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Safety Commission

Commission canadienne de  
sûreté nucléaire

Public hearing

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Le 7 juin 2017

Kikinahk Friendship Centre  
320 Boardman Street  
La Ronge, Saskatchewan

Kikinahk Friendship Centre  
320, rue Boardman  
La Ronge (Saskatchewan)

Commission Members present

Commissaires présents

Dr. Sandy McEwan  
Mr. Dan Tolgyesi  
Dr. Soliman A. Soliman  
Dr. Sandor Demeter  
Mr. Rob Seeley

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Mr. Marc Leblanc

M. Marc Leblanc

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La Ronge, Saskatchewan / La Ronge (Saskatchewan)

--- Upon commencing on Wednesday, June 7, 2017

at 9:50 a.m. / L'audience publique débute le

mercredi 7 juin 2017 à 9 h 50

### **Opening Remarks**

**MR. LEBLANC:** Good morning. Bonjour, Mesdames et Messieurs. Welcome to this public hearing of the Canadian Nuclear Safety Commission.

The Canadian Nuclear Safety Commission is about to conduct a public hearing on the application by AREVA Resources Canada Inc., which we will refer to as AREVA, for the renewal of the Uranium Mine Operating Licence for the McClean Lake Operation.

I would like to note that we have simultaneous interpretation in four languages. So we have interpretation in English on channel 1, in French on channel 2, in Cree on channel 3 and in Dene on channel 4.

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

I would also like to note that this

proceeding is being video webcast live and that the proceeding is also archived on our website for a three-month period after the closure of the hearing.

There will also be transcripts of this proceeding, but the transcripts will be in the language of the persons who have spoken. So the transcripts are not translated. To make the transcripts as meaningful as possible, we would ask everyone to identify themselves before speaking. And those transcripts will be available on our website in about two weeks.

As a courtesy to others in the room, please silence your cell phones and other electronic devices.

Dr. McEwan will preside over this public hearing. Dr. McEwan.

**THE CHAIRMAN:** Thank you, Marc.

Good morning and welcome to this public hearing of the Canadian Nuclear Safety Commission.

My name is Sandy McEwan and I am a Commissioner. President Binder is unable to be here for this meeting. He would have liked to be and he has asked me to apologize for him not being here.

Welcome to those joining us by webcast.

First of all, on behalf of the Commission, I would like to say how delighted we are to be here for the next two days to conduct this Commission meeting.

We enjoy the opportunity to hold hearings in the community, it's a very important part of what we do and who we are, and we believe it provides an opportunity for citizens with a chance to participate by intervening and observing in the hearing.

I would also like to take this opportunity to thank the staff of the Kikinahk Friendship Centre who accommodated us and have helped us to set up. For that, many thanks.

I would like to begin by introducing the Members of the Commission that are with us for this public hearing.

On my right are Dr. Sandor Demeter and Dr. Soliman A. Soliman; and on my left are Mr. Dan Tolgyesi and Mr. Rob Seeley.

We have heard from Mr. Marc Leblanc, who is the Secretary of the Commission, and we also have Ms Lisa Thiele, Senior General Counsel to the Commission, with us on the podium today.

**CMD 17-H8.A**

**Adoption of Agenda**

**THE CHAIRMAN:** With this information, I would now like to call for the adoption of the agenda by the Commission Members, as outlined in Commission Member Document 17-H8.A.

Do I have concurrence?

For the record, the agenda is adopted.

Before opening the hearing, I understand that an Elder from the Lac La Ronge Indian Band will be making a prayer, followed by a drum ceremony from the Athabasca Dene First Nations.

Elder Bella Sanderson, you have the floor.  
Please...?

**ELDER SANDERSON:** Nice to see so many people here from out of town. I have never been in a big group like this before. I have been an Elder for three years and I'm still learning the ropes of different organizations.

I didn't have -- I didn't go to school very long, so I don't have much education, but I still did a lot of work in my lifetime. I was born and raised here

in La Ronge and now I'm working with the Band, Chief and Council as an Elder. So we go to different places for meetings and that, and things like this I get asked to come. I usually go and do the prayers, whatever they need me for.

There's all different kinds of people that need elders. They don't know where to go, but if they know about me they usually phone me. If I'm available, I will go. But I'm on my own now, I don't have to cut my holidays short if I'm going somewhere, which I used to do.

And I would like to thank everybody for being here, everyone. I can't go by name, I don't know anybody, but you are all welcome to Lac La Ronge. And whatever you're aiming for I hope you do well in working together. I always tell my people, working together is the best thing to do when you're in big groups. Togetherness is the most important thing when you are working together. One voice is not half as strong as more people. Half a dozen people are stronger than one. So I always tell my people, work together, do things together and you will accomplish something. Don't go one way and your partner the other way. So that's my main point to everybody, work together.

And now I'm going to say a little prayer,  
but I'm going to say it in my own language, which is Cree.

--- Prayer in Cree

--- Pause

--- Athabasca Dene First Nations drum ceremony

--- Pause

**THE CHAIRMAN:** So thank you very much indeed to Elder Sanderson and to our drummers. I think we now have a very high bar for the proceedings as they move forward. So we will now proceed with the public hearing.

Marc, over to you for introductory remarks.

**MR. LEBLANC:** Thank you.

So the Notice of Public Hearing and Participant Funding 2017-H-03 was published on October 14th and a revised notice was published on May 18th to announce the location of the hearing.

The public was invited to participate either by oral presentation or written submission. April 21st was the deadline set for filing by intervenors. The Commission received 13 requests for intervention. One request -- or one intervention has since been withdrawn. One request was denied as it was filed several days after

the deadline.

May 24th was the deadline for filing of supplementary information and we note that supplementary submissions and presentations have been filed by CNSC staff, AREVA Resources Canada Inc. and intervenors.

As I indicated earlier, participant funding was available to intervenors to prepare for and participate in this public hearing. Nine groups or individuals are receiving funding. The funding decision is available on the CNSC website.

All documents are available at the reception, either on CDs or in paper format.

We will first hear the presentations this morning by AREVA and by CNSC staff.

After that, we will very likely break for lunch or hear the first intervenor if we have time before lunch. There will also be an afternoon break.

The presentations by intervenors will follow the order that is listed on the revised agenda. We are somewhat flexible, so we already have some small changes that will be made during the day.

Five intervenors are scheduled to present orally today and five more tomorrow. This is where it may

change because one of those intervenors to be presenting tomorrow may present later today. It's still to be confirmed.

While the presentations are limited to 10 minutes, Commission Members will have the opportunity to ask questions after each presentation, and no time limit -- and we will repeat this as we go through, this has been ascribed for the question period.

Your key contact persons will be Ms Louise Levert, Ms Johanne Villeneuve and Ms Lori Sukkau from the Secretariat staff and from our Saskatoon office and you will see them going around or at the side of the room if you need information regarding the timing of presentations, et cetera.

Dr. McEwan...?

**THE CHAIRMAN:** Thank you, Marc.

I would like to start the hearing with a few remarks. First, I would like to recognize that we are in the Lac La Ronge Indian Band and Treaty 6 territory as well as the Métis Nations of Saskatoon, and thank you.

We are in La Ronge for the next two days to consider the written submissions and oral presentations from AREVA, CNSC staff and the citizens and organizations

who wish to express their opinions in the context of the McClean Lake Mine and Mill Operating Licence Renewal.

I would like to clarify a few things prior to starting the hearing. I would like to emphasize that the Commission is a quasi-judicial tribunal and that, consequently, it is independent from any political, governmental or private sector influence. In fact each Commission Member is independent of one another and also independent of CNSC staff.

Interventions filed for this hearing include recommendations to the Commission. CNSC staff also make recommendations to the Commission, but it is the Commission Members who render a decision based on all the evidence presented in the context of the hearing process.

The Commission Members were appointed by the Governor-in-Council on the basis of their achievements in their respective fields as well as their excellent reputation among their peers. Their mandate is simple. It is to ensure that the use of nuclear is done in a manner that protects the environment as well as the health, safety and security of workers and of the public.

I would also like to emphasize that the Commission has no economic mandate. It will not base its

decision on the economic impact of a facility. I will repeat this. It is only the health, safety and security of the public and the protection of the environment that guides the decisions of the Commission.

Finally, as I stated earlier, the Commission is an administrative tribunal. It is willing to conduct this hearing in the affected community, and we believe this is an important part of our mandate, and to provide a forum where members of the public can express their views on the matter in hand.

As the Commission is a Tribunal and wishes to hear all oral presentations, we also think it is important to ask as many questions as we feel necessary on these submissions and we ask that everyone respects the decorum of the Tribunal setting and that it assists with the orderly, civil and respectful conduct of these proceedings.

The Commission will not tolerate inappropriate behaviour and will take measures necessary to ensure the orderly conduct of this proceeding. It will do this in the same way that it does for all other proceedings it conducts in Ottawa and in other communities.

I am going to apologize for the use of a

podium as well. Please don't see this as a sign of disrespect. We do it as a means to ensure that we can be seen by everyone clearly, particularly those people in the room, but also for the people who are viewing this by webcast. So please understand that we see this as a means of allowing the Commission to proceed transparently. So thank you for your understanding of that and thank you for your participation in the Commission hearings to come.

Before we proceed with the presentations, I would like to note that there are representatives from other governmental agencies joining us for the hearing. These individuals are available to answer questions after the presentations.

In attendance today we have Mr. Tim Moulding and Ms Brianne England from the Saskatchewan Ministry of the Environment. Thank you. And Dr. James Irvine -- thank you, Dr. Irvine -- Medical Health Officer.

So thank you very much for being available for these hearings.

**CMD 17-H9.1/17-H9.1A/17-H9.1B**

**Oral presentation by**

**AREVA Resources Canada Inc.**

**THE CHAIRMAN:** I will now turn the floor to AREVA Resources Canada Inc. for their presentation, as outlined in CMDs 17-H9.1, 17-H9.1A and 17-H9.1B. I will turn the floor to Mr. Vincent Martin for this presentation.

Mr. Martin, the floor is yours.

**MR. MARTIN:** Good morning, Mr. Chair and Members of the Commission. My name is Vincent Martin, President and CEO for AREVA Resources Canada. I am here today in support of AREVA's request to renew the McClean Lake Mining Facility Operating Licence.

I am joined here today by:

- Mr. Dale Huffman, our Vice President, Health, Safety, Environment and Regulatory Relations on my left;

- Behind me Ms. Tammy Van Lambalgen, our Vice President, Corporate Affairs & General;

- Mr. Eric Pacquet, our Vice President, Operations & Projects;

- Behind him Mr. Vincent Laniece, General

Manager, McClean Lake Operation;

- On my right, Ms. Tina Searcy, our  
Manager, Regulatory Relations;

- And on the other side behind is Ms.  
Carolanne Inglis-McQuay, our Senior CSR Advisor;

- And behind Mr. Glenn Lafleur, our  
Manager, Northern Affairs, who is based in our office here  
in La Ronge where we are very pleased to be here today, in  
Treaty 6 territory.

And I want to say that we are thankful to  
the Commission for holding this hearing here in Northern  
Saskatchewan. As you will see in later maps, our McClean  
Lake Operation is about 400 kilometers away, in Treaty 10  
territory.

Our relations with Northern communities  
are very important to us and we are proud of our successes,  
in terms of employment and business opportunities, first in  
the Athabasca basin, but also throughout Northern  
Saskatchewan.

We recently concluded the renegotiation of  
the long-standing Impact Management Agreement with the  
seven Athabaskan First Nations and municipalities that have  
been traditionally identified as priority recruitment

communities and include those closest to the McClean Lake operation. This agreement is referred to as the Ya'thi Nene Collaboration Agreement.

This slide outlines our presentation. I will provide an overview of AREVA and then turn the presentation over to Dale Huffman to discuss the McClean Lake Operation, our performance in key safety and control areas, our public engagement leading to this hearing, our future plans and the renewal request.

Our parent company, AREVA, is undergoing a strategic refocusing on its nuclear fuel business to better position itself for the future.

AREVA, a group owned in a large majority by the French State, is organized into two main activities, New AREVA and AREVA NP. New AREVA includes all of the fuel cycle activities and related central departments, including AREVA Resources Canada. AREVA NP, to be sold to EDF, the French electricity state corporation "Electricité de France", covers reactor design, supply, construction, maintenance and modernization activities, as well as fuel design and fabrication. AREVA is withdrawing from other activities such as renewables and nuclear measurements, which are being sold.

I want to point out that the new management structure is already in place, in fact since July 2016. AREVA's restructuring will have a minimal impact on our day-to-day operations here in Canada. AREVA Resources Canada remains one of the key mining assets for AREVA and the group remains committed to continue to invest in our operations, joint ventures and in our exploration programs.

AREVA Resources Canada's 470 employees are amongst New AREVA's 20,000 worldwide workforce focused on providing products, technologies and services with high added value to the entire nuclear fuel cycle in 6 business units: mining, conversion and enrichment, recycling, logistics, dismantling and engineering.

For AREVA, the safety of its facilities, its employees and its sub-contractors is part of its DNA, as are innovation on behalf of its customers and operational excellence. The sustainability of our activities depends on these qualities and they are the foundation of our corporate culture.

Focusing now on the mining activity, our goal is to discover, develop and operate profitable uranium deposits to ensure our customers' security of supply. For

that, AREVA has exploration programs on 5 continents and mining and milling operations in Canada, Kazakhstan, and Niger.

AREVA Mines intends to be a reliable, long-term supplier to our customers, targeting to maintain a portfolio of reserves and resources, giving us 20 years of production visibility while optimizing projects in our portfolio in preparation for the market recovery. We intend to remain a best-in-class uranium producer in terms of production cost through operational excellence and innovation, and a responsible player in terms of health, occupational safety, community involvement, environmental protection and business ethics.

I would like, as background to our operations, to give a brief reminder on our market. The uranium market has been facing production overcapacity since the Fukushima crisis in 2011 with spot prices reaching in 2016, their lowest level since 2004 at \$18 a pound of uranium.

I want to point out that at the beginning of our current McClean licence in 2009, the spot price was above \$50 per pound. As a result of our depressed market, to reduce the overcapacity, our industry has seen mines

closing down, reducing production and many projects deferred. However, we remain confident that we will see a market recovery when the need for new mines will drive prices up, but this recovery is likely still a few years away.

I am coming now to AREVA Resources Canada. Our headquarters is in Saskatoon and we have been present in Northern Saskatchewan for over 50 years, as a leader in uranium exploration, mining and milling. We have been through the entire mining cycle with our Cluff Lake mine, now decommissioned. We continue to explore on 16 projects in the province.

Northern Saskatchewan is a vast region, home to 12 First Nations, 20 First Nation communities and 33 Municipalities, 10 of which identify as Métis. It has a population of about 35,000, 80% of which self-identify as Indigenous. It is in this context that we have developed corporate and social responsibility practices, which are exemplary amongst mining companies.

We currently employ about 470 people in the province, 330 of them at McClean Lake. Fifty-one (51) percent of the current McClean Lake workforce resides in Saskatchewan's Northern Administrative District and 46% of

the work force self-identifies as Indigenous.

I am proud that AREVA is a leader in the employment of indigenous people and that a significant amount of employment benefits accrue to Saskatchewan's north.

Similarly, in 2016, to support the McClean Lake operation, AREVA spent 62 percent of its goods and services expenditures of \$64 million with Northern Saskatchewan businesses, most of which are owned by Indigenous Development Corporations or communities, thereby returning benefits back to Northern Saskatchewan communities.

In the difficult market environment that I mentioned earlier, our past eight-year licence period has been strongly influenced by the low uranium prices. We have stopped mining at McClean, deferred future mining projects for McClean and Midwest, and our mill was placed in care and maintenance for four years.

A major business deal between the McClean Lake and Cigar Lake Joint Ventures to process all Cigar Lake ore at McClean required an upgrade of the mill.

Since 2014, in tandem with the Cigar Lake Mine, we have successfully started-up and ramped-up

processing at McClean Lake and are on target to produce 18 million pounds in 2017.

To conclude my introduction, I want to emphasize that I am proud of our success during this licensing period. In a tough economic environment, we went through a major construction project and restarted the facility after an extended shutdown, all while never wavering in our commitment to our employees, to improving our safety culture, to environmental protection or to investing in the community near our operations. And our great team is delivering, completing the ramp-up of our world-class facility.

I will now pass the presentation over to Dale Huffman for more details.

**MR. HUFFMAN:** Thank you, Vincent.

Good morning. For the record, my name is Dale Huffman. I'll spend the remainder of the presentation discussing the McClean Lake Operation along with the renewal request.

The McClean Lake Operation is located in the Athabasca Basin region of Saskatchewan, 750 kilometres north of Saskatoon and about 400 kilometres by road north of La Ronge where we are today. This map shows the

locations of uranium operations in northern Saskatchewan, predominantly located along the eastern portion of the Athabasca Basin with AREVA's decommissioned Cluff site in the western region of the Basin.

The Basin hosts the world's largest known high-grade uranium deposits and accounts for almost one quarter of the world's primary uranium supply. As you can see on the map, our facilities are isolated, located substantial distances from the nearest communities.

Welcome to the McClean Lake Operation. The recently upgraded McClean Lake mill has a capacity to produce 24-million pounds of uranium concentrate per year.

The McClean Lake Operation is a joint venture between AREVA, as 70 per cent owner and operator; Denison Mines; and our Japanese partner, OURD Limited.

In northern Saskatchewan, AREVA has a strong minority interest in the two largest uranium mines in the world, operated by Cameco Corporation. AREVA holds a 30 per cent ownership in the McArthur River mine and a 37 per cent ownership in the Cigar Lake mine, as well as a 17 per cent ownership in the Key Lake mill.

The McClean Lake Operation is coming to the end of an eight-year licence. For four of those years, between 2010 and 2014, as a result of a shortage of economical ore to the mine and mill, the mill was shut down

and placed in care and maintenance.

As Mr. Martin mentioned, during the shutdown AREVA, Cameco and our joint venture partners came to an agreement to process a hundred per cent of the Cigar Lake ore slurry at the McClean Lake mill. The agreement resulted in the requirement to upgrade the backend processing circuits of the mill for processing up to 24-million pounds and was a return to the processing option considered with the original environmental assessment for the project.

This slide provides a couple of maps of the McClean Lake Operation. On the left, the surface lease boundaries in the three general areas of the McClean Lake Operation are shown. The Midwest site is outlined on the left in purple. The figure on the right is an enlargement that shows the JEB site in the top right, the Sue mining area at the bottom with a sink/vulture-treated effluent management system in the middle.

The JEB site is where the McClean Lake mill water treatment plant and tailings management facilities are located.

The Sue site, connected to the McClean Lake mill by a 12-kilometre haul road, is the location of the previously mined Sue A, B, C and E deposits. The remaining deposits of the Sue site can be developed in

future based on project feasibility.

The Midwest site has undergone multiple environmental assessments for varying mining techniques. The latest environmental assessment for open-pit development was approved federally and provincially in 2012. The Midwest site is currently connected to the McClean Lake Operation by the provincial Highway No. 905, but once developed, will be connected by a 17-kilometre haul road and utility corridor. It is currently under care and maintenance until conditions are favourable to make a development determination.

We've listed some major accomplishments and milestones over the eight-year licence term on this slide as they relate to the McClean Lake Operation.

AREVA completed the upgrade of the McClean Lake mill to enable production of up to 24-million pounds of uranium concentrate. We completed the first phase of our tailings management facility optimization project and we successfully restarted the mill and ramped up production receiving high-grade ore slurry from Cigar Lake.

During the licence period, environmental assessments were completed for the Caribou and Midwest mining projects and the McArthur River ore haul project. Unfortunately, as a result of declining market conditions, each of these projects was subsequently shelved.

In 2012 the McClean Lake licence was amended to increase the approved annual production and approve the operation of the high-grade receiving circuits, and with that licence our first Licence Condition Handbook was put into place.

Annual regulatory oversight reports to the Commission for uranium mines and mills were introduced early during the term of the licence with McClean Lake operations' performance reviewed six times over the past eight years.

Respecting the role of the regulatory oversight report to deliver performance information routinely to the Commission, I'll provide a brief summary of operational performance in key safety and control areas.

AREVA's committed to provide a safe workplace. We want every one of our employees to go home from work healthy and free of injury. We are committed to our province's Mission Zero objective which is trying to eradicate injuries at home, at work and at play and we continuously try to improve our safety performance.

The McClean Lake Operation is registered to the Occupational Health and Safety Assessment Standard 18001 for its safety management system. We have an active OHC Committee with members attending today's hearing.

This slide summarizes McClean Lake's lost

time incident statistics over the licence term with a comparison at the bottom to the Saskatchewan Mining Association.

Mining companies in Saskatchewan have been working together to achieve incident rates that are less than a quarter of the average rates for all industries in the province.

While we are always looking to improve our performance, AREVA's performance and the performance of the member companies of the Saskatchewan Mining Association indicate that mining is one of the safest industries in Saskatchewan.

AREVA's committed to protecting the environment. AREVA performs thousands of environmental measurements each year: we monitor air, water, groundwater, soil, vegetation, aquatic insects, sediments, fish. One of our key areas of focus is on the water downstream from where our effluent is released.

The next two slides show effluent quality relative to action levels established for the McClean Lake Operation. Effluent is normally of high quality and consistently below action levels. Concentrations of uranium and radium are well controlled and are consistently a small fraction of the action level. Molybdenum on the left has shown continuous improvement with very low levels

after restarting the mill.

AREVA makes our effluent information available to the public through quarterly effluent reports posted on our company website.

Similarly, concentrations of nickel, arsenic and selenium in our treated effluent are well below the respective action levels. Arsenic has been a contaminant of primary concern throughout operations, however, it is clear that concentrations in effluent are well controlled.

Selenium concentrations increased after the mill restarted in 2014 and the annual concentration in 2016 was slightly higher than during previous operations. Since the fall of 2016, the concentrations have been decreasing and 2017 is on track to have similar performance to 2015.

The increase in selenium concentrations triggered AREVA to identify a potential environmental issue. AREVA identified increased selenium in effluent in 2008 while processing ore from the Sue B mine and undertook to better understand selenium in mill processes and make process improvements. After the restart of milling in 2014, elevated selenium was again observed.

In response, AREVA implemented a proactive strategy to understand selenium sources and fate within

mills processes, refine our understanding of the potential risks to the receiving environment and develop and implement administrative and action levels for selenium in treated effluent release based on expected water treatment plant performance. In addition, AREVA implemented a program to evaluate new selenium treatment technologies.

We've used this slide during engagement activities with several stakeholders to provide context to the extent of water quality impacts from our treated effluent. Water quality results at a sampling point at the edge of the McClean Lake surface lease downstream of effluent release from the water treatment plants are shown relative to the Saskatchewan surface water quality objectives for the protection of aquatic life. The graph illustrates constituent levels are significantly below water quality objectives.

The image on the right is on a regional scale where it can be seen that from the sampling point in Collins Creek the water travels another 35 kilometres before it flows into Wollaston Lake.

The McClean Lake mill was designed with integrated radiation protection features so that high-grade ores could be processed undiluted. Radiation protection through design, coupled with a radiation protection program which carefully manages work and monitors employees, has

enabled AREVA to restart the McClean Lake mill and successfully process very high-grade ore from Cigar Lake while maintaining doses ALARA.

The graph on this slide presents the maximum average radiation doses for the past eight years at the McClean Lake Operation. Doses are well below dose limits and it is observed that doses experienced while processing high-grade ores in 2015 and 2016 are similar to those experienced processing low-grade ores previously in mining.

These low doses validate the design of the McClean Lake mill radiation protection features in which AREVA has heavily invested.

On human performance, we want to speak about our mill operator training program. Beginning during our period of care and maintenance, AREVA developed a mill operator training program that would ensure we have appropriately trained personnel ready for when the mill would restart and receive Cigar Lake ore. In partnership with two organizations, Northern Career Quest and the Prince Albert Grand Council, we developed an in-house training model that used the McClean Lake mill as a modern technical campus training over 80 northern Saskatchewan residents to become mill operators. We're proud to showcase the program and the others we have developed

in-house that allow us to tap into the talent pool found within northern Saskatchewan residents.

We have also conducted other training programs which target northern Saskatchewan residents with a goal to enhance employment opportunities for existing employees in trades, supervisory or professional and technical areas. All of this is done with a keen attention to ensuring people are working safely and are interested and engaged in their work.

The McClean Lake Operation is located in northern Saskatchewan, a region that is over 32-million hectares of land and home to a variety of First Nations, Métis communities and municipalities. AREVA works hard to support our public and Aboriginal engagement activities over this vast region, with a particular focus on those communities that are closest to or have been traditionally identified as priority recruitment communities through our surface lease.

As can be seen on the map, the McClean Lake Operation is located closest to the Hatchet Lake Dene Nation and the northern settlement of Wollaston Lake.

The other signatories to our collaboration agreement are the Black Lake Dene Nation, Fond-du-Lac Dene Nation and the northern settlements of Camsell Portage, Uranium City and Stony Rapids. These seven First Nations

and communities are the principal target audience group for the public information program to the McClean Lake Operation.

Our public information program has been developed in accordance with the CNSC's public information and disclosure regulatory document and is based on over 25 years of experience of engaging with stakeholders in northern Saskatchewan and the region in which McClean Lake Operation is located.

Through our public information program, AREVA strives to ensure information is made available to the public on a timely basis. There is no one way to provide accessible information to the public. Continual improvement and learning is at the heart of the public information program so we can adapt to what we are learning from the public about how they want to be informed and engaged.

AREVA uses many forums to provide information on our activities. On the right side of the slide you can see an article from one of the Athabasca Basin newsletters and it is focused on explaining how AREVA considers the protection of water at McClean Lake. We also publish this article in a magazine, Opportunities North, a magazine which reaches all of northern Saskatchewan and perhaps you read on the flight on the way to La Ronge. The

article was developed from the conceptual guidance provided by a few residents of the Athabasca Basin. This is just one example of how we aim to inform the public about what we do and the way that we do it.

The public information program identifies various levels of target audiences that are important to AREVA in its operation. Level I includes the Athabasca Basin communities. The Athabasca Joint Environmental Subcommittee, or AJES for short, was formed to play an important role by acting as the single point of contact on environment and engagement matters. It is through this committee that AREVA presents its projects and activities, such as McClean Lake licence renewal, technical matters and proposed engagement plans. As a single point of contact, this subcommittee provides advice to AREVA regarding concerns, interests, traditional knowledge and recommendations on the necessary level of engagement for the various projects and activities. This means that we develop our engagement plans and strategies, they are developed in consultation with this subcommittee.

This was an important aspect of the collaboration agreement agreed to by the negotiating team and leadership and it was recognized that there is an important need to provide an active voice to the region on environmental matters.

Level II includes the communities of the northern administrative district but outside of the Basin, and the Environmental Quality Committee as a broad body representative of northern Saskatchewan.

Level III includes all other organization with an expressed interest in our project, our employees and the general public.

In Appendix A of AREVA's written supplementary CMD, we provided a record of engagement conducted over the eight-year licence term.

We'd like to take a moment to highlight a key program making a meaningful impact in the Athabasca Basin region's better understanding of environmental components of the McClean Lake Operation.

Going into its 17th year this year, AREVA and Cameco Corporation have fully funded a community-based environmental monitoring program that is independently run by an Aboriginal-owned environmental monitoring company and includes the use of community members as employees to facilitate the monitoring.

Traditional or country foods such as fish, berries and wild game are very important, both culturally and nutritionally, to the residents of the Athabasca Basin and, indeed, to all northern Saskatchewan residents.

Two of the questions that are often asked

during community meetings is, "Is the food in my community safe to eat and is the water safe to drink?"

The purpose of the program is to answer those questions.

For over 17 years, data has been collected in reference and exposure collections near each of the seven communities in the Athabasca Basin. The original program design was developed in consultation with community members to determine the types and locations of the samples and, over the years, it has become more fine-tuned as feedback is provided on improvements.

An example of the brochure specifically developed for each of the communities is provided as Appendix D of AREVA's supplementary submission.

The data collected continues to demonstrate that the communities of the Athabasca Basin are not experiencing adverse environmental effects from uranium mining operations.

For 2017, this program continues on, but is under the direction of the AJES. The AJES plays an important role in providing direction and oversight with respect to community-based environmental monitoring program and sharing information with the operations -- about the operations to the communities.

AREVA is proud to be part of the uranium

mining industry in Saskatchewan for over 50 years. We place great importance on public acceptance of activities through our public information program, hiring practices and business development opportunities in northern Saskatchewan.

We also monitor public opinion of our industry regularly.

The graph on this slide shows that uranium mining industry continues to enjoy a firm foundation of support among Saskatchewan residents. The large majority of residents, both province-wide and in the north, support the continuation of uranium mining in the province and most think it is extremely or very important to the provincial economy.

Looking forward at the McLean Lake operation, in addition to the continued processing of ore slurry from Cigar Lake Mine, AREVA intends, with the right economic conditions, to recommence mining of McLean Lake ore bodies.

Ideally, this would happen some time over the next licence term.

Once development decisions are made, any regulatory approvals required would be requested. The activities shown here all fall within the scope of environmental assessments previously conducted for the

McLean Lake operation and are described by licensing basis documents.

The time period for which these activities may occur may change depending on the demand for uranium.

In summary, AREVA has requested to renew the operating licence for the McClean Lake operation, approving us to continue operating as is under the existing authorized activities listed on the slide. At this time, it is also requested that the Commission accept the final guarantee for the decommissioning of the McClean Lake operation. This value has been accepted by the province, the carrier of the letters of credit, as well as CNSC staff.

We've requested the licence be renewed for a 12-year term and have provided a rationale based on the alignment of resources required to produce, review and accept key environmental performance documents submitted to the CNSC and to provincial regulators.

The figure presented here illustrates timelines and milestones associated with the issuance of a licence for a 10-year and a 12-year term. A request for a 12-year term is intended to avoid overlap of the review period for key environmental performance reports with the preparation for the relicensing hearing, which was experienced in this period.

A 12-year term, with licence expiring June 2029, provides an adequate period of -- adequate period for regulatory staff to conduct their technical review and AREVA to respond to comments and update the report before providing a respectful period for public intervenors to meaningfully review McClean Lake's environmental performance and ecological risk assessment.

The rationale for our request of a 12-year licence term has been presented to key stakeholders and has been met with support, understanding that information on our performance is routinely presented to the Commission in annual regulatory oversight reports with opportunities for the public to review and intervene.

In conclusion, AREVA submits that it is a qualified operator which conducts its operations in a manner consistent with the requirements of the *Nuclear Safety and Control Act* and that the necessary measures are in place to ensure AREVA continues to conduct its operation consistent with requirements and in a manner that limits the risk to the health and safety of workers and the public, limits the risk to the environment, limits the risk to national security and is consistent with Canada's international obligations.

Thank you. We are available to answer any questions.

**THE CHAIRMAN:** Thank you very much.

So I think we will proceed to the CNSC CMD staff presentation, and we will then start our questions after each of the intervenors.

So I would now like to move to the presentation from CNSC staff. This is outlined in CMD 17-H9, 17-H9.A and 17-H9.B.

Ms Haidy Tadros will be presenting.

And Ms Tadros, please proceed.

**CMD 17-H9/17-H9.A/17-H9.B**

**Oral presentation by CNSC staff**

**MS TADROS:** Thank you. And good morning, Mr. Chair and Members of the Commission.

For the record, my name is Haidy Tadros. I am the Director-General of the Directorate of Nuclear Cycle and Facilities Regulation at the Canadian Nuclear Safety Commission.

With me today are my colleagues, Mr. Robert Lojk, Director of the Uranium Mines and Mills Division, as well as Mr. Salman Akhter of the same division.

We are also joined by other CNSC colleagues here in La Ronge and Ottawa familiar with this

file and who are available to answer any questions the Commission may have.

On behalf of the CNSC Staff, we are honoured to be here today and tomorrow in the community of La Ronge to discuss AREVA's application to renew the McClean Lake operating licence requesting authorization for continued operation for a period of 12 years.

Our presentation, identified as CMD 17-H9.B, provides a summary as well as highlights from CNSC staff's written submissions found in CMD 17-H9 and staff's supplementary CMD 17-H9.A.

In our presentation today, we will begin by first summarizing the purpose of this hearing, followed by an overview of AREVA's McClean Lake operation, CNSC Staff's review of the licence application, a summary of CNSC's regulatory oversight of the McClean Lake operation, CNSC staff's assessment of AREVA's performance over the current licence period as well as other matters of regulatory interest.

The proposed licence and draft Licence Conditions Handbook will also be discussed, followed by CNSC Staff conclusions and recommendations to the Commission on the licence renewal request by AREVA for the McClean Lake operation.

This hearing will review, discuss and

provide information on AREVA's application to renew McClean Lake operation CNSC licence. AREVA is requesting that the Commission renew their uranium mine operating licence to authorize AREVA to operate the McClean Lake operation pursuant to subsection 24(2) of the *Nuclear Safety and Control Act*, accept AREVA's increased financial guarantee for decommissioning in the amount of \$107,241,000.

I will now pass the presentation over to Mr. Lojk, who will begin by providing an overview of the facility.

**MR. LOJK:** Good morning, Commission, Chair, and Members of the Commission.

My name is Robert Lojk. I'm the Director of the Uranium Mines and Mills Division.

The next few slides will provide an overview of the location and the layout of the McClean Lake operation and discuss the activities carried out at this facility.

The McClean Lake operation is a uranium mine and mill facility located approximately 750 kilometres north of Saskatoon in the Athabasca Basin area of northern Saskatchewan.

**MR. LEBLANC:** Mr. Lojk, excuse me. If you can have the mic closer to you, that way we will be able to hear your great voice.

**MR. LOJK:** I usually don't need a mic, but thank you very much for pointing this out.

Excuse me for repeating. The McLean Lake operation is a uranium mine and mill facility located approximately 750 kilometres north of Saskatoon in the Athabasca Basin area of northern Saskatchewan.

The nearest permanent communities are Wollaston Post on the Wollaston Lake Indian Reserve, Hatchet Lake Indian Band, located approximately 50 kilometres from the facility to the southeast on the far shore of Wollaston Lake.

While the McClean Lake operation is operated by AREVA, ownership comprises of AREVA only 70 percent, followed by Denison Mines, 22.5 percent, and Overseas Uranium Resource Development Canada Limited, with 7.5 percent.

The McClean Lake operation includes the John Everett Bates JEB milling Area and Tailings Management Facility -- this was named after the original prospector -- the Sue mine area and undeveloped deposits.

This slide shows an overview of the JEB site facility. Key facilities are shown and labeled. The JEB TMF facility is shown as number 1. The ore receiving and tailings neutralization circuits are indicated as number 2 and the main mill as number 3.

Number 4 and number 5 are the solvent extraction circuits. Number 6 and 8 represent the JEB water treatment plant and the monitoring ponds. And finally the sulfuric acid plant is shown as number seven.

This slide presents an overview of the Sue mining areas, showing the mined-out Sue pits and waste rock piles. The Sue mine area is located approximately 12 kilometres along the haul road from the JEB milling area and TMF. The Sue water treatment plant and the Sue maintenance shop is labelled number three. The ore transfer pad is labelled as number four.

AREVA's current licence was issued by the Commission on July the 1st, 2009, amended in December 2012, and remains valid until June 30th, 2017. The current licence authorizes AREVA to operate and modify a nuclear facility for the mining of uranium ore and the production of uranium concentrate; mine a nuclear substance -- uranium ore; produce a uranium concentrate; and import, possess, use, store, transfer, and dispose of nuclear substances and radiation devices. The proposed licence is requested for 12 years, to be valid until June 30th, 2029. No changes are requested to the authorized activities in the proposed licence.

I will now discuss the review of the licence application.

AREVA submitted its licence renewal application August 22nd, 2016, requesting a 12-year licence term. There are no new licence activities proposed in this application.

CNSC staff performed a technical assessment of AREVA's application, in all 14 safety and control areas, and supporting documents. CNSC staff also reviewed AREVA's past performance, including records of compliance activities and environmental radiation monitoring.

Through CNSC's compliance monitoring program, CNSC staff verified and seen AREVA's implementation of CNSC's regulatory documents and CSA Group standards. CNSC staff also reviewed AREVA's compliance with public information program documents and observed community outreach and consultation activities over the licence term. Consequently, staff conclude AREVA has met CNSC licensing requirements.

CNSC staff conducted an environmental assessment under the *Nuclear Safety and Control Act* for AREVA's McClean Lake licence renewal application. The environmental assessment considered impacts to the environment from existing and future considerations. For the environmental assessment, CNSC staff reviewed environmental protection measures, environmental project

interactions, annual compliance reporting, the updated environmental risk assessment, and the results of CNSC's independent environmental monitoring program.

The information provided in its environmental assessment report, attached as Addendum E of CNSC staff's written submission CMD 17-H9 and the supplementary CMD 17-H9.A supports the recommendations by CNSC staff to the Commission to renew AREVA's licence for the McClean Lake operation.

CNSC staff conclude AREVA has made and will continue to make adequate provisions for the protection of the environment and the health and safety of workers and the public.

The next few slides discuss CNSC's regulatory oversight of AREVA's McClean Lake operation.

Regulatory oversight is provided by CNSC staff to ensure licensees operate in a safe manner and in compliance with the requirements of the *Nuclear Safety and Control Act* and associated regulations. Licensing requirements are comprised of licence conditions, CNSC regulatory documents, and CSA Group standards.

CNSC's approach to compliance includes verification activities to assess compliance, graduated enforcement actions in cases of non-compliance, and reporting of safety-significant events to the Commission

through event initial reports and other means. CNSC staff's regulatory framework is robust, clear, and safety-focused.

Over the current licence period, CNSC staff spent approximately 4,000 person days of regulatory oversight efforts. From 2010 to 2012, CNSC's compliance efforts were greater as the results of AREVA's transition to care and maintenance, JEB TMF optimization, and licence amendments. In 2013, CNSC licensing efforts were increased as the result of a number of technical reviews relating to the mill upgrade projects. The increased licensing effort in 2016 is due to the effort associated with the reviews of documents submitted for this licence renewal of staff's preparation for the current licence renewal process.

CNSC staff performed compliance verification activities such as desktop reviews of monthly, quarterly, annual reports and licensee applications, event notifications, event follow-up reports with corrective actions identified, and on-site inspections.

CNSC staff conducted 45 inspections during the current licence term which covered all 14 safety control areas. Inspections conducted by CNSC staff did not identify safety-significant non-compliances. Examples of such minor non-compliances include documentation updates, radiation protection training recertifications, and the use

of self-assessments.

Non-compliances that result in corrective actions implemented are tracked by CNSC staff through to completion using the CNSC's regulatory information bank tool or RIB. AREVA has taken timely actions to correct and close all identified non-compliances. CNSC staff verified completion of corrective actions as part of ongoing regulatory oversight. The picture on the right shows CNSC staff checking contamination records for yellow keg drums.

AREVA is required to report unplanned events to the CNSC as required by the *Nuclear Safety Control Act*, associated regulations, and licence conditions. During the current licence term, AREVA provided notifications of 120 reportable events which were of low safety significance. CNSC staff reviewed AREVA's event notifications and follow-up reports with corrective actions and found these acceptable and meeting expectations. AREVA continued to proactively disclose reportable events on their website.

Event reports that are significant in nature or may be of significant public interest are presented to the Commission by CNSC staff during public meetings. No event initial reports were presented to the Commission during the current licence term.

In addition, CNSC staff report annually to

the Commission on AREVA's compliance performance in the form of a regulatory oversight report. As I mentioned previously, some issues and events are reported either as part of the oversight operations reviews or at the meetings, and as part of the regulatory oversight reports that are produced on a yearly basis.

Thank you.

I will now pass the presentation over to Mr. Salman Akhter to present CNSC staff's performance assessment of current operations at AREVA's McClean Lake operation.

**MR. AKHTER:** Good morning Mr. Commission Chair and Members of the Commission. For the record, my name is Salman Akhter and I am a senior project officer with the Uranium Mines and Mills Division.

I will now discuss AREVA's McClean Lake performance over the licence term.

CNSC staff use a rating system to rate licensee compliance. The ratings range from unacceptable to fully satisfactory. Regulatory oversight is performed in accordance with the standard set of safety and control areas or SCAs. SCAs are technical topics used across all CNSC-regulated facilities and activities to assess, evaluate, review, verify, and report on licensee regulatory requirements and performance. The table on this slide

provides the overall ratings for each safety and control area at AREVA's McClean Lake operation.

As detailed in CNSC staff's written submission CMD 17-H9, AREVA has maintained a satisfactory rating across all CSAs during the current licence period. CNSC uses a risk-informed and performance-based approach for each regulatory oversight. While all 14 SCAs are covered in detail in CNSC staff's written submission CMD 17-H9, four SCAs are further highlighted in this presentation. The four safety and control areas are management systems, radiation protection, conventional health and safety, and environmental protection. Other matters of regulatory interest will also be discussed in this presentation.

The picture in this slide shows an environmental technician taking air samples at the site.

Management systems covers the framework that establishes the processes and programs required to ensure an organization achieves its safety objectives, continuously monitors its performance against these objectives, and fosters a healthy safety culture.

AREVA has effectively implemented CSA Group standards N286-12 management system requirements for nuclear facilities. CNSC staff monitor implementation of the management system through desktop reviews and on-site

inspections.

CNSC staff conclude AREVA's management system meets regulatory requirements and fosters continual improvement.

The next three slides will discuss radiation protection SCA. The radiation protection SCA covers the implementation of a radiation protection program in accordance with the radiation protection regulations. The program must ensure that contamination levels and radiation doses received by individuals are monitored, controlled, and maintained as low as reasonably achievable or ALARA.

AREVA's radiation protection program meets regulatory requirements through effective implementation of a radiation protection program, ascertaining and recording doses to workers, ensuring no exceedances of prescribed dose limits.

CNSC staff conclude that AREVA's radiation protection program is mature, effective, and adequate in protecting workers.

Radiation doses are monitored, controlled, and maintained by AREVA to ensure compliance with the CNSC's regulatory dose limits and with keeping doses as low as reasonably achievable.

The maximum effective dose received by a

nuclear energy worker in the current licence period was 6.94 mSv, which is 13.9 per cent of the regulatory dose limit of 50 mSv. An increase in average and maximum worker dose occurred in 2015 and 2016 as AREVA restarted and initiated mining Cigar Lake, high-grade ore at high production rates. CNSC Staff confirm that worker exposures continue to be below regulatory limits.

Action levels are developed by the licensee and reviewed and accepted by CNSC Staff. An action level, if reached, may indicate a potential loss of control in the licensee's radiation protection program. This triggers specific actions to be taken.

Licensees are responsible for identifying the parameters of their program that represent timely indicators of potential loss of control of the radiation protection program. For this reason, action levels are licensee-specific and may change over time based on operational and radiological conditions.

The action levels for the McClean Lake operation are 1 mSv per week and 5 mSv per quarter of a year. Two exceedances of AREVA's weekly action level occurred in 2015 and another two weekly action level exceedances occurred in 2016. The maximum dose received was 3.2 mSv.

CNSC Staff reviewed the initial event

notifications and follow-up reports with corrective actions. CNSC Staff also conducted follow-up inspections and are satisfied with the corrective actions taken and implemented by AREVA to prevent similar future occurrences. CNSC Staff conclude that AREVA has implemented an effective ALARA program.

The Conventional Health and Safety SCA covers the implementation of a program to manage workplace safety hazards and to protect personnel and equipment. CNSC Staff and the Saskatchewan Labour Relations and Workplace Safety Inspectors conduct regular inspections at the McClean Lake site regarding conventional health and safety and share their inspection reports.

CNSC Staff verified through compliance activities that AREVA has been proactive in identifying and managing risks to minimize the incidence of occupational injuries and illnesses. AREVA's health and safety program continues to improve and remains effective. This picture shows an AREVA staff member performing a facility inspection.

A key performance measure for the conventional health and safety SCA is the number of lost-time injuries. A lost-time injury is an injury that takes place at work and results in the worker being unable to return to work for a period of time.

AREVA is required to report all LTIs and provide an investigation report, which includes root cause and corrective actions. As part of compliance verification CNSC Staff review AREVA's investigation reports, reviews the corrective actions and verifies implementation during compliance inspections. CNSC Staff concludes AREVA's conventional health and safety program meets regulatory requirements.

The environmental protection SCA covers programs that identify, control and monitor all releases of radioactive and hazardous substances and effects on the environment from facilities as a result of licensed activities. AREVA has implemented and maintained its environmental protection program that protects the environment and the public in accordance with regulatory requirements.

Licensees are required to review the environmental risk assessments every five years. CNSC Staff reviewed AREVA's updated risk assessment in 2016 and confirmed the predicted impacts of the McClean Lake operation are consistent with those predicted in previously approved environmental assessments.

On an ongoing basis CNSC Staff review AREVA's environmental monitoring program results and confirm that the environment and human health in the

vicinity of the McClean Lake operations remains protected.

CNSC Staff conclude AREVA's environmental protection program continues to be effective in protecting the environment and minimizing adverse impacts to human health.

This table shows the annual/ monthly mean concentrations of treated effluent released to the environment from the JEB Water Treatment Plant. Treated effluent released to the environment must meet the effluent discharge limits stipulated in CNSC licence and the Metal Mining Effluent Regulations. CNSC Staff confirm that during the licensing period concentrations of contaminants in the effluent remain low and well below licence effluent discharge limits.

CNSC Staff will continue to monitor and assess environmental results through desktop reviews or performance reports and onsite inspections.

An action level is the concentration of a specific parameter that, if reached, may indicate a loss of control of part of a licensee's environmental protection program, and triggers a requirement for specific action to be taken. For environmental protection, action levels are set at 80 per cent of the licence limits of key indicated parameters in treated effluent. The action level for selenium is based on CSA standards.

AREVA uses a batch process to discharge treated effluent. Effluent is controlled in ponds, analyzed to ensure it meets requirements before being discharged. This proves to be effective and allows recycling and retreatment if effluent quality does not meet requirements.

There were no action level exceedances associated with the JEB Water Treatment Plant.

From 2009 to the end of 2016 there were two action level exceedances for effluent released from the Sue Water Treatment Plant. Twice in August 2016 the pH of treated effluent discharge exceeded the action level of 9, with the highest value of 9.14. Regulatory limits were not exceeded and no impact to the environment occurred.

Action levels have also been established for ambient sulphur dioxide concentrations. The 1-hour and 24-hour action levels are 0.17 and 0.06 parts per million respectively.

From 2009 to the end of 2016 there were seven action level exceedance events for sulphur dioxide; two each in 2009 and 2016, and one each in 2010, 2014, and 2015. All of these events were of short duration and most were the result of acid plant start-ups.

CNSC Staff reviewed the initial event notifications and follow-up reports with corrective actions. CNSC Staff also conducted follow-up inspections

and are satisfied with the corrective actions taken by AREVA.

A new CSA Standard N288.8-17, Establishing and Implementing Action Levels for Releases to the Environment from Nuclear Facilities, was published in early-2017, and AREVA is providing an action plan for implementation.

I will now discuss other matters of regulatory interest. I will begin with AREVA's operating performance followed by an overview of selenium management. I will then present an update on CNSC's Independent Environmental Monitoring Program, the JEB Tailings Management Facility, decommissioning, financial guarantees, Aboriginal engagement, public outreach, CNSC participant funding program, and interventions.

The McClean Lake mill was temporarily shutdown from 2010 to 2014 due to a lack of ore. As previously approved, AREVA restarted the mill in September 2014 to process ore slurry from Cameco's Cigar Lake operation.

After one year into the restart of the mill CNSC required AREVA to submit a commissioning report and radiation performance confirmation plan report for the processing of high-grade ore. The reports provided safety analysis and confirmation of performance with respect to

conventional health and safety, radiation protection and environmental protection.

CNSC Staff accepted AREVA's reports and concluded that the McClean Lake operation demonstrated capability to meet production targets as designed in each circuit while meeting objectives for the protection of the environment, radiation, and safety of workers.

CNSC Staff verified that AREVA has used these results to identify and effectively implement ALARA initiatives to reduce worker exposures.

CNSC Staff compliance activities verified that AREVA operated the McClean Lake operation safely and in accordance with CNSC regulatory requirements. AREVA's performance during commissioning and restarting the mill in 2014 met regulatory requirements.

After restart and commissioning of the McClean Lake operation in September 2014 AREVA identified an increasing trend in selenium effluent concentration from the JEB Water Treatment Plant, however remain well below the provincial license limit of 0.6 mg/L. This increase in concentration in effluent is attributed to the milling of Cigar Lake ore.

AREVA has been proactive and has triggered process improvements to control selenium and has established an interim administrative level of 0.084 mg/L,

and action level of 0.112 mg/L. The action and administrative levels were reviewed and accepted by CNSC Staff.

If the process control improvements do not suffice, additional options would be implemented. As a result, CNSC staff requested AREVA to develop a formal Selenium Adaptive Management Plan and incorporate strategies including a pollution prevention plan, best available technology economically achievable assessment and an active commissioning plan as part of the selenium adoptive management plan.

AREVA submitted a formal Selenium Adaptive Management Plan in April 2017. CNSC staff are currently reviewing the plan to ensure it meets regulatory requirements. CNSC staff will continue to monitor the progress of the selenium adaptive management process. The picture shown in the top right is the JEB Water Treatment Plant.

The objective of the CNSC Independent Environmental Monitoring Program, IEMP, is to verify that public health and the environment is not adversely affected by releases to the environment around facilities regulated by the CNSC, confirm that the licensee's environmental protection program adequately protects the public and the environment, and complements the CNSC's environmental

protection compliance program activities.

Sampling plans are developed for publicly accessible locations and are site-specific. Sampling plans identify the media to be sampled, air, surface water, fish, blueberries and Labrador tea.

In August 2016, CNSC staff carried out an Independent Environmental Monitoring Program around the McClean Lake operation. Samples were taken upstream at reference locations not impacted by operations and downstream exposure locations potentially impacted by operations. Fish, medicinal/edible plants, blueberries and surface water samples were analyzed for uranium, Radium-226, arsenic, selenium and molybdenum. These elements were chosen because they were contaminants that had the most regulatory and public significance.

Revised data was provided to the Commission in CNSC staff's Supplementary CMD. This revised data was related to the toxicity reference values. The revised data did not change CNSC staff's conclusion that the McClean Lake operation does not pose a risk to human health or the environment. These results will be posted on the CNSC's IEMP website.

This picture shows CNSC staff measuring depths of fish nets during the IEMP sampling campaign last fall near the McClean Lake operation. The samples

collected are shown on the map and designated as foodstuff, radon and water samples. The reference location is located upstream of the operation in the vicinity of the McClean Lake operation and not impacted by operations. The exposure location is located downstream of the McClean Lake operation in the Kewen Lake area.

The IEMP results are consistent with AREVA's results. Radioactivity in all samples were below CNSC's screening levels and within national background levels. Concentration of hazardous substances in water, blueberries and Labrador tea samples were below the toxicological reference values. Selenium in fish tissues at both the reference and exposure stations exceeded the very conservative toxicity reference level for human health protection, including both adults and children. However, daily intake from fish, blueberries, water and Labrador tea remains safe for consumption. IEMP results indicate that the public and the environment around the McClean Lake operation are not impacted by the McClean Lake operation.

The Eastern Athabasca Regional Monitoring Program was initially established by the Province of Saskatchewan in 2011, building on the previous Cumulative Effects Monitoring Program. In partnership with the Government of Saskatchewan, industry and Saskatchewan communities, the program monitors the safety of

traditionally harvested country foods from representative communities located in Northern Saskatchewan. The intent of the program is to evaluate the quality of country foods to assess any potential impacts resulting from industrial activities in and outside of Saskatchewan and to provide confidence to community members that traditional country foods remain safe to eat today and for future generations.

CNSC staff support the Eastern Athabasca Regional Monitoring Program and are working towards collaboration opportunities on this valuable program. The study gives a good representation and assurance that country foods are safe to eat, the water is safe to drink and the environment is protected. The Eastern Athabasca Regional Monitoring Program concluded that there are no cumulative effects from legacy and operating uranium mines and mills in Saskatchewan.

The picture in this slide shows the JEB tailings management facility referred to as JEB TMF. In June 2016 AREVA submitted an application to reconfigure the JEB TMF. With the current configuration the remaining tailings storage capacity available is approximately 0.8 million cubic metres. Based on current mining and milling projections, AREVA expects to generate approximately 2.4 million cubic metres of tailings over the next 18 years. The modification will provide additional tailing storage

capacity of 1.7 million cubic metres.

The JEB TMF was included in Canadian Environmental Assessment Agency EAs and the expanded capacity is within the scope of this EA. Additionally, CNSC staff also conducted a technical assessment and an EA under the NSCA. CNSC staff accepted the proposed activity in 2017 and concluded the project is within the licensing basis and will continue to maintain hydrodynamic containment, place tailings subaqueously and below the ground surface, validate geochemical and geophysical aspects of the facility design which are on a five-year cycle. Tailings deposition remains in pit disposal into the same pit using the same methodology.

AREVA has indicated construction activities would begin in 2018. CNSC staff will monitor progress through ongoing compliance activities.

I will now pass the presentation back to Mr. Lojk.

**MR. LOJK:** Thank you, Mr. Akhter.

Bob Lojk for the record.

AREVA continues to maintain a preliminary decommissioning plan throughout the facility lifecycle. The plan is required to meet CSA group standards and CNSC regulatory documents.

This slide shows the graphic of AREVA's

proposed decommissioning schedule. Operations are expected to continue until approximately 2050. Following final operations, initial decommissioning would occur followed by a period of interim monitoring. If the results of the interim monitoring are in line with CNSC staff and AREVA's expectations, then final decommissioning would take place. Following the final decommissioning, five years of post-closure monitoring have been proposed. Following a period of post-closure monitoring that is in line with expectations, AREVA would apply to release the properties from CNSC licensing for acceptance into the Province of Saskatchewan's Institutional Control Program. A CNSC licence would be required for the full duration of the lifecycle of the McClean Lake operation, including decommissioning.

Under the *Nuclear Safety and Control Act* AREVA is required to provide a financial guarantee in a form that is acceptable to the Commission. AREVA maintains a consolidated financial guarantee for its McClean Lake operation. In October 2016 AREVA submitted a revised preliminary decommissioning plan, and increased financial guarantee of \$107,241,000, the final dollars. The financial guarantee increased as a result of the JEB mill upgrade project, changes to the leaching circuit, long-term monitoring and water treatment requirements. The

preliminary decommissioning plan and financial guarantee includes all existing facilities as well as planned activities to the end of 2020.

The Saskatchewan Ministry of the Environment is the beneficiary of the financial guarantee. AREVA continues to use letters of credit as the financial guarantee instrument and there is a memorandum of agreement in place with the Province of Saskatchewan and the CNSC covering this particular financial guarantee.

CNSC staff reviewed and verified that the preliminary decommissioning plan and proposed financial guarantee meets the requirement of CNSC regulatory guides and CSA standard. CNSC staff conclude AREVA's proposed financial guarantee is sufficient to complete future decommissioning activities.

This slide lists other regulatory matters for discussion.

CNSC staff confirm that AREVA has and continues to comply with the *Cost Recovery Fees Regulations*, has adequate nuclear liability insurance under the *Nuclear Liability and Compensation Act* which came into force January 1, 2017. AREVA's Public Information and Disclosure Program meets the requirements of CNSC regulatory documents.

CNSC staff informed the public about the

licence renewal through CNSC's website, email subscription lists, social media channels, and specifically radio and print advertisements in communities in Northern Saskatchewan.

CNSC held a CNSC 101 information session attended by over 100 participants in the Wollaston Post/Hatchet Lake First Nation community on October 11, 2016. These participants include representatives from other Saskatchewan First Nation and Métis communities and organizations.

The CNSC also hosted a CNSC 101 session for leadership and staff of the Prince Albert Grand Council and the Federation of Sovereign and Indigenous Nations of Saskatoon October 12, 2016. These sessions provided an introduction to the CNSC and the work it does to ensure that nuclear facilities are safe and how the public can participate in the licensing process.

In addition, CNSC staff participated in another outreach session in the Wollaston Post/Hatchet Lake, Black Lake and Fond du Lac First Nation communities in January 2017. There were a total of 38 community meetings or events during the licence term where AREVA and CNSC were present. Many were environmental quality Council meetings that included discussions on the JEB TMF work.

The picture shows CNSC staff presenting

information regarding the McClean Lake licence renewal to the Hatchet Lake First Nation community in October 2016.

Please note that on this particular slide, due to an administrative error, paper copies of this slide incorrectly used the word "aboriginal" in the second and fourth bullets. The correct word is "First Nations" and is included in this presentation.

CNSC staff regularly engage with aboriginal groups in a number of ways, including community meetings, workshops, facility tours and Northern community science fair. CNSC staff identified five First Nations and Métis groups who previously expressed interest in a proposed licence renewal. Letters of notification were sent to the identified groups in November 2016, followed by phone calls. First Nation and Métis groups have been awarded funding to the Participant Funding Program which is discussed in greater detail in a later slide.

In March 2017 identified groups were provided with a copy of CNSC staff's and AREVA's Commission Member Documents. The continued operation of McClean Lake operation would not adversely impact aboriginal or treaty rights.

Based on the recommendations from the Funding Review Committee, which is independent from CNSC staff, the CNSC approved and awarded funding in the amount

of \$75,289 to the groups listed on the right side of the slide. Funding was provided to assist members of the public and indigenous groups in providing valuable information directly to the Commission.

There were 11 interventions received on AREVA's licence renewal application. The main themes of these interventions included the 12-year licence period, protection of the public and environment, the preliminary decommissioning plan and financial guarantee, and CNSC and AREVA's engagement activities.

I will now turn the presentation over to Ms Tadros to present CNSC staff's Proposed Licence and Licence Conditions Handbook, as well as overall conclusions and recommendations.

**MS TADROS:** Thank you.

For the record this is Haidy Tadros.

AREVA is requesting a 12-year licence term. The Proposed Licence includes standard licence conditions and a Draft Licence Conditions Handbook. The Draft Licence Conditions Handbook uses the CNSC standard template and states compliance verification criteria, including CNSC regulatory documents and CSA group standards. Guidance is also provided, enhancing the effectiveness of the safety and control measures in place.

AREVA has requested a 12-year licence

term. The normal practice has been for the Commission to grant 10-year licence terms for uranium mines and mills.

Notwithstanding the licence term, CNSC staff report annually to the Commission and the public on uranium mines and mills through regulatory oversight reports. The ROR summarizes CNSC staff's assessment of a licensee's safety performance for operating a mine and mill facility.

In addition, the CNSC looks for opportunities to hold the Commission proceedings in communities where the ROR is being presented. CNSC staff have confirmed that the McClean Lake operation is a mature facility with established programs, an effective management system and a history of regulatory compliance, and a 12-year licence term does not pose any additional risk to the public, the health and safety of workers or the environment.

For the proposed licence term CNSC staff will continue to evaluate AREVA's performance across all safety and control areas; conduct onsite inspections according to the CNSC's Compliance Verification Program; review and assess compliance and event reports, licensee programs and facility changes to ensure safety; verify and monitor licensee's implementation of CNSC's regulatory requirements in accordance with the implementation plans.

CNSC staff will also monitor implementation of AREVA's Selenium Adaptive Management Plan to ensure risks from selenium are managed; maintain regulatory oversight of the JEB tailings management facility modifications to verify design and ensure long-term containment. And finally, CNSC staff will report annually to the Commission in the form of a regulatory oversight report on AREVA's compliance performance.

The following two slides outline staff's conclusions and recommendations.

CNSC staff have concluded that AREVA is qualified to carry on the activities authorized by the licence and will, in carrying out these activities, make adequate provision for the protection of the environment, the health and safety of persons, and the maintenance of the national security and measures required to implement international obligations to which Canada has agreed.

CNSC staff recommend that the Commission accept staff's conclusions and recommendations presented in staff CMD 17-H9 and our supplementary CMD 17-H9.A to renew the uranium mine and mill operating licence and to authorize AREVA to operate the McClean Lake operations until June 30, 2029, pursuant to subsection 24(2) of the *Nuclear Safety and Control Act*.

CNSC staff also recommend that the

Commission accept AREVA's revised financial guarantee for decommissioning in the amount of \$107,241,000.

Thank you. We are available for any questions you may have.

**THE CHAIRMAN:** Ms Tadros, thank you.

I think we will take a 10-minute break now. Then we will have one intervention before lunch. Marc, I think one hour planned for lunch?

**MR. LEBLANC:** That's correct.

**THE CHAIRMAN:** One hour planned for lunch. So thank you and we will see you in about 10 minutes.

--- Upon recessing at 11:30 a.m. /

Suspension à 11 h 30

--- Upon resuming at 11:49 a.m. /

Reprise à 11 h 49

**MR. LEBLANC:** So we will resume. If you can take your seats, please.

Before we start, I would like to apologize because we forgot to acknowledge some other participants from other government organizations.

So we would like to recognize that Mr. Leonard Kaskiw, who is with the Ministry of Labour Relations and Workplace Safety, as well as Ms Karen Coates

from the same department are with us in this room. Thank you very much.

And we also have on the line from Environment Canada -- well, it's Environment and Climate Change Canada, the Canadian Wildlife Service by phone, Mr. Ken Corcoran, who I think is part of a so-called Caribou Group, so will be able to answer questions in this regard as the day unfolds.

Mr. Chair...?

**CMD 17-H9.11/17-H9.11A/17-H9.11B**

**Oral presentation by the**

**Ya'thi Néné Lands and Resources Office**

**THE CHAIRMAN:** Thank you, Marc.

So we will move to the first submission, which is an oral presentation by the Ya'thi Néné Lands and Resources Office. This is outlined in CMDs 17-H9.11 and 11A and 11B.

So I see we have two representatives and we will invite you to make the presentation. Thank you.

**MR. DAWE:** Good morning. My name is Michael Dawe and I am the Environmental Implementation Coordinator with the Ya'thi Néné Lands and Resources Office. Here with myself today is Mr. Victor Fern and

seated just behind us is Ms Mary Denechezhe.

I would like to begin by thanking the Commission, the CNSC and our friends at AREVA for hosting this event and having us present today.

In introduction, our presentation will include an outline of the Ya'thi Néné Lands and Resources Office, a map of the traditional lands and historic ties to lands around the McClean Lake operation, the Athabasca Joint Environmental Subcommittee, also known as the AJES group, community engagement, the licence term, CNSC engagement, the tailings management facility at the McClean Lake operation, closure and remediation, and finally, human performance management.

The Ya'thi Néné Lands and Resources Office is an independent professional organization that protects the Athabasca residents' culture and Aboriginal and Treaty rights. Ya'thi Néné makes decisions on behalf of the communities to ensure the land, water, air and natural resources in the region are preserved for future generations. We work with industry and government organizations and local communities on various environmental matters that occur within the Athabasca Basin Region. We are the main point of contact between industry and the local residents.

The slide before you contains our mission

statement which explicitly states that:

"Ya'thi Néné' works to promote and enhance the environmental, social, cultural and economic health of the Athabasca region. Ya'thi Néné has a duty to maintain stewardship responsibilities within the region."

We have also listed a few of our mandates.

I would like to draw your attention to the map of traditional lands, as noted in the presentation here.

While the Ya'thi Néné Lands and Resources Office is a new organization as of 2016, the Athabasca Denesuline have always had an interest in ensuring they understand and participate in processes related to activities within their traditional territories. The area both in and around the McClean Lake operation is traditional territories for the communities represented by the Ya'thi Néné Lands and Resources Office.

The purpose of this map is to give a visual representation of the numerous traditional activities that have occurred around the McClean Lake operation directly relating the McClean Lake operation and the Athabasca Basin residents. So as is clearly stated in the map here, we have outlined various fishing, gathering

and hunting sites, various travel routes that really relate the local traditional people to the land itself and the McClean Lake operation located in the area.

The First Nations of the Athabasca Basin have been present within the Athabasca Denesuline territory for time immemorial. Since the beginning of the McClean Lake operation, the Athabasca Denesuline have been active and engaged participants in the eight environmental assessments and 12 licensing actions.

I would like now to speak briefly about the AJES Group that AREVA had mentioned previously in their presentation.

So the Ya'thi Néné group works in partnership with the AJES group. The AJES group consists of six members. We have two First Nations representatives, the Executive Director of the Ya'thi Néné Lands and Resources Office, one representative for the municipalities within the Athabasca Basin, one representative from Cameco Corporation and one representative from AREVA Resources Canada.

Because the AJES is mentioned in detail in both our original and our supplementary submission I did want to definitely give a brief overview here today.

The AJES is a single point of contact for the companies on matters related to the environment and

engagement activities within the Athabasca Basin. This isn't to be confused with the technical work that the Ya'thi Néné Lands and Resources Office does.

The Athabasca Joint Environmental Subcommittee, or AJES, will serve to inform the Ya'thi Néné Lands and Resources Office. This is particularly important for issues such as selenium and SO<sub>2</sub>, which were mentioned in our supplementary and original submission, and spills and various other environmental matters are reported to the AJES Group. This is just a brief showcase of the group's capacity and their importance.

At this point in time I would like to hand the remainder of our presentation over to our colleague, Victor Fern.

**MR. FERN:** Thank you.

Thank you, Mr. Chair, Commission.

I would first of all like to acknowledge the Elder for the opening prayer and the Dene drummers and also the Woodland Cree for holding the hearing on their territory.

First of all, my name is Victor Fern, I am a member of Fond du Lac First Nations. And I would like to also explain, Ya'thi Néné in our language means northern territory, which is the name of the entity that we represent today. So with that, I would like to acknowledge

the members that are here from all the communities.

AREVA and Ya'thi Néné have worked jointly to consider issues associated with a licence renewal. Ya'thi Néné appreciates the meetings, in particular meetings held in the communities with CNSC, which were in January. We appreciate the presence of CNSC within our Territory to hold these public meetings which give our members more knowledge of the licensing and what it's all about.

And also on behalf of the three First Nations, we represent seven communities in the Basin.

Ya'thi Néné supports the proposed 12-year licence renewal with AREVA. A 12-year licence term will allow AREVA and CNSC sufficient time to undertake various renewal activities. There are no Ya'thi Néné conditions attached to the licence term and we have made some recommendations and we will continue to work with AREVA through our collaborative agreement to sustain the I guess collaboration with -- I guess continue talking which will allow continuing to progress in the development with AREVA.

And I think it's important that we engage with CNSC to have our people understand what the licensing is about and I think it's important that CNSC with the companies work together to acknowledge what the Basin people have, that the importance of land use and our

traditional lifestyle is continued through collaboration with the mining companies.

And I think too, that with the tailings management facility proposed, which was proposed by AREVA, and we do continue too talks with AREVA, and any other projects pertaining to tailings facilities is very important to us, that we understand what it involves, that the environment is one of our main, main concerns and for the people of the Basin for future generations and we do support the project that they have, which we feel is safe for the future. And I think it's important that they involve the communities as well.

And also, the closure and the remediation of the mine is very important. Again, the environment is very important to us, that we are always engaged with AREVA, and Ya'thi Néné will be involved with any remediation that's happening during the life of the mine and after the life of the mine and I do believe that we have good collaboration with AREVA in that matter.

Human performance and management. We do have a lot of workforce from the Athabasca Basin, it is important. I myself have worked 25 years in the mining industry with Cameco and I believe that AREVA and Cameco, they both have very safe procedures for the workforce, that their employees do. Safety is one of their main concerns

and I think that they go beyond the safety of the workers, but for the people of the Athabasca Basin. So I think we always talk about the environment and the future, for the future generations, and I do believe that AREVA does that for the safety of the people in the Basin.

With that, in closing, I would like to again thank the Commission for inviting us and hearing our concerns regarding the renewal of the AREVA 12-year licence. Thank you.

**THE CHAIRMAN:** Thank you, Mr. Fern and Mr. Dawe.

**MR. LEBLANC:** Thank you very much.

I mentioned this morning that there was interpretation in four languages, including Cree and Dene. These are not being webcast, though, in Cree and Dene in the community. However, we are making recordings of them and so recordings will be available should members of your community wish to hear those proceedings in the language of their choice. I just wanted to mention that. Thank you.

**THE CHAIRMAN:** Questions?

Mr. Soliman...?

**MEMBER SOLIMAN:** Thank you, Mr. Chairman.

In your original submission you have mentioned many, many recommendations in different areas, and in the last submission, H9.11B, you mentioned that you

have meetings with AREVA and CNSC, and the recommendation, it looks like it has been discussed and you reached some conclusion and now we are talking about the AJES Committee to resolve all of these issues. I just would like to know what discussion you have with AREVA and CNSC and whether all your recommendations have been discussed to your satisfaction.

**MR. DAWE:** Thanks for the question. I was absolutely expecting that one.

I think it was, yes, very much required with the two submissions. So we have been in a lot of communications with both the CNSC and AREVA since the original submission up and to the supplementary. The purpose of that communication was more or less to mitigate a few of the recommendations that we had mentioned in the original submission. So we were somewhat time-constrained and there were multiple moving parts that we kind of had to put together almost at the eleventh hour to get our submission in on time.

After that had been submitted, in talks with AREVA there were multiple recommendations that we both jointly decided that we can sit down and talk about these outside of the Commission, they don't need to be, you know, brought into the relicensing renewal talks themselves. So we had multiple meetings with various AREVA staff and we

also sat down with the CNSC just to get a better understanding of the whole renewal process itself.

So from the original to our supplementary submission we had removed various recommendations that we feel can be very effectively dealt with through the AJES Group, have already been effectively dealt with through communications with AREVA and additionally with the CNSC to better understand their process to move forward.

So we are very confident that any recommendations that we had mentioned in the original submission that are not included in the supplementary have been either already very effectively dealt with or will be continually monitored and dealt with through our AJES Group. So we feel that that's the best. They are the best conduit for those conversations as opposed to, you know, bringing them forward here.

**MEMBER SEELEY:** Maybe one question with respect to the closure on remediation. So I noticed that was a recommendation and you have deferred to the Athabasca Joint Environmental Subcommittee for that work and I'm just curious, does the Athabasca Joint Environmental Subcommittee have something specific around that? Do they have a subgroup on remediation and closure planning to include the communities and their interests?

**MR. DAWE:** Yes, absolutely. So the

Athabasca Joint Environmental Subcommittee is composed of various representatives from each community, the Ya'thi Néné Office itself and Cameco and AREVA. So with respect to closure or decommissioning plans, we do -- we recognize that those are very far down the road, so it will be a continual conversation in process and we are confident that -- AREVA sits at the AJES Group. Any information that they bring to the group itself is, you know, effectively communicated.

If any specific community members have concerns, questions, ideas, opinions about decommissioning or closure plans, they can bring those thoughts and ideas to their representative who then reports back to the AJES group. So all of these thoughts, ideas and opinions are recorded, you know, brought to the group itself, discussed and we feel that there is effective representation of both industry, the technical side, which would be our office, and the community side. So we do feel confident that moving forward with any closure or decommissioning plan, that kind of thing, there is a very open door for conversations and, you know, idea-forming, brainstorming, and that kind of thing. So we are confident that down the road it would be a very effective process.

**MEMBER DEMETER:** Thank you for your presentation. One of the recommendations in your

original -- and this may have been dealt with, but I think just for my own understanding, in your original submission it was that the five references in the preliminary decommissioning plan for traditional use only consider radiologic criteria and there are other aspects that you think are important. I want to confirm from staff that the goal of the decommissioning plan is to allow the land to return to full traditional use, if that's the intent, taking into consideration radiologic and non-radiologic issues.

**MS TADROS:** Thank you for the question.  
Haidy Tadros for the record.

You are correct, in terms of remediation we look at the radiological components but we also look at the operations and the impact the operations have on the environment, with the objective of returning the environment back to its natural state. And as was discussed in staff's presentation, in Saskatchewan there is the Institutional Control Program whereby the province also gets involved in looking at the mechanisms in place to ensure the environment is constantly looked at and maintained in the original form that it's in.

Maybe one point to note is, as was noted in staff's CMD, the preliminary decommissioning plan is an evergreen document. So while it does look out very far

out, any changes to the operations are required to come back to the CNSC and update the preliminary decommissioning plan and it is recognized that these conversations do need to happen to ensure that the community is engaged with what the operation changes are and how forward-looking the preliminary decommissioning plan needs to maintain those assumptions for the environment.

**THE CHAIRMAN:** Mr. Tolgyesi...?

**MEMBER TOLGYESI:** I have one. It's not necessarily touching your submission, but I see you are representing three or four or five native communities, so you discuss about fishing and hunting. Now, this is specifically about hunting. Do you have a comment or observations heard from native communities that there are changes in the wildlife presence due to mining operations, due to the caribou presence or migratory path changes due to mining operations?

**MR. FERN:** I don't think that it has changed at all from the previous years. All the migratory birds have their same routes. There hasn't been any knowledge of any changes due to the mining industry within the area.

**MEMBER TOLGYESI:** Do you have any programs with AREVA and CAMECO, ore operators, to follow up this bird presence and wild game presence and observations?

**MR. FERN:** We do have programs that are available. There's always continuous monitoring of wildlife within the area and within the basin, all the basin area including Lake Athabasca with all the surrounding communities. There is ongoing monitoring at all times.

**THE CHAIRMAN:** So just to the caribou question, Mr. Cochrane, do you have any comments on the migration patterns and presence patterns?

**MR. COCHRANE:** Thanks for the question.

Well, Environment Canada -- Environment and Climate Change Canada is responsible, has certain responsibilities related to boreal caribou under the *Species at Risk Act*. But in terms of specific management of boreal caribou and the lands they occupy that the jurisdictions, provinces and territories are in a much better place to provide that type of information.

**THE CHAIRMAN:** Okay, thank you. And I think we have a specialist coming, presenting later to talk about it as well, so thank you.

Dr. Soliman, I think you -- no?

So if I could just ask, I think, one question related to the presentation that you said that CNSC made and the conversation you were able to have I think, in January, was there anything in that presentation

that you felt needed changing in the way in which it was structured, in the way in which the questions were answered or if the right people were actually there to give you the patents and information/background that you needed?

**MR. DAWE:** I guess just to clarify, are you referring to the community engagement aspect of the -- okay.

When we did our community engagement tour in January, I think it was very effective to have ourselves as local representatives to the CNSC and members of industry present. I feel that the presentations and the information that was given was very effective, concise and informative, at a level that could be widely appreciated and understood.

So with respect to the process itself, I think again, it was very effective and informative. The timeline worked well, obviously back in January before this process as we sit here today happened. So again, I think it was effective. I was pleased with the outcome.

And the questions that were asked both from the CNSC and from the community point were taken very critically and, I think, addressed in the appropriate way.

**THE CHAIRMAN:** Thank you.

Any more questions?

So Mr. Fern and Mr. Dawe, thank you for

presenting today. The last word is yours.

**MR. DAWE:** Thanks for all the questions and, again, thanks for hosting us here today. As a new organization it is nice to attend these events and promote ourselves and continually to be involved. So thanks again to the Commission, the CNSC and AREVA for hosting us here today.

**THE CHAIRMAN:** We look forward to seeing you at future Commission meetings.

**MR. FERN:** I'll just --

**THE CHAIRMAN:** Oh, I'm sorry, Mr. Fern.

**MR. FERN:** -- I'll just say a last word. I'd like to thank the Commission again and AREVA and again Lac La Ronge Indian Band for hosting.

I think it is, as a Dene First Nations person and a traditional land user, I think it's important that our voice comes across to the industry and to the CNSC and everybody involved in the industry that we respect Mother Nature, our land, and for future generations to come.

With that I'd like to thank you for you hearing us. Thank you.

**THE CHAIRMAN:** Thank you.

**MR. LEBLANC:** So as was expressed earlier, we will now break for lunch, a one-hour lunch period. And

we will resume at 1:15 p.m. with the presentation from the Saskatchewan Environmental Society.

Thank you.

--- Upon recessing at 12:17 p.m. /

Suspension à 12 h 17

--- Upon resuming at 1:16 p.m. /

Reprise à 13 h 16

**MR. LEBLANC:** We will resume the hearing.  
Please take your seats.

**THE CHAIRMAN:** Good afternoon. Welcome  
back from lunch.

So before we move onto the next  
submission, I understand that Ms Tadros has a clarification  
to make.

**MS TADROS:** Yes, thank you, Mr. Chair.  
Haidy Tadros for the record.

I would just like to clarify, for the  
record Dr. Demeter's question on the preliminary  
decommissioning plans because I believe there was some  
confusion in my answer with regards to what the intent of  
the answer was.

So to clarify the preliminary  
decommissioning plan objective is to capture in the current

time the plan for the decommissioning of the facility. It's based on the licensed activities and any changes to those activities as I had described are planned, are assessed in terms of their impact to the environment and those impacts then determine the future or the final state of the land, whether it be for restricted use or for unrestricted use.

So I just wanted to make sure that was clear for the record. Thank you.

**THE CHAIRMAN:** Okay. Thank you, Ms Tadros.

Marc...?

**MR. LEBLANC:** Yes, I would just like to re-clarify what I said earlier this morning in terms of the process for interventions.

So we will now continue interventions this afternoon and today, and after all interventions there will be a round of questions on general matters from the Commission Members and we will end with the last words being provided to AREVA.

I would last like to remind intervenors that are appearing before the Commission that we have allocated 10 minutes for each oral presentation and we would appreciate your assistance in helping us to maintain that schedule.

Your more detailed written submissions have already been read and will be fully and duly considered. There will be time for questions from the Commission after each intervention and no time has been ascribed for the question period.

So I forgot to mention that earlier today, but we have to help manage the time, a timer system is being used. The light will turn yellow when there is one minute left and turn red at the 10-minute mark.

I just wanted to make that clear, Mr. Chairman.

**THE CHAIRMAN:** Thank you, Marc.

We will now --

**MR. LEBLANC:** I'll also make something else clear.

--- Laughter / Rires

**MR. LEBLANC:** Those who have an agenda, you will have noted that the first intervention that had been planned today which was from the Lac La Ronge Indian Band has been withdrawn and in that context this intervention will not be part of the record.

Thank you.

**CMD 17-H9.6/17-H9.6A**

**Oral presentation by the  
Saskatchewan Environmental Society**

**THE CHAIRMAN:** So thank you. We will now move to the next submission, which is an oral presentation by the Saskatchewan Environmental Society, as outlined in CMDs 17-H9.6 and 17-H9.6A.

I understand this group is presenting by teleconference. So I will turn the floor to Ms Ann Coxworth to proceed. Thank you.

**THE CHAIRMAN:** Can you hear us?

--- Pause

**MR. LEBLANC:** We will be -- everything is coordinated from Ottawa in terms of the teleconference so we are verifying now, what is the status of the call with Ms Coxworth. And if we cannot reach her, we will just go to the next intervenor and then we'll proceed.

She is in now? Okay, thank you.

Ms Coxworth, are you with us?

--- Pause

**MS COXWORTH:** Hello.

**THE CHAIRMAN:** Ms Coxworth..?

**MS COXWORTH:** Hello.

**THE CHAIRMAN:** Hello, welcome. We had a

little difficulty hearing you at the beginning but I think we have you clearly now.

**MS COXWORTH:** Okay, good. So for the record, my name is Ann Coxworth. I am a member of the Board of Directors of the Saskatchewan Environmental Society and I have with me Hayley Carlson who is our Policy Coordinator.

In the time allocated to us we intend to summarize for you the main issues that we have raised in our written submission.

First of all, we will comment on several issues related to public support and social licence. These include accessibility and understanding of project information, ambiguity of terminology, and evaluation of the acceptability of the project.

Secondly, we will discuss some concerns about the materials that were initially available to us as intervenors. Within the documents that we examined we found gaps and inconsistencies of information. Also, the time provided to review the material at an appropriate depth was inadequate.

Lastly, we identify specific concerns about climate change projections, about funding for the post-decommissioning period, about species at risk, about water contamination levels and plans for raising the

tailings level in the JEB Tailings Management Facility.

In terms of issues related to public participation and consultation, both AREVA and CNSC have invested heavily in pursuing social licence and in offering opportunities for public comment. But the technical issues involved are complex and it can't be assumed that an adequate level of understanding will be achieved by the general public.

Therefore, doing surveys of public support for the uranium industry without at the same time measuring the level of understanding that each respondent brings to the table can lead to meaningless results.

Moreover, we question whether the finding of 77 percent public support among Northerners should be regarded as a strong endorsement of the industry. The 23 percent who are not supportive identify environmental issues as their main reason for concern. Given the many economic benefits that the industry has brought the Northern communities, a 23 percent level of opposition is, in our eyes, significant and concerning. It suggests to us that Indigenous connections to the land and the right to self-determination on the path to reconciliation must be given greater attention.

Ambiguous terminology such as "as low as reasonably achievable" or "negligible effects" or "limiting

risks" -- this kind of language is used frequently throughout the documents. It has become clear that what seems reasonable to an industry with shareholders to satisfy may not be reasonable to a local resident whose culture is rooted in the land under consideration. We need to recognize that "Indigenous knowledge" is not just an individual elder's observations of a particular plant or animal, but embraces a whole cultural relationship between a people and the land.

The detailing of acceptable contaminant levels as "effluent release limits" or "action levels" or "site-specific objectives" or "interim administrative levels" or "Saskatchewan Surface Water Quality Objectives for protection of aquatic life" or "lowest effect level" or "severe effect level", this is confusing to the lay reader who is looking for assurance that the land and ecosystems are being treated with respect and, indeed, with reverence.

Also, in the listing of public participation concerns, we include the inadequacy of the time allowed for preparation of interventions in the review process. We would like to have been able to do a more thorough analysis of the information provided, particularly around the expansion of the Tailings Management Facility, and to seek out relevant information from other sources.

For example, the Technical Information

Documents, which we did eventually access with help from helpful staff at AREVA, has filled many of the information gaps that we had initially observed in the licensing proposal and the CNSC staff review.

The actual time allocated for the review period was 18 working days. That's counting from the date the documents were received and excluding weekends and statutory holidays. We believe that a more appropriate review time would be 30 working days to allow for gaps in accessing and studying additional information and arranging for consultation with the proponent. We suggest that groups such as ours would be able to play a more effective role in the review process if time for review and information accessibility were improved. We have further suggested that CNSC give some thought to clarifying just what it hopes to achieve through its public participation program.

The rest of the presentation will be delivered by Hayley Carlson.

**MS CARLSON:** For the record this is Hayley Carlson, Policy Coordinator with the Saskatchewan Environmental Society.

In our written submission, we have identified some inconsistencies between documents, specifically with respect to species at risk that leads us

to suggest that further work is needed to ensure that an adequate knowledge base has been established regarding the presence of various species in the project area, and that appropriate protection is in place for those species identified. Data from various sources and studies need to be consolidated and presence/absence surveys completed. AREVA has since indicated in a supplemental submission that they will be pursuing some of these surveys.

Among the gaps that we identified was adequate consideration of the changing climate. In particular, changes in the processes of precipitation accumulation and melt, alterations in the timing of precipitation and a highly active precipitation cycle will contribute to water insecurity in the project region that is difficult for us to predict. Despite the considerable changes projected for the meteorological parameters surrounding the site, which have the potential to reduce stability of the site, cause erosion and dislodge contaminants, among other impacts, climate change projections are excluded from predictive risk modelling. Estimates instead are based on past climate normals, which may be standard practice, but will not work well for planning purposes in a century of increasing climatic variability and uncertainty.

We also raise a concern about the absence

of any funding allocation in the decommissioning budget for the costs of ongoing monitoring, care and maintenance in perpetuity under the provincial Institutional Control Program

(ICP). Although the hope is that the contaminant containment systems will perform perfectly forever, we must assume that periodic monitoring and perhaps maintenance will take place after the site is transferred to the ICP. We cannot assume that the rate of release of contaminants will follow a smooth curve over time. If an increase in releases occurs after several quiet years it will presumably be because of a fracture or breakdown in a natural or engineered contaminant system. Funding to cover post-decommissioning costs should be identified.

We are pleased that much work has been devoted to environmental issues related to hazardous and radioactive contaminants. However, we found that inadequate attention had been paid to other types of environmental impacts such as spills during transportation, noise and dust pollution, increased use of transportation corridors, among others. These activities have the potential to result in soil erosion, habitat fragmentation and sensory disturbance of wildlife.

We have since learned from CNSC staff and AREVA that each of these activities if they should occur

will be assessed individually. However, this is our opportunity to comment and we hope CNSC staff will take our comments into consideration at the appropriate time.

Certainly, the major concern about this site is the potential for widespread contamination of waters. We have noted the proliferation of geological faults in the region, making the spread of contaminants through groundwater very difficult to control.

The proponent is also seeking a 12-year licence in the absence of a demonstrated solution to the problem of elevated selenium levels in the mill effluent. SES has made several suggestions about how CNSC might address this issue. One approach would be to restrict processing of Cigar Lake ore until effluent levels of selenium can be kept below 10 µg/L.

And I would like to clarify to the Commission that 10 µg/L is a level based on AREVA's own modelling in their environmental performance technical information document, volume 2, where 10 µg/L was expected to exceed guidelines from the U.S. Environmental Protection Agency in fish tissue and water 41 percent of the time between 2016 and 2100.

We further note that the recommended concentration of selenium in water for the protection of aquatic life is 1.5 µg/L of the U.S. EPA and 1 µg/L by the

Canadian Council of Ministers of the Environment. This is significantly below CNSC's action and administrative levels.

The proposed increase in capacity of the JEB Tailings Management Facility is of concern because of the potential for an embankment failure with resulting release of pond water and tailings, and groundwater contamination above the till/sandstone contact.

We note that uncertainty about future mining developments means that there is a possibility that even the enlarged TMF will not provide enough space for all the tailings eventually generated. This could mean that a further enlargement or a new tailings facility would be required and indeed may be an inevitability within the licensing term or shortly after.

The increased tailings level presently planned likely increases the risk of migration of contaminants to adjacent water. We suggest that a more detailed explanation of the decision to pursue TMF expansion be provided because we note that some of the options for a purpose-built facility elsewhere had comparable or lower environmental effects, albeit somewhat higher financial costs.

For a more detailed discussion we would refer you to our written submissions. Thank you.

**THE CHAIRMAN:** So thank you very much. So I think we'll move to questions.

And Dr. Soliman...?

**MEMBER SOLIMAN:** Thank you, Mr. Chairman. There is -- SES has lots of concerns and I am picking up one of their concerns and I would like this concern to be addressed by either AREVA or the staff.

During the TMF site expansion the expansion will produce dust, noise pollution and spills during transportation. I think this -- we would like to know how this will be mitigated.

Either, yeah.

**MR. HUFFMAN:** Just to clarify the question you're asking about how things would be mitigated with the TMF expansion and increased transportation?

**MEMBER SOLIMAN:** Again, I will state my question.

It is a concern during TMF expansion activity that the activity will produce dust, noise problems, spilling during transportation. How this will be mitigated?

**MR. HUFFMAN:** Okay. Thank you for the clarification. Dale Huffman for the record.

We've developed the TMF expansion project and put forward a proposal that has considered these

aspects in the development of that project. Now, specifically to mitigate, we have practices on site to mitigate dust due to transportation of materials on the site. We have already conducted a portion of the optimization project.

The distinction between optimization and TMF expansion is quite subtle. Effectively, it's a staged expansion of the TMF, the TMF proper.

So we've already conducted a portion of this work as the TMF optimization project and quite successful in managing dust onsite, been quite successful in managing the transportation, the increased transportation around the site. So for the rest of the TMF expansion it would be more of the same.

**MEMBER SOLIMAN:** Thank you. Do you have support in that, to support what you are saying?

**MR. HUFFMAN:** Dale Huffman for the record.

Yes, we do. While we are conducting these activities we have high volume air samplers that collect dust around the perimeter of the tailings management facility. We have our incident statistics that would take a look that would show that we haven't had transportation incidents related to movement of materials in the construction of the placed liner at the TMF. We have supporting information to support that statement.

**MEMBER SOLIMAN:** Okay. Is this information public?

**MR. HUFFMAN:** Dale Huffman for the record. We typically -- we put all of our environmental monitoring information into our annual report and we have made that annual report public through our web page. You do have to request a copy through our web page, but the public has access to that, that information, yes.

**THE CHAIRMAN:** Staff...?

**MS TADROS:** Thank you for the question. Haidy Tadros, for the record.

So, as AREVA has indicated, this information is part of staff's assessment and I'll refer to our colleagues in Environmental Protection Division to explain their assessment of mitigation measures of the concerns that were raised by the intervenor.

**MR. McALLISTER:** Andrew McAllister, Director of the Environmental Risk Assessment Division.

In doing our assessment of the information with respect to the JEB TMF expansion we know that -- for example, you mentioned noise, Dr. Soliman, that was looked at and the mitigation measures proposed were dealing with noise suppression on vehicles having machinery that's noise generating that's stationary, being within enclosure, so really more for following best practices with respect to

reducing noise impacts on the environment.

**THE CHAIRMAN:** Mr. Jammal?

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

I'd just like to complement the answer provided by staff, that before the licensee is authorized to do any licensed activity staff did assess the programs and it becomes part of the licence basis, hence, we hold them accountable with respect to the regulatory requirement according to the Act, the regulation licence conditions.

And our inspectors on-site, when they visit the site for inspection they do verify compliance with the program submitted to the Commission for review.

And with respect to the publicly available information, as we state in our CMD in the Executive Summary, that the documents referenced in the CMD are publicly available.

**THE CHAIRMAN:** So, Ms Carlson or Ms Coxworth, do you have any comments on that before we move to the next question?

**MS COXWORTH:** No, I don't think so.

**THE CHAIRMAN:** Thank you.

Mr. Seeley?

**MEMBER SEELEY:** Yeah. Perhaps stay with the tailings management facility theme.

The Saskatchewan Environmental Society has commented that the two major concerns about the tailings management facility were: No. 1, embankment failure and raise upon water entailing solids, the environment; and 2, groundwater contamination.

So, perhaps on the first question I could direct this to AREVA. What standards or guidelines have you used in the design of the tailings management facility dyke and what programs would you have in place to continue to monitor the integrity of that structure?

**MR. HUFFMAN:** Dale Huffman, for the record.

So, the design of the tailings management facility expansion has been developed using the Canadian Dam Guidelines and we've further done an assessment of the dam stability to ensure that there's a suitable margin of safety in the construction of that berm.

And also, regarding embankment failure, within our application we did an assessment of the impacts of an embankment failure, so we looked at the scenario of what would happen if there was an entire embankment failure and the tailings pond water flowed into the neighbouring lake. We looked at the impacts of that potential failure.

**MEMBER SEELEY:** Thank you.

Okay. And the second part of the question

was around groundwater contamination related to the TMF, and maybe perhaps AREVA could comment on the programs that are in place for mitigation of any groundwater contamination.

Thank you.

**MR. HUFFMAN:** Dale Huffman, for the record.

So, during the operating period we maintain hydraulic containment with the tailings management facility. So, in the early stages of the TMF development there is a perimeter of groundwater wells to divert water from around the TMF and now that water is diverted by drawing from a base drain that creates a cone of depression around the tailings management facility and diverts that clean water.

So, during the operating period we have hydraulic containment.

Post closure, the TMF is developed such that there will be a hydraulic conductivity contrast between the tailings materials and the surrounding sandstone. So, the preferential path for water to flow will be around the tailings rather than through them.

At the same time, there are geochemical controls established during the operating period as we place the tailings to ensure that there's very low

concentrations of contaminants of concern in the tailings pour water.

So, the two methods of protection of groundwater stem from geochemical controls and geophysical controls.

**THE CHAIRMAN:** Ms Coxworth, any comments on that answer?

**MS COXWORTH:** I think our main concern is what happens in the distant future. Because, you know, the fact that it might appear that there are no problems develop, say, in the first 50 years, there's no guarantee that something is not going to change, you know, a hundred or 200 years into the future.

As we had noted, there are some geological faults in the area and, so, our major concern is with the distant future after all of the treatment has been ceased.

**THE CHAIRMAN:** Mr. Rinker?

**MR. RINKER:** Mike Rinker, for the record. I'm the Director General for the Directorate of Environmental and Radiation Protection and Assessment.

So, just on the two questions asked by Mr. Seeley. In terms of embankment failure, CNSC has a member of the Canadian Dam Association on staff who's been a member for many years and he was the subject matter expert who reviewed the design and found that there's ample margin

for safety and it was consistent with standards that are available.

On the second instance about groundwater contamination and the response from AREVA, the notion of hydrodynamic containment and how groundwater would interact with the tailings, as well as the geochemical stability of, particularly, arsenic in the tailings, was a matter of importance when this facility was first licensed in the 1990s and spilling over for a number of years. There was a program called the Tailings Optimization and Validation Program that was a licence condition for this facility that specifically looked at those two aspects of ensuring that groundwater would travel around the facility as opposed to through the facility and that concentrations of arsenic in this facility would remain low so the loadings would be protective of the surrounding lakes.

AREVA was released of that condition after they demonstrated, through much research, that that was, indeed, the case.

Nevertheless, I think the intervenor is correct, that we need to continue surveillance over the decades to come and we will be expecting improvements to the modelling, continued surveillance and at the time of decommissioning we'll be still re-looking at this.

**MR. JAMMAL:** If you allow me, Mr. Chair,

I'd just like to complement Mr. Rinker, to respond to Mr. Seeley and the question with respect to long-term monitoring.

As Mr. Rinker has mentioned, the fact that part of our regulatory oversight is ongoing monitoring, but at the same time, even though it was not related, the Mount Polley accident did take place, the Commission took on its own its own action in order to review existing dam or future design for the dams based on lessons learned.

Even though it does not impact -- we determined it does not impact the CNSC licensees, we went on to verify that the design -- the existing design and the future design is adequate in order to meet the requirement.

But regardless, the fact is, as long as there is institution control, there will be provincial government and the federal government and the CNSC, there will be ongoing monitoring with respect to the design, with respect to the integrity of the design, with respect to any impact on the environment and we will impose requirements on the licensee to adjust accordingly.

**THE CHAIRMAN:** Mr. Tolgyesi?

**MEMBER TOLGYESI:** Thank you.

I have several questions on selenium. So, what I will do, I will split them into two, three bunches.

Now, first of all, I would like to know,

the selenium is something like mercury which is bio-cumulative in the human body, and is it in the fish also, and how human reacts when eating fish?

**MS TADROS:** Thank you for the question. Haidy Tadros, for the record.

So, we've looked at the selenium management program that AREVA's put in place and we've extensively followed the data and plans for selenium management and I would ask our colleagues in the Environmental Protection group to answer that question specifically.

**DR. DOWSLEY:** Dr. Barbara Dowsley, for the record.

Selenium is an essential nutrient for both fish and for animals and humans, but it can also cause toxic effects at relatively low concentration.

The mode of toxicological effect is different for egg-bearing fish and animals such as birds, those with a yolk. The selenium tends to accumulate in the ovaries and it can cause reproductive effects on the developing embryos.

In humans, it is more of a gastrointestinal effect that it will have. In extremely high concentrations, you could have damage to the liver.

But, again, it's a very narrow band

between being an essential element and being over into a toxicological effect.

Recently the Canadian Environmental Protection Agency has done an assessment of selenium and has recognized that even multi-vitamins that have selenium greater than concentrations of about 0.4 mg can cause implications for human health.

So, for any further questions about sort of human potential effects for northern diets, Dr. Irvine from the Province of Saskatchewan is here from the -- that you could ask -- answer further questions.

**THE CHAIRMAN:** Dr. Irvine, do you have any comments on this?

**DR. IRVINE:** Good afternoon. So, I'm James Irvine. I am medical health officer with the three northern health authorities and with Ministry of Health.

Yes, selenium, as she mentioned, is one of those things that if you don't get enough of it it's not good for your health, if you get too much of it it's not good for your health.

Saskatchewan is noted for soils in the southern parts of the province that have high levels of selenium and, so, it's noted that in different countries the sale of wheat from Saskatchewan with its higher levels of selenium is beneficial.

So, in Europe, for instance, the intake of selenium is lower than in parts of Canada, and so they get the benefit of eating wheat from areas in which selenium is a little bit higher.

So, for the downside of if you don't get enough selenium it may cause some oxidative stress in the body. It can -- there's some studies that make a suggestion that the risk of neurological damage is increased and potentially higher rates of Alzheimer's disease.

There's some studies suggesting that there's a cancer protective effect from selenium, particularly lung, bladder, breast cancer, that with very low levels of selenium you may have increased risks.

There has been some studies suggesting that diabetes may be increased with higher levels, but those studies have not demonstrated it completely yet.

So, the main effect that we see, not so much in Saskatchewan, but in areas of the world in which the soil levels and water levels of selenium are very high, such as in China, the impacts are a loss of hair, nail changes for fingernails, skin changes and some neurological troubles.

So, selenium is available in most of our foods. It is available, as mentioned, in vitamin pills and

also in prenatal vitamin pills too for pregnant women.

So, it's recommended that we get about 40 to 60  $\mu\text{g}$  a day and toxic effects wouldn't show up at least until 400  $\mu\text{g}$  per day, you could eat on a regular basis.

Places like China that have shown -- particular areas of China in which they had some toxic effects of selenium, they were in the range of 4- to 6,000 levels, so very, very high.

So, that's kind of the -- the other thing I guess, there has been studies that have shown that death rates for those people that have very low levels of selenium are higher than the average person and the death rates for those people that have higher blood levels of selenium are greater.

We've been involved in northern Saskatchewan with some prenatal bio-monitoring project that have been looking at bloods that have been given by prenatal women for testing of about 220 different environmental chemicals. Selenium was one of the ones we tested for and we were able to compare the results of selenium in northern Saskatchewan, in different areas of northern Saskatchewan with blood selenium levels of pregnant women in Alberta: north, south and central parts of Alberta. And in all the tests we've had in northern Saskatchewan, the pooled average tests are lower selenium

levels than in Alberta generally, so...

So, that's a lot of information on selenium and I'm happy to answer any more.

**MEMBER TOLGYESI:** So -- but I understand that selenium is not bioaccumulative in the body; it is eliminated through the kidneys normally. Only there's a high level -- you were talking about China. I never visited China, but I have consequences, you know.

--- Laughter / Rires

**MEMBER TOLGYESI:** And so -- and you were saying that 400 -- 0.4 mg or 400 µg is a kind of limit where you feel comfortable.

So, how you feel -- I put you on the spot, how do you feel about emissions of 0.1 -- 0.1, how do you feel? Do you think it's to some extent safe, or should be done something else to make sure that it's lowered quite a bit?

**MR. IRVINE:** I think doing it in ways by which you can confidently predict what levels there would be in fish that would be consumed by people.

There are screening values that are available through the U.S. EPA, various states, and in British Columbia they've developed and we've replicated that here in northern Saskatchewan as well.

To say that if the level would be 2.5 µg/g

and lower, then the degree of consumption of that fish, no limits would be required. And then, if there was above that level, then it would be important to do an analysis of how much fish people were consuming.

So, in Beaver Lodge area, northern Saskatchewan, there is a Fish Advisory. We don't tell people not to eat fish, but we advise them to limit the amount of fish they eat from that lake. And those selenium levels in the fish there have been going down, but they were in the range of -- in the previous days up to about 50 µg/g and now 10 and 12. So, that's quite substantial.

So, I think that's where -- if you can do the amount of selenium that's brought through the tailings to keep the selenium level in the fish below 2.5 that would be good. Right now that certainly seems to be the way it is as it relates to, particularly off-site and even on-site, but with the mathematical modelling and the predictions for the future, depending on how the selenium mitigation program works, could put you up well below -- or well above that amount.

**MEMBER TOLGYESI:** And so, I am going back to staff.

So, it's not bio-cumulative in the human body. Is it in the fish?

**DR. DOWSLEY:** Barb Dowsley, for the

record.

In fish the tendency is for the fish to eliminate the selenium in its system by shunting it into the ovary. So, that's a method by which the fish use to rid their body of the selenium, and when it moves into the ovaries this is when, if you have high enough concentrations, you could have impact on the developing embryos that are in the ovary.

The modelling that was done by AREVA in association with their risk assessment has shown that the levels of releases of selenium, if they are kept lower than approximately 0.4 -- 0.04 mg/L that should be protective of toxicological responses of fish.

**THE CHAIRMAN:** Ms Coxworth, do you have any comments? That was a fairly lengthy answer to the question.

**MS CARLSON:** Yes. Hayley Carlson, for the record.

The interpretation of the modelling in the technical information document, Volume 2 that we had, was that the effect on fish and water quality were going to exceed guidelines between 41 to 58 per cent of the time, depending on if the concentration was 10 µg/L all the way up to 100 µg/L.

And our main question was why are the

guidelines at 84 µg/L and 112 µg/L when the U.S. EPA and the Canadian Council of Environment Ministers is recommending 1 µg/L to 1.5 µg/L?

And, I mean, that's based on guidelines, but based on AREVA's own modelling, we're seeing impacts exceeding those guidelines and leading to probable effects in fish and aquatic wildlife in Sink and Vulture, McClean Lake and sometimes in Kewen Lake.

**THE CHAIRMAN:** I'm going to ask staff if they can respond first.

**MR. DAGHER:** Elias Dagher, for the record.

The 0.01 mg/L levels are in effluent, and so for the -- so, in the risk assessment, the environmental risk assessment that AREVA submitted those levels at 0.01 mg/L and at 0.04 mg/L would be protective of the environment downstream.

The effluent released from the JEB water treatment plant is released into the Sink/Vulture treated effluent management system whereby it then flows through that system and into McClean Lake East Basin and then along the Collins Creek Watershed.

The surface water quality guidelines, the cesium limit of 1 µg/L applies in the environment at the Collins Creek, the outflow of the Collins Creek Watershed, and so it would be protective there.

So, there is a little bit of a difference between the two values that the intervenor is talking about; one is the levels that are coming out of the effluents, and the other one is the value -- the guideline that applies in the environment itself.

**THE CHAIRMAN:** Okay. Ms Coxworth, does that make sense?

**MS COXWORTH:** Well, I'm wondering why the guideline only applies at Collins Creek and not to McClean Lake itself?

**THE CHAIRMAN:** Staff?

**MR. DAGHER:** I'm sorry, could you repeat the question?

**MS COXWORTH:** Well, you said there's a difference between the numbers I'm using and you're saying that the numbers I'm using are referring to environmental impact at Collins Creek, but do they not also apply to predicted concentrations in McClean Lake and at least Vulture Lake as well?

**MR. DAGHER:** Elias Dagher, for the record. I'll pass that on to my colleague in environmental risk assessment.

**MS DOWSLEY:** Barb Dowsley, for the record.

I believe what the intervenor is referring to is that the predicted concentrations, looking forward,

could go as high as 0.0015 mg/L in McClean Lake East, which is above the provincial water quality objective of 0.001.

In terms of protection of fish, water quality is not a great predictor for selenium because it enters through the food chain. So it's about what goes into the fish through eating, particularly fish that eat at the sediment surface water interface.

So we have developed with AREVA an enhanced field monitoring program whereby, as they're moving forward, they are doing monthly monitoring of McClean Lake East. Once the concentration of selenium, if it ever reaches 0.008 mg/L, they are to increase their monitoring to weekly.

If they reach 0.001 mg/L, they are to start to do fish -- they collect ovaries and tissue from fish in McClean Lake East and compare them to baseline values which they collected in the fall of 2016, to determine whether the concentrations are increasing in the fish tissue and, if so, are they reaching levels that could have effects on developing embryos.

So there's a plan in place through adaptive management to address this.

**THE CHAIRMAN:** Thank you. I'm going to move to Dr. Demeter.

**MEMBER DEMETER:** Thank you. I'll return to

the selenium question later. The question I have, and this is somewhat of a recurrent theme in hearings, the intervenor talks about which species were picked for monitoring, those are the species at risk, whether they're a generic set of animals and plants that are chosen for monitoring.

The question I have is what input did the community or the Indigenous people in the area have to that set of plants and animals?

**THE CHAIRMAN:** AREVA?

**MR. HUFFMAN:** Dale Huffman with AREVA.

During our environmental assessment processes we've gone through picking valued ecosystem components, and they have been influenced by engagement and consultation with local communities on what is important, what is important to them as what is important for ecosystem health. So there is participation in the selection of those species.

**THE CHAIRMAN:** Any comments from Staff?

**MR. RINKER:** Mike Rinker, for the record.

So in terms of how we engage communities or, in fact, it was AREVA who engaged communities for that selection of species, I don't have anything to add. But there were other comments that the intervenor brought up about how species at risk may have changed; in one table

it's one list, in another table there's another list.

We have Dr. Ducros on the line who may help to respond to that question. I just want to emphasize that it was not an oversight, that these lists actually do change over time. If you would like more explanation, Dr. Ducros' a able to respond to that.

**THE CHAIRMAN:** Dr. Ducros?

**DR. DUCROS:** Yes, Caroline Ducros. I'm the Director of the Environmental Assessment Division at the CNSC.

So what Mr. Rinker is saying is right. The intervenor talked about some inconsistencies between the CNSC's EA under the NSCA report, and AREVA's environmental performance technical information document tables.

So just to clarify, some of those inconsistencies are due to the fact that the lists of species that have been assessed by the Committee on the Status of Endangered Wildlife in Canada, known as COSEWIC, and listed species under the *Species at Risk Act* as well as the Saskatchewan Conservation Data Centre have been updated since the 2016 date of the technical information document.

However, I do note that the intervenor has a good point; as much as possible, we should be consolidating those lists.

Another factor is that in the

environmental assessment under the *Nuclear Safety Control Act* report the documented table that we have is the federal species. That's not to say that we didn't assess the provincial species as well, it's just that the discussion in terms of how we assess potential impacts to the species are found in Sections 2.1 and 3.5 of the EA report.

So that's the clarification I think Mr. Rinker was looking for. Thank you.

**THE CHAIRMAN:** Thank you. Dr. Soliman.

**MEMBER SOLIMAN:** Thank you. I have supplementary about the question raised before about the tailing facility embankment failure.

I would like to know if we consider external events like earthquakes and other external effects on the designing of that facility? In addition, I would like also to know if, due to earthquakes, the sloshing of the water will spill the water outside the boundary of the facility and contaminate or maybe do something which is not safely acceptable?

**MS TADROS:** Thank you for your question. Haidy Tadros, for the record.

So I'd just like to maybe reiterate what Mr. Jammal was saying with regards to our lessons learned about dam failure. So we did take the opportunity to look at the Mount Polley incident and, while it wasn't a uranium

mine, the lessons learned from the dam and the embankment and the design of how dams should be put together was part of our review and AREVA's design.

With regards to your question about the sloshing, I believe it was, and the potential for contaminated water to spill over the embankments, I would ask our colleagues in environmental protection to describe sort of the assessment of all of that mitigation work that is done to ensure the design and potential mitigation measures that need to be put in place from such a scenario.

**MR. McALLISTER:** Andrew McAllister, Director of the Environmental Risk Assessment Division.

I'll add a bit more detail and then perhaps AREVA can add a bit more with regards to the sloshing of the water that was referred to.

The Canadian Dam Safety Guidelines do take into consideration seismic considerations. I believe one of the considerations is a 1 in 10,000 year earthquake event. In addition, refer to external events, climate change-related aspects are also considered and looked at.

For example, when CNSC Staff was reviewing the materials we queried about, from a climate change perspective, what sort of maximum water levels could be predicted for Fox Lake, which is right near the proposed embankment. With that, they indicated it would be close to

the toe of the embankment, and AREVA indicated that they would be riprapping that aspect.

So that's just sort of an example of how climate change has had a bearing on the design, proposed design I should say, of the facility.

With respect to additional seismic and the sloshing effect, I'll ask AREVA if they have anymore detail to add.

**MR. HUFFMAN:** Dale Huffman, with AREVA.

The tailings embankment has been designed, as we've said, consistent with the Canadian Dam Guidelines and considering the seismic zone we're in, and we're in an area in the Athabasca Basin that experiences very very little seismic activity. So it's considered in the design, but it's not such a big consideration as would be experienced in other areas that have more seismic activity.

Maybe to emphasize too, that as far as climatic effects, the berm is in place to hold pond water during the operating period. So once the facility is decommissioned post-operating period, there's no embankment that's holding liquid anymore, it's removed as part of the decommissioning and covered.

The climatic activity that's most of concern to us would be a probable maximum precipitation event. So we've designed the TMF considering the maximum

rainfall that would occur in a certain period of time to make sure that there's capacity for that without impacting on the embankment or on the wave run-up for the embankment, to make sure that it's stable under a very extreme storm situation. Thanks.

**THE CHAIRMAN:** Thank you. Mr. Seeley.

**MEMBER SEELEY:** No, I think that piece answered my question, which was with respect to climate change, the design criteria for, you know, a major rainfall event such that was referred to I think in the SES submission. They talked about potential greater rain events in the future.

So I think you've clarified that the future really only needs to consider the operating phase, because after that you're decommissioning the TMF

**MR. HUFFMAN:** Maybe just a comment on that. Dale Huffman, for the record.

Where we are designing like long-term structures and decommissioning, we pay particular attention to aspects of climate change and when we're making designs for surface runoff or these sorts of features in perhaps the tailings cover. We've taken a look at a collection of climate changes scenarios.

But during the operating period, it's not so necessary to look at climate change, we're there and

we're in control of the site and we can manage the site accordingly.

**THE CHAIRMAN:** Ms Coxworth, do you have any comments as we've sort of moved into a new area?

**MS COXWORTH:** Well, just happy to hear that AREVA is considering climate change and that well, you know, during the next 12 years extreme precipitation events and increased precipitation in general might not have a direct impact on the sites, activities that occur within that 12-year period will have long-term implications for the site and for the health and safety of people around the area, especially considering how populations may migrate north.

So while we know that it may not be an immediate concern, things going on in the next 12 years have implications, long-term implications, to the site.

**THE CHAIRMAN:** Thank you. Mr. Tolgyesi.

**MEMBER TOLGYESI:** Merci, Monsieur le président.

I'm going to your CMD H9.1A, page 3.2, and I have several questions on that page.

One is, you have a picture, Figure 3.2, where different data. The blue, I think, is actual selenium measured somewhere, is a discharge to Sink/Vulture treatment system. Okay? The red, dotted red, you are saying

selenium mine plan. What's that? It's your mill feed, expected mill feed, selenium in the mill feed or what?

Page 3.2 of CMD H9.1A, the Figure 3.2.

Yeah, 1A, it's supplementary information. Okay?

**MR. HUFFMAN:** Dale Huffman, for the record.

Yes. We appreciate, we've tried to get a lot of information on this graph. Most importantly, we're showing what's coming up in our life of mine plan. We gained a lot more precision on our understanding of what selenium challenges we're going to face over the next few years, and plotted those up.

It shows that the peak of our selenium challenge seems to be behind us, and the forecast for selenium coming in Cigar Lake ore plots the line that you mention.

**MEMBER TOLGYESI:** So what you are saying that, according to your ore evaluation, grade, et cetera, the selenium is going down eventually? This is Phase 1 I suppose? Phase 2, do you have any hints what will be selenium grade?

**MR. HUFFMAN:** Dale Huffman, for the record.

We don't yet have a good forecast for Phase 2, but we have this forecast for Phase 1 that takes

us into the late 2020s.

**MEMBER TOLGYESI:** Because I think this page will merit a little bit of clarification. Because you are talking three different values at three different points, which is difficult to compare. Your mid-2016 selenium upper limit was 0.1 mg, which is 100 µg. It was based on a point of discharge to JEB Management Facility which is, I suppose, mill discharge. Okay?

Now, the 0.04 mg, which is 40 µg, is based on the selenium concentration entering the mill, which is a mill feed, which is not the same place.

Further down, just on top of the picture, you are saying that concentration of selenium and treated effluent have declined and are currently below 0.01, which is 10 µg.

What's that? It is discharge to -- treated effluent is discharged to the environment, which is a Sink/Vulture Lake discharge, which is quite far away in the process or it is discharged to JEB? Because you compare things which are difficult to compare.

**MR. HUFFMAN:** Dale Huffman, for the record.

We are comparing things that are difficult to compare, and I'll try to clarify. The blue line on this figure plots out the actual selenium discharged from our

JEB Water Treatment Plant to Sink Lake or Sink Reservoir. So that's our discharge.

In 2016 we saw the trajectory for the selenium rising and we made a prediction based on our understand of some processes in the mill and capped that based on our -- what we were observing in our tailings thickener overflow. Not to get too distracted by that, it was our best prediction that we could make at the time. At that time, we were updating our ecological risk assessment.

So we put forward a few scenarios in our ecological risk assessment: one that would see selenium releases rise to 100 µg/L; we looked at a scenario that was 40 µg/L; and, a scenario that was 10 µg/L.

So where we're sitting today is we're releasing selenium concentrations at about 10 µg/L. We have re-forecasted based on the early part of, or the late part of 2016 that would still see selenium rise up to about 40 µg/L. So we think that's quite conservative.

We're working on better understanding in our process, better understanding the selenium that's effluent from the Cigar Lake Mine and looking at potential technologies to reduce selenium if they're needed. So we're working towards a decision point in the future as to whether we'll need to do more on selenium removal.

**MEMBER TOLGYESI:** So this is a discharge

0.01 is to Sink/Vulture Lake, which is part of your treatment process, okay, it's not a final effluent. You have control over Sink/Vulture Lake to some extent. So it's not your final effluent. What's your final effluent which is going -- it's effluent from Sink/Vulture Lake, because that's what you should count because that's going to the environment.

**MR. HUFFMAN:** Dale Huffman, for the record.

We've calculated that with concentrations released to Sink Lake at about 40 µg/L, the maximum concentrations in McClean Lake will be less than 1.5 µg/L, and at Collins Creek would be less than 1 µg/L.

So at Collins Creek, at the edge of our lease boundary we would be meeting surface water quality objectives with releases at around 40 µg/L.

**MEMBER TOLGYESI:** You were calculating. Did you measure?

**MR. HUFFMAN:** Dale Huffman, for the record.

This is a future problem, and so we're making predictions now. What we're measuring now in McClean Lake and in Collins Creek are very low levels of selenium. So we're proactively getting on top of this selenium issue, so we won't measure selenium in the environment right now.

**THE CHAIRMAN:** So can I just be clear? The 2016 projection was based upon the maximum rate of increase that you were seeing in early 2016?

**MR. HUFFMAN:** Correct.

**MEMBER TOLGYESI:** Staff?

**MR. JAMMAL:** Ramzi Jammal, for the record. I'll start and then I'll pass it on to my colleagues.

There is a lot of discussion about the lakes and the control of the effluent. I just want to remind the Commission that these lakes are not being used for fishing or any of that sustenance. So the environment is protected. The independent environmental monitoring program has determined that the environment is protected, and that is being conducted by the CNSC.

Now, you're talking about the modelling versus the measured. I'll pass it on to my colleague, Dr. Dagher, with respect to what is being measured and how is the projection with respect to the model.

**MR. DAGHER:** Elias Dagher, for the record.

So I think in terms of looking at that graph and the actual effluent monitoring results that have been achieved recently, so we're seeing those. So originally, there were increasing trends in selenium concentrations coming out of the JEB Water Treatment Plant. AREVA was very proactive in putting in place continuous

improvement techniques to help to reduce those concentrations.

In their 2016 environmental risk assessment they did provide, based on -- as Mr. Huffman said, they did provide predictions of what they anticipated maximum effluent concentrations coming out of the JEB Water Treatment Plant to be in the event that there were no further improvements in the techniques.

They did apply a number of improvements, one of the main ones, and the reason why we do see that forecast coming down in terms of the effluent concentrations of selenium, is a result of engagement between AREVA and Cigar Lake and Cameco at Cigar Lake to better characterize the selenium concentrations in the ore that would be sent to AREVA and milled.

So that's why you see a drastic increase in the concentrations to date. So the techniques have been effective, and there is a better forecast, a more accurate forecast in place based on measured data.

**THE CHAIRMAN:** So I'm wondering if Mr. Moulding from Saskatchewan Ministry of the Environment have any comments?

**MR. MOULDING:** Tim Moulding, for the record. I am the Manager of Uranium and Northern Operations for the Ministry of the Environment here in Saskatchewan.

The current selenium measurements are meeting objectives right now downstream of the McClean Lake operation. So again, as my colleagues have noted, the levels that we're talking about right now were predicted levels into the future. And those will continue to be monitored as part of the approved monitoring program that's in place. And we're satisfied that McClean Lake is doing a good job of adhering to that.

**THE CHAIRMAN:** Dr. Demeter.

**MEMBER DEMETER:** Thank you.

To return to the topic, and the correction was made about future land use, and the intervenor talked about future land use. With that correction in mind, I wanted to just -- obviously the future land use will be risk-dependent and we will want to keep people safe. And that's when you talked about restricted or unrestricted use of the land.

But I wanted to get a sense that the initial starting point or the premise is to do everything possible to allow that use to be used for traditional unrestricted use. And then from there you take mitigating steps if that can't be achieved. But I wanted to get a sense. Is that the starting point of the decommissioning plan is for future unrestricted use? Or when do you know that? Because then the planning -- you can plan to get

there. And if you've exceeded all options and you have to have restricted use, you do. But I wanted to get some sense of is that the starting point.

**MS TADROS:** So Haidy Tadros for the record. Thank you for your question.

So we've received AREVA's preliminary decommissioning plan. And as mentioned, the decommissioning plan is based on licensed activities within the current licensing basis. And the assumptions made by AREVA of what will happen with regards to the operations that is currently being run and how far that operations will go into the future.

As operations progresses, the preliminary decommissioning plan turns into a detailed decommissioning plan, and that we have also received from AREVA. And we have our colleagues in Ottawa, Ms Karine Glenn, who looked at the decommissioning plans, the detailed as well as the preliminary. They do their assumptions based on the information provided on the operations. And I believe, getting to your question, which is the starting point, do you look at these plans with the assumption that the environment will be returned to nature or do you start with the assumption that you are following the operations? And it's more the latter, that we are following the operations. But I will allow Ms Karine Glenn to provide you the details

with how that's being assessed.

**MS GLENN:** Good afternoon. My name is Karine Glenn. For the record, I'm the director of the Waste and Decommissioning Division at the Canadian Nuclear Safety Commission.

Before I go into a little bit more detail, I just want to clarify that we actually only have the preliminary decommissioning plan for the McClean Lake facility. They have not yet submitted a detailed decommissioning plan since at this point in time they are forecasting an operation based on mineral deposits at the location to be until 2050 at this point in time if operation was to continue until the mine was depleted.

When we're looking at the assumptions that are made by AREVA in the decommissioning plan is that the decommissioning involves the removal or the stabilization of all the structures and the reclamation of disturbed areas such that the environment is safe for non-human biota and human use, that long-term adverse effects are minimized, that the reclaimed landscape is stable and that it is self-sustaining, and that restrictions on future land use are minimized. And that, those restrictions on any future land use should not prevent traditional land use, including casual access for trapping, fishing, or hunting as the primary site activities.

In setting up the activities in the decommissioning plans and in assessing the costs that are estimated with the associated decommissioning, a number of criteria are being contemplated by AREVA in this case, including meeting criteria for the site, including the levels of the Minister of the Environment -- excuse me, I'm trying to find the exact wording for that -- and then any additional -- and, you know -- Ministry of the Environment criteria that would apply for the site and whenever that is possible. And that's what the site would be remediated to, and that includes for non-radioactive contaminants such as arsenic, zinc, nickel.

**THE CHAIRMAN:** Thank you. Mr. Moulding, do you have any comments from the Province?

**MR. MOULDING:** Tim Moulding again.

Again, the decommissioning criteria is generally laid out in the initial environmental assessment, what the plan is for the ultimate disposition of the site. And generally what we look at is making sure that that is safe for transient occupation. There wasn't anybody living on that property prior to operations being conducted there, so that the land use restrictions are minimized to the degree that they can be. Again, we don't want anybody building condominiums on the former tailings facility or anything like that. So our Ministry of Economy will make

sure that there's caveats placed on any future lease agreements that prevent that sort of thing from happening. But for traditional uses of that land, the goal is unrestricted.

**THE CHAIRMAN:** Thank you very much.

**MR. HUFFMAN:** Dale Huffman with AREVA.

Just to confirm the decommissioning plan is laid out with the objective of returning the land for traditional land uses with a minimum of land use constraints. And as we progress from a preliminary decommissioning plan into a more detailed decommissioning plan, this is where we take the -- have the opportunity to engage with local land users and put more specifics about what traditional land use looks like as we do -- as we get closer to the -- putting the details into that plan at the end of the life of the property.

**THE CHAIRMAN:** Ms Carlson, do you have any comments on this part of the conversation?

**MS COXWORTH:** Ann Coxworth here for the record.

I think one of the -- this is an issue that we have raised at a number of other CNSC hearings, and that is that, okay, we can talk about putting it back so that it's suitable for present-day traditional land use. But it's extremely hard to predict what kind of land use

will be in place a hundred years in the future. And the idea of putting restrictions on building permits and so on is in our mind not very realistic when we don't know what kind of social and regulatory regimes will be in place in the distance. And we feel that it's necessary to leave the land in a condition which will not depend on having the current regulatory bodies in place, because we have no idea whether there will be the same type of regulatory regime in the distant future.

**THE CHAIRMAN:** I think Mr. Jammal is going to try and reply to you.

**MR. JAMMAL:** Thank you, Mr. Chair. I'll be providing my response through the Commission.

For the record it's Ramzi Jammal.

The key point here is we're not talking about hypothetical scenarios. We've got significant experience with respect to the existing decommissioned mine, let it be the decommissioned mine or any of the legacy lands that we've got. So as we speak with respect to Saskatchewan itself, many of the lakes are open for fishing, many of the territory is being used for proper Indigenous tradition. So the point here is to generalize, to say that the land will not be turned to its original state is a hypothetical scenario.

As it was mentioned by my colleagues,

there is a whole licensing process associated with a decommissioning that requires a Commission approval with respect to the licensed activity that's going to be authorized by the licence. So there'll be interventions taking into consideration interventions.

However, to state the fact that no proper decommissioning has taken place, that's not accurate. To have a hypothetical discussion is not accurate. Because again, I'm going to repeat two things: the Province of Saskatchewan will exist. The Province of Saskatchewan has a continuous monitoring program; it has requirements. The Federal Government exists, so does the CNSC will exist and will have requirements in place.

But if you want any specific response to the successful access to the traditional knowledge or even with respect to the country food or the success of decommissioning, I'll pass you on to Mr. Mike Rinker if he has anything to add specific to unrestricted access to lakes, fishing, and lands.

**MR. RINKER:** Mike Rinker for the record.

Maybe just briefly that the goal certainly is that Fox and Pat Lake would have concentration of contaminants well below surface water quality objectives. Sink and Vulture Lake, while part of the facility now, in the long term would have a safe and healthy fish population

that is safe to consume. And any health and safety hazards would be -- would no longer exist. So it would be quite feasible to walk across the tailings waste rock piles and there would not be ponded water that would be unsafe. And in that way, it would be safe to access the facility, safe to consume the fish.

**THE CHAIRMAN:** Thank you. Dr. Soliman?  
Mr. Seeley?

**MEMBER SEELEY:** I just had a question on perhaps SO<sub>2</sub> emissions. I know I noted that there were a number of acute events in 2016, probably mostly around commissioning and start-up of the facilities. And this was a concern of SES as well in their submission.

So my question would be was this a -- considered a start-up and commissioning exceedance versus a long-term operating problem for the facility or what -- I guess what operating procedures and practices have been put in place to mitigate in the future the SO<sub>2</sub> exceedances for day-to-day operations.

**MR. HUFFMAN:** Dale Huffman for the record.  
Over the past eight years you've seen there are a few SO<sub>2</sub> environmental action level exceedances. And those were largely related to operation of the acid plant and the start-up of the acid plant. And we've had challenges with having efficient conversion efficiency when

the plant starts up. And we've been working to improve those during the initial ramp-up at McClean.

We also had some issues with SO<sub>2</sub> being released from our calciner stack, which really related to process control within the mill.

And I'm going to turn it to Vincent Laniece, and he can identify a few things that we've done to improve on SO<sub>2</sub> emissions.

**MR. LANIECE:** Vincent Laniece for the record.

So I am the general manager of that site. We had effectively some SO<sub>2</sub> excursions as Dale was pointing out, mostly with the restart of the acid plant in 2015. We've been working on that. First of all, we've been training our staff. Because of the governance period that occurred between 2010 to 2014, we had a significant turnover, of course.

So we needed to retrain our people at the mine site, so we brought a very expert consultant in order to train our people better. And yes, we've got effectively these kind of time of period when we're restarting the acid plant that the temperature to convert the SO<sub>2</sub> to the SO<sub>3</sub> is very type of critical. And right now with advise from the consultants and our methodology at that site we are somewhat cocooning all the piping and cocooning in order to

heat the pipes to the temperature that allows the conversion of SO<sub>2</sub> to SO<sub>3</sub>. And since we've got that, we didn't have any SO<sub>2</sub> excursion anymore.

**THE CHAIRMAN:** Mr. Tolgyesi.

**MEMBER TOLGYESI:** I have just a very short comment about the SO<sub>2</sub> and I will go to the JEB tailing management.

Just to say that you are saying that in your submission that another improvement was extension of stack height, because it's better dispersion. It's true that it's better dispersion, but it's the same volume which you emit. So it's not really improvement, it's just covers a larger space and it's less on the ground. But it's not necessarily an improvement as such.

**MR. HUFFMAN:** Dale Huffman for the record.

We extended the calciner stack height because we had concern that a release of SO<sub>2</sub> from that stack could be picked up by the ventilation systems in the building or we could experience SO<sub>2</sub> concentrations on the mill terrace that would exceed health-based standards. So we extended the stack not so much for protection of the environment but to ensure workers were protected.

**MEMBER TOLGYESI:** Okay. That answers my question.

Now I'm going back to the JEB tailings

management facility. You are saying that the proposed expansion is calling for 1.7 million cubic metres of room for tailings. That means it's -- to what year is this? It's until 2050, 2035? What's that?

**MR. HUFFMAN:** Dale Huffman for the record.

I think the way that we've described it is with that tailings expansion, the approved tailings expansion, we would not require to return to you for another tailings expansion within the proposed term of the licence. But if things go well in uranium mining, there is a day that when we will return for, with a proposal for additional tailings capacity.

So right now, the tailings management facility is maximizing the use of the JEB pit. We're trying to get the maximum utility out of that old mine working.

**MEMBER TOLGYESI:** Because I find you have -- up to now you have storage capacity of 0.8 million cubic metres. You ask for 1.7, which is 2.5 million. And you will generate 2.4 million of tailings, which gives you a margin -- a safety margin of 0.1 million, which is about four percent, which is not too high, I consider, in a tailings capacity. It could be a little tight. That means that it could happen that you will have to come back and do something about it, even in this licence period.

**MR. HUFFMAN:** Dale Huffman for the record.

Yeah, we appreciate that we are tight on that calculation and that could be sensitive to things like tailings density and placement issues. But we're working on those issues and we expect that the tailings capacity will suffice for the proposed licence term.

**MEMBER TOLGYESI:** Staff, do you have any comments? You don't feel it's tight?

**MS TADROS:** So Haidy Tadros for the record.

And this is an area of what AREVA was proposing that we've looked at quite extensively to ensure that, one, it's currently within the licensing basis of what the Commission has authorized AREVA to do, and two, to ensure the predictions of where AREVA's operations is going would remain within the licensing basis.

But as you've very clearly pointed out, any changes beyond what is currently acceptable and authorized AREVA will need to come back and provide a new proposal for it in front of this Commission.

In staff's review of AREVA's material for the current expansion as it was in the licensing basis and the environmental assessments that have been conducted, staff were accepting of the proposal as AREVA had described it.

**THE CHAIRMAN:** Mr. --

**MR. JAMMAL:** It's Ramzi Jammal for the record. Thank you, Mr. Chair.

Just don't want to leave this discussion based on tight or not tight. There are two things we will continuously do ourselves with respect to the Commission and the staff of the Commission. We will continuously monitor the licensing basis and the capacity with respect to the tailing management. At any time we feel that there is any risk associated with the activity, we will take licensing action in accordance with the capacity of the tailings management.

In addition, we are before you on a yearly basis, so we'll provide updates with respect to the licensing basis and the performance of the licensee. And we continue to do such things.

But a calculation is a calculation. A measurement is a measurement. An inspection is an inspection. I just do not want to leave the fact that we have staff that will go visit and inspect and determine if there is at any time any risk. We will take licensing action in order to ensure the protection of the environment is continuous.

**MEMBER TOLGYESI:** Now I have one more on the JEB which is a little bit more technical.

When I look at the drawing which you're presenting how you manage, my understanding is that the JEB tailing management facility right now, there is no liner or any kind of barrier. Raise well drifts, pumping, and the dewatering well are ensuring that the groundwater movement is towards the JEB pit. Okay, so you maintain the in-flow where the table is lower than, you know, to make sure that there is no opposite side flow.

Now, once the pumping is stopped -- you know, you will end operations eventually. Thirteen years after you will stop and you will do just pumping. The end of operations, have you ensured that there is no water movement in opposite direction? That means there is no contamination by migration from the pit towards the water table and eventually further down to the environment.

**MR. HUFFMAN:** Dale Huffman for the record.

There's two primary ways that we're protecting the environment from contaminant transport from our tailings management facility. So the first is, and I mentioned them a little bit earlier, was establishing geochemical controls on the contaminants. So when we place tailings into the tailings management facility, the tailings preparation process has manufactured minerals that are stable over geological time periods such that the concentration of contaminants and solids is quite high;

however, the concentration in the surrounding pore waters is quite low. So that's the first way.

And you mentioned that there's no barrier around the pit, and that's true. It's a pervious surround in that the sandstone is quite pervious. And the tailings themselves will consolidate such that they have a hydraulic conductivity that is two orders of magnitude lower than the surrounding sandstone. So the groundwater flow will preferentially be around the tailings rather than through the tailings.

And then I guess the third thing is at the time of decommissioning we'll put a cover on the tailings, and it'll be a low-permeability cover, and that'll limit the infiltration that would go through the tailings. So there's the three methods that we're protecting groundwater, or we're protecting contaminant transport to the neighbouring lakes.

**THE CHAIRMAN:** Staff...?

**MR. RINKER:** Mike Rinker for the record.

I think the work that AREVA is talking about is something that staff were also very much involved in. There were some challenges during the early operation of the facility to maintain that the tailings did not get segregated into coarse fractions and fine fractions because that would be a challenge to the type of control for

hydraulic conductivity contrast.

There were changes to how tailings were placed over a number of years until finally AREVA was able to come up with a design for tailings and placement that would ensure for one thing that ice lenses would not occur which could increase the volume of tailings, which is your first point. The other point was to make sure that the hydraulic conductivity was consistent over the entire tailings volume and of sufficiently lower conductivity than the surrounding sandstone. So that was something that staff had a heavy part in reviewing technical documents and coming up with the conclusion and that is indeed correct.

Similarly, with the engineered mineralogy for tailings management, in this case for arsenic, the tailings are in fact processed in the mill facility to ensure that there are stabilized minerals in the tailings being placed. AREVA has published five or six scientific publications on the geochemistry of their tailings and in addition staff have done independent research taking tailings samples, using synchrotron analysis and looking at mineralogy as well to get some confirmation that the work is indeed correct. So that monitoring and research continues, but I would say these are very well studied tailings and we are accepting what AREVA has proposed.

**MEMBER TOLGYESI:** When I look at this

section, you are talking about placing a bentonite liner along a glacial till. What about the sandstone, you don't have to go lower to prevent that there is some movement, water movement, it's enough just to protect glacial till? Because what you are saying is that you expect that you will cover eventually and there will be water on the top of that I suppose.

**MR. HUFFMAN:** Dale Huffman with AREVA.

The bentonite amended liner that goes against the glacial till is really meant to hold water during the operating period. So once the tailings are placed and consolidate, the liner then serves no purpose. So it's just during the operating period. And eventually the tailings management facility will be filled up, there won't be a water cover, there will be a placed engineered to cover on the TMF.

**MEMBER TOLGYESI:** So you don't trust the glacial till just by the watering wells around the pit, you expect that there could be some inflow, that's why you are putting the bentonite, because bentonite really is protecting from inflow, not to go out?

**MR. HUFFMAN:** Dale Huffman with AREVA. Correct. We need to have the bentonite amended liner to keep the water in the TMF.

**THE CHAIRMAN:** Okay, thank you. We have

been with this intervention for a little while and I think the Commission would like a 10-minute break. So, Ms Coxworth and Ms Carlson, if we can ask your patience, we will be back in about 10 minutes.

--- Upon recessing at 2:53 p.m. /

Suspension à 14 h 53

--- Upon resuming at 3:07 p.m. /

Reprise à 15 h 07

**MR. LEBLANC:** If you can take your seats, please, we will be resuming.

So just for those who are wondering how this is going to proceed, we are just going to finish now with the current intervention from the Saskatchewan Environmental Society and then we will proceed immediately with the presentation from Dr. McLoughlin and then with the Buffalo River and Birch Narrows presentation. And we are also going to accommodate the Canadian Nuclear Workers' Council as the last intervenor today. Then we will proceed with the rest of the interventions tomorrow. Thank you.

**THE CHAIRMAN:** Okay. Thank you, Marc.

If I could just make sure that Ms Coxworth and Ms Carlson are still on the line, please?

**MS COXWORTH:** Yes, we are here.

**THE CHAIRMAN:** Thank you for your patience. We are going to move to our next round of questions and then I'm going to ask you for a couple of opportunities to comment as we go through that, if that's okay.

Okay, Dr. Demeter...?

Dr. Soliman...?

Mr. Seeley...? No?

Mr. Tolgyesi...?

**MEMBER TOLGYESI:** I have no questions.

**THE CHAIRMAN:** Okay. So I have a couple of questions.

So the intervenors have brought up a couple of questions that have come up before and that is the time that it takes intervenors to get documents and data and the limitations that can place upon the amount of time that they have to prepare their submission and prepare for their submission. So it seems to be an issue that has occurred other than with these intervenors. So I wonder if staff have any comments or any thoughts on ways in which that can be ameliorated.

**MS TADROS:** So thank you for the question. Haidy Tadros for the record.

And you are right, I think this theme has come up a couple of times and what maybe we can share is

from staff's perspective as we run through our preparation for the Commission Member Documents. We prepare them looking at all of the information that is submitted by the licensee in terms of the request being put forward and the request for the licence renewal and our current process indicates that once our CMD is ready it is available to the public for 30 days and I think that 30-day span is what really is coming down to some challenges, both with regards to the intervenors but also as the intervenors review and provide staff with their assessment and proposal, staff then reply to that through supplementals. So it has been for the last few files a bit of back and forth with regards to getting the information together and being able to come to the Commission.

So some of the thoughts that we are looking at is how to improve that mechanism of allowing proper consultation to occur in a proper timeframe. As you have noticed, these requests are quite detailed and quite technical at times and it does take time to go through them both from staff's perspective and from the public's perspective. So we are definitely in line with looking at how to better improve the time period that it takes for everyone to be able to look at the information and we potentially could be working with the Secretariat to look at those time periods to make sure that they remain

relevant but they also are important to be able to provide the Commission with the information they need to make a decision.

**THE CHAIRMAN:** So do industry have any ways in which they can help with this or do you have any suggestions where that information flow process could be facilitated?

**MR. HUFFMAN:** Dale Huffman for the record.

I can appreciate the challenge in trying to digest the information that SES was trying to work through. So in addition to looking at the CMDs that are provided on the schedule Ms Tadros identified, we also provided our environmental performance technical information document. It's a key document that summarizes all of our environmental performance and also lays out our ecological risk assessment and it is written for a technical audience. So I think it's a key ingredient in taking a look at McClean Lake's environmental performance, but it does take some amount of time to digest and it is part of the reason that we were proposing the 12-year licence, is to be respectful of those review periods. And we have taken to putting these big technical documents or making them available through a request on our website.

And so we think that it could be alleviated with just better sequencing of when the

relicensing is and when some other key milestones are in the whole licensing regulatory process.

**THE CHAIRMAN:** So would it be reasonable for the Commission to ask for just an update on what your thoughts are on this at some future meeting to try and understand how this communication flow can be improved?

**MS TADROS:** Yes. Haidy Tadros for the record.

The other consideration is also we look to these licence renewals as the main event and I think the opportunities come for the public annually because, again, as mentioned several times, there are regulatory oversight reports that are being put together on an annual basis and they do provide information for the public. And the licensees are usually present as well when we talk about their performance, so there is always an opportunity to go through information and annually come before the Commission so that it's not only during a relicensing that we tend to kind of get the squeeze of when all this information has to come in. I think we are gradually taking stock in the fact that annually we come before the Commission so there is always ample opportunity for the public to engage outside of a licence renewal period.

I believe my colleague Mr. Bob Lojk would like to make a statement as well.

**MR. LEBLANC:** Thank you. And thank you for the response from staff, particularly for taking responsibility for what is ultimately the Secretariat's responsibility. So I am taking notice of the comments. I mean we have been working with those Rules of Procedure for some time. There are other, I mean the application from the licensee has been available since October, so a lot of the information you find in these would be found also in the application and when you do have a notice of participant funding in Commission proceedings it does provide a four- or five-month period. But I agree in this case with SES that the time of the 30 calendar days is not 30 working days, which is what would have been helpful, and even I think in this instance 30 calendar days, the calendar days were even reduced to about 26 because of the lateness in providing some documents. So in that regard we take good notice of the intervenors' comments in this regard.

**THE CHAIRMAN:** So, Ms Coxworth, do you have any comments on this part of your intervention?

**MS COXWORTH:** Ann Coxworth here for the record.

I appreciate that you're taking that concern seriously and I think one of the things that we certainly found helpful was being able to meet directly

with AREVA staff, who were very helpful in sort of directing us to appropriate documents to answer some of the questions that we have and I think that experience really bears some resemblance to that of some of the aboriginal intervenors in that it really wasn't until we were able to meet directly with the AREVA staff that we gained a better understanding of the issues. And, you know, we do want to be helpful in this process and we appreciated that AREVA staff were willing to spend that time with us. And obviously, it would have been great if we had had those discussions several weeks before our report was due, rather than dealing with this last-minute rush that we and other groups have experienced. So, you know, I hope that in any future hearings that we're involved with that we might find a way of having these discussions with the proponent well in advance of the actual requirement, date requirement for our report to come in.

So yes, I mean we are really pleased that our intervention has obviously provoked a lot of interesting discussion and questioning and we appreciate that. Thank you.

**THE CHAIRMAN:** Okay. So I just have one more question that is on page 2 of the AREVA CMD 9.6, and that is the intervenors' comments:

"AREVA specifically notes that they

are not proposing new activities..."

And then if I understand the intervenors correctly, they are implying that many of the elements that they produce, there are what, eight or nine bullets going on to page 3 that can be implied almost to be new activities rather than an absence of new activities.

So I would just like to understand from staff the way in which each of these activities, which may reflect a larger component of activities, how they will be monitored and how they will be evaluated over the course of the licence period.

**MS TADROS:** Thank you for the question. Haidy Tadros for the record. I will pass the microphone to my colleague, Mr. Salman Akhter, who has looked at future projects and how to roll up all of the little bits and pieces to one major activity.

**MR. AKHTER:** Salman Akhter for the record. Yes, there was a confusion. Most of the intervenors were thinking that the projects, the future significant projects which AREVA has mentioned in their application with this licence renewal, they can go ahead and complete those projects, which isn't the case. AREVA has clarified that information in their supplementary document.

And I further want to elaborate on that.

If AREVA decides to move forward with any of these projects, AREVA would have to submit a formal application to CNSC. CNSC would then carry out an assessment on the proposed activities as per the CNSC regulated process to determine whether or not these activities fall within the licensing basis. So if this falls within the licensing basis, staff can make a decision, but if the staff determines that these are outside the licensing basis, then it has to be brought up to the Commission to make a decision. Thank you.

**THE CHAIRMAN:** Ms Tadros.

**MS TADROS:** Yes, thank you. Haidy Tadros for the record.

Just to supplement my colleague's answer, as mentioned before, ongoing compliance activities is part of our regulatory oversight of all the programs that exist and all of the project proposals that are currently within the licensing basis. So regular oversight, onsite inspections, desktop reviews and exchanges of information on clarifying what AREVA's projects are is an ongoing regulatory activity that we have and it is presented to the Commission every year during our regulatory oversight reports.

**THE CHAIRMAN:** Okay, thank you.

Do any of my colleagues have further

questions?

So, Ms Coxworth, the last word is yours.

**MS COXWORTH:** Thank you. I'm going to let Hayley have the last word.

**MS CARLSON:** Yes. We just appreciate the answers to all our questions that were provided. It did clarify a few things for us and particularly on the last point. It was through our subsequent discussions with CNSC and AREVA -- or AREVA's, sorry, Supplementary Submission where we learned that all of those potential activities that could occur within the next 12-year term would be assessed individually after the fact. So we are thankful for that clarification and thank you for considering our comments.

**THE CHAIRMAN:** Okay. So, Ms Coxworth, Ms Carlson, thank you very much for your intervention.

**CMD 17-H9.12/17-H9.12A**

**Oral presentation by Philip D. McLoughlin**

**THE CHAIRMAN:** We will now move to the next submission, which is an oral presentation by Dr. Philip McLoughlin. It is outlined in CMDs 17-H9.12 and 17-H9.12A.

Dr. McLoughlin, the floor is yours.

**DR. McLOUGHLIN:** For the record, Philip McLoughlin. I am an Associate Professor in the Department of Biology at the University of Saskatchewan. Thank you for the opportunity to contribute to evidence-based decision-making.

My intervention is designed around a research project that we initiated in 2014 with regards to boreal woodland caribou of the Saskatchewan Boreal Shield. So boreal woodland caribou are a threatened species as listed on Schedule 1 of the Canada *Species at Risk Act*. In 2012 there has been a recovery strategy produced by Environment and Climate Change Canada. In that recovery strategy it was noted that out of the 51 caribou range jurisdictions, the Saskatchewan Boreal Shield, this study area, was the only one to be unknown with respect to status trend and definition of critical habitat. So this project was designed to inform us as to these items.

A more detailed copy of the data is presented in the report on this screen. You can also email me for a copy.

Over the last few weeks I have received a review from Environment and Climate Change Canada and I have produced a response to that review. That is also available by contacting me.

So the project is designed around learning

about caribou habitat, population dynamics and behaviour in combination with what does this mean for woodland caribou in our range with respect to population trends, status, probability of occurrence and definition of critical habitat.

The study area in which we were able to collar caribou, track them through time, as well as their predators, is a relatively large area. You can see we include the McClean Lake facility in the Northeast of our study area, although it's a much larger study area. The SK1 range is approximately 200,000 square kilometres. We are making inference on data directly from around 96,000 square kilometres.

In terms of what we have learned, just briefly, it's our understanding that there is a relatively high density of boreal woodland caribou in the region, in the upper quartile of woodland caribou densities reported across Canada, that in the study area we are looking at somewhere between 3,000 and 5,000 caribou.

At the same time, we understand that moose, another species of interest, is at relatively low density from our surveys, quite low density in fact.

We also tracked wolves and we understand from our wolf-tracking, which you see some home ranges here -- these are relatively large home ranges, the

territories are very large compared to the rest of Canada -- and they are occurring at relatively low density as well and small pack sizes. In February we just ran another survey. These wolf densities are relatively low for what we know for boreal woodland caribou range in Canada.

In terms of caribou and how they are faring, after two years of monitoring data we were able to see that there is approximately a survival rate of 92 percent. With another third year of data which we have just finished crunching the numbers, this is around 91 percent survival rate for female caribou in the study area. This ranks on the very high end for what we know about woodland caribou in Canada in terms of averages. Pregnancy rates were normal relative to what we find in other caribou ranges, on the high end as well.

Recruitment was relatively low from what we can tell from our own data over the last three years and the last two years leading to the report itself and then what we have been able to learn from our surveys just this past March.

On balance, you take recruitment and adult female survival together. What we have been able to conclude is that we are looking at a stable population, stable in terms of short-term population trajectory. Add

to the 2016 and 2017 data, this has not changed our conclusions. We are looking at a relatively stable population that occurs at high female adult survival, relatively low recruitment as they balance out.

We did some projections as well into the future based on kind of the status quo, habitat conditions and the level of disturbance that's out there right now, and the conclusion is similar, it's a stable to perhaps slightly increasing population.

We also conducted some widespread vegetation sampling and created maps of the larger Boreal Shield study area as well as some more finer-scaled maps. We conducted several years' worth of vegetation sampling.

Coming together, we have analyzed the movements of caribou with respect to the availability of habitat to boreal woodland caribou in the study area. We have done this at a couple of scales. This is ongoing work right now, but what we have been able to learn is that the caribou are focusing on old growth forests, in particular mature pine forests and mature black spruce forests, and black spruce bog forests which are also of an older age. Together, these habitat components are comprising around 50 percent of the land base in the study area, both where we have our collared caribou but also over the larger SK1 range, as we call it, which encompasses both of -- or the

larger part of the northern sort of the province.

We noted that linear features occur at very low density. Linear features are of interest to boreal caribou. We know that caribou respond negatively to linear features in some parts of the country. In this study area these linear features are occurring on the landscape at very, very low densities, in general almost an order of magnitude lower than what you might find in regions where most of the research on how caribou respond to linear features has occurred.

At various scales we have seen differential responses of caribou to linear features. The larger scales, we are looking at home ranges that do not seem to be fazed by the presence of linear features. At the finer scales it might be a little bit more equivocal. I would say that this is still preliminary work. Because of the very low density of linear features in the study area, I'm not quite sure exactly how caribou are responding to these lines. In fact, we had some caribou that had no linear features in their home ranges.

**THE CHAIRMAN:** Dr. McLoughlin, I'm going to interject. Could you just explain for the record what a linear feature is, please?

**DR. McLOUGHLIN:** Yes. So a linear feature, I'm talking about roads, transmission lines, those

types of features.

**THE CHAIRMAN:** Thanks.

**DR. McLOUGHLIN:** So in terms of general conclusions, you know, we have a region that is subject to a high amount of fire, a natural fire cycle of around 100 years. This is pristine habitat in the sense that fire is by far the most dominant disturbance on the landscape, such as lightning strike fire.

We also have very little in the way of linear features and other anthropogenic disturbances.

This is an area that is characterized by what we believe to be some of the highest densities of woodland caribou in Canada.

And at the same time wolves and alternate prey, this being alternate prey to wolves compared to caribou, moose being relatively low. One of the problems for boreal woodland caribou in other parts of Canada is a hypothesized link between high numbers of alternate prey like deer and moose leading to higher numbers of wolves to have then a depressing effect on caribou population, dynamics and population growth. Here we have relatively low densities of most of these two species.

We note that hunting pressure is also very low. In our correspondence with First Nations we have noted only a couple of collared animals being killed. This

is very low in terms of human harvest levels. I note one on the slide here, but we have just had another one very recently.

Our caribou are characterized by high survival, moderate to low recruitment, high pregnancy rates. As an ecologist, a population ecologist, I look at this and I see this as being characteristic of a relatively large herbivore, or a large herbivore population that is experiencing high density conditions where females will often trade off their own reproduction for their own survival. I think it's still a preliminary assessment and we are a few years left in our study here, but this is not an unexpected trade-off to me between survival rates and recruitment rates.

The population is stable to slightly increasing. In this quote that I have at the end here, I would say that the best available evidence right now in terms of a preliminary assessment is that we are looking at a large self-sustaining caribou population and I think of it as probably being one of the more secure caribou populations in the country given the very low levels of human disturbance right now and the natural fire cycle that dominates the disturbance regime and also the presence of low wolf densities and low alternate prey densities.

So just to conclude here, there have been

many people who have been helping out with this project. This is year three of a five-year study and it's certainly not myself that has been alone contributing to this project, including several funders listed here on the final page. Thank you.

**THE CHAIRMAN:** Thank you, Dr. McLoughlin.

So we will move to questions. Dr.

Soliman.

**MEMBER SOLIMAN:** Thank you, Mr. Chairman.

Thank you very much for your presentation.

It is very interesting and the finding is very encouraging. I understand that this program will continue for another two years and I would like you maybe to explain the future activity and your expectations for the results. It will improve or go the other way?

**DR. McLOUGHLIN:** Philip McLoughlin for the record.

That's right, our study will continue for at least another two years. How the results will be used by various agencies I'm not sure exactly. As a professor I am producing science that I hope will be used for evidence-based decision-making.

In terms of the McClean Lake facility question relevant right now, it's my opinion that what we are showing is that this is --what is proposed for the next

12 years is not going to change the things for caribou all that much, boreal woodland caribou all that much into the next 12 years.

**THE CHAIRMAN:** Dr. Demeter...?

**MEMBER DEMETER:** Thank you, that was an excellent presentation. The one conclusion you didn't draw in your report, and I didn't want to put words in your mouth, was that since we are at a hearing looking at the impact of an industry on the environment and individuals, my sense reading your report, my summary and my conclusion is that there is no noted effect on this industry on the caribou population. I don't want to put words in your mouth, but is that part of your conclusion or can you comment on that?

**DR. McLOUGHLIN:** So it's Philip McLoughlin for the record.

No, we still have some more data to collect. Questions even arising today, selenium levels, we do have blood samples available for caribou that could be analyzed for selenium levels. In terms of the broad-scale distribution of boreal woodland caribou and their current population dynamics, the status quo right now does not in my opinion lead me to conclude that the caribou are in trouble in this region right now.

**MEMBER DEMETER:** Thank you very much.

**THE CHAIRMAN:** Mr. Tolgyesi...?

**MEMBRE TOLGYESI :** Merci, Monsieur le Président.

You are saying that Northern Saskatchewan is prone to forest fires. Are forest fires modifying the nature of the vegetation from before to after fire and how does this modification impact on the woodland caribou?

**DR. McLOUGHLIN:** Philip McLoughlin for the record.

So it is an interesting region in that by far the most dominant disturbance is natural forest fire and there is a relatively short fire cycle. So from what we can tell with our own tree coring and from the literature, this hundred-year fire cycle is relatively short compared to other parts of Canada. It is a fire cycle that is characteristic, though, of the Western Boreal Shield, which is a relatively dry area.

Now, the effects of caribou on fire compared to linear or anthropogenic disturbances, I would say that this has not been studied across Canada to the same extent and what we can learn, though, from our own data is that the regions that have been burned, even though they are fairly large forest fires, caribou are still able to find relatively large unburned patches. So the fact that this fire cycle is not all that different from what

was present 200 years ago, the region itself is relatively pristine, leads me to conclude that the same reason why caribou persisted 200 years ago in the same environment, those conditions still stand.

**MEMBER TOLGYESI:** And my last one is did you observe or did you hear about any changes in migratory patterns of caribou due to mining operations?

**DR. McLOUGHLIN:** Philip McLoughlin for the record.

No, I have not. I would state, though, that the species that we are talking about here, these are boreal woodland caribou, there are barren ground caribou that venture into the study area. Those are the migratory caribou that perhaps you may be referring to. This study is not specific to migratory barren ground caribou but rather the more sedentary boreal woodland caribou. That being said, we do detect some migration patterns. They do appear to be normal.

**THE CHAIRMAN:** Mr. Corcoran, if you are still with us, do you have any comments?

**MR. CORCORAN:** I don't have any specific comments on -- Ken Corcoran here for the record. I'm with Environment and Climate Change Canada.

I don't have any specific comments on Dr. McLoughlin's study except perhaps to say that one of

the things that the recovery strategy did in 2012 was to identify critical habitat to the extent possible in 50 of the 51 ranges across Canada. And as Dr. McLoughlin mentioned, critical habitat hasn't been identified in the SK1 range, the area that we are speaking about. And there is a schedule of studies in the Act to do that and so Dr. McLoughlin's study will be one piece of information that Environment and Climate Change Canada will look at in identifying critical habitat.

**THE CHAIRMAN:** Thank you.

Any more questions from my colleagues?

So, Dr. McLoughlin, thank you. Any final comments?

**DR. McLOUGHLIN:** Philip McLoughlin for the record.

No. I just want to thank you. As a wildlife population ecologist, I'm really happy to be able to help contribute to evidence-based decision-making. I think this is great. I really appreciate the opportunity. Thank you.

**CMD 17-H9.8**

**Oral presentation by the  
Buffalo River Dene Nation and the  
Birch Narrows Dene Nation**

**THE CHAIRMAN:** So we will move now to the next submission. This will be an oral presentation by the Buffalo River Dene Nation and the Birch Narrows Dene Nation. This is outlined in CMD 17-H9.8.

It's my understanding that we have presenting Chief Eileen Morrison of the Buffalo River Dene Nation, Elder Paul Sylvestre of the Birch Narrows Dene First Nation, and Mr. Lalji and Mr. Joseph will also be presenting.

Chief Morrison, I understand you're going to make the first comments.

**CHIEF MORRISON:** My name is Chief Eileen Morrison from Buffalo River Dene Nation. We are located 60 kilometres northwest of Buffalo Narrows, a population of 1,700. We are concerned about this project here that's in our Treaty 10 area. And we did collaborate with Birch Narrows where the Chief couldn't make it today, and I do have Paul Sylvestre who will speak on his behalf.

So with that, I just wanted to note that hopefully the Commission will be open-minded and hear our

concerns about what we have, because we had to do this submission and then we will go from here. Thank you.

**THE CHAIRMAN:** Thank you.

**MR. LALJI:** Thank you, Chief Eileen.

For the record my name is Aryn Lalji, partner at Miller Thompson and legal counsel to the Buffalo River Dene and the Birch Narrows Dene Nations.

Beside me to my left, for the record, is Saul Joseph, who is an associate at Miller Thomson and legal counsel to Buffalo River and Birch Narrows as well.

And again for the record, to my right is Elder Paul Sylvestre, a member of Birch Narrows Dene Nation and a holder of cultural and traditional knowledge for the Nation.

So with that, I will commence my portion of the submission on behalf of the two Nations. We do appreciate the latitude which is granted by the Commission to have some additional time as we are representing the interests of both Nations, but we will be mindful of the time that has been allocated to us.

So as an outline -- we don't have a formal presentation, but as an outline or an overview of our presentation there will be an introduction and an overview of the rights of the two Nations in the project area. That will be the first point. The second point will be an

overview of the duty to consult generally and that will be presented by my colleague Saul Joseph. Then I will present on the duty to consult in respect of the application as a third point. Additionally I will present on the summary of relief sought and, finally, Elder Paul Sylvestre will close out our remarks with some comments.

So again, thank you to the Commission for hearing our remarks.

I also wanted to acknowledge that we are on the territory of the Lac La Ronge -- in the territory of the Lac La Ronge Indian band as well as Treaty 6 territory and the traditional territories of the Métis Nation of Saskatchewan.

So with that, we will commence an overview of the submissions and an overview of the rights of the two Nations.

Buffalo River Dene Nation and Birch Narrows Dene Nation reside and have resided in Treaty No. 10 area of Saskatchewan and within the Athabasca Basin since time immemorial. The continued operation of the McClean Lake mine and mill will impact the aboriginal and Treaty No. 10 rights of the Buffalo River and Birch Narrows Nations. There will be specific impacts as well as cumulative impacts from the continued operation of the project and the renewal application, which does trigger a

duty to consult meaningfully to both Nations with the objective of substantially resolving the concerns which might be articulated by the Nations.

Historically, members of both Buffalo River and Birch Narrows would use the areas in the direct vicinity of the McClean Lake operation for trapping, hunting, fishing, gathering, spiritual and ceremonial purposes. In particular, members would travel to Northeast Saskatchewan to hunt caribou and other large animal species.

Notwithstanding the fact that members of the Buffalo River and Birch Narrows Nations were encouraged to move towards the present day areas of Dillon, Churchill Lake and Turner Lake in the 1700s, the area surrounding the McClean Lake operation is of important historic and contemporary significance to both Nations. Both Nations have historic and familial connections to the communities of Black Lake and Wollaston Lake and members continue to reside in and exercise rights within the immediate vicinity of these communities.

Both Nations are of the view that there may be historic sites of significance in and around the McClean Lake operation, burial sites and meeting points in the area of Wollaston Lake. There may be sites of direct archaeological and historic significance as well as

environmental impacts to both Nations which should be considered in the context of the cumulative impacts of the McClean Lake operation and other developments in the region generally. Those impacts are discussed in more detail in the actual written submission which has been made by the Nations.

So with that, I will turn over the remarks to my colleague Saul to discuss the duty to consult generally.

**MR. JOSEPH:** I will give a brief overview of the duty to consult as was provided in the written submissions.

The Supreme Court of Canada in its *Haida* decision clarified the requirements for when the duty to consult has arisen. The Court found that the duty to consult arises when the Crown has knowledge, real or constructive, of potential existence of an aboriginal right or title and Crown conducts that might adversely affect it. Broken down the test has three elements: Crown knowledge, actual or constructive, of a potential aboriginal right, interest or claim; contemplated conduct, including decisions; and the potential that the Crown conduct may adversely affect an aboriginal right, interest or claim.

For the duty to arise it's not necessary for the indigenous Nation to show that the proposed action,

conduct or decision will necessarily result in an adverse impact to an aboriginal right or interest, rather, that it just may adversely impact that right or interest. The Supreme Court of Canada in its Mikisew Cree decision confirmed that the threshold for triggering the duty to consult is low and should be interpreted and applied broadly.

In addition to the principles espoused in the *Haida* and *Mikisew Cree* decisions, the B.C. Supreme Court in the *Dene 'Tha First Nation* case established that conduct that would preserve the status quo does not necessarily mean that aboriginal interests will not be adversely affected and that a broader approach has to be applied. These principles are in accordance with those of the *Haida Nation* and *Mikisew Cree* decisions.

Further, when determining if the duty whether there is a duty to consult and, if so, where on the spectrum consultation is to occur. In the *Haida Nation* case, the B.C. Supreme Court held that the proponent and the Crown are required to consider strength of claim assessments as a primary factor in determining whether the duty to consult has been triggered. The court noted that a failure to assess a strength of claim, and I'm quoting:

"...represents a complete failure of consultation based on the criteria

that it is constitutionally required for meaningful consultation."

Buffalo River and Birch Narrows assert that the duty to consult was triggered by AREVA's current licence renewal application.

Applying the *Haida* test, the Crown has knowledge of Buffalo River and Birch Narrows' Aboriginal and treaty rights in the area around the McClean Lake operation. The Crown is contemplating the conduct in relation to the McClean Lake operation and the contemplated conduct may have adverse impacts on both Buffalo River and Birch Narrows Aboriginal and Treaty 10 rights.

Further, *Delgamuukw* held that the trigger for the duty to consult is low and that the duty should be applied broadly.

No strength of claim assessment was completed in this instance despite the *Haida* test, *prima facie* being met and no strength of claim assessment. Buffalo River and Birch Narrows were informed by the CNSC staff and AREVA that no duty to consult is owed to either nation. In this respect, we note that section 4.1.2 of the CNSC Member Document 17-H9, the CNSC staff say that this licence renewal will not cause adverse impacts to any potential or established Aboriginal and/or treaty right. This is a mischaracterization of the law and may indicate a

flawed implementation of the *Haida* test, on the part of the CNSC staff.

**MR. LALJI:** Again for the record, Amin Lalji.

So I will now discuss the duty to consult in respect of the application itself. The Crown, CNSC staff and the applicant have failed to discharge the substantive and procedural aspects of the duty to consult in respect of the renewal application. Indeed, it is our submission that both the Crown and the applicant have made an incorrect determination that the duty to consult has not been triggered in respect of the renewal application.

Further, the engagement processes to date as they relate to Buffalo River, the Dene Nation and Birch Narrows Dene Nation have not been sufficient to discharge the duty to consult in keeping with the honour of the Crown.

The specific and cumulative impacts articulated by both nations in their submission are more than mere speculative adverse impacts and established that the contemplated Crown conduct could result in adverse impacts to Aboriginal and/or Treaty No. 10 rights of the nations and their members.

Additionally, evidence has been provided by both nations and other intervenors about the specific

and cumulative impacts to the caribou and to the exercise of their Aboriginal and treaty rights, the nations' Aboriginal and treaty rights within the project area.

In the *Fond Du Lac Denesuline First Nation v. Canada* decision, 2010 and 2012, cases that followed the previous licensing process for the McClean Lake operation, the court noted that adequate information relating to specific impacts was not provided. On this basis and others, Buffalo River and Birch Narrows distinguish the facts relating to their interest in the current licence renewal application to the facts in the *Fond Du Lac Denesuline First Nation* cases.

The Crown and the applicant determined that due to the geographic proximity of the project to the reserves of Birch Narrows and Buffalo River and the past involvement of the two nations in the original application and subsequent renewal applications that no engagement was required with Buffalo River and Birch Narrows. These are not correct factors to consider in determining whether a duty to consult is owed.

The renewal application is a new application and triggers a new a duty to consult and the related strength of claim assessment. The minimal engagement which did take place with Buffalo River and Birch Narrows took place late in the process and at the

initiative of both nations.

To the extent that further and specific information is sought, Buffalo River and Birch Narrows have sought an extension of the consultation process and only an interim renewal of the licence to allow for the provision of additional information relating to specific and cumulative impacts which the nations feel is required given Buffalo River and Birch Narrows were not appropriately and originally engaged by the Crown or AREVA in respect of this renewal application.

So to date there have been a few meetings subsequent to the submissions which have been made by Buffalo River and Birch Narrows. There was a meeting with AREVA and there was a meeting with the CNSC staff. So we'll just briefly summarize, you know, the outcome of those meetings in terms of advancing, you know, consultation or engagement, as it may be, with respect to this project. And in our view, at least from the Crown, consultation was required.

In the meeting with the applicant the specific concerns of the Buffalo River and Birch Narrows Nations were identified at a high level. The Nations sought to establish a process for meaningful evaluation and consultation in respect of the specific impacts which were identified as a concern. In effect, the proponent took the

view that consultation was not required at all and that other nations were more impacted than Buffalo River and Birch Narrows. Due to this, the proponent refused to consider establishing a process whereby resources could be put in place for each nation to further study and identify specific impacts to their rights which might require mitigation.

In the one meeting which took place with Buffalo River there was an attempt to relay the specific concerns of the nations and to establish a process and basic resources for the First Nation to further study impacts and to identify mitigation.

Indeed, a similar submission has been made to the Commission in the relief sought section. Unfortunately, this meeting ended abruptly following the request for a process and funding for the nations to advance basic due diligence and evaluation of the renewal application. The Chief of Buffalo River was told that she was threatening AREVA with a request and if she wanted to challenge the application at the hearing or beyond she was free to do so, and that AREVA would be successful as they have been successful in the past and they would continue to be successful in the future.

As such, the meeting was not productive and was followed by the proponents once again filing a

one-sided and self-serving supplementary submission seeking to cast in a very positive light its past engagement efforts with both nations. Respectfully, both nations are of the view that the efforts of engagement by AREVA in respect of this application have not been meaningful, sincere or positive.

Notwithstanding the unfavourable tone of the one meeting which took place with AREVA in respect of this application, both nations remain willing to develop a productive framework to understand the project with both the CNSC and AREVA.

Now, I will talk about the meeting which took place with the CNSC fairly recently. In that recent meeting which took place with CNSC staff, again Buffalo River and Birch Narrows were advised that consultation was not required in respect of the renewal applications.

Respectfully, it is the submission of both Birch Narrows and Buffalo River that this determination is not correct. The Crown is obligated to consider new evidence that Buffalo River and Birch Narrows have in respect of specific impacts that could occur as a result of the renewal application.

Notwithstanding the fact that the footprint of the project may remain the same, the permitting for the renewal of activities at the project

will lead to additional mining of the subsurface and is akin to the take-up of new land which can trigger a deep duty to consult.

Additionally, the McClean Lake operation has been in operation since the mid-1990s. At no point since the original JRP are we aware of there being a thorough assessment of the cumulative impacts arising from the continued development and operation of the mine.

Further, the study of impacts to sensitive caribou species are presently at a preliminary stage as we just heard. The study of cumulative impacts of the McClean Lake operation and other development activities in and around the area of the project should be fully considered prior to any approval of the project. Further, an approval should incorporate necessary conditions to protect sensitive caribou species.

In our submission, any decision to approve the renewal application must consider the cumulative impacts of the continued operation of the McClean Lake operation and other developments in the vicinity of the McClean Lake operation to the caribou.

In the CNSC's own submission it is acknowledged that a complete study of the impacts to the caribou is not yet available. Further, there is no indication that Aboriginal traditional evidence regarding

impacts to caribou has been adequately considered. This is something which is quite important in terms of the consideration of Aboriginal traditional evidence.

To summarize, Buffalo River and Birch Narrows leadership believe that the meeting was not setup to facilitate meaningful consultation or engagement. Beyond providing basic information on the application and touting the credibility and reliability of the recommendations made in the CNSC member document, there was not a genuine interest to understand the concerns of the two nations. The nations were not even provided with an opportunity to blow off steam.

The leaders and elders in attendance were of the view that the meeting was convened as a mere formality and that there was no desire to hear, consider or address meaningfully the substantive and process-related concerns that were being suggested. Elder Paul will elaborate on his sense that the meeting was not meaningful.

I will now briefly comment on the reply submissions of AREVA.

In reply to the submissions of Buffalo River and Birch Narrows which submitted that there was a complete lack of engagement in respect of the renewal applications the proponent has responded by referring to every point of contact that they have had with Buffalo

River and Birch Narrows over the past decade.

The fact is that there was a complete lack of engagement with BRD and in Birth Narrows in respect of this renewal application prior to the submissions which were filed by both nations with the CNSC. One meeting took place with Buffalo River and a subsequent meeting is planned with Birch Narrows and the proponent.

So I will briefly talk about the summary of relief sought which was already submitted in our original submission but I think it's noteworthy to highlight that because, you know, it's really where the submissions which are made flow.

The first submission was that, you know, project should not be approved due to the evidence of specific direct and adverse cumulative impacts that have been provided within the submission itself. But there are several alternative arguments which, you know, I believe that the Commission should give significant weight to and consider in any decision which is rendered.

In the alternative, and it has been submitted already, it was thought that the Commission if it did approve the application, that Buffalo River and Birch Narrows would be granted an interim -- the approval would be granted on an interim six-month basis and be subject to the following conditions and a subsequent final hearing:

- That AREVA provide reasonable funding to each of Buffalo River and Birch Narrows to complete technical and traditional land use studies in order to more fully understand the specific direct and cumulative impacts to Buffalo River;

- That AREVA review the final studies by Buffalo River and Birch Narrows and that AREVA engage directly with Buffalo River and Birch Narrows;

- And that a draft licence be amended to adopt those concerns.

I won't read them because they are in the written submissions, but there are a number of alternative submissions which are made which we believe should be considered as conditions in any decision of the Commission.

So with that I would like to thank the Commission for hearing my submissions. I would like to have Elder Paul Sylvestre close out with some remarks.

**ELDER SYLVESTRE:** Thank you for inviting me to come down. It's a matter of great concern to me.

I view that my life -- I lived on a trapline and I have to present that in 10 minutes, 76 years of my life. There is more that is of great concern -- grave concern where my trapline is. I have lived on it. I have survived on it. And my view, my point of view is for my grandchildren to live in that area for time to come.

With all due respect, at my last meeting I was pretty concerned about someone taking over what I had to present that was meaningful. I am not opposed to mining but it would be a good idea, a good format if we sat down and consulted with all the things that are a barrier to where I come from.

All through these years I have been a leader and I have travelled all over Canada. And as we know, we come to meetings like I came here today. There are people that are involved in presenting their submission with corporations and departments. If only we could change the system starting today. It is of grave concern that we can work together and make things better for all the Northern communities in the North.

I appreciate what the people you employ, the workforce that you have. I appreciate the specialists that made the presentation. But the real specialist is the one that lives off the land. I think you are forgetting that these people are the most important part of the whole scenario.

I don't talk -- I can't make a presentation in 10 minutes. I can't make a presentation in one day of my whole life that I have been doing my mapping of where I have been, what I have done; of all the grave sites that are burial grounds, the lakes and rivers that I

have travelled and I slept on, how I have utilized it.

But all through these years that I have been acting as chief or councillor, administrator, whatever, I noticed that there is lots of things missing that are coming that can accommodate the future generation.

Your corporation employs people which is great but jobs only last just for a short time. It eventually ends no matter where you are. It's part of where you are. But I think what's important to us are three components everywhere we go in Canada or wherever: Employment, health, education.

Up in my area in the North we don't even have comparable education to the South. So there is nothing wrong with having a university, something to think about starting today that we as Canadians can supply that within the next 50 years. There's nothing wrong with having a university in the North comparable to the one in Saskatoon; nothing wrong with having a hospital comparable to the one in Saskatoon. There is nothing wrong with having an economic strategy plan made by the people of the North for the next 50 years.

That's always been my vision. How do we do that? We can't do that by ourselves. If we are going to be part of Canada we have to start making the North feasible to the rest of the nation and to the native people

that live there.

I know it's not a specific -- a special time to bring out those things, but I want to make it clear to every department here what could be the best for the people in the North, and from there I have a vision and I have drawn a map. I've done it on my own.

When you talk about one specific part of the mining operation -- I've been sitting here and listening -- it's all on the northeast side while there is a west side too. I haven't heard a word about mining operations on the west side.

But due to the fact when you talk about traditional land you go back in history, the boundary of Treaty 10 doesn't only exist in the Cluff Lake area. The boundary of Treaty 6 is widespread, Fond du Lac -- I mean Black Lake, Williston(ph) Lake, Cold Lake, Birch Narrows, Pied du Pont(ph) and Matawa(ph). So associate being widespread. That is our boundary where we can keep on going and keeping, practicing our treaty rights.

The Province is here to listen. When it took over the Natural Resources transfer agreement in 1930 they shrunk our boundary we couldn't commute anymore to the distance that we -- the people used to. They put us in fur blocks. Later on the environmental minister of Canada here put us on reserves. They even further restricted our mode

of life.

All these things boil down to social problems but, like I said, if we had a fair share of people listening to the elders of grave concerns we can go a long ways. It's good for Canada. It's good for us; good for the nation. The whole world will be proud of you.

And with that -- I would like to express more, but this is not the time to do, to talk about these kind of things, but I have a handful at home that I can present, but in a meaningful and friendly environment where we have time, a lot of time to sit and talk about it.

With that, I'd like to thank everyone that came here and the departments that are here that you have listened to me.

**THE CHAIRMAN:** Elder Sylvestre, thank you very much.

Before we go to questions, I just have two specific questions that I want to be clear that I understand as we go into it.

Can you please define for me what a speculative impact or speculative impacts are; give me a context that I can understand better?

**MR. LALJI:** I think you may want to ask a judge that because I think there's a lack of clarity as to what -- I don't think the court has elaborated

significantly on what a speculative impact is, but I can say what it's not.

And a speculative impact is not an impact or a concern which is raised in good faith with evidence from a Nation who has concerns that there will be impacts of a project in their Treaty territory where there is evidence of contemporaneous and historic use of that.

So, I can say that the information which has been provided in the submission of the two Nations are not speculative impacts. Speculative impacts would be impacts which were so remote and so not based in an understanding of the rights of that Nation within that Territory that they wouldn't have a basis, in my interpretation, I'm not a judge, but that's how I would interpret that.

And I believe in the circumstance of Buffalo River and Birch Narrows, who are both Treaty 10 Nations, who have a connection within the Athabasca Basin and who continue to exercise rights within the areas of the Wollaston Lake area, and historically and contemporaneously the impacts which have been referred to are not speculative. I guess I can say that.

I hope that answers your question.

**THE CHAIRMAN:** It helps. Thank you.

So, the second thing, I'd just like to be

clear. Did I hear you say the renewal application is a new application and, therefore, it triggers the duty?

**MR. LALJI:** The renewal application is a renewal of the existing licence, but it is akin to a new application because it will allow for a period of 10 or 12 or eight years the continuation of activity which the Commission is required to make a decision on. If you were deciding not to approve it, the considerations about specific or cumulative impacts do not factor into the assessment. So, in our submission, it's akin to a new application.

The renewal will be on the same terms perhaps as a previous approval, but it needs to be considered in and of its own instance. And also, one thing which the courts have stressed quite significantly is, we need to consider the cumulative impacts of decisions made by the Crown or Crown actors.

In this instance, if there is a decision made to renew the application which extends the ability to mine and conduct work within the area of the project, the impacts -- the cumulative impacts from that continued operation should be considered.

**THE CHAIRMAN:** So, I'm a simple man. Do I understand you to say that this is a renewal application, but that it should be considered a new application? Is

that what you just said?

**MR. LALJI:** It's a renewal application, of course we know that it's a renewal application, but you know, you need to consider the renewal application in the context of the evidence which is given and the facts which are present.

Before us right now the issue of taking up of land is something which is often considered in the context of applications and the level of duty to consult.

In our submission, when you're renewing and you're allowing the continued operation on a basis whereby there's continued mining there is a duty to consult. So, on a renewal, the Commission needs to look at the facts and the evidence before it so that it can make a correct decision.

It's our submission that if you feel that, based on the submissions which have been made, there ought to have been more information provided or more in-depth consultation, that really is not the fault of my clients because they became notified and engaged in the process fairly late because the determination was made that there was no obligation to engage or consult with them.

So, it would be prudent to establish a process whereby the Commission can consider that evidence fully. If there's gaps in that evidence because of the

dearth of time within which it prepared its submissions, then that should be considered as well.

**THE CHAIRMAN:** So, final question, then I'll move to my colleagues.

**MR. LALJI:** Yes.

**THE CHAIRMAN:** Did the Nations intervene in the last application?

**MR. LALJI:** The Nations did not intervene in the last application.

**THE CHAIRMAN:** Mr. Seeley?

**MEMBER SEELEY:** I understand from the record that there was some engagement back in 2010 in the process, perhaps some of the previous activities of AREVA, and these were with respect to the -- I'll find the reference here, the Midwest project -- Midwest project and the Midwest project impacts and information.

So, I guess my question is, there was some engagement at that point in time?

**MR. LALJI:** Often First Nations -- there was engagement, I'm aware of that. Often First Nations are faced with, you know, competing interests, capacity constraints. There was engagement at that time.

The fact that there was engagement at the time of the prior renewal should not, and the extent of the Nations' engagement, should not in any way prejudice how

the Commission considers the submissions which are made with respect to this renewal.

So, you know, I guess in my submission, and that's why I didn't focus on the record of the past engagement because it's your obligation to consider the current renewal application and the evidence before you presently. So, I don't think there should be an adverse inference from the fact that there was some engagement by them, but it was limited.

**THE CHAIRMAN:** Dr.

Soliman?

**MEMBER SOLIMAN:** Thank you, Mr. Chairman.

Thank you for your presentation.

**MR. LALJI:** Yes.

**MEMBER SOLIMAN:** I have a general question. If you look in page 7 of the CMD, the last paragraph. Page 7, last paragraph. H9.8.

--- Off microphone / Sans microphone

**MEMBER SOLIMAN:** Yes, your submission.

**MR. LALJI:** Okay. Is it the submission of the two Nations? Yes, I have that here.

**MEMBER SOLIMAN:** Yes. Okay.

There is a claim that concerning MLO there is --

"...no engagement has occurred...CNCS

have provided limited information regarding the activities...and Areva has not engaged with Buffalo River or Birch Narrows at all..."

So, is this statement still correct?

**MR. LALJI:** It is not correct as of today. It was correct as of the date of the submission because there was no meeting.

Subsequent to the filing of the submission and the request for a meeting, there was a response saying there was a willingness to meet, so there was an engagement, I described the one meeting.

There's also a request -- that meeting happened with Buffalo River. There was also a request for Birch Narrows to meet and obtain some additional information and to have a dialogue with the company.

Also, there was a meeting with CNSC which was described as well.

But because there is engagement -- and so, to answer your question simply, it's not present as of today. That doesn't -- but there was -- it's all being -- the process for engagement is abbreviated because of the date of the hearing and the time by which, or subsequent to which there was a desire by both the CNSC and the proponent, or the applicant to engage with both Buffalo

River and Birch.

So, there is a desire for a more thorough process so that the Nations can have the opportunity to have capacity. For instance, you know, it's very common in these circumstances for Nations who have concerns about impact, and I believe there's strong basis for consultation because of the impacts which have been articulated, for there to be further study of the impacts in the context of a traditional land use study, in the context of the collection of Aboriginal traditional knowledge, in the context of First Nations, Indigenous Nations having their own resources to conduct their own independent evaluation.

To be quite frank, a lot of the information from the hearing, beyond the issue and the evidence surrounding Aboriginal rights and title or Aboriginal and Treaty rights, a lot of the evidence, which is of a very technical nature, it relates to impacts to rights, but the Nations do not have the internal capacity to review it and understand it independently.

And often for the process to be meaningful, the First Nation does need to have that. And, you know, the idea is that through that information that, should the project move forward, there at least can be some dialogue and some accommodation and mitigation measures if concerns are identified for which conditions could be put

in place or the scoping of the project could be done in a way which accommodates for those concerns.

Right now the timeframe is abbreviated and it's not permitting, in our respectful submission, a process for meaningful consultation. Because, to be quite frank, it's been the position of both the CNSC and of the company that with respect to all Indigenous intervenors or those who are interested, that there's no duty to consult at all, it's a renewal and it's just mere notification and engagement.

In our submission, we're saying that that's -- you know, each case needs to be looked on a case by case basis and we disagree with that conclusion. And so, it's in the interest, I believe, of the Commission to make sure that there is meaningful consultation so that the decision of the Commission reflects the fact that there was consideration of the concerns and a process was put in place to address them.

**MEMBER SOLIMAN:** I think AREVA and staff now heard all the concern, and maybe we start with AREVA. How do you address in a very short time the concern you heard from the intervenors?

**MR. HUFFMAN:** Dale Huffman, for the record. I'm going to turn this to Ms Van Lambalgen who looks after our corporate social responsibility part.

**MS VAN LAMBALGEN:** Thank you. Tammy Van Lambalgen, for the record.

We approach this -- over the life span of our facility, we've been there for 25 years, so the relationship isn't just in the context with the public and the Aboriginal, it's not just in the context of the licence renewal period.

As we talked about earlier, our public information program was set up in tiers and those tiers and how we met with and informed the different levels of public and Aboriginal groups was based on the long, 25 years of experience in this area.

We met with Birch Narrows and Buffalo over the course of our operations and, in particular, in response to their request that I believe came in in February and we were really surprised at the content of it.

Our Manager of Northern Affairs, Glen, has been periodically in the community and this was the first time that it was raised that there were specific rights that may be impacted in the area, or by our McClean Lake Operation.

In meeting with them, we did not hear any new rights that were specifically identified and we're happy to continue with engaging with these First Nations and helping them understand our operations and address any

concerns.

Does that answer your question?

**MS TADROS:** Haidy Tadros, for the record, and thank you for your question.

And from staff's perspective, as has been noted in staff's original CMD and staff's Supplemental CMD, we take our obligation to consult very seriously and we have engaged with the Nations in terms of more meaningful and long-standing formal structured and open engagement.

I will ask our specialist, Mr. Adam Levine, in Aboriginal engagement to describe CNSC staff's approach with regards to determining the legal duty to consult in this particular case with regards to the licence renewal.

**MR. LEVINE:** Thank you. Adam Levine, Senior Aboriginal Consultation Advisor for the CNSC, for the record.

So, as we've been discussing, the Supreme Court has made a number of determinations on the duty to consult and provided clarity around what constitutes the legal duty.

So, in this case the decision before the Commission is a request by the applicant, AREVA, to renew the operations of the McClean Lake site. Within the application there is no requests that have not already been

previously assessed, they're not outside the licensing basis, so there is no new projects or activities that will be allowed by renewal of the site that could result in new adverse impacts to Aboriginal or Treaty rights.

So, any activities, traditional activities that are taking place in the vicinity of the project will continue to be allowed to continue and continue unimpeded should the renewal of the licence go forward, depending on the Commission's decision.

Now, for this particular renewal, we identified all the Indigenous groups that had previously expressed an interest in the McClean Lake facility.

As AREVA had described, the facility's been there for a number of decades, around 25 years, and has been thoroughly assessed in terms of its potential effects on the environment, the Aboriginal and Treaty rights within the vicinity of the project, the traditional land use within the vicinity of the project and there's been numerous renewals and environmental assessments been conducted at the site, which included public engagement and Aboriginal consultation activities.

So, throughout the years we have heard from a number of Treaty 10 and other First Nations, the Métis Nation of Saskatchewan who have expressed a direct interest in this particular site, and because they have

expressed a direct interest to us, we have provided them information about the renewal. And for the two First Nations here, Buffalo River and Birch Narrows, they also had the same amount of time to participate in the process as the public and other Indigenous groups as well.

We received their participant funding application in December, 2016 and immediately upon receiving their funding request we followed up with them, asking if they wanted to meet so we could learn more about their interest rights. This is the first time that we've heard a direct interest from them with regards to this facility and we followed up on numerous occasions and were able finally to meet on May 15th, 2017 in Saskatoon.

So, we're happy to continue the relationship that we're starting to build with these communities, learn more about their interest moving forward and to build that trust around our regulatory oversight of the McClean Lake facility where we have confirmed that the environment is protected and that we would like to continue that dialogue with them, which is something we conveyed during our meeting in May.

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

I would like to complement Mr. Levine's discussions. I would welcome the intervenors, and I

welcome what we heard from AREVA and staff with respect to the continuance of engagement with the two Nations.

I would like to go back to the science, though, with respect to cumulative effects and the studies that were done independently by the CNSC to include the environmental monitoring program of the East Athabasca region which has been producing reports successively determining, in specific, the cumulative effects of not just existing operating mines, but with legacy mines and the mines that were shut down.

And to date, the data speaks for itself and this is not just a simple assessment, it includes and engages the Indigenous communities who are part of the study in collecting the samples and represents multiple stakeholders, the Saskatchewan government, Indigenous communities and the operators.

So, I would like to bring it back to the science with respect to the regulatory oversight and the operations associated with these facilities. We make sure that the environment is protected and there is no impact on the environment.

And I would like to respect the fact that the science does exist and we will deal with the future and the fact that the CNSC will always exist and will make sure that there is always a regulatory oversight in

continuation.

And as part of our lessons learned with respect to the engagement of the Indigenous Nations and the communities, we'll be formalizing the process, we the CNSC, and we'll be working on this process of engagement with the Indigenous communities in order to ensure, as Mr. Levine mentioned, the understanding of the regulatory oversight and the continuation of the protection of the environment with respect to the CNSC oversight, our assessments or our evaluation.

**THE CHAIRMAN:** Thank you, Mr. Jammal.

Dr. Demeter? Mr. Tolgyesi?

**MEMBER TOLGYESI:** I have one, it's a little bit different nature. In your submission in page 9 you are saying that:

"...the migratory patterns of caribou have changed dramatically since uranium activities began...and caribou once quite present, is more difficult to locate due to decreased populations and changes to migration patterns."

Mr. Sylvestre, did you assess the previous speaker's intervention, Dr. McLoughlin from University of Saskatchewan, who concluded that, in essence, that

population is stable, slightly increasing and Saskatchewan Boreal Shield is one of the largest self-sustaining and most secure Boreal caribou population in Canada?

**ELDER SYLVESTRE:** You have it on paper, but I was on a trapline ever since I was 14 years old. So, what I'm going to be telling you this, woodland caribou existed across the Churchill River from Buffalo Narrows. The woodland caribou existed within that area, Dillon, Bull South(ph), La Loche. Where are they today?

You haven't been there, but you only read on a paper. Then they moved north around the Cree Lake area, that's my trapline. They're getting less and less every year. I don't know where they're at now. Just from here say, they're moving north.

So, you have it on paper, I have it from where my trapline is.

**THE CHAIRMAN:** So, perhaps I could ask Mr. Cochrane to come in again at this stage to discuss the migratory as well as the woodland caribou.

Mr. Cochrane, are you still there?

--- Off record discussion / Discussion officieuse

**THE CHAIRMAN:** No, Cochrane. Cochrane?

**MR. RINKER:** Dr. McEwan, he certainly will be back tomorrow. I'm not sure if he's there now, but he will be back tomorrow.

**THE CHAIRMAN:** Mr. Tolgyesi?

**MEMBER TOLGYESI:** Okay. Saskatchewan Environmental you say you administer environment there. Do you observe any movements of caribou, do you have knowledge of if there is a movement, it's decreased or increased, what's your knowledge of the territory?

**MR. MOULDING:** Tim Moulding, for the record again.

I'd have to defer to one of our wildlife biologists to answer a question of that nature. In terms of AREVA's operating approval, they do collect information on wildlife sightings at the site that gets recorded in the annual report. But I don't have any specifics on a report from the last couple of years.

**THE CHAIRMAN:** Dr. McLoughlin, do you have any comments on the migration or the movement?

**DR. McLOUGHLIN:** Philip McLoughlin, for the record.

With regards to boreal-living caribou, the distribution of caribou in Northern Saskatchewan is fairly widespread. There are populations outside of the range in which we tracked caribou. The status of those caribou, which would include caribou right in the vicinity of the intervenors' communities, I can't make a -- I won't make a statement on those caribou, but definitely caribou across

the border, in Alberta, are noted as being in trouble.

Where these caribou are historically relative to historic distribution of barren-ground caribou, which may have, you know, ranged also in the province further south and perhaps where they are right now, I think that is something that would require additional analysis. Aboriginal traditional knowledge could probably inform on that.

**MEMBER TOLGYESI:** Dr. McLoughlin, you don't have any knowledge if Alberta is doing or was doing similar studies where -- because what you are saying, that the caribou in Alberta is quite low, and Buffalo Nations are close to Alberta's border, which means that it could be affected. It's not because of necessarily the mining activities, but some other reasons, other risks?

**DR. McLOUGHLIN:** Philip McLoughlin, for the record.

Yes, certainly there is active research programs in Alberta, in the Cold Lake Air Weapons Range, that can inform to some of the more local caribou population dynamics. But, myself, I haven't studied that.

**THE CHAIRMAN:** Mr. Seeley?

**MEMBER SEELEY:** I have a question perhaps for AREVA on the trapline users in the region. My understanding is you have been working with the trapline

holders or rights holders, engaging with them. I'm not sure what process you're using for that. Perhaps you could elaborate on that.

Then my question would be, has the Birch River First Nation representatives today here been included in those discussions or consultations to date?

**MS VAN LAMBALGEN:** Do you want us to start? It's Tammy Van Lambalgen, for the record, with AREVA.

I'll ask Glenn Lafleur, our Manager of Northern Affairs, to answer the trapper conversation agreement, the trapline question, at McClean Lake.

**MR. LAFLEUR:** In regards to engaging with the trappers in the English River -- I mean, sorry, Birch Narrows First Nations, yeah, we do have a trapper compensation program right now that we have in the Athabasca area.

Right now, we have compensation -- trapper compensation programs with Hatchet Lake and the community of Wollaston. So those are the two communities that we're dealing with.

With the other First Nations, we don't really have any compensation programs in place.

**MR. LEVINE:** Adam Levine, for the record. I just wanted to supplement what Mr.

Lafleur was saying. As far as understanding publicly available information, what's provided by the communities at this time, Mr. Sylvestere's trapline is, from my understanding, around Turnor Lake, which is -- or just north of there, which is about, you know, 300 kilometres south and upstream from the McClean Lake operation.

So I'll let AREVA explain more about how they engage with hunters and trappers in close proximity to their site. But, from what I understand, their trapping and hunting is in that region around Turnor Lake. But again, we're happy to receive new information from the communities if they're willing to share with us.

**THE CHAIRMAN:** So I just have one more question, and it's a simple question. Historically, have there been archaeological surveys of the area?

**MR. HUFFMAN:** Dale Huffman, with AREVA. Yes, there have been archaeological surveys of the area, and it's a practice that we conduct those types of surveys before new land disturbance.

**THE CHAIRMAN:** Those data are publicly available?

**MR. HUFFMAN:** Dale Huffman, with AREVA. They're available in technical information documents that are available through our website, yes.

**THE CHAIRMAN:** Thank you. Dr. Demeter.

**MEMBER DEMETER:** There's been a number of interventions by Indigenous groups that have similar issues in similar areas. I wanted to know if there was any interaction you had with the Métis group, with other intervenors that are First Nations in the same area to share experiences, share information, because you may all have a common goal or a common cause or common land, and that might help further the agenda of understanding; how other people, other First Nations perceive the area or what their issues are and if they're common with yours, if that's been helpful for you?

**MR. LALJI:** Is there someone in particular you would like to answer that question?

**MEMBER DEMETER:** Well, mostly if you or your clients have had experience in gathering some of the information you need or understanding from other Indigenous or First Nations groups that have similar issues.

**MR. LALJI:** My understanding is that there is, because from my understanding of the record, and I'm happy to have either the Chief or Elder Paul speak if they wish to elaborate, is that there are strong familial connections between those at Birch and Buffalo River and the area of Wollaston Lake and those communities; there's some intermarriages between members from those communities.

So there's a significant contingent of

members of the two nations who currently reside in that area. So there's a lot of sharing of information and knowledge between those communities through the familial connections is my understanding.

Maybe I can just touch upon, you know, the importance of science, and I don't think there's any intent to discount that in relation to the submissions. I think what we know is that there's still some further study which is required of caribou, we have some interim findings, but there's also the importance of Aboriginal traditional evidence, and the courts have recognized that and the courts have said that that needs to be considered in the context of scientific findings.

I think part of the consideration here is consideration of Indigenous Aboriginal traditional evidence, in particular the evidence of the Nations.

I don't know if anyone -- if Elder Paul or Chief, if anyone would like to elaborate?

**ELDER SYLVESTRE:** Oh, I don't mind elaborating if I was sitting across the table, but this is a different scenario altogether for me. To correct Adam, he's talking about 300 miles north -- he's talking about only the Turnor Lake surroundings. Well, I don't trap around the back of my house, you know. I'm trapping 90 miles north of Green Lake, that's where my cabin is. So

that cuts the distance to about 90 miles from Cluff Lake. So I just want to correct him on that.

Because when you talk about a specific area, you have to go down to the trapper's level and see him. There's a lot of stories out there that are not coming out from the general public at the local level. It's very interesting that we do that, otherwise we're just on paper.

**THE CHAIRMAN:** Thank you. The last word goes to Buffalo River and Birch Narrows Nations.

**MR. LALJI:** For the record, Aryn Lalji. I'll just summarize with some thoughts that I have from the various questions and then turn it over to anyone else who I have the privilege of sitting with, should they wish to make any comments.

First of all, I'd like to say Elder Paul Sylvestre has asked a lot of questions with respect to oral traditional evidence. Normally the format for the hearing of that evidence would be with others and people who share broad interests and knowledge in that area. That's part of what is being sought, is a more thorough hearing of that evidence.

It seems like, from the questioning, that there's an appetite and a desire and acknowledgement that that information is important, which is good. Because that often is necessary to compliment scientific findings which

are in the interim at this point. It's positive in some of the interim conclusions, but some of the evidence which was provided in the submission through oral traditional evidence interviews was that on an anecdotal basis, in the area of the project, there was concern about diminishing caribou stock, if I can use that word.

So I think OTE, if I can use the acronym, or oral traditional evidence, is important to consider.

I would also say, and I'm not saying that the Commission is suggesting this, but I know that in the context of the engagements with the Crown and with the company there's been a lot of weight put on the fact that -- notwithstanding the fact that my clients are within the same treaty area as the project, they are far away from the project and thus, you know, perhaps have less of an interest.

I think that's not a healthy path to go down because it's within their traditional treaty area, they've identified concerns, and it's important that there be a thorough hearing of the evidence and their concerns,

They're involved in this process because they have legitimate concerns and they want those concerns to be considered. You know, the Nations are investing their own resources to the extent they can, and they're limited. To be able to be here at this hearing, to be able to

present their concerns and to try and get a voice so that in making your decision that there can be accommodation of concerns, and hopefully that decision is made after further collection of evidence surrounding those concerns.

So in being here, they are here with sincere concerns and a desire to further, in a positive way, the outcomes of the Commission, to make sure that the decision which is made is defensible based on our understanding and submissions on what the law requires.

We would like the Commission to make an informed decision, and so we hope that any decision which is made facilitates that.

There has been a concern, which has been expressed to me by both Chief Eileen and Chief Jonathan about the term of the licence. You know, normally it's customary for the term to be 10 years. In this last instance it was eight. I think they're, at least at this current instance, given the fact that the due diligence that the Nation would like to have on cumulative impacts, impacts to caribou in the region are still -- there's interim findings, but not final.

You know, believe that the same reasoning can be used to suggest that a 10-year or an eight-year licence is appropriate because there's annual reviews and there is a basis, you know, to consider the concerns in

that context.

Beyond that there was, you know, a lot of focus upon the economic accommodations which may have been made by AREVA towards employment and training, which is great. But I guess the mandate of the Commission is to consider accommodation when it comes to environmental and safety and Aboriginal rights and concerns. So, you know, those are accommodations which need to be understood, studied and addressed. We hope that the process, as it goes forward, will facilitate that.

So thank you so much.

**THE CHAIRMAN:** Thank you. Having promised you the last word, I'm going to have the last word.

So thank you very much for the presentation. A plea I think from the Commission, if you're making a presentation like this again, it would be very very helpful for you to present us with a map. You've probably noticed me struggling a little bit to follow, and it would have been very very helpful to do that.

Am I clear in my understanding that you do believe that there has been the beginnings of what could become constructive conversations with CNSC and with AREVA?

**MR. LALJI:** I know from speaking, and I'm speaking on behalf of both Chiefs, I think the answer is yes. I mean, notwithstanding the concern about the tone of

the first meeting. I don't think either chiefs held that, you know, against any of the parties with which that meeting happened. I think, you know, they're perhaps, you know, through the course of this process there'll be a better understanding of the concerns, and there always remains a willingness from the Nations. That's why there was a meeting scheduled to happen today with Birch, because they have not met with at least the Applicant, which can't go ahead today. But, yes, we did discuss rescheduling that meeting.

Also with the CNSC, I mean the limitations in terms of the meetings are capacity-related, but the objectives are also capacity related in terms of having some resources to do what may have been required to fully understand and evaluate certain aspects of the project. Those were submitted in the written submissions. I'm not going to get into that. But to be brief, yes.

**THE CHAIRMAN:** Thank you. So any other last words?

So Chief Morrison, Elder Sylvestre, thank you so much for coming. We appreciate the time you've spent in getting here and the time you've taken at the hearing. Thank you very much.

So we are going to go to just one more submission this evening, which is one from tomorrow. That

is we will move to the oral presentation by the Canadian Nuclear Workers' Council, this is outlined in CMD 17-H9.5 and 17-H9.5A.

Mr. Dave Shier will present. The floor is yours.

**CMD 17-H9.5/17-H9.5A**

**Oral presentation by the  
Canadian Nuclear Workers' Council**

**MR. SHIER:** Good afternoon, Members of the Commission and everyone else, including the public and the other intervenors. I will try and be quick because I know I'm between here and everybody having a cold beer, so I'll promise to be as efficient as I can.

So just moving forward here. Our presentation is going to be a little update on the written presentation that we have provided you. I'd also at this time like to welcome the new Commissioners. Under my overview, I'm going to spend a little bit more time on who we are and what we do just for the benefit of the new Commissioners, the old Commissioners, well they've heard it before and they can check to see if I'm really telling the truth each time.

We'll talk a bit about worker and public

safety, protection of the environment, our concern initially around the licence term, and then our comments and conclusions.

So who we are, this is kind of a graphic here, we're the collective voice of unions in the Canadian nuclear industry. You will see quite a lot of the mainstream unions involved here. The industry is very highly unionized which, to talk about further, which it is a big benefit, we believe, to the industry and the public.

In regards to this hearing the workers at McClean Lake are members of Unifor, Local 58 -- I think I probably got that number wrong, but I'm sure they'll correct that tomorrow when they do their presentation. Just a note on their union. It's the biggest private sector union in Canada.

So our member unions start basically in Saskatchewan with the uranium industry going through the power plants, to fuel processing in Ontario, the researchers, the designers at Canadian Nuclear Laboratories, and then right to the east coast to the Point Lepreau Plant. So all these unions are members of our organization.

What our role is is people say, oh yeah, you're just interested in this because of jobs. Well, naturally, unions are concerned with jobs. But we also are

concerned with many other issues: worker health and safety; the environment. As organizations, we believe that it's our role that we have a civil responsibility to appear at these hearings, other hearings, other things we do, to bring the views of the unionized workers from the shop floor on the issues that are a concern to the public that attends these hearings.

So that is the basic -- we can go on further, but I think that'll give you a quick view of where I'm coming from.

So worker and public safety. As indicated, unions are very concerned with worker safety. They're in the forefront in lots of areas at improving worker safety. We saw lots of improvements in this industry, in all industries for that matter over the years.

In some sectors there's still a lot to be done. We always believe in continuous improvement and even this industry is way up there, but we always believe that there is room for improvement.

We believe that unionized work sites are safer than nonunionized and that's basically due to several reasons. One of the main ones is that if a worker or a union has a safety issue, they do have protection from the union to take that issue forward.

For example, the union at McClean Lake,

they have a national union they can go to, they can go to any bar unions in our sector, in our council, for advice on different issues that come about.

McClellan Lake mill has a very good safety culture. We just don't pull that out of the air. Many of our representatives of our council have been at McClellan Lake over the years. We have a conference every year and each of the unions provides report on what is happening at their work sites. Naturally health and safety is one of the main factors that is reported on, so we get reports, or anytime during the year there's any issues we talk to our different members as well.

The saying that we have is if the workers are safe, that means the public is safe. Anything that's going to affect the workers or the environment starts in the workplace, and that's where these issues of safety can get sorted out.

The environment.

Unionized workers are very concerned with the environment. The McClellan Lake site, there's many Northern workers and the environment is naturally dear to them. But all workers are members of the public and environmental issues are definitely in the forefront with people, even more so nowadays. So with these environments, I think the public should be at comfort to know that any

issues around the environment will be brought to the attention of the employer or the Commission or any of the other regulatory bodies.

So in conclusion, the licence term, we did highlight an issue around that. We were getting questions from our union -- member union saying, Well, where are we going with the length of the licence? Years ago, we were concerned with them increasing. It used to be like two years, then five and they keep going up. Now with the CNSC's oversight review, we're satisfied with that, that that covers the longer licence terms.

This one is requesting a little longer. We do support that. We've had discussions with AREVA and understand the reason for it this time, so we are in support of the 12-year licence.

For the public and the Commissioners, the union is -- unions are very vigilant on safety and the environment, and it's an ongoing job to improve that and make sure that these facilities are covered under good, strong policies and have worker involvement to make sure things are looked after on a practical and safe manner.

And in conclusion, we fully support the licence renewal. And with that I see on the time I still have six minutes, but I'll waive that for questions and then everybody can go for that cold one. Thank you.

**THE CHAIRMAN:** Mr. Shier, thank you.

Questions? Mr. Tolgyesi.

**MEMBER TOLGYESI:** Mr. Shier, AREVA, you have contractors on the site. What's the proportion of contractors?

**MR. HUFFMAN:** Dale Huffman with AREVA.

We've had a collection of contractors on site when we're doing construction, but the proportion is quite small now. Of the 330 people on site, we probably have 60 contractors. I'm looking at Vincent Laniece. Maybe he'll --

**MR. LANIECE:** Even, yes, right now with the other construction, we've got about 40 long-term contractors with us. And they are mostly in charge of the catering, because it's a remote site so we need to be fed up there. And as well as security around the different buildings. So but 40 out of 350 total, that's -- that's fairly low.

**MEMBER TOLGYESI:** Mr. Shier, are these contractors your members also?

**MR. SHIER:** Dave Shier for the record.

No. I think for -- I could stand to be corrected -- I think most of them aren't unionized at the site except, for example, when they were doing the major modifications and they were using the building trades --

the workers from the building trade unions. But general ongoing, in there they are not members of our council here or members of the on-site union.

**MEMBER TOLGYESI:** According to AREVA stats it's 51 percent, I think, of your -- 46 percent of your population is declared as they are Natives, First Nation members. So you represent them also? Okay.

**MR. SHIER:** Dave Shier for the record.  
Could you repeat that? Which workers are these?

**MEMBER TOLGYESI:** Forty-six percent of AREVA employees at McClean, they are Native population. So you represent them also?

**MR. SHIER:** Yes -- Dave Shier for the record.

Yes, a lot of any of those workers that are falling within the jurisdiction of the local union are members of the union. And lots of them are active in the union as well.

**MEMBER TOLGYESI:** And my last one is that what's your relations with -- do you have any communications or interactions with Native communities from where these First Nation population is coming?

**MR. SHIER:** Dave Shier for the record.  
We have no direct communications with any

of the Aboriginal or First Nation groups. The only communication we have is through our member unions and their members. So any time there's a need for us to address them or anything, we're always open to do that, but currently we haven't had any requests and we have no direct communication with them.

**THE CHAIRMAN:** Mr. Seeley? Dr. Demeter?

**MEMBER DEMETER:** Thank you for your presentation.

You mentioned in your written submission that you suggest some discussion is required as to where the cut-off for the increasing licence terms will be. I'd appreciate if you have an opinion on that. Where is the sweet spot and why?

**MR. SHIER:** Dave Shier for the record.

When we originally put our written submission in, we were -- just had some preliminary discussion with the employer. And as I indicated that we are okay with the 10-year licence normally, but when we go to the 12-year, we keep thinking where -- how far is it going to go. And we're looking at the transparency aspect. The question we were getting, well, we had a lot of questions on the 10-year one, where now as I said we're happy with the oversight reports to provide some public and any unions or anybody else any input and any concerns at

that time.

But I think a formal licence hearing at 10 years should be the max, except in this one, as I indicated, we understand the rationale for going the two extra years.

**MEMBER SOLIMAN:** I have two questions.

The first one is a popular question. I would like to learn from you about the statement written in page 2, "Conventional Health and Safety." You mentioned that "A Unionized workplace is a safer workplace compared to a nonunionized [workplace]."

So could you give us your experience about this statement?

**MR. SHIER:** Which statement is that again? Which part --

**MEMBER SOLIMAN:** Statement page 2.

**MR. SHIER:** Yeah.

**MEMBER SOLIMAN:** Second line under "Conventional Health and Safety."

**MR. SHIER:** Right. Okay --

**MEMBER SOLIMAN:** Statement -- you want me to read the statement?

**MR. SHIER:** I think it's --

**MEMBER SOLIMAN:** "A Unionized workplace --

**MR. SHIER:** Okay.

**MEMBER SOLIMAN:** -- is a safer workplace compared to a nonunionized work site."

**MR. SHIER:** Okay.

**MEMBER SOLIMAN:** So feed us with your experience about this.

**MR. SHIER:** Dave Shier for the record.

Yeah, I could talk about this for a long time, but I won't. The true facts of the matter is in a unionized workplace, there is some -- it's like a democracy. The health and safety committees, for example, the union appoints members to the health and safety committee. They have -- each union has different processes for doing that. A nonunion workplace, it's -- can be anybody. They're not really speaking for the collective voice, because there is no collective voice there.

So with the -- and the bigger part is in a unionized environment, if a worker or the union brings an issue forward, they have the protection of the union behind them to carry that on. Legally the union has to look after their interests. In a nonunionized place, there's that threat that I better not bring it forward, I may get terminated or something like that. So there are the main -- there are some of the main issues.

There has been studies done that show that unionized workplaces are safer than nonunionized as well,

based on some of those type of reasons.

**MEMBER SOLIMAN:** But I think every facility has its own regulation regarding the health and safety. And that has to be followed. And the management is the main responsible for enforcing these regulations. So what do you think of that?

**MR. SHIER:** There's provincial legislation in health and federal health and safety legislation. And it's correct, the obligation is on the employer to have a health and safety committee and health and safety policies. And the committee is the main part of it for workers, and the unionized workplaces or all workplaces have to have a certain number of workers on the committee.

The difference with a unionized workplace is again is -- similar to my comments earlier -- is the union members on that committee have resources through their unions. They have the strength of the union behind them to take those issues forward, where in a nonunionized environment they don't have that.

My own practical experience, when I was in my previous job I was a staff officer with a union. And one of my duties was to assist the joint health and safety committees at the nuclear plants in Ontario. So that was another resource that those unionized committees had where in a nonunion environment they don't have any of that.

So and I'd be happy to talk to you over a beer about the benefits of unionization.

--- Laughter / Rires

**THE CHAIRMAN:** I'm actually just going to interrupt for a second, because I understand we have Sask Labour here. And I think it might be helpful to get your perspectives on the safety culture that you see at McClean Lake, the safety culture that you see in the nuclear industry, and the perspectives that you've seen in the CMDs and heard today, please.

**MR. KASKIW:** For the record, Len Kaskiw, chief mines inspector for the Province of Saskatchewan. And we collect stats for the entire province, and some unionized, some nonunionized. And to be honest, we don't see a difference between the two. The legislation in the province is pretty strict in how the OHSC committees are formed, how -- their interactions, protection of workers in the event of an issue that arises at the plant site.

My experience at the AREVA site is they are -- they always are trying to do the right thing, as is the case across the entire mining industry, really. The Saskatchewan mining industry's total incident rate last year was 1.34, which is significant, lower than what the rest of Saskatchewan is. And I would put that accident record against any other provincial jurisdiction.

The challenge we have in the mining industry is some of the injuries are very significant. And that's -- typically hits the media and gets a lot of attention. But for the most part, the mining industry is safer than most of the government agencies. And so there's my thoughts.

**THE CHAIRMAN:** And I think we saw data in -- I think it was the staff CMD -- that there was a differential between the rest of the mining industry and the uranium mines as well, that there was a -- there appeared to be a safety differential. I'm not sure how significant it was, but --

**MR. KASKIW:** They're pretty close.  
They're pretty close.

**THE CHAIRMAN:** Sorry, Mr. Shier.

**MR. SHIER:** Dave Shier for the record.  
Well, it kind of goes without saying I disagree with the Saskatchewan Ministry of Labour Chief Inspector. I would say I know in Ontario that the inspectors there are unionized, and I'll say the inspectors at the CNSC are unionized too, so the mining industry -- I don't know what the stats are as far as unionization is. I know the steel workers are very active province-wide, so -- but anyway, on the record I'd like to point out that I disagree.

**THE CHAIRMAN:** I think I would have been surprised if you hadn't.

--- Laughter / Rires

**THE CHAIRMAN:** Dr. Soliman.

**MEMBER SOLIMAN:** Supplementary question to what Dr. Demeter asked you.

This is the first time I see that your union and the local union, which has belonged to your union, have different opinion about the term of the licence. You suggest that 10 years or eight years or 12 years need to be studied more while they are supporting directly that, the 12-year. So why these differences between two unions belong to each other? Communication?

**MR. SHIER:** Dave Shier for the record.

It's not two unions. Just to clarify for you, we're a council of unions, and the local union is a member union of ours. They support the 12-year licence; we support it as well, as I indicated. I highlighted it as a concern we had initially, but after discussions with the -- with AREVA, we understand and support the reason why they're going to the -- requesting the 12-year licence at this time. So and the choice on that is naturally going to be you guys, so we'll go from there.

**THE CHAIRMAN:** So any further comments from Sask Labour around this?

**MR. KASKIW:** Len Kaskiw for Sask Labour.

No, I don't have any further comment.

**THE CHAIRMAN:** Thank you very much.

So the last word of the day, Mr. Shier, is yours.

**MR. SHIER:** Dave Shier for the record.

Yes, thank you, and as I say tomorrow you will be hearing from our member union at site and they can give you a good oversight of the specific issues that they deal with and why they are in full support.

So with that, again, time for a beer.

--- Laughter / Rires

**THE CHAIRMAN:** So thank you.

So this brings us to the close of today's hearing. The hearing will resume tomorrow at 9:45 in the morning.

Prior to the continuation of the hearing, starting at 9:00, the Commission will be holding a short Commission meeting for some routine business. This meeting will allow CNSC staff to update the Commission on the status of power reactors in Canada, and this is an update that is provided at every meeting.

Thank you for your participation today, thank you for your attendance, and have a very good evening. Thank you.

**MR. LEBLANC:** And just there's -- I don't see anybody with headphones. We had some earlier. But don't forget to return them and get your identification cards back. Thank you.

--- Whereupon the hearing adjourned at 5:16 p.m., to resume on Thursday, June 8, 2017 at 9:45 a.m. /  
L'audience est adjournée à 17 h 16 pour reprendre le jeudi 8 juin 2017 à 9 h 45