on which the financial guarantees are based?

MR. LeCLAIR: So the preliminary decommissioning plans are based on an assumption that the decommissioning were to start today, because it's -- they're intended for five year periods. Every five years they get reviewed and get revised. So they're based on an assumption. Decommissioning had to be done on everything that currently exists and anything that's planned over the next five year period.

So they go through, look at all the facilities, the tailings, the waste rock, the monitoring ponds, all the facilities need to be removed, reclaimed. It includes covers, the construction of covers. It includes the monitoring programs to do the long-term monitoring. So there's assumptions in terms of the length of the monitoring period that would be required.

So it basically goes through systematically all the steps that we need to go through, the physical works that would need to be done, the monitoring programs that need to be made to support, to verify, and confirm

the results of the decommissioning.

And in addition, there's a contingency that's also added to address for things that are -- in typical engineering design you do like a preliminary and you add a contingency value to account for you haven't necessarily covered absolutely everything. So it adds that as a buffer, as an additional dollar value. It gets adjusted again, based on current inflation rates, current labour rates, cost for electricity. All these things are all factored in, in terms of determining the cost.

The plans are reviewed by both CNSC as well as the Saskatchewan government. And both of us have to be in acceptance, because the financial guarantees are actually to direct it to the province of Saskatchewan as the beneficiary, if you can call it that, because they're the land owner.

So both CNSC and the Saskatchewan government, both are involved in the review of both the plan and the detail cost estimates. And we both have to consider them as acceptable before it can be -- it can go forward.

MEMBER VELSHI: And is the increase in cost from the last time, or maybe you can answer, what were the major contributors to the increase in the decommissioning cost estimates? Now I guess I'll ask Cameco to answer

that.

MR. MOONEY: Liam Mooney for the record.

And I'll ask Kevin Himbeault to provide some details in relation to the increases at Key Lake, as well as Kirk Lamont at Rabbit Lake and Rick Morrison in relation to McArthur River.

But again, I wanted to emphasize that the facility design here is that they will be safe, secure and stable at the time of decommissioning and that's what then forms the plans. And those are subject to review as Mr. LeClair outlined in detail.

MR. HIMBEAULT: Thank you. Kevin Himbeault for the record.

Our preliminary decommissioning plan that we now have presented to the CNCS and the province, in the current situation, as actually incorporated in some of our anticipated activities moving forward with the Key Lake extension project. So in that, our tailings elevation is higher, therefore, there's a higher surface area for sand placement over the tailings at the end of the day. So that -- those aspects have been incorporated into that cost estimate.

In addition, when we looked at the -- our anticipated water treatment and specifically around the requirements for water treatment for the decommissioning

of the Deilmann north waste rock pile, we identified that there would be, or could possibly be, an extended period, from a 15 year period to a 30 year period for water treatment at the end of day, on that facility. So we added that component into the cost estimate, as well, to extent that time frame, to ensure we were capturing -- I guess adding some conservatism into that estimate that we had.

MEMBER VELSHI: Thank you.

THE CHAIRMAN: Can I jump in on this one. I read that the irrevocable guarantee is sent to the provincial government. Some people are -- expressed a concern, what happens if Cameco goes bankrupt? And, you know, so can we deal with this and dispose of that? How safe is that money in terms it's being earmarked for decommissioning and only for decommissioning?

MR. HIMBEAULT: So as I mentioned, the irrevocable letters of credit are in the name of the government of Saskatchewan. As an irrevocable letter of credit, if Cameco was to run into financial difficulties, was to be declaring bankruptcy, the financial guarantees would kick in. It's built right into the letters of credit that are established.

In effect, the licensee, if we tried to look at that going forward, the government of Saskatchewan

would now be the bearer of the funds and also the owner of the land. And we would have to work with the government of Saskatchewan then, to proceed with the final decommissioning, which would include any licensing and regulatory issues that we would have to deal with as the regulator.

THE CHAIRMAN: Thank you. Ms. Velshi?

MEMBER VELSHI: My second question sir, for Cameco. And given what Mr. Jammal's response to Commissioner Harvey's question around above -- are fully satisfactory and tying-in to best practices. Who does Cameco look to for best practices for uranium mining, particularly in the area of safety and environment?

MR. MOONEY: It's Liam Mooney for the record.

We do benchmarking. Well I'll start with. We do -- we have a very robust non-conformance and corrective action process across the organization. So that gives us the ability to see from our mining operations, due to our fuel services operations and look for events that are potentially of broader application and learn from those.

So the corrective action process forces an investigation, a certain degree of investigation. And that's entered into our Cameco instant reporting system,

which is available to our employees to review. And significant instance require additional management oversight. But there are also made topical, as far as the quarterly safety teleconference meetings or radiation safety -- radiation teleconferences or environment teleconferences.

They are brought forward, as you know. To discuss the issue, I have someone present on them and answer any questions. There are times when we use bulletins as well, as part of that process that we see a trend and it's sent corporate wide.

So that's a big component of it, is looking at our own operations across the suite of what we do.

We also look at -- to the -- our, the groups that we're involved with. You heard the SMA here, earlier in the day and some representation that Cameco has on the Saskatchewan Mining Association's safety sub-committees. And we also have strong representation on the Environment Committee there. We're also -- work very closely with the Mining Association of Canada and again, there's a sharing of use of experience that's part of being a member of those associations.

MEMBER VELSHI: And is there any global network that you're part of, international? And I'm thinking of like the nuclear power plants have WNO, for

instance.

MR. MOONEY: It's Liam Mooney for the record.

Through our involvement with the World Nuclear Association, there's work with other uranium miners to understand some of the issues that are encountered around the world in relation to those activities.

MEMBER VELSHI: Thank you.

THE CHAIRMAN: Dr. Barriault?

MEMBER BARRIAULT: Thank you Mr. Chairman.

Just two brief questions really. The first one deals with your water treatment and uranium, molybdenum and selenium.

You've managed to reduce those by 75 and 65 percent for selenium. What is your final objective, do you plan on going any lower than that or do you think that’s probably where you're going to settle at? It's been like that for the last two years, I understand.

MR. MOONEY: It's Liam Mooney for the record.

And we do have a management system that requires us to look at our key environmental aspects and look for opportunities for improvement.

So, I think that the perspective there, is

that we look at opportunities as they arise and take them on, and having regard for the business that we're in, and meeting challenges or changing expectations down the road.

MEMBER BARRIAULT: So, you're talking about continuous improvements. So you're planning in going lower than that if you can, is that it?

MR. MOONEY: Liam Mooney for the record.

We look at trying to improve our performance across the whole of the organization. So, it's not necessarily that we're going to be focused on further increases to water treatment at our facilities, there might be another aspect identified through our environmental management system that we would focus on in the near term in that regard.

So that being said, there's always opportunities that are underway, whether it's to look at not just the water quality, but also the water quantity and the management of the water quantity at site and making any infrastructure improvements in that regard.

MEMBER BARRIAULT: Thank you.

CNSC, are you satisfied with the amount of reduction on these elements, or would you expect them to bring them down even further? It's a difficult question, I know.

MR. LeCLAIR: Well, we're satisfied with

what they've done, but we always look for them to do better. We always look for improvement. So we're constantly looking at it. We expect them to look at it. It's actually built in to their programs as well. A continuous improvement approach to looking at things.

I'd have to agree that with Mr. Mooney that, really you have to start looking across where you're going to get the maximum benefits. Maybe it will be another area in the operation, where the attention would be focused.

We do look at their environmental management systems and their programs and see where they're focusing and where their targets are. But we're always constantly looking for the most improved.

MEMBER BARRIAULT: For improvement. Thank you.

Next question. With regard to your tailing ponds, how do you keep waterfowl out of them, or do you have a waterfowl problem? We saw what happened to Fort Mac where the -- some years ago, and the publicity involved with this.

Do you have a control system to keep waterfowl out of the tailing ponds?

MR. MOONEY: It’s Liam Mooney, for the record.

We do have a wildlife management program on site. I'll maybe ask Kirk Lamont to expand on one of the sites that has a tailings pond -- tailings management facility with water on top of it.

MR. LAMONT: Kirk Lamont, for the record. So at the Rabbit Lake operation, as Liam mentioned, Cameco has a wildlife management standard that we implement on our operations, similar to all the other operations.

Part of that is using multiple levels of control to ensure that waterfowl hazing practices are utilized. We have daily inspections of our tailings facilities to ensure that waterfowl aren't present. And if they are, that they're removed from there.

We use other means such as scare cannons that are constantly utilized and maintained. We also conduct other studies that we want to assess the effectiveness of our programs. And to date, they've been very effective.

Something else that we do is in the summer -- spring and summer months, we bring on extra personnel to the operation to help with hazing in those times of the year when more hazing may be required.

MEMBER BARRIAULT: Do you have a problem during migration, for example, with the ducks and geese coming down from the north?

MR. MOONEY: Sorry, I ---

MEMBER BARRIAULT: Migration problems with the ducks and geese coming down from the north at this time, are they affecting your water pond?

MR. MOONEY: I'll ask Kirk Lamont to expand on that in a second, but I first wanted to really distinguish our tailings ponds facilities from the circumstances in northern Alberta. While the water quality, as we heard, it still needs to be treated, it's the sort -- it's not in the same ballpark as it relates to the unfortunate incident that you mentioned earlier. So the hazing program is more to prevent them from becoming ---

MEMBER BARRIAULT: In tailing ponds.

MR. MOONEY: --- resident at the facility. Not necessarily the same circumstances at all.

MEMBER BARRIAULT: Okay. Thank you. Do we have policies with regard to CNSC in managing these tailing ponds with regards to migratory waterfowls?

MR. LeCLAIR: Actually, I'd like to perhaps touch, for the Commission's benefit, actually, for people here in the room. Jean LeClair, for the record.

The actual issue of waterfowl came up a few years ago with the Cluff Lake site. And in fact, the issue was raised through involvement with the EQC. We

heard from the EQC yesterday, and this was actually an example where the environment quality committee, through their annual tours to the mine, had said “Well, we notice there’s some ducks and some geese.”

And this is a surface tailings facility, which is quite different than the tailings facility we’re talking about here. So I’ll come back to that in a minute, but just to carry on.

So this is an above-ground tailings facility with liquid pond that’s there. And the ducks were actually landing in the pond and there was some vegetation and things that were starting to grow because the tailings had been there for quite some time.

And so an actual sampling campaign was done based on the concerns that were raised by the EQC. And actually was identified that some of the waterfowl had elevated concentrations of certain contaminants.

As a result of that, there was a number of actions that were taken to stop the waterfowl from landing on that above-ground TMF. And there was reclamation activities that went on to cover the tailings in order to prevent the geese and prevent the ducks from being able to go there.

So there’s an example actually of one that -- it’s a very valid concern, one that was raised through

the EQC. Action was taken on it and things were done.

Coming back now to the current situation. The current tailings facilities that we have do not have the same conditions, they're deep tailings facilities, you've seen the pictures of these in-pit tailings facilities, so you don't have the same types of conditions.

We do expect the control of waterfowl or any other animals within those facilities and the licensees are expected to have measures in place in order to control access from animals or waterfowl.

MEMBER BARRIAULT: Thank you. Thank you, Mr. Chairman, that's all.

THE CHAIRMAN: Okay. Dr. McEwan.

MEMBER McEWAN: I'd like to go back, if I may, to the polling that you've done and your 80 percent reported approval rating for your activities. I think we've heard over the last couple of days that those figures aren't universally accepted. And there will be some people who will suggest that it was a lot less, even, than 50 percent.

How do you support your 80 percent? Are you confident that it is sustained over the course of the present time?

MR. MOONEY: We are very confident with

those polling numbers. They've been carried out over a long period of time and they're statistically sound and carried out by an independent party.

So we heard from one person who had concerns and had a very informal basis for those concerns. But the polling that we do in Saskatchewan and the weighted polling that we do in Northern Saskatchewan gives us great confidence in those numbers.

MEMBER McEWAN: So again, one of the intervenors said that you have very few people responding from Northern Saskatchewan.

MR. MOONEY: Liam Mooney, for the record.

And the polling design is so that we get a sample from Saskatchewan and that it's oversampled in Northern Saskatchewan, with a view to getting a stronger statistical basis for the conclusion of the poll.

So I can't really respond to what the pollster may or may not have said to somebody in the course of conducting the poll, but the numbers are the numbers and the numbers show an overwhelming support for our operations in Northern Saskatchewan.

MEMBER McEWAN: So I guess that takes us to the next part of it. You don't have it on your Web site. Would you have plans to do that, would you consider using this as a tool as part of the community outreach and part

of the community relations?

MR. MOONEY: It’s Liam Mooney, for the record.

We would take that back and consider how we use it in our community engagement, but also sharing it more broadly than at present.

THE CHAIRMAN: I would strongly recommend that you do that because now in making presentation and you’re making some statement about acceptability, it would be nice to have the data behind that actually prove some of those statements, or at least support those statements.

Dr. McEwan.

MEMBER McEWAN: So my second is, is actually a very simple educational question. Scattered throughout your submission is the word hydroseeding. What is that?

MR. MOONEY: It’s Liam Mooney, for the record.

Perhaps I’ll ask Kevin Himbeault to give you the lay of the land on that.

MR. HIMBEAULT: Sure, Kevin Himbeault, for the record.

So hydroseeding is basically utilizing a seed -- like a grass seed or a plant seed material mixed in with a mulching fertilizer. You got a large truck unit

that sprays this material out, covers a broad space of area and allows that seed to germinate and grow.

So, you know, people get it done in their lawns in the city and in other areas. So it's just on a larger scale for us.

THE CHAIRMAN: So have you had any success with all of this? Has it been successful?

MR. HIMBEAULT: Kevin Himbeault, for the record.

Yes, we've had success. It certainly is, you know, a challenge somewhat at Key Lake with the sand and that. But we continue to work on it. We have various -- we have very good growth in other areas where we, you know, we got to tweak the amendments and do some stuff. And that's part of the test work that we do.

MEMBER BARRIAULT: Just a brief one on that. What seeds do you use? What plants do you plant?

MR. HIMBEAULT: Kevin Himbeault, for the record.

It's a mixture of seeds. We do try to use seeds ---

MEMBER BARRIAULT: Pasture mixture or?

MR. HIMBEAULT: No, it's more focused on seeds from kind of native seeds, seed base and that. But it really is dependent on what we can get from the

suppliers.

MEMBER BARRIAULT: My reasoning for asking that is because if you're going to plant something that's attractive to the animals of the area, you may wind up with an animal problem on your sites. I guess that's the reason why I'm asking. But all right. Thank you.

MR. HIMBEAULT: Thank you.

THE CHAIRMAN: Okay, Dr. McDill.

MEMBER McDILL: Just one question. To staff, actually. In view of some of the concerns of the intervenors, is there any merit or value in putting a hold point in the licence associated with the ongoing EA at two years, say?

MR. JAMMAL: Ramzi Jammal, for the record.

It's a good question. Let me start with this. Is there a need for a hold point from a regulatory perspective? I don't believe so, because the licensing basis, as approved by the Commission, and if the environmental assessment, or the EIS itself determine that everything is within the bounding factors, within the licensing basis, I don't see from a regulatory perspective any added value as long as everything is within.

Because in the process of the EIS, there will be consultation period where the public will have input into it. And that's where I'm trying to weigh the

risk benefit factor.

So the public will have input with respect to the EIS report itself. The Commission will determine and accept it or not and then will go on to the licensing. So you've got two elements actually.

Is there a need for a hold point? Well actually, the process itself is a hold point. If it exceeds or goes beyond the licensing basis, based on our determination, we're going to come before you, the Commission, for an approval.

THE CHAIRMAN: So let me add, we're told that within two years the EIS will be in front of you or you will be analyzing it. And just in time for the SOE, that will be available.

So maybe, I don't know if it's a hold point, but definitely a reporting requirement of some sort about what those two documents will find. Why wouldn't that be something that would be required?

MR. JAMMAL: Ramzi Jammal, for the record.

Again, by all means we would report to the Commission on what you will ask us to do from directive perspective.

The issue, going back to Dr. McDill's question, is the hold point is from safety perspective. That means if you continue with the operations, is it

going to be unsafe. It’s going to be needed information to continue the operation safely. Is it obligatory to the safety case?

But again, I don’t see it from that perspective. I see it as the EIS process. If it is within the licensing basis and determine there is no impact, the public consultation on the EA is taking -- will have taken its course and that would determine -- again, it’s all hypothetical. I do not want to give the perception that staff is making a decision beyond their capacity.

So the process requires under the EIS an approval by the Commission, public input. And by all means, the updates on the SOE, the status of the environment, we will be providing that information as part of our annual update.

MEMBER McDILL: Maybe I should, in fairness, address the same question to Cameco, assuming that there is a licence granted, of course.

MR. MOONEY: It’s Liam Mooney, for the record.

We have examples of environmental assessments that have been concluded during concurrent licence term and a couple of them that were shared with you, the Cigar Lake Water Management Project, the Key Lake

Mill Services Environmental Assessment, as well as the Rabbit Lake Expansion to the In-pit Tailings Management Facility that was part of the Rabbit Lake uranium-rich solution EIS.

In those instances, those were carried out safely and the environment was protected and we saw the performance on the graphs that we presented at the beginning of these proceedings.

So we don't think that's necessary. We think that it can be effectively managed through the licence and the LCH with the necessary oversight from the staff.

THE CHAIRMAN: Okay, my turn. My two questions for this round.

The first one, I think that we need to spend a minute about whether there is a limit, a regulatory limit on molybdenum. Of all the tables that are in both documents in Cameco and our staff, there's regulatory limits, regardless to where they come from, whether it's Environment Canada or Ministry of Environment, on molybdenum. The footnote says there is no limit, but you have an action level of 0.6.

I want to understand where are we going with this and how it relates, how does this action, I think, which is a lot higher than the actual performance

after they've put in the new circuit. Where is it taking us on the health impact? And maybe we can get some environmental experts on both sides?

MR. JAMMAL: Ramzi Jammal, for the record.

I'll start with the values and the numerical limits are in the licence condition handbooks for every and each site. Before me is Key Lake Operation Draft Licence Condition Handbook.

For example, page 41 of 63, that actually talks about the action level, administrative and action levels that we put and impose on licensees, which covers from arsenic to selenium and selenium and molybdenum, whether it's ---

THE CHAIRMAN: No, no, I got that. I'm just interested on molybdenum. I got every -- I understand everything else. I'm just saying if you look at the table and molybdenum has no regulatory limit.

MR. LeCLAIR: Mr. President, Jean LeClair, for the record.

So if you look at page 41 of 63 of the Licence Conditions Handbook, which is part of the CMD for Key Lake Operation, if you look at that -- I'm sorry, I don't have the CMD number here in front of me.

If you look at the table, it says:

"Mill F1 administrative and action

levels for selenium and molybdenum. From molybdenum there is an administrative level of 0.3 milligrams per litre and an action level of 0.6 milligrams per litre."

Point three (0.3) milligrams per litre means this is normal operations that they're looking at, they're checking for variations. It allows them to do their own internal controls. A 0.6 milligram per litre action level exceedance would be a reporting to the CNSC.

So we can look at the administrative, we can look at the performance regularly. As soon as the 0.6 milligram per litre level would be reached, there would be requirement to report.

THE CHAIRMAN: That's what I said. What I want to understand is the health impact. When is there going to be an international agreement as to where we're going, what is the number?

MR. JAMMAL: Okay. Mr. McKee will provide you with that answer.

MR. McKEE: Site specifically right now, with the molybdenum reduction, we're very happy with it. It looks -- we're confident that we're going to achieve the environmental targets in the receiving environment that were set for molybdenum.

So with respect to the molybdenum reduction, the reduction being very successful, we're seeing decrease already within the receiving environment. And the modelling looks like we're going to actually attain the receiving environment targets we wanted for molybdenum.

With respect to having a specific defined limit for going into licences, we hope in 2014 to be producing a CNSC position based on the discussion document for release limits and a protocol for establishing a limit for such as molybdenum, and hope to be putting actual licences -- limits in all licences.

THE CHAIRMAN: Are we getting close to an international agreement about those kind of limits?

MR. McKEE: There's generally standard practices internationally in how those limits are developed, and we're trying to adopt one of them. There is no limit for molybdenum in legislation in Canada. And the MMER review process that's going right now, molybdenum is not a substance they've decided to look at. They decided it's not showing up in enough of their mines for a national perspective.

They are looking at selenium. And I'm part of the selenium task team on the metal mining effluent review group. So it's looking very likely that for

selenium there will be, at least for metal mines, a metal mine effluent regulation limit in some form. And we're actively engaged in that process.

THE CHAIRMAN: Do you have an opinion on this?

MR. MOONEY: It's Liam Mooney, for the record.

We see the improvement in the receiving environment and the success in the treatment that has led to that as being one of the strong points in the performance. And those numbers are below the proposed action and admin levels that the CNSC has proposed in the Licence Condition Handbooks. So we will deal with those action admin levels and report any exceedances in that regard.

THE CHAIRMAN: No, we are actually impressed with that technology that you developed on this. And I think internationally, you are leading in this particular area.

My second question, and it's sort of related, in practically in all documents here, everybody is talking about again another piece, an impressive piece of work. You've managed to reduce the SO2 limits, some places at 95 percent, and it goes down to 10 to 12 parts per million. What is the limit? Is there a limit? All I

hear about the reduction and what it is, but is there a regulatory limit?

MR. MOONEY: Liam Mooney, for the record.

I could ask Kevin Himbeault to give you that number?

THE CHAIRMAN: Okay.

MR. HIMBEAULT: Yeah, Kevin Himbeault, for the record.

Our -- through the provincial process, we actually have a -- is a reporting limit for ambient air quality, which would be away from the stack emissions, but that sits at, I think, 170 parts per million. Yeah, 0.17 micrograms per cubic meter, which I believe converts to 170 parts per million.

THE CHAIRMAN: A hundred and seventy (170)?

MR. HIMBEAULT: Yeah, and that's on an ambient air sampling area, so it's not directly the stack, it's actually further away from the stack. So with the technology we're putting in place, we're, you know, well below those limits.

THE CHAIRMAN: Well, just in the future, please, when you do a reduction, tell us where you started from so we can understand where you ended up and how it relates to where you've been into the regulatory limit.

MR. MOONEY: It's Liam Mooney.

And we were -- when we were talking about those reductions, we were putting them forward, characterizing them as already low numbers that were being reduced. So it wasn't of concern; it's just that the performance has improved substantially. So that's why we were looking at vis-à-vis previous performance. The limit really wasn't relevant to that ---

THE CHAIRMAN: M'hm.

MR. MOONEY: --- improvement.

THE CHAIRMAN: Okay, we're back to Monsieur Tolgyesi.

MEMBER TOLGYESI: Merci.

You just answered one of the questions that I was want -- I wanted to ask.

But I will come back to acid generation. You are talking about 200 to 300 tonnes of acid, which you are producing right now. What you do with so much acid?

MR. MOONEY: It's Liam Mooney, for the record.

I'll ask Les Yesnik to speak to the acid plant at Key Lake and its use at that facility.

MR. YESNIK: Les Yesnik, for the record.

The quantity of acid required, of course, depends on production rate, and the upgrade of the acid plant. Of course, we're looking at the long-term

immediate needs or for needs for the operation as well as a potential to support another operation if required.

The acid plant, it does have a 300, a top production rate of 300 tonnes per day of concentrated sulphuric acid. We also have capacity on site to store 6,000 tonnes of concentrated sulphuric acid in a fully contained facility. So the -- we have that flexibility if we want to do maintenance on that facility to be able to shutdown and so on.

We will consume currently at this point in time, depending on the ore that we were receiving from McArthur, in that range of around 160 to 180 tonnes per day, and of course, that will increase with increasing production levels in the future.

MEMBER TOLGYESI: You were also talking about installing a horizontal rotary calciner, and which supposed to further reduce SO2 but also will reduce uranium. So how much you expect the uranium emissions will be reduced?

MR. MOONEY: It's Liam Mooney, for the record.

And I'll ask Les Yesnik to give you a sense of that. But again, it's important in that regard, it's akin to the same discussion we were having in relation to the SO2 emissions, that they were low and well within our

regulatory limits and licensed approval limits, but it was an improvement that we thought we would bring to your attention.

MR. YESNIK: Les Yesnik, for the record.

Yes, just to confirm what Liam has passed on, our current levels of particulate, particularly uranium release, are low and well within our requirements. The new calciner, I've described the benefits of that being reduced, gas is going to the atmosphere. The main benefit, of course there, is the SO2 scrubbing that will be in addition to what we currently are removing. So we'll have the removal of SO2 with that new calciner scrubber, removal of ammonia, removal of particulate down to our current levels with the particulate of -- including uranium.

MEMBER TOLGYESI: You don't risk to predict how much?

MR. YESNIK: Les Yesnik, for the record.

Once we have that facility operational we will be able to confirm through commissioning and ultimate operation, the operation of a scrubber compared to design. So I wouldn't be prepared to commit at this point.

THE CHAIRMAN: Okay.

Mr. Harvey?

MEMBER HARVEY: Merci, Monsieur le

Président.

Probably my last question. I got to keep a little space.

It's on page 31 of the -- it's for Key Lake, 31 of the staff CMD and 36 of the Cameco's CMD. It's about the waste rock piles.

Starting in 2009, CNSC accepted the management plan for the rock piles. In 2012, tests were conducted, and finally, in the final detailed cover design is expected to be submitted in 2014. I don't know if it's January or December.

In page 36 of the Cameco, we can read the last paragraph -- the second paragraph before the last:

> "Reshaping and grading of the waste rock pile is expected to begin in 2015 followed by placement of the full till cover, which will be the medium for revegetation." (revégétation en francais)

What is the timetable? I mean, it has been nearly five years to get to the point, and -- because if it's submitted to the -- to CNSC next year, CNSC will have to -- will take time to review it and then if it's not correct it would continue. And so do you have a timetable for this project?

MR. MOONEY: It's Liam Mooney, for the record.

And I'll ask Kevin Himbeault to give you a scope there. Again, this is a decommissioning with a view to the long-term, so taking the time to do it right on a risk-informed basis to ensure that at the end we have a safe and secure and stable facility.

MR. HIMBEAULT: Kevin Himbeault, for the record.

I mean, the action plan that we put forward in 2009, we're on track on that one, and we are looking at end of 2014, you know, I hesitate to say maybe early 2015 right now, but end of 2014 is what we're targeting for submission of our detailed design for that, based on the test work we've been doing over the last several years. The schedule plan after that was to actually start, providing we had approval from both CNSC staff and from the Provincial Ministry of Environment, to move forward with that -- the front end work of that reclamation program in 2015.

So that is currently what the project schedule is, is to initiate that work in 2015. I think what we have on there is about a three year time period for execution of that. And of course, that just comes down to, you know, there's factors that come into play,

but that's what we're anticipating.

MEMBER HARVEY: Thank you. You have the same perspective?

MR. JAMMAL: Ramzi Jammal, for the record.

I will ask Mr. Tom Gates to provide you with the answer. The answer is yes.

MR. GATES: Yes. Generally, the same perspective, however, Cameco does have modelled performance criteria that are required and that is basically the amount of infiltration of water into the pile that can interact with the rock, there's a criteria there, and there's also the criteria of a vegetated engineered cover. Vegetation meaning sustainable vegetation on the cover, and the test spots are being looked at and they're instrumented.

And engineered also means that engineered in a way that with probable maximum precipitation events that the cover on it is sustainable through those events such as rip-rapping runoff channels to the environment and that sort of thing. So we’ll be looking at detail at the design. We’ll be making sure that with the modelling that they are going to be meeting their criteria before we find it satisfactory to proceed with the construction.

THE CHAIRMAN: Okay, thank you.

Ms. Velshi?

MEMBER VELSHI: A couple of quick questions, the first one is for Cameco for Rabbit Lake and CMD 13-H15.1 on page 25 please. This is on the dose records.

And as I look at the 2013 results ---

THE CHAIRMAN: Sorry, I'm slow. Could you repeat which ---

MEMBER VELSHI: 13-H15.1 page 25.

THE CHAIRMAN: I don't see a 15.1. Okay, go ahead.

MEMBER VELSHI: Okay, so 2013 results to March 31st, and I just did a straight line extrapolation on your average effective dose and maximum dose. Question for Cameco, and the trend just from that straight line extrapolation looked a little disturbing, recognizing this is well within your internal annual guidelines.

So the .47 would give a year end of 1.88 and the 4.47 would be 17.9 or so. I just wondered if you had more recent results to confirm whether there is indeed a disturbing trend or whether the first quarter was just a bit of an aberration.

MR. MOONEY: It's Liam Mooney, for the record.

And I'll ask Kirk Lamont to respond in relation to the average effective dose question. On

maximum dose, I don't think you can extrapolate that. Okay, I'll leave it with Kirk Lamont. He's a radiation protection specialist.

MR. LAMONT: Kirk Lamont, for the record.

As Liam said, it is difficult to do a linear extrapolation on a quarterly basis for the maximum dose. We have extensive programs in place at our facilities that looks specifically at our maximum doses on a monthly and quarterly basis to ensure that we stay way below our internal limit.

So the linear extrapolation of the 4.4 millisieverts is not a good way to look at it over the course of the year. What would happen with this particular individual who has this dose, we would have an extensive assessment done on the dose record for this quarter for the individual.

There are meetings that go on with that individual and their supervisor to look at work practice, work area conditions, tasks that were done so that we can build a work plan for the remainder of the year or the next quarter to ensure that we're keeping the doses as low as reasonably achievable.

MEMBER VELSHI: And what about the average dose?

MR. LAMONT: The average dose again is --

it’s difficult to extrapolate the average dose in the same fashion in that the average dose takes into account all the nuclear energy works at the facility. So over the course of the summer months we will have a large increase in workers at the facility due to summer project work that goes on.

Because of that, the linear extrapolation over the course of the year isn’t quite accurate because there are waxes and wanes within the distribution of the dose.

MEMBER VELSHI: I guess we’ll have to wait for next year’s annual report to see how this year ended. My second question is more a comment, is to staff.

As I was reading the three written CMDs, you make no mention, though you did in the oral presentation, but in the written CMDs you made no mention of the follow up action to the Fukushima event. And I wondered whether that was deliberate or whether you didn’t think it was important enough or whether it was an oversight.

MR. LeCLAIR: Jean LeClair, for the record.

I’ll take full responsibility with regards to what was included in the CMDs. The Fukushima report, we had been providing information to the Commission quite regularly. We talked about it at the annual report when

we came to the Commission in October 2012 and had a specific reference to the Fukushima and, at that time, it said the actions had been closed.

When we were finalizing the CMDs, we knew that we were going to appearing before the Commission in August as well to provide another update on the Fukushima report in that public meeting where again it was stated that the actions were closed.

It was actually the executive vice president who after seeing that the CMDs had not included a section on the Fukushima that asked that we include it in the presentation to make sure that, given that we're here in La Ronge and people might not have had an opportunity to see that more recently, that they had a chance to actually hear that this was something we had taken seriously and action had been taken on it.

MEMBER VELSHI: Thank you. And I mean I don't need to repeat it, but I think it's just as important to say there were no gaps identified and make it complete.

THE CHAIRMAN: Okay. Dr. Barriault? Dr. McEwan?

MEMBER McEWAN: So just one question around the -- sorry, one question around the incident reporting system database and if I look at each of the three

submissions, there is a huge increase in the incidents reported from 2008-2009 to 10-11-12.

There’s also a significant increase in the number of corrective actions that needed to be taken. Why is that? Is that a function of the reporting environment culture requirements?

MR. MOONEY: It’s Liam Mooney, for the record.

And you hit the nail on the head in relation to reporting culture. There’s two factors that are really at play there.

One was the Cameco incident reporting system, that electronic database that’s part of that non-conformance and corrective action process was really put in place starting in 2006 and started to get legs from there.

And the number of reports that we see, we see that as being a good thing, looking for employees to not hesitate to report incidents and near misses. And that’s probably the more telling metric that we have a significance matrix that we look across the incidents through a number of different lenses, from a safety, environmental, stakeholder perspective, et cetera.

And we rank them and the vast majority of the incidents that you see are the Level 1, Level 2, so

they're entered just for the purposes of tracking and trending. If you see too many of those Level 1s, Level 2s of a certain order, then you can have an adverse trend and you might elevate the investigation and follow up required there.

So we see that as being a healthy indicator on that service system that it's being used and there's been good value derived from it for the organization as a whole.

MS EATON: Sarah Eaton, for the record.

During our regular compliance inspections, we do look at the CIRS system that they use to track incidents. We look at whether those incidents have been assessed, whether they've been followed up, what the corrective actions have been taken, and we do agree that it is a good reporting culture, that thing are reported.

THE CHAIRMAN: Thank you.

Dr. McDill?

Okay, I got, on -- let's see, which document is that? That's H13.1. This is Cameco, Key Lake. Well let me, I think it's a generic question about transportation.

You quote a number that from MacArthur River operation shipped 4,642 slurry trucks and then there were another 3,900 shipments of waste rock. All I'm

trying to figure out, are there any accidents? Is there any accident rate here?

MR. MOONEY: Liam Mooney, for the record.

I’m going to ask Kevin Quesnel to give you some detail in that regard as far as the performance of the haul between MacArthur and Key Lake.

MR. QUESNEL: Kevin Quesnel, for the record.

MR. LAMONT: As far as the slurry trucks go, we have had no accidents as long as I've been in McArthur River. I do believe we had one incident with waste rock, I'm not sure if it was in this license period or not, where we had one waste rock slide off the road, spilled a little bit of the waste material in the ditch. That area was cleaned up and remediated. Nobody was hurt, and it was -- it all scanned clean, and that was it.

THE CHAIRMAN: If there are accidents they are all reportable? Are those reportable?

MS. EATON: Sarah Eaton, for the record.

Mr. Quesnel is correct. There was a transportation incident in November of 2009 where, as he correctly stated, a small amount of waste rock did go on to the road. As part of the corrective actions, they had to complete a radiological scan of the area and also soil sampling. And as we talked about, either yesterday or the

day before, every three years there's a requirement that the licensee go out and actually do a gamma scan and soil sampling along the road to confirm that.

MR. LeCLAIR: Jean LeClair, for the record.

Just to close the loop, though, we didn't wait three years to do it. When the spill happened, it was cleaned up, it was checked and scanned to verify and confirm that the area was clean.

THE CHAIRMAN: Okay, thank you.

In -- Cameco is using a table for loading of uranium, molybdenum, and selenium. Those are neat little tables that shows the trend over the year, and they are -- but the data is by kilograms. And again, I'm always looking for what is the regulatory limit. So to pick up a number, for uranium it was in Reed Creek in McArthur River, this is McArthur River submission page 32.

You use -- I'm just trying to understand, are the limit -- do we put a licensing or some sort of an action item on the actual amount of loading required for uranium?

Staff, let me start with you in terms of the regulatory thing.

MR. McKEE: There is no loading action level for uranium. There -- the issues at McArthur and McArthur River with respect to uranium and selenium are

that we've not identified any immediate problems in the environment, but through their environmental risk assessment updates they've identified that there could be some in the future. So this is a continuous improvement program at their level.

But we like to see loadings, especially for contaminants that we've heavily modelled, because from an aquatic toxicity perspective, loadings can be as important as concentrations.

THE CHAIRMAN: Why?

MR. McKEE: So that's why you see the two of them.

In some -- in -- if you take molybdenum and selenium at Key Lake, we actually have concentration action levels and as a result of the modelling we also have loading action levels for those.

THE CHAIRMAN: But answer my question, what is the purpose of this table if you don't have whether these are good numbers or not? I mean, I can see the trend, it's reduced, it's very, very good ---

MR. MOONEY: Right.

THE CHAIRMAN: --- it's terrific.

MR. MOONEY: It's Liam Mooney, for the record.

And the regulatory limits that we deal with

are concentration values. We put this loadings in to give you a sense of what the reductions were with the optimization of the water treatment at McArthur River. And again, we talked about the action level and admin levels that will be in the upcoming license condition handbook for McArthur River.

But it was much more to drive home the point on the significance of the improvements that were made on the basis that Mr. McKee had outlined previously.

THE CHAIRMAN: So you can't work backwards and say what the concentration would be if you had this loading, et cetera?

MR. McKEE: Yes, yes you can. You can do both.

THE CHAIRMAN: So my point here is a lot of people read this and look at 123 kilogram of molybdenum and have no idea whether it's good or bad or what have you.

MR. McKEE: Point taken.

MR. MOONEY: So in the future, the table will be solely the concentration based.

THE CHAIRMAN: Okay, I'm back to Mr. Tolgyesi.

MEMBER TOLGYESI: I have my last question.

Just a comment that I think this loading if

it's useful to see what's the total, what it shows, how much uranium was unloaded to the environment.

Now, my question is, do you expect any labour movement, I mean, increase or decrease on the hours worked at the Key Lake and the McArthur River?

MR. MOONEY: It's Liam Mooney, for the record.

I'll ask Les Yesnik to give you a sample at Key Lake.

MR. YESNIK: Les Yesnik, for the record.

So the question, I understand, is do we expect any labour movement, what do we expect are the labour requirements over the next period.

Of course, we've been, over the last license period, we've ramped up and have executed some significant projects. Our workforce, our regular workforce has remained constant since around 2009 up until the current period.

As we move into the new period, and if, you know, for the next three to five years, we would expect our contractor levels will in fact start to taper off, and by the year 2017 to 2018, we'll just be in a sustaining type of a capital mode, which would then have a significant reduction in our contractors on site, specifically during the summer months.

We would expect to see about a third of the current number of contractors that we currently carry, and we'll have upwards of anywhere's from 200 to 300 contractors on site at the current time. So we would expect that to be down to around 50 to 100, depending if we're in a shutdown or not.

Our regular workforce, we expect to remain constant from this point through the upcoming license period, and that's around 375.

MEMBER TOLGYESI: I will tell you why I'm asking that.

If you go to the CMD 13.H13.1, page 27. You know, at Key Lake and McArthur River, you report total number of hours worked. You don't do that at Rabbit Lake on this CMD. Now, when you go to Key Lake at that page 27, year to date 2013 up to May 31st they have 288,000 hours worked. If you project that to the year end, it gives you 700,000 hours compared to 1.4 million in 2012. That means it's about 50 percent decrease. That's why I'm asking if it's something which ---

MR. MOONEY: Yeah.

MEMBER TOLGYESI: --- what I don't understand or ---?

MR. MOONEY: It's Liam Mooney, for the record.

And I think Les Yesnik can provide the explanation that would mirror the discussion earlier in relation to the radiation protection and our staffing levels at site.

MR. YESNIK: Les Yesnik, for the record.

Certainly, our incident frequency is measured on a frequency of injuries per 200,000 hours worked. Our spring and summer construction period, we would see a small increase during that period, then of course, as we get into the fall and winter we have a significantly reduced contractor requirement on site, and of course, then our injury frequencies have tapered off.

I'd just like to point out that when you look at our stats during that current license period, we have certainly seen that significant increase in contractors on site and our injury frequencies have diminished significantly as well with that period of time.

And one other item to note is our contractor group, and this is all contractors on site, they've achieved six years without a loss time incident on site, which is an amazing accomplishment and many hours -- also, the cumulative hours worked on site has been 2 million hours worked without a loss time injury on our operations. So that's certainly very notable as well.

MEMBER TOLGYESI: I wasn't talking about

frequency, accident frequency, I was talking about hours worked. It's -- projection is about decrease of 50 percent, whereas at McArthur River, same way. You are talking about, that's a 40 ---

MR. YESNIK: Sorry, Les Yesnik, for the record.

Yeah, that hours worked, it's definitely dependent on the level of contractor activity on site.

MEMBER TOLGYESI: Oh, so that means that in the summertime there's lots of contractors?

MR. YESNIK: There's lots of contractors for that spring and summer period, then it tapers off in the fall and in the winter again.

MEMBER TOLGYESI: Okay, and when you look at McArthur River, which is 13-H14.1, page 30, it’s just opposite. You are talking about up to -- it will increase about 50 percent, the total hours worked, if you project that.

MR. QUESNEL: Kevin Quesnel, for the record.

So the issue with the McArthur River numbers is that we have not had as much contractors on site this year as we had planned.

MEMBER TOLGYESI: So historically you didn’t have.

MR. QUESNEL: Pardon me?

MEMBER TOLGYESI: Historically you didn't have. It's two million hours in 2012.

MR. QUESNEL: That's correct.

MEMBER TOLGYESI: Less than two in 2011 and this year you will have over what, three million probably?

MR. QUESNEL: I don't understand.

MEMBER TOLGYESI: What you have in 2013, January to March, 775,000 hours?

MR. QUESNEL: That's right.

MEMBER TOLGYESI: Times four, because it's first quarter, it gives you three million. So probably is not -- in the summer, you will not have so many contractors?

MR. QUESNEL: No.

MEMBER TOLGYESI: Okay.

MR. QUESNEL: Recent numbers are around 1.8 million at the end of the third quarter at McArthur River.

MEMBER TOLGYESI: Oh, okay, merci.

THE CHAIRMAN: While we are on this table, I just, I'm anal about this. What's footnote four? It's missing in all your tables. It repeats itself so I'm just curious to know what is footnote four? When you find it, please let us know.

MR. MOONEY: Sorry, it's the same as three.

THE CHAIRMAN: Okay, well, I just want to try to understand whether there was another little nugget that was missing there. Okay. Mr. Harvey, no? Ms. Velshi? Dr. Barriault?

MEMBER BARRIAULT: No.

THE CHAIRMAN: Dr. McEwan?

MEMBER McEWAN: No.

THE CHAIRMAN: Dr. McDill? So you're leaving me for the last, I think I have -- first of all, this is a quick issue, it should be very quick.

Do you sample under into the ground, under the mill building? Some of you remember the Port Hope discovery of contamination under the building. Do you sample under the buildings?

MR. MOONEY: Liam Mooney, for the record.

I'll ask Kevin Himbeault to give you some details about the Key Lake Mill as an example. And the efforts are under way there to review our containment structures having regard for use of experience from our Port Hope operation.

MR. HIMBEAULT: Kevin Himbeault, for the record.

Certainly around the mill terrace in a number of locations, we have piezometers drilled into the grounds. We monitor the water quality in the groundwater

in that area consistently.

When we are doing projects where we need to breach containment or remove containment, like the upgrades of the sumps and the projects we talked about there. When we get that opportunity to open up those areas, we do do sampling to see whether there's any contamination in those areas and report on it if in fact there is any.

And you know, we are very pleased to find that, I think, in the majority of situations, we have found no evidence of contamination underneath the facility.

THE CHAIRMAN: So the answer is yes, you actually do soil testing if there is any contamination to the soil?

MR. HIMBEAULT: Yes.

THE CHAIRMAN: Thank you. My last question here is I'm looking at the Rabbit Lake and explain to me this frozen tailing challenge. First of all, I'm trying to understand, I don't know, the chemistry, the physics. Where do those frozen tailings come from and why is it so difficult to thaw them during the summer?

So what am I not understanding? And you've tried to deal with them and I don't see anywhere what is the going forward solution.

MR. MOONEY: Liam Mooney, for the record.

I'll ask Barry Esford to characterize the issue there. And it's mostly meteorological when it comes right down to it that there's active tailings deposition at the time in Northern Saskatchewan when there's snow and other activities.

MR. ESFORD: Barry Esford, for the record.

So historically, what happened for the tailings to freeze would be during winter deposition. Tailings would freeze because of the climate conditions. And when we're actively placing tailings, those would get buried and covered with enough tailings that they wouldn't thaw in the summertime.

So over time, what we did is accumulated frozen tailings buried within that deposit. And naturally, because of how thick the tailings are in in-pit facilities, they would take a very long time to thaw naturally. So what we've done is we've done extensive work over the last five years, really to look at develop, really what's the best option for thawing those. We've run several trials and we've developed a technology that we believe is feasible to thaw the tailings.

As far as the path forward for completing that work, we feel the best option to complete the work is while we're not actively depositing tailings. So we're

planning to complete that at the end of deposition. This gives us more assurance that thawing can be done successfully as opposed to trying to do it while we're actively placing tailings.

THE CHAIRMAN: But you need to thaw this for increasing the capacity or the tailing management or is it a good practice for eventually reclamation?

MR. ESFORD: Barry Esford, for the record.

Ideally, for both, we would like to thaw them. As far as for decommissioning, we do want to thaw the tailings prior to decommissioning the facility. We also would like to take advantage of the space from thawing to place tailings to make most effective use of that space. And we're currently looking at options to utilize that space.

THE CHAIRMAN: Okay, thank you. Last chance. Okay. I'd like to thank everybody for your patience and this is now complete the hearing.

Mark, anything you want to say here?

MR. LEBLANC: Yes, I'd also like to thank everyone for their participation. Particularly I'd like to thank the interpreters that translated into Dene, into Cree, into French. And also thank all the technical support staff, their work is not done, they have to undo this room, and the caterer and the Kikinahk Friendship

Centre for their welcome and their assistance.

So in this context, as this brings to a close these hearings, the Commission will now confer with regards to the information that it has considered throughout the week and then determine if further information is needed, whether the Commission is ready to proceed with decisions. We will advise accordingly.

Also I'd like to remind those who borrowed interpretation devices to please return the headphones to the reception desk. And we thank you and have a pleasant evening.

--- Upon adjourning at 6:47 p.m.

L'audience est suspendue à 18h47