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Safety Commission

Commission canadienne de
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Public hearing

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280, rue Slater
Ottawa (Ontario)

via videoconference

par vidéoconférence

Commission Members present

Commissaires présents

Ms. Rumina Velshi
Dr. Sandor Demeter
Dr. Timothy Berube
Dr. Marcel Lacroix
Dr. Stephen McKinnon

M^{me} Rumina Velshi
D^r Sandor Demeter
M. Timothy Berube
M. Marcel Lacroix
M. Stephen McKinnon

Secretary:

Secrétaire:

Mr. Marc Leblanc

M^e Marc Leblanc

Senior General Counsel:

Avocate-générale principale :

Ms. Lisa Thiele

M^e Lisa Thiele

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Ottawa, Ontario / Ottawa (Ontario)

--- Upon commencing on Wednesday, November 25,
2020 at 9:00 a.m. / L'audience débute le
mercredi 25 novembre 2020 à 9 h 00

Opening Remarks

THE PRESIDENT: Good morning and welcome to the first virtual public hearing of the Canadian Nuclear Safety Commission.

Mon nom est Rumina Velshi. Je suis la présidente de la Commission canadienne de sûreté nucléaire.

I would like to begin by recognizing that our participation today and our participants today are located in many different parts of the country. I will pause for a few seconds in silence so that each of us can acknowledge the treaty and/or traditional territory for our respective locations. Please take this time to provide your gratitude and acknowledgement for the land.

--- Pause

LA PRÉSIDENTE : Je vous souhaite la bienvenue, and welcome to all those joining us via Zoom or webcast.

I would like to introduce the Members of the Commission that are with us today remotely: Dr. Sandor Demeter; Dr. Stephen McKinnon; Dr. Marcel Lacroix; and Dr. Timothy Berube.

Ms Lisa Thiele, Senior General Counsel to the Commission, and Marc Leblanc, Commission Secretary, are also joining us.

As always, I would like to begin today's public hearing with a Safety Moment to talk about the importance of having a winter emergency kit.

During this time of year the days get shorter and the weather is typically colder. For many parts of Canada winter can mean bitter cold and winter storms that bring high winds, icy rain or heavy snowfall. This winter, get prepared for whatever the season will bring, whether you are indoors or out.

You likely have some basic winter emergency kit items already in your home, such as a flashlight, battery-operated radio, food, water and blankets.

Just as important is an emergency car kit. In addition to keeping a shovel and scraper in the trunk, your kit should include such items as a blanket, antifreeze

or windshield washer fluid, sand, salt or cat litter, jumper cables and a fire extinguisher. Check Public Safety Canada's "Get Prepared" webpage for a detailed list of items for your winter car safety kit.

Winter may be cold, but it doesn't have to be dangerous. Stay warm and stay safe and enjoy your winter, inside and out.

Thank you.

I will now turn the floor to Mr. Leblanc for a few opening remarks.

Marc, over to you.

M. LEBLANC : Merci, Madame la Présidente.

Bonjour, Mesdames et Messieurs. Bienvenue à l'audience publique de la Commission canadienne de sûreté nucléaire.

Mon nom est Marc Leblanc. Je suis le secrétaire de la Commission et j'aimerais aborder certains aspects touchant le déroulement de l'audience.

The Canadian Nuclear Safety Commission is about to start the public hearing on the application by the Canadian Nuclear Laboratories, or CNL, to amend its Waste Facility Decommissioning Licence for the Douglas Point Waste Facility.

During today's business, we have simultaneous interpretation. Please keep the pace of your speech relatively slow so that the interpreters have a chance to keep up.

L'audience est enregistrée et transcrite textuellement. The transcripts should be available within the next 10 days.

To make the transcripts as meaningful as possible, we would ask everyone to identify themselves before speaking.

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.

As a courtesy to others, please mute yourself if you are not presenting or answering a question while on the Zoom session.

As usual, the President will be coordinating the questions to avoid having two people talking at the same time. During the question period, if you wish to provide an answer or add a comment, please use the Raised Hand function.

Madame la Présidente...?

CMD 20-H3.B

Adoption of Agenda

THE PRESIDENT: Thank you.

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 20-H3.B.

Do I have concurrence?

--- Pause

THE PRESIDENT: For the record, the agenda is adopted.

We will now proceed with the public hearing.

Marc, over to you for introductory remarks, please.

MR. LEBLANC: Thank you.

The first Notice of Public Hearing and Participant Funding on this matter was published on February 6, 2020, and revised notices were published later, including to announce the postponement of the hearing originally scheduled to take place in the Kincardine area for June 2020, due to the pandemic situation.

The public was invited to participate in writing and by making oral presentations. October 26th was the deadline set for filing by intervenors. The Commission received 21 requests for intervention.

November 18th was the deadline for filing of supplementary information. I note that supplementary submissions and presentations have been filed by CNL, CNSC staff and a number of intervenors.

Participant funding was available to intervenors to prepare for and participate in this public hearing. Seven groups or individuals are receiving funding. The funding decision is available on the CNSC website.

We will first hear the presentations by CNL and CNSC staff.

After that, we will take a health break and reconvene after for the presentations by intervenors, following the order listed on the agenda.

Three intervenors are scheduled to present orally this morning, six this afternoon, and four more tomorrow morning. While the presentations are limited to 10 minutes, Commission Members will have the opportunity to ask questions after each presentation. There is no time

limit for the question period.

The written submissions will be addressed either at the end of today's presentations or tomorrow.

I want to note that Ms Nardia Ali and Mr. Duck Kim from Environment and Climate Change Canada and Dr. Shannon Quinn from Atomic Energy of Canada Limited are joining us remotely, to be available for questions.

President Velshi...?

THE PRESIDENT: I would like to start the hearing by calling on the presentation from CNL, as outlined in CMDs 20-H4.1, 20-H4.1A and 20-H4.1B.

I will turn to Mr. Mike Gull for this presentation.

Mr. Gull, the floor is yours.

CMD 20-H4.1/20-H4.1A/20-H4.1B

Oral presentation by Canadian Nuclear Laboratories

MR. GULL: Thank you, Madam President and Members of the Commission. Good morning to all attending this hearing virtually.

For the record, my name is Mike Gull. I am the Vice President of Environmental Remedial Management

for Canadian Nuclear Laboratories, also known as CNL.

We would like to begin by acknowledging that while this hearing is being held virtually and therefore we are all physically present across numerous indigenous traditional territories, myself and my colleagues from CNL are here today at Chalk River, Ontario. Chalk River Laboratories is in traditional unceded territory of the Algonquin peoples. We are grateful to have the opportunity to be present in this territory.

We would like to also acknowledge that the Douglas Point site is located in the traditional territories of the Chippewas of Nawash Unceded First Nation and the Saugeen First Nation, who together form the Saugeen Ojibway Nation, as well as the Métis Nation of Ontario and Historic Saugeen Métis.

With me today is Kristan Schruder, who is the General Manager of Decommissioning and Environmental Remediation and the site licence holder for the Douglas Point Waste Facility, and Ian Bainbridge, who is the Director or Reactor Decommissioning for Douglas Point and Gentilly-1, as well as the Facility Authority for the Douglas Point Waste Facility.

Also joining me today, seated here at a

distance from me, are Mitch MacKay, Manager of Environmental Remediation Management Stakeholder Relations; Sarah Brewer, Director of Safety, Licensing and Engineering; and George Dolinar, Director of Environmental Services.

Other key CNL staff are also with us today to respond to your questions as appropriate.

Representatives from Atomic Energy of Canada Limited, or AECL, are attending this meeting and are available to answer your questions as needed.

Today we are here before the Commission as part of our application to amend the Douglas Point Waste Facility decommissioning licence to enable CNL to begin with the final phase of decommissioning this facility.

We base our application on the strength of our safety and environmental performance at Douglas Point site. Today we set out to demonstrate to the Commission and the public that CNL is committed to continuing to meet the requirements set out by the regulators as we fulfil our mandate to Canada.

We want to emphasize that safely meeting these requirements is not something we do just because we have to, we do it because we are dedicated to operating in

the right way, responsible for the benefit of our workers, the public, indigenous communities and the environment.

This presentation will start with a few introductory remarks. Next, we will summarize the storage of surveillance activities during the current licence period which began in 2014. After this, we will discuss CNL's plans for the proposed amended licence term. We will then focus on Douglas Point's regulatory performance related to several of the 14 CNSC safety and control areas, including our new precautions and mitigations related to the global pandemic, as well as other matters of regulatory interest. We will finish with some concluding remarks.

In 2015, CNL transitioned to a government-owned, contractor-operated management model, also referred to as a GoCo model.

Before addressing CNL's past performance at the plans of the Douglas Point site licensee, it is important to acknowledge the roles and responsibilities of the organization within the GoCo management model. This slide illustrates these relationships.

Natural Resources Canada's role is to set policy with respect to radioactive waste management. The Government of Canada, through Natural Resources Canada, has

put in place a radioactive waste policy framework that specifies that waste owners are responsible for funding and finding solutions for their radioactive waste.

AECL, as a federal Crown Corporation, is the owner of the Douglas Point site and the associated waste and decommissioning liabilities. One of AECL's mandates is to manage and reduce its liabilities in order to protect the environment. AECL has a contract in place with Canadian National Energy Alliance and CNL. Under these contracts, CNL is responsible for the management and operations of AECL sites. CNL is the operator and licensee of the Douglas Point site. CNL is and will continue to be in full control of safe day-to-day operations of the site. As the licensee, CNL is the party accountable for meeting the regulatory requirements set out by the CNSC and other regulators. Even if there was a change in the GoCo contractor, it is important to understand that CNL will be the enduring entity that will remain as licensee responsible for the management and operation of AECL's sites.

Moving forward with the final decommissioning of Douglas Point aligns with one of CNL's primary mandates, which is to safely and effectively reduce

the Government of Canada's nuclear legacy and historic waste liabilities. Its decommissioning is also fully in line with CNL's vision to safely and cost-effectively reduce the federal legacy liabilities and associated risks.

And lastly, Douglas Point is at its core an environmental remediation project. The successful decommissioning and remediation of the Douglas point site directly aligns with CNL's mission to protect Canada's environment while reducing and effectively managing nuclear liabilities.

I would like to emphasize that CNL demonstrates an absolute commitment to safety and the protection of the environment. The success of the measures we take to ensure safe operations and protection of the environment is reflected in our annual reports.

In addition, while ongoing hazard reduction activities, we have continued to improve safety and reduce environmental hazards as we will describe in this presentation.

This year has brought new challenges for us all. At Douglas Point and across all sites, CNL has added new protective measures to promote safe return to work following deferment of non-essential activities in the

spring of this year. Like everyone, we are consistently fine-tuning and improving our approach to combating the spread of COVID-19.

Building upon our strong performance across all sites, we are well positioned to continue to meet our regulatory obligations during the final decommissioning of Douglas Point.

Before we get into the details of our past performance at Douglas Point, I want to highlight our extensive experience in waste management and decommissioning work.

CNL is accelerating the accomplishment of the largest and most complex environmental remediation portfolio in Canadian history. The CNL environmental remediation management team's capabilities range from decommissioning to environmental remediation, waste management, engineering, safety and licensing. These capabilities are underpinned by CNL's science and technology laboratory as a technical authority and a source of cross-cutting CANDU subject matter expertise.

The photograph on the top left depicts a milestone recently achieved on the Port Granby project. A few weeks ago, CNL completed the removal of more than 1

million tonnes of historic low level waste, moving it away from Lake Ontario to a new purpose built long-term waste management facility. The safe and successful completion of this remediation is the culmination of years of hard work and planning, including public involvement and indigenous engagement carried out by CNL's team, and fulfils a key commitment by the Government of Canada to remediate these lands for the local community.

Next to this photograph is an image of decommissioning activities of a chemical laboratory at our Chalk River Laboratories site. Workers are dismantling a glovebox containment system used in support of the research completed in the former thorium facility at the Chalk River site.

This picture represents decommission activities being performed by a highly skilled and trained workforce and it also illustrates the type of personal protective equipment required based on the hazards involved.

The photograph on the top right shows the progress in decommissioning some of the ancillary facilities associated with the National Research Experimental, or NRX, reactor at the Chalk River site.

The large cylindrical object at the bottom of the picture is the base of one of the NRX delay tanks which were used in support of the NRX reactor while it was in operation. CNL is completing the final removal of the tank this fall.

The photograph in the bottom left corner of the slide shows a worker operating a remote-operated vehicle, known as a ROV, in support of decommissioning the former thorium fuel pressure site facility at Chalk River site.

CNL uses robotics to support decommissioning by staying on top of activities that need to be executed and to protect our workers from radiation dose fields if they are high.

The photograph next to this one shows workers performing radiological monitoring at the top of the NRX reactor deck plate. CNL is currently decommissioning the NRX reactor at Chalk River. The research reactor was built in the 1940s and in the current phase we are safely removing redundant reactor support systems and equipment from this shutdown facility.

On the bottom right is an image of Whiteshell Laboratories in Manitoba. CNL is currently

progressing with a full decommissioning and remediation of the Whiteshell Laboratories and to date we have safely decommissioned 32 buildings at this site.

As you can see, our people are experts in environmental remediation work. We have what it takes to safely decommission Douglas Point and we are ready to move forward with the final remediation of this site.

Shown here is a map of Ontario, illustrating where the Douglas Point site is located on Lake Huron in Bruce County, just to the north of Kincardine. The aerial image on the right shows the Bruce site looking to the north along the Lake Huron shore. You can see the Douglas Point facility circled in green.

This slide depicts the Douglas Point site and where it sits on the Bruce site. On the left, the red box represents the licence boundary of the Douglas Point site. On the right, the red box shows the same footprint within the Bruce site. As you can see, the 13 acres of the Douglas Point area is only a small proportion of the over 2,000 acres on the Bruce site.

Here, we will share a brief history of the facility so we can understand the current status and plans for the sites.

The Douglas Point Nuclear Generating Station was Canada's first full-scale nuclear power plant. It was a 200 MW prototype CANDU reactor that produced electricity from 1967 until 1984, after which it was permanently shut down, having achieved its objectives. As a prototype nuclear reactor, Douglas Point's objective was to demonstrate that a CANDU nuclear power plant could be scaled up for commercial power generation. Its successful operation was fundamental to getting Ontario where we are today, with 60 percent of our electricity consistently coming from clean, reliable nuclear power.

The first phase of decommissioning took place shortly after the reactor was shut down. Phase 1 of the decommissioning brought the facility to a safe and sustainable shutdown state suitable for a period of storage with surveillance.

In Phase 1, initial decommissioning activities included defuelling of the reactor, removing heavy water from the heat transport and moderator systems, transferring the spent fuel from wet storage in a reactor pool to a dedicated onsite dry storage facility, that is, the spent fuel canister area, and finally, the preparations of the facility for the next phase of decommissioning.

Phase 2, the current phase of decommissioning, is called storage with surveillance. Douglas Point has been in storage with surveillance following a deferred decommissioning strategy for more than three decades. Our staff have ensured and continue to ensure the same safe, secure storage of the site during this period. This means keeping required equipment and safety-related systems functional, as well as taking opportunities to reduce ongoing hazards where practicable.

The systems that continue to be maintained include, for example, radiological monitoring equipment and instruments, fire detection and alarm systems, reactor building ventilation systems, fuel canister containment structures, and the buildings' superstructures themselves.

We will get into more details on the activities and performance of the facility and the hazard reduction activities that have taken place over the last few years later in the presentation.

Phase 3, final decommissioning is planned to occur from now until 2070, depending upon several regulatory decisions, including the outcome of this hearing on our application to amend the licence.

The most recent licence period for Douglas

Point began in 2014 when CNSC issued a new waste facility decommissioning licence. This licence covered the three prototype reactor facilities owned by AECL, namely, the Douglas Point Waste Facility, the Nuclear Power Demonstration Waste Facility, and the Gentilly-1 Waste Facility. To allow for the different decommissioning timescales of these reactors, in 2013 CNL requested an administrative split of this licence. Subsequently, the CNSC issued a separate waste facility decommissioning licence to each facility. Last year, in 2019, we submitted an application to the CNSC to amend the waste facility decommissioning licence of Douglas Point to allow CNL to proceed with the final phase of decommissioning. Note that we are applying for a 14-year licence to cover the activities from this point until 2034, which is the end date of the current licence. CNL is also agreeable to aligning with the 10-year licence period proposed by the CNSC staff.

These two photographs were taken around 50 years apart. The one on the left is the facility in the early 1970s and the one on the right was taken in 2019. As you can see, the condition of the buildings has not changed. We are proud that our storage and surveillance

activities have maintained the facilities in excellent condition. The ongoing maintenance, along with the hazard reduction efforts, places us in the prime position to safely move forward with the Phase 3 decommissioning work.

At this point I will turn the presentation over to my colleague Kristan Schruder to go over the details of the work accomplished since 2014. Based on this strong record of safe, compliant work, we will then share our phased plan for the final decommissioning of the facility.

MR. SCHRUDER: Thank you.

Madam President and Members of the Commission, good morning to everyone joining us virtually today. For the record, my name is Kristan Schruder. I am the General Manager of Decommissioning and Environmental Mediation for CNL and site licence holder for Douglas Point Waste Facility.

Since this is the first time in front of the Commission, I would like to provide you with some background on myself. I have been with AECL and subsequently CNL for more than 18 years. I am a Professional Engineer and Certified Project Management Professional with experience in construction, nuclear

decommissioning and environmental remediation. I am also responsible for the Douglas Point and environmental -- I am also responsible for decommissioning and environmental mediation efforts at the Chalk River Laboratory site as well at Douglas Point, Gentilly-1, and nuclear power demonstration sites. Specifically at the Chalk River Laboratories, our team has demolished 92 buildings in the last five years, including a number of nuclear reactor support facilities.

I will begin my remarks with an overview of activity since 2014 then I will present the plans for final decommissioning in five stages, which are referred to as planning envelopes. After this, I will share our past performance for some key safety and control areas for Douglas Point as well as look at our Indigenous engagement and stake hold engagement activities.

We trust that, through this, we will demonstrate our continued commitment to safe management of the site.

Since 2014, our storage with surveillance activities, which include inspections, maintenance and hazard reduction work have been critical to maintaining and improving the facilities' safety. Storage with

surveillance activities include periodic inspection monitoring of the remaining functioning systems such as ventilation, heating and fire detection and alarm systems.

Buildings and structures are also inspected to identify any early signs of degradation so that corrective actions can be identified and implemented as documented in the Douglas Point Life Management Program.

The hazard reduction work involved the removal of designated substances, removal of loose waste and removal of redundant building structures.

This slide and the next few slides show some of the storage with surveillance work that has been completed to safely maintain the Douglas Point Waste Facility. For instance, as shown on this slide, in 2014, we completed the work to repair the reactor building roof. This slide shows more work on the reactor building roof as well as an image of the upgraded fire alarm and detection system installed throughout the facility that was completed in 2016.

In 2017, a project to install two local steam boilers to reduce the use of local steam heating on site and an upgrade to the surveillance system in the spent fuel canister area was completed.

Another example is the roof repair work on both the purification building and service building which was completed in 2019.

As mentioned previously, this type of maintenance work was essential to ensuring this facility was kept in a safe state during storage with surveillance.

CNL has safely conducted multiple hazard reduction campaigns since 2014. Hazard reduction work involved the removal of waste generated from ongoing maintenance operations and legacy waste from past operations.

This included emptying the spent resin tanks, which was completed in 2018. This is the only activity that generated intermediate level radioactive waste. This waste was treated and transported to Chalk River Laboratories for storage.

Approximately 4,000 metric tonnes of waste was removed from the facility during hazard reduction work. Approximately 90 percent of this waste was determined to be non-radioactive and non-designated waste, the majority of which was reused or recycled with only a small percentage requiring disposal.

This material can be reused within the

industry after appropriate processing or, if it is clean metal, it may be recycled or reused as you would metal from any conventional industrial decommissioning.

For example, in the last few years, we have sent metal for recycling through the Ken Jackson facility in Tiverton and Triple M metal based out of Hamilton.

Of the other waste, the majority was asbestos-containing material requiring disposal in appropriately authorized landfills. The small fraction of waste that was radioactive was safely packaged and transported to Chalk River Laboratories.

To reduce the overall costs to maintain the Douglas Point Waste Facility and to prepare the site for final decommissioning, several redundant, non-nuclear buildings and structures have been removed. These included the guardhouse, plate shop, machine shop, tool crib, and emergency coolant injection system tank and bunker. These structures are shown in yellow boxes on the slide. The corresponding layout on the right shows the site footprint today with these buildings removed.

Of the approximately 2,500 metric tonnes of waste that was generated from these removals, the vast

majority was successfully reused or recycled. The main exceptions were asbestos-containing material which was -- which required disposal in appropriate, authorized landfills and small amounts of material such as wood, drywall and plastics that could not be recycled and were, therefore, disposed of in conventional landfills.

There was one package of low-level radioactive waste material shipped to Chalk River Laboratories for storage. This was the only radioactive waste material generated.

The staff completes inspections to confirm our compliance with Canada's Nuclear Regulations.

Between 2014 and 2019, CNSC conducted eight inspections. A ninth inspection was -- which was also completed in 2020 but is not included on this slide.

None of these inspections identified any significant issues and all but one of the recommended improvements have been completed to CNSC satisfaction.

One outstanding issue requires concurrence between CNL and CNSC on the ongoing emergency drills required by CSA Standard N393. This is on track for completion in December of 2020.

The International Atomic Energy Agency or

IAEA, performs independent verification activities at nuclear sites around the world to verify nuclear material inventories and assure the absence of undeclared nuclear material and activities.

The IAEA has also conducted four inspections between 2014 and 2019 and a fifth one recently in 2020. No significant findings were identified in any of the IAEA inspections.

The licensed amendment is granted. We intend to proceed with final decommissioning in a phased approach, focusing our efforts on the first three work packages, which we refer to as planning envelopes.

During the next part of the presentation, I will describe the plans for an amended licence period. Throughout this final stage, as during all work, we will continue to prioritize the safety of people and the protection of the environment.

CNL will continue to ensure that systematic monitoring and inspection programs are maintained during decommissioning so that the facility remains in a safe, sustainable and secure state until final decommissioning is complete.

The storage with surveillance activities,

including the life management program, will continue to be reviewed and updated as decommissioning progresses.

In terms of hazard reduction work, CNL will continue to protect worker health and safety by removing designated substances, like asbestos, PCBs, and lead, in advance of each decommissioning planning envelope.

Hazard reduction also means removing operational and legacy waste but with radiological and non-radiological from redundant structures.

In addition to enabling to worker's safety, this will also reduce nuclear liabilities and associated risks and maintenance costs. Due to the length and complexity of decommissioning the entire Douglas Point Waste Facility, CNL has prepared a program overview detailed decommissioning plan to outline the structure of the decommissioning program. This document contains a description of the planned decommissioning activities outlined in five planning envelopes.

It is important to note that we will submit individual Detailed Decommissioning Plans, referred to as DDPs, for each of the planning envelopes to the CNSC staff for review and acceptance prior to any planned decommissioning work for a particular planning envelope.

In order to develop the details for each planning envelope, CNL will conduct further characterization surveys and safety assessments to establish applicable hazards and appropriate mitigating measures, ensuring safety of the workers and protection of the environment. This approach also allows us to incorporate public and Indigenous input into our planning as we go along.

This slide shows the structures within each planning envelope and the corresponding future DDP volume number. Over the next few slides, we will see some of the buildings in each planning envelope, review the associated decommissioning work and we will look at the timeline for each.

Planning Envelope A is the first set of buildings scheduled for decommissioning from 2021 to 2025. Planning envelope A is a set of non-nuclear buildings, including the administration building, the turbine building, and ancillary facilities, east steam lines, and the steam bridge.

Characterization of the facility structures and systems has shown there is no radiological contamination so this work will be conventional, industrial

demolition.

Here is the exterior and interior of the administration building. This building was used for staff offices up until 2018 when the CNL staff at Douglas Point moved to a trailer complex. Extensive work has been done on this building to determine what the waste is and how much will be generated when this building is decommissioned. Here is the turbine building. Majority of the equipment within this building such as the main turbine was removed during Phase 1 decommissioning in the late 1980s.

In Planning Envelope B, we move into the radiological facilities. In this planning envelope, we will decommission the nuclear support buildings, namely the purification building, the service building, the spent resin tanks and the vault as well as the well test shop.

These pictures show internal and external views of the purification building. The orange caps to the right of the purification building identify the locations of the underground resin storage tanks and vault, which will also be removed as part of this planning envelope.

Here is another nuclear support structure, the service building. The image on the left is the

exterior, the image in the middle is the former fuel rod loading bay located behind a barrier and the image on the right shows the entrance to the reactor building circled in green.

Planning Envelope C covers the work to clear out the redundant peripheral systems in the reactor building. This will include the removal of all systems, structures and components that are external to the reactor bio shield, CNL is currently conducting the same type of work, removal of redundant peripheral systems in the NRX Reactor at the Chalk River Laboratories.

These images are of the interior of the reactor building and show systems that are typical of those that we will need to remove. These first three planning envelopes we just reviewed are scheduled to advance over the next ten years. The last two planning envelopes, which we'll review now, are anticipated to start after 2034 and would be subject to a future licensing decision.

Planning Envelope D is a decommissioning of the spent fuel canister area and this work is anticipated to occur beyond the end of the proposed amended licence period.

The spent fuel canister area consists of

47 seismically-qualified above-ground storage canisters.

And finally Planning Envelope E is the final decommissioning of the reactor building, also intended to occur beyond this proposed licensed, amended period.

The work in this planning envelope will include the removal of the Calandria and its bioshield as well as the remediation of the site. Depicted here is an image of the reactor face and the redundant fuel handling system. We currently plan to decommission the reactor building after 2034.

Before I begin explaining the timeline of the project and strategy considerations associated with this timeline, it's important to note that CNL is still following the deferred decommissioning strategy for the Douglas Point site. The reactor has been in a safe, shutdown state since 1985. This represents more than 35 years of radioactive decay prior to commencement of final decommissioning.

Several factors were considered in accelerating the execution of the work in Planning Envelopes A to C. CNL evaluated the potential impacts of the environment for decommissioning activities and, in the

case of advancing Planning Envelopes A to C, removing the structures and equipment before 2070 reduces the potential for impact on the environment.

CNL considered the potential doses to workers and the public as well. Planning Envelope A consists of non-nuclear structures and therefore there is no additional doses to workers by advancing this work.

As well, the radioactive material contributing to doses in Planning Envelopes B and C has been decaying for more than 35 years and our assessment of this work indicates minimal additional dose to workers.

Advancement of this work contributes to effective site configuration management through the removal of legacy structures to gain access to areas of the site that will be undergoing decommissioning next.

CNL carefully evaluates waste management and storage capacity and the waste generated during the execution of Planning Envelopes A through C will be managed in accordance with CNL's integrated waste strategy.

Another consideration for progressing these Planning Envelopes was efficient management of Canada's nuclear legacy liabilities. As presented earlier, CNL maintains legacy structures in a storage with

surveillance state which requires ongoing maintenance and occasionally significant cost for roof and for structural repairs.

Advancing these work packages will also allow for the development of relationships with Indigenous communities and the public during early stages of final decommissioning, work collaboratively with stakeholders and Indigenous peoples to determine the end state of the site.

In summary, by advancing the decommissioning Planning Envelopes A, B, and C, CNL will save the Canadian public money by reducing the storage with surveillance cost, minimizing any potential impacts to the environment from maintaining these redundant structures, ensuring dose to workers are minimized and effectively managing all waste types.

To demonstrate how our assessment related to radioactive decay was considered as part of the revised timeline, we have this graph depicting the dose rates at historically high dose rate locations outside of the bioshield which is part of the planned work in Planning Envelope C.

As you can see, the dose rates measured at this location have decreased from approximately 22

milliSieverts per hour in 1985 to approximately 0.13 milliSieverts per hour in 2020.

The projected dose rate for the next 50 years shown in this graph demonstrates that further delay of decommissioning activities at Douglas Point site will not result in significant dose reduction to workers.

Presented here is the project schedule for these Planning Envelopes. Note that while some of the phases are consecutive, that is to say one phase follows another, there is overlap between other phases. As mentioned, the plan is to advance the first three Planning Envelopes over the next ten years, which would be within the proposed amended licence period.

Storage with surveillance activities will continue throughout the final phase of decommissioning.

It is important that we highlight the Douglas Point Waste Facility's regularly performance within the context of the selected safety and control areas.

In addition to presenting the regulatory performance for Douglas Point's Waste Facility as part of this licence amendment hearing, CNL prepares an annual summary of CNL regulatory performance in all 14 safety and control areas.

This summary informs CNSC's annual regulatory oversight report for CNL, which includes the Douglas Point site and is part of an annual public meeting with the CNSC commission.

This provides another opportunity for the commission, members of the public, and Indigenous communities to monitor CNL performance on an annual basis.

Now I will discuss the Douglas Point Waste Facility's regulatory performance since 2014 for these six safety and control areas, as well as their Indigenous engagement activities and public information program.

With respect to our management system, CNL has established a complaint framework through which it manages and operates Douglas Point Waste Facility. Major revisions to CNL's management system documents were implemented in 2017 to capture the requirements of the new local management model. The management system documents ensure delivery against commitments within appropriate accountabilities and controls resulting in safe, effective and efficient conduct of work across all CNL sites.

It applies to all our activities and is an up-to-date compliant and agile framework that aligns with

the CSA groups N286-12 management standard.

CNL has undertaken company-wide surveys several times since 2014 to support staff engagement, to drive the company's safety culture initiatives and to reinforce management expectations. The 2019 results of the employee survey showed a consistently increasing number of positive responses related to questions about the workplace safety, showing CNL's safety culture is effective and improving as it remains successfully integrated into daily work and operations.

The management system has and will continue to evolve to align with changing regulatory requirements and standards.

This leads us to conventional health and safety. I am proud to report that there have been zero lost-time work-related injuries or illness at the Douglas Point Waste Facility since 2014. This is to the credit of CNL's human performance program, which has built a strong safety culture, promoted safe work practices and reinforced the use of human performance methodology through training, communication and observation.

Credit is also due to the robust, integrated work control process and permitting system which

has enabled contractor employee work to be as safe as possible.

CNL has adjusted to the required new ways of living and working with the COVID-19 pandemic. For the duration of the pandemic, the CNL health centre, in collaboration with the CNL corporal physician and public health authorities, continues monitoring and providing guidance for all CNL sites.

COVID-19 protocols are established at all sites and are aligned with public health protocols. These include daily screening prior to accessing the site, mandatory face covering, increased cleaning, flexibility for remote work options and provision of necessary personal protective equipment.

CNL is incorporating COVID-19 lessons learned and best practices into our work environment, including the proposed decommissioning work of the Douglas Point Waste Facility.

As CNL's programs evolve, these will continue to be reflected in site processes by maintaining the facility-specific procedures to identify, assess and manage conventional hazards from routine activities and decommissioning projects.

As we move forward with decommissioning, we recognize the importance of evaluating future work for specific hazards and documenting the controls that are to be used to control that work as each planning phase will bring unique challenges.

Based on our past performance and our proven ability to integrate external and internal best practices, I am confident in our ability to maintaining this record of excellence.

CNL's radiation protection program provides an overall framework for ensuring that exposure to ionizing radiation is kept as low as reasonably achievable or ALARA for all CNL employees, visitors and contract workers.

With respect to radiation protection, I am again proud to report that, since 2014, no radiation incident occurred at Douglas Point that resulted in an individual exceeding any regulatory limit for CNL action level. Note the highest annual individual dose was 0.43 milliSievert received by a radiation surveyor. For reference, the maximum allowable annual dose for a nuclear energy worker is 15 milliSieverts. All of this is to say that CNL's radiation protection program has provided a

robust safety culture for people and will continue to uphold this record into our future licensing periods.

CNL's environmental protection program flows down from the CNL environmental policy which ensures that protection of the environment and sustainability are integral components of CNL's decision-making in all activities.

As Mr. Gull emphasized earlier, decommissioning Douglas Point is an environmental remediation project. Indeed, the primary purpose of this proposed decommissioning is to support the protection of the environment.

At the Douglas Point Waste Facility, there is an effluent monitoring program that is in compliance with the CSA standard N288.5, effluent monitoring at Class 1 nuclear facilities and uranium mines and mills. Based on the implementation of the CSA standard, CNL identified the requirement to monitor airborne and waterborne releases for radiological contaminants as well as check to confirm reporting requirements under the National Pollutant Release Inventory, Greenhouse gas and halocarbon regulations.

The next few slides, I will demonstrate, in graphic format, the airborne and waterborne releases of

radiological contaminants compared to their associated release limits.

The airborne effluence from the Douglas Point site are monitored for tritium, gross alpha, gross beta, and, if necessary, carbon-14.

On this slide, the left graph shows a logarithmic scaled graph of the tritium releases. Similarly, on the right, is a graph of gross alpha and gross beta releases. On both of those graphs, the red line indicates the regulatory limit and the blue and green line, the monitoring data. As you can see, the releases of tritium, gross alpha and gross beta to air are a small fraction of the regulatory limit.

Here we have a graph showing the results of the waterborne monitoring since 2014. The monitored parameters are tritium, gross alpha and gross beta. Again, the red line indicates the regulatory limit for these parameters and the blue and green line represents our monitoring data. As you can see, releases from Douglas Point are a small fraction of the release limit.

I'd like to point out that there was an error in the CNL's commission member document for gross beta releases in 2018. The correct value has been shown in

this graph.

CNL has done an assessment of the Douglas Point site against the requirements of CSA, N288.4, environmental monitoring at Class 1 nuclear facilities and uranium mines and mills and determined that a monitoring program is not required.

However, CNL will continue to provide information to Bruce Power on waterborne and airborne releases for inclusion in their environmental monitoring report and have been included in the site environmental risk assessment for Bruce Power.

This way, the cumulative effects from all facilities at the site are assessed. The CNSC, through its independent environmental monitoring program, also confirms that the public and the environment around the Bruce site are protected and there are no expected health impacts.

Over the next proposed licensing period, CNL, in accordance with its commitment to continuous improvement, will further develop its Douglas Point Waste Facility environmental monitoring program by implementing CSA N288.7-15, Groundwater Protection Programs at Class a Nuclear Facilities and Uranium Mines and Mills. This implementation will provide a more formal standardized

groundwater program that is easily comparable to programs of other licensees.

As discussed previously, CNL has safely and effectively managed waste removal activities in accordance with the organization's integrated approach. Since 2014, just over 6,500 metric tonnes of waste were generated and, of that waste, the majority was recycled.

The waste management program continues to refine the CNL integrated waste strategy to align lifecycle waste management across all CNL operated sites, including Douglas Point, capturing strategies and defining pathways for all CNL waste.

CNL is taking a holistic view to manage waste in an efficient and safe manner. In an effort to reduce the waste being generated from CNL activities, waste hierarchy presented in this graphic is applied throughout the lifecycle of all projects.

As waste handling from our recent hazard reduction efforts have demonstrated, Douglas Point has been very successful in following this strategy, recycling more than 90 percent of the non-radioactive waste generated.

Throughout the final Phase 3 decommissioning, there will be a continuous review of the

waste management strategies to ensure effective implementation of this hierarchy.

CNL has an impeccable record on the transportation of radioactive waste. CNL has transported radioactive material for decades with no releases to the public or the environment.

This is a result of CNL's transportation of dangerous goods program which provides an operational framework for the safe transport of dangerous goods and fully meets the requirements of our licence conditions handbook as well as the Transport Canada's transportation of dangerous goods regulations and the packaging and transport of nuclear substances regulations.

Our transportation of dangerous goods program requirements apply to any activities involving the transportation of dangerous goods to or from any of the CNL sites by all personnel and all modes of transport, and ensures that all regulatory and licence requirements are completed prior to packaging and shipment.

In terms of past performance since 2014 CNL safely made 13 shipments of intermediate level waste and 22 shipments of low-level waste from Douglas Point to Chalk River Laboratories and other licensed waste

management facilities.

Note, in the executive summary of our commission member document there was an error stating that there had been 21 shipments. In fact there were 22, as I just stated.

In terms of future planned transport, CNL predicts one shipment of intermediate-level waste and 20 shipments of low-level waste from Douglas Point to Chalk River Laboratories, and potentially other licensed waste management facilities which are licensed to process material and support of reuse or recycling within the nuclear industry.

CNL recognizes the value and necessity of engaging Indigenous communities and we believe in building relationships within Indigenous communities that have traditional territories in the vicinity of our operations.

We aim to grow our understanding and through engagement we want to ensure that our activities remain protective of the people and the environment.

With respect to the Douglas Point site, we have started to build relationships with the Saugeen Ojibway Nation representing the communities of the Chippewas of Saugeen First Nation, and the Chippewas of

Nawash Unceded First Nation, as well as two distinct Métis communities; the Historic Saugeen Métis and the Métis Nation of Ontario.

Our engagement with these communities has involved meetings with each community, we have held facility tours with the Saugeen Ojibway Nation and the Historic Saugeen Métis, and completed community-specific engagement with the Historic Saugeen Métis which included a webinar and mailout to households in the community.

We are supporting fulsome participation in this licensing process and lay groundwork for future engagement and relationships.

It is important to recognize the CNL's engaging equally and directly with each community. Each community is unique and each relationship is developing in a unique way.

Now I'd like to discuss CNL's public information program, which seeks to build public awareness, understanding and support for the work we carryout on behalf of Canadians. This program is an established platform that sustains open and honest communication. This is done through several vehicles, including our corporate website, community meetings, conventional media,

recruitment materials and special events.

CNL also has a social media strategy to better engage online stakeholders with more than 20,000 followers on its platforms including Twitter, Instagram, Facebook, YouTube and LinkedIn.

In the last year, to ensure community employee safety and to follow public health guidelines, our stakeholder engagement has moved away from in-person engagements and towards more virtual methods.

Since October 2019 we have been reaching out to local stakeholders. We have attended local council meetings at the Municipality of Kincardine, the County of Bruce, and the Towns of Saugeen Shores. We had several plans for in-person engagements with the public, including open houses and facility tours in the spring of 2020 which were cancelled.

In response to COVID precautions, we have pivoted and engaged the community through traditional methods like print advertising as well as virtually through our online webinars, social media, teleconference meetings with stakeholders and with a virtual open house.

Throughout our engagement with Indigenous Communities and the public we have reiterated our goal to

listen and learn from the community Indigenous peoples in order to enhance or evolve our plans for decommissioning by seeking to understand, incorporate and take their views into account.

Before we end this presentation, I want to reiterate CNL demonstrates an absolute commitment to safety and protecting people and the environment. Since 2014 we have continued to improve our good performance and we are ready to move forward towards final decommissioning of the Douglas Point Waste Facility.

Building upon this strong record we are well positioned to continue to meet our regulatory obligations into the future with an amended licence.

Pending permission to progress with decommissioning, CNL looks forward to safely achieve any activities proposed in the licence amendment. At the completion of the planning envelopes A through C, CNL will have the valuable relationships with the local public and Indigenous communities and we will reduce potential environmental impacts through achievement of our remediation activities.

We will have improved the site configuration to permit future decommissioning planning and

execution and the safe compliant management of our nuclear legacy liabilities. All of this will be completed with a continued focus on safety and remediation of the land.

In closing, we want to recognize that some of the interventions for this hearing are based around a concern for the environment. While we may not agree with the conclusions of these interventions, this concern for the environment is one we share.

Completing the final decommissioning of Douglas Point will minimize impact to the people, to the environment, to the earth, and protect the future. In our view, deferring decommissioning further into the future is just passing the buck to future generations for minimal benefit.

By planning and engaging the public Indigenous communities now and beginning the final stretch to decommission Douglas Point, we are making steps in the right direction by taking responsibility and progressing towards a cleaner future today.

That concludes our prepared remarks. I'd like to thank you for your time today, Madam President and Members of the Commission. We are happy to address the questions you may have about CNL's application to amend the

licence for the Douglas Point Waste Facility to enable final decommissioning.

PRESIDENT VELSHI: Thank you, Mr. Gull and Mr. Schruder, for your presentation.

I'd now like to move to the presentation from CNSC Staff as outlined in CMDs 20-H4 and 20-H4.A.

Ms Murthy, the floor is yours.

CMD 20-H4/20-H4.A

Oral Presentation by CNSC staff

MS MURTHY: Thank you. Good morning, Madam Velshi and Members of the Commission.

For the record, my name is Kavita Murthy and I am the Director General of the Directorate of Nuclear Cycle and Facilities Regulation at the CNSC.

Our presentation today will discuss Canadian Nuclear Laboratories, or CNL's, application to amend the site licence for the Douglas Point Waste Facility.

With me today are Ms. Candida Cianci, Director of the Canadian Nuclear Laboratories Regulatory Program Division and Mr. Kevin Ross, the Senior Project

Officer responsible for the licensing and compliance of the Douglas Point Waste Facility.

Also online are a number of specialists from various areas of expertise who have been involved with the Douglas Point Facility and who are available to answer any questions that the Commission may have.

Before we begin we wish to note two errata. Next slide please. Thank you.

Before we begin we wish to note two errata in Staff's CMD 20-H4. First, in the table of contents, on page V of Staff's CMD there should be five safety and control areas listed under Section 3, General Assessment of SCAs, the Safety and Control Areas of conventional health and safety and packaging and transport are missing from that list.

Second, in Section 4.7 of Staff's CMD on page 32 the licence condition referenced with respect to operating performance should be identified as 3.1 to match the proposed licence and the licence condition handbook. We apologize for any confusion this may have caused.

In this presentation CNSC Staff provide an overview off CNL's application to amend its decommissioning licence for the Douglas Point Waste Facility. We will

highlight CNSC Staff's review of the licence amendment application and CNSC Staff's review of CNL's program and documents in the context of this request, and summarize the safety performance of CNL at the Douglas Point Waste Facility.

CNSC Staff want to acknowledge the interventions received from members of the public, Indigenous groups, municipalities, and nongovernmental organizations. This presentation will also identify key teams that emerge from those interventions and we will present CNSC Staff's response to these concerns. A comprehensive common disposition table of the interventions can be found in the annex to this presentation.

We will then provide CNSC Staff's conclusions and recommendations for your consideration.

We will begin with the purpose of this public hearing. The Douglas Point Waste Facility operates under a waste facility decommissioning licence which is valid until December 31, 2034. This licence authorizes CNL to undertake different activities at the Douglas Point Waste Facility site including, among other things, decommissioning buildings and structures and storing and managing waste.

This licence was granted on the basis of continued storage with surveillance activities only. CNL has carried on these activities safely and in compliance with the regulatory requirements of the current licence period.

In as much as CNL's Douglas Point licence authorizes it to undertake a broad range of activities at the Douglas Point Waste Facility, it is limited by the licensing basis. The licensing basis is central to the matter of this hearing. The concept of licensing basis is fundamental to what activities a licensee will conduct and how the licensee must operate.

The licensing basis defines what a licensee must do to demonstrate that they will carry out the authorized activity in accordance with the requirements of the *Nuclear Safety and Control Act* and any other applicable laws and the supporting regulatory framework. In addition to the regulatory framework requirements, the licensing basis also includes all relevant documents provided by the licensee in support of the licence application.

Part of our regulatory oversight activities throughout this lifecycle of a licence is to review licensee submissions and show that the licensee

activities and programs remain within the licensing basis approved by the Commission.

If the licensee proposed to make changes to their programs or proposes activities whose scope extends beyond the licensing basis, they must obtain authorization by the Commission beforehand.

The scope of CNSC Staff's review of the submission includes the assessment of all aspects of the licensee programs that are drawn in by the proposed changes above and beyond our routine regulatory oversight.

CNL's licence amendment application was submitted to the CNSC in July 2019. In their submission CNL has requested that the Commission amend the Douglas Point Waste Facility decommissioning licence to proceed with Phase 3 decommissioning activities.

The Commission is required to make two decisions. First, a Federal Lands review determination under Section 67 of the *Canadian Environmental Assessment Act 2012*, or *CEA 2012*. And subsequently, a licensing decision under the *Nuclear Safety and Control Act*. I will speak to the two decisions next.

CEA 2012 was the act in place at the time of receipt of the licence amendment application. The

Impact Assessment Act did not apply to this project in accordance with Subsection 4(1) of the physical activities regulation made under the *Impact Assessment Act*, as the CNSC Staff had started its review under the Federal Lands provision of *CEA 2012* prior to the news act coming into force.

Under Section 15(a) of *CEA 2012* the Commission is the responsible federal authority for making a decision on the proposed project. Now, a determination of whether a proposed project requires an environmental assessment is based on the designated project list as set out in the physical activities regulation which supports *CEA 2012*.

CNL's proposal does not constitute a designated project and, as such, no environmental assessment was required. However, since the proposed activities are to be carried out on lands belonging to a federal entity, that is the Atomic Energy of Canada Limited, it is subject to Federal Lands reviews in accordance with Section 67 of *CEA 2012*.

The scope of factors to be considered in a Section 67 review under *CEA 2012* are the environmental effects from project activities conducted on federal lands.

The Federal Lands review is integrated as part of CNSC's licensing process.

The Commission must conclude that completion of the proposed project is not likely to cause significant adverse environmental effects before it can proceed with the licensing decision under the *Nuclear Safety and Control Act*.

In the record of decision related to CMD 18-H107, the Commission require that should CNL seek to accelerate the decommissioning of any of its three prototype reactors, including the Douglas Point Waste Facility, CNSC Staff would submit a full assessment of all relevant safety and control areas for the Commission's consideration at the separate public Commission hearing.

CNL is proposing to decommission the Douglas Point Waste Facility following a staged approach or approximately the next 50 years, ending in 2070. The preliminary decommissioning plan proposed a schedule of activities that was part of the licensing basis for the site.

CNL's current request seeks to reduce the deferment period for some decommissioning activities for time periods ranging from five to 46 years. The earliest

decommissioning activities are scheduled to bring in in 2021. This request represents a change to the current licensing basis for the decommissioning of the site.

Subject to approval under the *NSCA*, the Commission is asked to amend the licensing basis to authorize the proposed activities.

CNSC Staff also recommend that the Commission approve the modernization of the existing licence to bring it in line with the accepted standard for Commission-issued licenses of this type.

I will now pass the presentation to Candida Cianci.

MS CIANCI: Good morning, President Velshi and Members of the Commission, and those joining us as part of the virtual hearing today.

For the record, my name is Candida Cianci, and I am the Director of the Canadian Nuclear Laboratories Regulatory Program Division at the CNSC.

The next few slides provide some background on the Douglas Point Waste Facility. As mentioned, this was already presented by CNL. I will be brief.

The Douglas Point Nuclear Generating

Station, now known as the Douglas Point Waste Facility, was Canada's first full-scale nuclear power plant. As a prototype nuclear reactor, Douglas Point demonstrated that a CANDU nuclear plant could be scaled up for commercial power generation.

Douglas Point first generated power in 1967, was declared in service in 1968 and was operating until 1984. The region within 100 kilometres of the facility is primarily rural. There is no single major urban centre in this region.

The Douglas Point Waste Facility is located within the Bruce Nuclear Generating Station site in Tiverton, Ontario. The Douglas Point Waste Facility is owned by Atomic Energy Canada Ltd., or AECL, and is being decommissioned by CNL.

A deferred decommissioning strategy was selected at the time of a permanent shutdown of Douglas Point in 1984. Following this strategy, the decommissioning of the Douglas Point was planned to occur in the following three phases.

Phase 1, as we've heard, has already brought the facility to a safe, sustainable shutdown state, suitable for period of storage with surveillance. This

work was completed in 1994.

Phase 2 is the current storage with surveillance phase of decommissioning. This phase involves monitoring and maintaining the facility to allow for radioactive decay.

Phase 3 is active decommissioning. This phase involves decontamination, dismantling, disposal and site restoration to achieve the final end state, making the property available for alternative use.

In the period immediately following the permanent shutdown of the reactor the Douglas Point Nuclear Generating Station was transformed from a power plant into a nuclear waste management facility. Upon conclusion of this transition, the Atomic Energy Control Board issued AECL a waste facility operating licence, or WFOL.

This licence was renewed multiple times between 1988 and 1994, at which point the licence with an indefinite term was issued. In 2014 AECL applied to replace the waste facility operating licence with a single consolidated 20-year term waste facility decommissioning licence, or WFDL, covering three former prototype reactors: the Douglas Point Waste Facility; the Gentilly-1 Waste Facility; and, the Nuclear Power Demonstration Waste

Facility.

CNL was established as a wholly owned subsidiary of AECL in 2014. The consolidated WFDL was subsequently transferred by the Commission to CNL. In 2018 CNL requested the separation of the WFDL into three licences, one for each of the prototype reactors. Not changes to the licensed activities or expiry date were requested.

In order to ensure compliance with the *Nuclear Safety and Control Act*, its regulations, and the licences, CNSC Staff have established a compliance program for each licensed facility. The compliance program consists of inspections, desktop reviews and reports, plans or other submissions as well as reviews of events that CNL reports to the CNSC.

The baseline inspection program is tailored to the specific risks of each facility and to its compliance record. CNSC Staff may also conduct other inspections such as those related to security and safeguards to verify that the licensee's operating in compliance with CNSC regulatory requirements.

CNSC Staff oversight of the Douglas Point Waste Facility is aligned with the risks associated with

the current and proposed activities conducted at this site. There is no operating reactor at the Douglas Point Waste Facility and activities at this site have been limited to waste management and decommissioning.

Since 2014 CNSC Staff have conducted nine on-site compliance inspections at the Douglas Point Waste Facility. CNL submitted the licence amendment application on July 18th, 2019.

A number of supporting documents, including a program overview detailed decommissioning plan, an environmental effects review report, and environmental risk assessment, and storage of surveillance activities and schedules were provided along with this application.

An Indigenous engagement report was subsequently provided as required by CNSC's REGDOC-3.2.2 Indigenous Engagement on October 15th, 2020.

As mentioned earlier, CNL is proposing to decommission the Douglas Point Waste Facility following a stated approach over approximately 50 years. CNL has divided the proposed decommissioning activities into stages known as planning envelopes.

In total, there are five planning envelopes, A through E. Note that only planning envelopes

A through C are under consideration if the current Douglas Point licence is amended. The environmental effects review report submitted by CNL as part of their application and the correspondent Federal Lands review conducted by CNSC Staff was limited to this scope.

Separate decisions from the Commission will be required should CNL wish to proceed with planning envelopes D and/or E. All areas covered by planning envelope A are non-nuclear areas. Planning envelopes B and C contain nuclear areas.

Planning envelope C would entail the removal of systems and components such as tanks and pumps from the reactor building. This phase does not include the reactor core or the reactor building structure.

The most significant sources of radiation at the Douglas Point site are located in the spent fuel canister area and the reactor. They are part of planning envelopes D and E. These two planning envelopes are not planned for the proposed licence period.

I will now turn the presentation over to Kevin Ross, the Senior Project Officer responsible for licensing and compliance of the Douglas Point Waste Facility.

MR. ROSS: Thank you. For the record, my name is Kevin Ross and I am the Senior Project Officer with the Canadian Nuclear Laboratories Regulatory Program Division. In the next few slides we will highlight CNSC staff's review of the licence amendment application.

The Douglas Point Waste Facility licence amendment, a thorough assessment of the application submission and a verification of licensees compliance performance was carried out. CNL has a history of satisfactory performance in all 14 safety and control areas at the Douglas Point Waste Facility, as shown in the recent Regulatory Oversight Report CMD 19-M24 presented on November 7, 2019, and in CMD 20-M22, that will be presented in an upcoming commission meeting on December 10, 2020.

CNL utilizes a suite of corporate wide programs to meet their licensing requirements. No changes to these programs were identified by CNL in order to proceed with the proposed decommissioning activities at Douglas Point. This suite of programs is currently being used to perform decommissioning activities at other CNL sites such as Chalk River Laboratories and Whiteshell Laboratories. CNSC staff have reviewed these programs to confirm that they meet regulatory requirements and are

suitable to support activities across all CNL sites.

CNSC staff assessed CNL's application for the licence amendment, along with the supporting documentation. Following the review of the application, supporting documents, CNL's past performance and CNL's corporate programs, CNSC staff are satisfied that there are adequate provisions in place to safely execute the proposed decommissioning project.

The safety and control or SCA framework is designed to allow CNSC staff to evaluate all applications consistently and provide a platform to ensure that all aspects relevant to safety and security are viewed thoroughly, using a risk informed approach.

The Douglas Point licence environment, five relevant SCAs, as noted on this slide, were selected for discussion in staff CMD, radiation protection, conventional health and safety, environmental protection, waste management and packaging and transport. Radiation protection was selected as increased work in radiological zones and on potentially contaminated equipment will occur during decommissioning.

Provincial health and safety SCA includes conventional hazards as presented during decommissioning of

structures and the handling and removal of hazardous substances.

The environmental protection SCA ensures that the existing monitoring programs are sufficient to capture unplanned releases to the environment that may result from the proposed activities, it is also relevant to the federal lands to review under section 67 of CEAA 2012.

The waste management SCA includes decommissioning as a sub topic. CNL will also continue to generate and handle waste throughout the decommissioning process.

And finally, the packaging and transport SCA acknowledges public interest in the shipment of radioactive material.

Following the finalization of staff CMD, CNL has provided additional information indicating that there is no expected increase in the frequency of radioactive material shipments from the site when compared to the current licence period.

The radiation protection SCA covers the implementation of 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, ALARA.

CNL's radiation protection program meets the requirements of the *Radiation Protection Regulations*. CNL manages radiological exposure of workers who controls stipulated in its radiation protection program, as well as operational control measures defined through its corporate work permit system and ALARA processes.

CNL has not had any radiological occurrences that lead to an action level being reached or exceeded during the current licence period.

CNL conducted a review of the current radiological protection action levels in December 2019. This review considered the proposed decommissioning activities at the Douglas Point Waste Facility. The revised action levels are appropriate. CNSC staff reviewed revised action levels and found that they meet regulatory requirements.

CNSC staff conclude that CNL continues to implement and maintain an effective radiation protection program at the Douglas Point Waste Facility in accordance with regulatory requirements. This existing program is adequate to support the proposed decommissioning activities

outlined in CNL's licence amendment application.

The conventional health and safety SCA covers the implementation of a program to manage workplace safety hazards and to protect personnel and equipment. CNL's existing conventional health and safety program meets regulatory requirements. This program applies to all work performed at the Douglas Point Waste Facility.

CNL's activities during the current licence period have included storage surveillance activities, hazard reduction campaigns and demolition of nonnuclear buildings. CNL successfully mitigated the non-radiological hazards present during this work.

CNSC staff conclude that CNL continues to implement and maintain an effective conventional health and safety program at the Douglas Point Waste Facility in accordance with regulatory requirements. This existing program is capable of safely supporting the activities outlined in CNL's licence amendment application.

Environmental protection SCA covers programs that identify, control and monitor all releases of radioactive and hazardous substances such as asbestos and PCPs and effects on environment from facilities or as the result of licensed activities.

CNL has an effluent monitoring program at the Douglas Point Waste Facility that monitors airborne and waterborne releases from the facility for radiological and hazardous substances. CNL has established derived release limits, or DRLs, at the Douglas Point Site to ensure that the releases of radionuclides from the facilities operations would not exceed the established regulatory limit of 1 mSv per year per member of the public and the public and environment remain protected.

The proposed decommissioning activities are not expected to result in significant releases from the site and CNL has adequate controls in place to detect any unplanned releases.

CNSC staff conclude the CNL continues to implement and maintain an effective environmental protection program at the Douglas Point Waste Facility in accordance with regulatory requirements. This existing program is adequate to support the proposed decommissioning activities.

The CNSC conducts environmental protection reviews of all licence applications with potential environmental interactions in accordance with its mandate under the *Nuclear Safety and Control Act* to ensure the

protection of the environment and the health of persons. These activities to be conducted under the proposed licence amendment would be carried out on federal lands. As such, the proposed project is also subject to the federal lands provisions of the *Canadian Environmental Assessment Act, 2012*.

Therefore, the environmental review for the licence amendment of the Douglas Point Waste Facility included both an environmental protection review under the *Nuclear Safety Control Act*, as well as a federal lands review under section 67 of CEAA, 2012.

CNSC staff's assessment conclusions and recommendations for the environmental review are summarized in the Environmental Protection Review Report for the Douglas Point Waste Facility which is found in Addendum D to CNSC staff's CMD for this hearing.

CNSC staff concluded that taking into account all proposed mitigation measures and their proper implementation the proposed decommissioning activities are not likely to cause significant adverse effects on the environment and people at or around the Douglas Point Waste facility.

CNSC staff also concluded that the

licensee has and will make adequate provision for the protection of the environment and the health of persons. The information provided in this EPR report supports the recommendation in CNSC staff's CMD.

The waste management SCA covers internal waste-related programs that form part of the facility's operations up to the point where the waste is removed from the site to a separate waste management facility. This area also covers planning for decommissioning.

CNSC staff have verified that CNL has adequate waste management and decommissioning programs in place. CNL has processes and procedures in place to characterize, segregate and minimize waste. During the current licence period CNSC staff confirmed through the reviews of DDP's that adequate characterization was taking place in advance of decommissioning activities. A number of nonnuclear structures and facilities were removed during the current licence period in order to reduce the hazards and liabilities present at the Douglas Point Waste Facility in accordance with the approved building specific detailed decommissioning plans or DDP's. These DDP's were reviewed and accepted by CNSC staff.

CNSC staff conclude that CNL continues to

implement and maintain an effective waste management program at the Douglas point waste facility in accordance with regulatory requirements. This existing facility is adequate to support the proposed decommissioning activities.

As part of the licence amendment application, CNL provided a program review detailed decommissioning plan. This is volume 1 of the DDP. This volume is not associated with a specific planning envelope, rather it provides an overview of the proposed decommissioning programs and strategy. It contains details regarding support programs that will be in effect as the site is being decommissioned. It also describes individual facilities in their decommissioning approach schedules, cost and funding and proposed monitoring and surveillance. CNSC staff confirmed that the program overview DDP meets regulatory requirements.

Each planning envelope will be covered by a separate volume of the DDP. Each DDP must be reviewed and accepted by the CNSC before decommissioning activities under that planning envelope can begin. CNSC staff review detailed decommissioning plans against CNSC regulatory Guide G-219, Decommissioning Planning for Licensed

Activities, and CSA N294-14, Decommissioning of Facilities Containing Nuclear Substances.

CNSC staff ensure that licensees have adequate programs in place and that the DDP's contain mandatory information, including, but not limited to, a description of the decommissioning activity, comprehensive and systematic survey results and radiological and other potentially hazardous conditions, waste management plans, and assessment of environmental effects, decommissioning schedules, cost estimates, financial guarantee arrangements, and any public consultations undertaken in the preparation of the plan, including a summary of issues raised and how they were considered and dispositioned.

The flowchart on this slide is intended to clarify the relationship between the various decommissioning plans. CNL currently has a preliminary decommissioning plan for the Douglas Point Waste Facility. Preliminary decommissioning plans are developed as early as possible in the lifecycle of a facility. A PDP documents the proposed operational conditions, the selected decommissioning strategy, the radiological monitoring and survey commitments, waste management strategy, cost estimate and financial guarantee arrangements.

Licensees must review and update the PDP and submit it to the CNSC every five years.

Prior to executing decommissioning activities, licensees must prepare and submit a DDP to the CNSC for acceptance. The DPP refines and adds details to the PDP. The licensee may consider dividing a complex site or facility into a number of relatively independent decommissioning project's. For example, a large facility may be divided into areas such as the proposed planning envelopes that are relatively physically independent from one another.

For sites preparing to undergo decommissioning with more than one facility, the licensee should submit a DDP for the entire site to the CNSC for acceptance. In such cases, this site DDP will be prepared to cover all planning envelopes. The project overview DDP is a site-wide DDP for the Douglas Point Waste Facility.

Facility specific DDPs for each planning envelope will also be submitted to CNSC staff for review and acceptance prior to executing the decommissioning activities under that planning envelope.

Facility specific DDP's refine and add additional information to that provided in the site wide

program overview DDP.

Packaging and transport SCA covers programs for the safe packaging and transport of nuclear substances to and from the licensed facility. CNSC staff confirmed that CNL has implemented a packaging and transport program that meets the requirements in the *Packaging and Transport of Nuclear Substances Regulations, 2015* and the *Transportation of Dangerous Goods Regulations*.

During the current licence period, CNL has made -- I believe they corrected the number of shipments in their presentation, they made a number of shipments at both intermediate level and low level waste. There have been no events related to the transport during the current licence period. CNL expects one additional shipment of intermediate level waste and 20 shipments of low-level waste will occur in the proposed licence period.

CNSC staff concludes CNL's packaging and transport meets regulatory requirements and is adequate support in the proposed decommissioning activities.

I will now turn the presentation back over to Candida Cianci, Director of the Canadian Nuclear Laboratories Regulatory Program Division.

MS CIANCI: Thank you. Candida Cianci,

for the record.

The next few slides provide a discussion on the proposed licence changes.

CNSC staff are proposing that the Commission take this opportunity to implement the standard licence format and applicable standard licence conditions for this type of facility. Standardized sets of licence conditions have been established to ensure consistency of language and approach in establishing licences.

The proposed licence and draft LCH have been prepared following the standardized format and using wording that has already been incorporated in several Class 1 licences that have been issued following public hearings.

The proposed licence and draft LCH provide clarity and conciseness, while maintaining regulatory rigor and no reduction in regulatory requirements or oversight for the proposed facilities and activities going forward.

CNSC staff's recommendation regarding the proposed licence period is founded on a safety case associated with the requested activities to include the associated hazards with the decommissioning activities.

CNL has not requested a change to the current licence period, however CNSC staff recommends that

the licence period be aligned with the proposed activities by revising the expiration date of the licence to December 31st, 2030. This would align with the schedule for planning envelopes A, B and C.

In the next few slides I will summarize CNSC staff's consultation activities and the participant funding provided in relation to this hearing.

In February 2019 the CNSC posted a Notice of hearing on the CNSC website. The same notice was sent out to our e-mail subscriber list. As this hearing was delayed due to the impact of the COVID-19 pandemic, two revised Notice of Public Hearings were posted to reflect the revised hearing dates.

Due to the ongoing pandemic, in-person outreach activities have not been possible. However, CNSC staff hosted a total of four virtual webinar sessions in both official languages to inform the public on the role of CNSC on the next steps of the licence amendment process and on how to participate and intervene in today's public hearing. The webinar sessions were well attended and results from polling questions and participant feedback forms indicated that the majority of participants found the sessions to be informative in better understanding the

proposed licence amendment.

This hearing was also advertised through an information flyer mailed out to households within a 30 km radius of the Douglas Point Waste Facility site, as well as a series of social media posts.

Next I will provide information on engagement with Indigenous groups.

The CNSC is committed to meaningfully engaging and consulting Indigenous groups with respect to CNSC-regulated facilities and activities. CNSC staff identified the following groups that may have rights or interests related to the Douglas Point licence amendment. The Saugeen Ojibway Nation, or SON, which is comprised of the Anishinabe people of the Chippewas of Nawash unceded First Nation and Chippewas of Saugeen First Nation, the Métis Nation of Ontario and the historic Saugeen Métis.

CNSC staff have existing relationships with these groups and engage regularly under their respective signed terms of reference. CNSC staff conducted a number of Douglas Point specific consultation activities to ensure that any concerns about potential impacts to Indigenous and/or treaty rights could be understood and addressed.

CNSC staff sent letters of notification to the identified groups in October 2019. These letters provided information regarding the proposed licence amendments, the availability of participant funding and details on how to participate in the hearing process.

CNSC staff met with these groups in person and remotely to discuss the Douglas Point licence amendment and CNSC staff provided updates and maintain open lines of communication as the hearing and consultation process adapted to the pandemic context.

Each group has expressed a strong interest in ongoing engagement and consultation as decommissioning progresses. Topics of interest or concern include their involvement in environmental monitoring, the protection of lands, waters and wildlife, potential impacts to indigenous and/or treaty rights, the safe transport and management of radioactive and hazardous wastes, and estate planning such as rehabilitation or restoration of the site, and known or potential sites of archaeological value.

CNSC staff are committed to continue working with groups to address these concerns on an ongoing basis. High level responses from CNSC staff to each group's concerns are included as an annex to this

presentation. CNSC staff have also verified that CNL has met the requirements of REGDOC 3.2.2, Indigenous engagement.

The CNSC Participant Funding Program, or PFP, has been implemented to assist members of the public, Indigenous groups and other stakeholders in providing value-added information to the Commission through informed and topic specific interventions.

Through the Participant Funding Program, the CNSC awarded over \$97,000 to the seven recipients listed on this slide to participate in the Douglas Point regulatory process. All seven recipients have submitted interventions and six will be making oral presentations over the course of these proceedings.

The interventions expressed concerns on a number of topics. These are summarized on this slide. Detailed responses to each area of concern are provided in the table annexed to this presentation.

I will now pass the presentation to Ms Murthy for the final remarks and recommendations to the Commission.

MS MURTHY: Thank you, Candida and Kevin.
For the record, my name is Kavita Murthy.

The next few slides summarize the conclusions and recommendations from CNSC staff's review of CNL's licence amendment application for the Douglas Point based facility.

With respect to section 67 of the *Canadian Environmental Assessment Act, 2012*, CNSC staff conclude that the carrying out of the proposed activities is not likely to cause significant adverse environmental effects, taking into account the proposed mitigation measures.

With respect to paragraphs 24(4)(a) and (b) of the *Nuclear Safety and Control Act*, CNSC staff concludes that CNL is qualified to undertake the activities proposed in the licence amendment application 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 national security and the measures required to implement international obligations to which Canada has agreed.

Based on the CNSC staff's assessment of the current licence application, and on CNSC staff's knowledge of CNL's safety and control programs and its compliance history, we recommend that the Commission make a determination that carrying out the proposed

decommissioning activities at the Douglas Point Waste Facility is not likely to cause significant environmental effect in accordance with section 67 of the CEAA 2012.

Authorize the delegation of authority as set out in section 4.7 of CMD 20-H4 for licence condition 3.1 on reporting and amend the waste facility decommissioning licence for the Douglas Point based facility as per the proposed licence.

This concludes CNSC staff's presentation. CNSC staff are available to answer any questions that the Commission may have. Thank you for your attention.

THE PRESIDENT: Thank you, Ms Murthy, Ms Cianci and Mr. Ross, for the presentation.

We will now take a break before the presentations by the intervenprs and we will reconvene at 10:50 a.m. So we will see you in 15 minutes. Thank you.

--- Upon recessing at 10:35 a.m. /

Suspension à 10 h 35

--- Upon resuming at 10:50 a.m. /

Suspension à 10 h 50

THE PRESIDENT: Welcome back.

Before we proceed with the interventions, we would like to take a moment to recognize two important contributors to Commission proceedings from the Grey Bruce region who have passed away in 2020.

Our thoughts are with the extended families and friends of Mr. Eugene Bourgeois who was to participate in this hearing, and Mr. Ziggy Kleinau, two active and thoughtful intervenors who made a significant contribution in Commission licensing matters.

May they rest in peace.

Marc, over to you.

MR. LEBLANC: Thank you.

We will now move to the interventions. Before we start, I would like to remind intervenors appearing before the Commission today that we have allocated 10 minutes for each oral presentation and it would be appreciated if you could help us in maintaining that schedule.

Your more detailed written submission has already been read by the Members and will be duly considered. There will be time for questions from the Commission after each presentation, and there is no time limit for the question period.

I will ask that once your presentation is over and the associated question period is also completed, that you leave the Zoom session. You will be able to continue following the hearing via the live webcast on CNSC website.

Madame la Présidente.

THE PRESIDENT: The first submission is from Mr. Benoit Robert Poulet, as outlined in CMD 20-H4.5.

Mr. Poulet, my understanding is that you do not have a presentation per se, but would like to provide a short summary before I open the floor to the Commission Members for questions.

So the floor is yours, Mr. Poulet.

CMD 20-H4.5

Oral presentation by Benoit Robert Poulet

MR. POULET: Thank you very much.

Members of the Commission, commission staff and the other remote hearing participants, good morning. For the record, my name is Benoit Robert Poulet and many of the people listening today may already know or remember me as I have worked in the nuclear power industry

and its regulation for just over 40 years.

I started my career in Ontario Hydro in 1980 -- now OPG -- during the construction, commissioning, the beginning of operation of the Bruce Nuclear Power Reactors. I later joined the AECB, which later became the CNSC, where I worked in a wide variety of technical positions.

I retired from the CNSC in 2018 as the Director of the Gentilly-2 Point Lepreau Regulatory Program Division. During my tenure in that position I oversaw the return to service of the Point Lepreau reactor following the five-year refurbishment outage and the transitioning of the Gentilly-2 reactor from full power operation to the safe storage state.

I consider myself fortunate to have had the opportunity to work in all phases of the nuclear power plant life cycle, as well as the opportunity to visit the Douglas Point facility, both when it was still in operation and when it was being placed in the safe storage state.

CMD 20-H4.5 is the full report on my review of the CNL and the CNSC staff CMD's. My oral presentation today will be limited to the three main points of that report. I would like to point out that some of the

points I will raise presently were already touched on by both the CNL and the CNSC staff presentations so there may be a bit of repetition. I apologize for that.

The first point concerns the radiological protection of the workers who will be dismantling the nuclear systems. This work is part of planning envelopes B and C that is expected to begin in 2022 and 2023.

It is important to note the CNL detailed decommissioning plans for these planning envelopes have not yet been submitted nor reviewed by CNSC staff. This means much of the information is still pending and only expected after this hearing.

The experience gained from the Canadian refurbishment and decommissioning projects shows that uptakes of alpha radiation emitter's can pose a radiological risk to the workers that are performing the work on these nuclear systems.

Although these types of uptakes are for the most part preventable, they unfortunately have been repeating themselves here in Canada. One of the more recent of these events was in February 2018 at the Darlington Plant. A similar event occur in November of 2009 at the Bruce Plant. There was also another earlier

event at the Chalk River site involving workers that were dismantling a ventilation system from a decommissioned processing facility. I believe the Chalk River event occurred in the 1990s.

These are just three of the events that involve internal uptakes of alpha radiation emitter's or contamination by the workers. All were preventable and all occurred at licensing facilities which had radiation protection programs reviewed and accepted by the CNSC and its staff, as is the case for the current CNL program.

I looked into the IAEA IRS database and found that other countries have reported about 10 reports involving alpha radiation emitter's which have been provided by these countries.

The points that I raised in my report were intended to clarify the following:
the CNL CMD was very clear that it considered its whole experience in quite detail and to improve their own safety performance. They were quite detailed in that, but it didn't touch too much on the information that may be coming from the external sources. So I wanted to determine exactly what kind of depth and range that program would be using.

The events that -- as I mentioned, the events involving uptakes of alpha emitters by workers who are opening or dismantling nuclear systems can be prevented when adequate measures are in place. In my view, the Canadian workers should not have to live through another reputation of these types of events at a Canadian nuclear facility. So I would like to ask CNL if possible if they could, at the completion of my presentation, provide more information on the alpha program for planning envelopes B and C.

The second point also concerns worker safety in terms of emergency response services such as firefighting. Contrary to CNSC staff, which did not consider this safety and control area to be relevant for this hearing, I do believe this SCA to be relevant based on the experience gained from the Gentilly-2 decommissioning.

The CNL CMD states emergency services are being provided by Bruce Power through a contractual agreement. I understand this to mean the Bruce Power fire brigade would respond in the event of a fire on the Douglas Point Waste Facility Site.

Early in my career I belonged to the Bruce Industrial Fire Brigade. All members of this brigade

received training, performed regular drills and participated in the development of fire attack plans for all buildings in areas of the plant. Prior knowledge of the buildings and areas of access routes, their contents in terms of flammable, toxic or explosive materials, location and types of available firefighting equipment is obviously very useful when you are responding to fire.

The conduct of the decommissioning and dismantling activities at the Douglas Point site will definitely impact the site configuration and likely bring changes in terms of the content of the remaining buildings and areas.

I believe these changes should be reviewed to determine whether the fire protection measures and response plan remain adequate through the different phases of the Douglas Point Waste Facility decommissioning and dismantling.

The points I raised in my report were intended to obtain additional information on activities such as drills and fire planning that are conducted by Bruce Power during the current licensing period in order to determine the level of effort and readiness being maintained at the Douglas Point Waste Facility. Also, I

wanted to determine whether the changes to the Douglas Point Waste Facility site resulting from the decommissioning dismantling activities will be reviewed to ensure the level of readiness response remains adequate.

My third and final point concerns this CMD prepared by CNSC staff. Unlike CNL, CNSC staff determine only five of the 14 CNSC safety and control areas were relevant to the review of the CNL application. This CNSC staff determination suggests that the information provided by CNL concerning the other nine safety and control areas was not considered or included as part of the basis for the CNSC staff recommendation.

Additionally, as stated in my report, the CNSC staff determination of the packaging and transport SCA has been relevant to the CNL application because of the likely increase in the frequency of dangerous goods shipments appears to be in contradiction with the CNL information provided in its CMD. It shows actually the estimated number of shipments for the remainder of the requested licence period to be lower and not higher.

CNSC staff also rated the CNSC safety performance of the five relevant SCAs as satisfactory. The basis for this determination is mostly attributed to CNL

having developed and implemented corporate wide programs that are also applicable to the Douglas Point waste facility and not expected to change significantly during the next licensing period. The basis of these satisfactory readings, a word by CNSC staff, does not however appear to be supported by the conduct of the CNSC staff appliance verification activities at the site proper. This is one of the areas where the CNSC staff presentations stated that in 2019 there was one inspection and in 2020 one inspection. This is the information we have right now.

THE PRESIDENT: Thank you.

Mr. Poulet, are you finished? I think you have --

MR. POULET: No, I have two minutes more. May I?

THE PRESIDENT: Make it quick, please.

MR. POULET: Yes, okay. Okay.

One important -- the only last point I want to make regarding these SCAs is that there is the *Nuclear Safety and Control Act* where it is created and refined over time by the CNSC itself to openly show the areas which were important to safety and part of the CNSC regulatory mandate. These SCAs were communicated to all

major licensees, who in turn have used them for years in their submissions and applications to the Commission, as CNL is not in the application brought forth to this hearing.

For CNSC staff not to conform to these SCA frameworks and not explain the basis for not considering them to be relevant, essentially invalidates that framework which has been adhered to for years.

This completes my oral presentation. I would like to thank you for the opportunity to participate in this hearing and I will remain online to answer any questions you may have. Thank you for giving me an extra two minutes.

THE PRESIDENT: Okay. Thank you for your intervention, Mr. Poulet.

I will open the floor up for questions and start with Dr. Demeter.

MEMBER DEMETER: Thank you for your presentation. There are a number of issues I will hit, but I will start with four CNL, during your presentation you talked about having a contract with Bruce Power for fire and I wanted to confirm that the contract for services includes Fire, Hazmat, Medical and Security and does that

contract last for the duration of your current planning envelopes before us for consideration and, if not, what is Plan B?

THE PRESIDENT: Mr. Schruder...?

MR. SCHRUDER: Kristan Schruder, for the record. Before I pass it over to Ian Bainbridge to speak a little bit more specific about our services provided by Bruce Power, I can confirm that we do get the services that you have referred to through Bruce Power and this is incorporated into our management system that we have. So I will pass it over to Ian Bainbridge.

MR. BAINBRIDGE: Ian Bainbridge, for the record. Yes, we have an ongoing contract with Bruce Power that does cover fire services, emergency services, so that is medical emergencies. So any emergency response would require Bruce Power there to provide. They obviously have the capabilities, they have thermal complex, nuclear buildings on their site and are able to provide that service and every indication is they are happy to carry on doing that and we will continue to extend that contract as we go forward.

There was a question on Plan B. We obviously are capable of providing our own service if

required, but we see no requirement to do that in any foreseeable future.

THE PRESIDENT: Thank you.

Dr. Berube...?

MEMBER BERUBE: Mr. Poulet, thank you for your presentation. I just want to check that you can hear me, if everybody can hear me?

THE PRESIDENT: Yes.

MEMBER BERUBE: That's wonderful.

I note in your written presentation you are asking specifically about -- and you just mentioned it again during your oral presentation, the idea of integrating lessons learned from previous works and also from other operators and incorporating this into your management systems as well as your procedures and processes for decommissioning work.

If you could talk to me about how you actually track this. You are doing quite a bit of decommissioning work on this site and other sites as well and could you explain to me, how do you actually pull that information and transfer that and get that into your management systems and make sure that that learning is actually being conveyed to your line managers and the

actual people doing the work?

THE PRESIDENT: Mr. Gull...?

MR. GULL: Mike Gull, for the record.

Before I hand it over to George Dolinar for some more detailed information about CNL and organizational living across Canada, I think I would just like to reflect on the kind of learning that the GoCo model brings to CNL. I mean the fundamental premise of that model is to bring the world international decommissioning experience into CNL. So it can learn from the events that have occurred in America and Europe and elsewhere around the world. So, you know, we have, if you like, the basic construct here is to bring that learning into CNL.

And then beyond that we have, for example, some specific projects, for example, some of the projects, for example some of the projects carried out at Chalk River where we bring additional experience, particularly to deal with alpha hazards into our buildings. These are experienced -- people who have experienced and performed the same kind of work in the USA or Europe. So we really do try and bring that international learning into CNL as part of this GoCo construct.

So I think it is a really, you know,

useful vehicle for bringing our learning into CNL and making sure that Canada doesn't, if you like, embark upon activities without taking that learning on board and into their arrangements.

MR. DOLINAR: George Dolinar, for the record, Director of Environmental Protection For Canadian Nuclear Laboratories.

Yes, I will pick up on a couple of things. So one was the intervenor raised, you know, how we share information about previous events involving radiation protection. So we, you know, keep very aware of industry OPEX. The specific items raised by the intervenor were incidents that took place in the Canadian nuclear industry. I think it is important to mention that CNL, as well as the nuclear utilities all participate in a cog radiation protection managers forum. We are regular participants in that forum.

During those meetings we share insights and we share our, you know, issues, incidents, potential remedies and how we have dealt with issues within our organization. So there is a broad amount of sharing that happens within that radiation protection managers forum.

I think I should also mention that of

course for radiation protection, you know, there is a very systematic approach to identifying hazards and then putting appropriate controls in place to support work. This includes things that have already been mentioned, but things like procedures and part of the management system, but also extending eventually into things like the use of appropriate PPE. And of course for radiation protection we also have worker surveillance in the form of external dosimetry and also internal or bioassay. Thank you.

THE PRESIDENT: Thank you.

Moving on to Dr. Lacroix, please.

MEMBER LACROIX: Can you hear me?

THE PRESIDENT: Yes, we can.

MEMBER LACROIX: Okay. Thank you. Thank you very much, Mr. Poulet, for your presentation. It is always interesting to read you and to benefit from your past experience. You have raised a number of very interesting points and I would like to pursue the issue raised by Dr. Berube. This question is addressed to CNL. You have talked about sharing information and knowledge with OPEX. But I was wondering, is there an actual well-established knowledge management program within CNL that would allow you to benefit from this information and,

most of all, transfer this information to other decommissioning project's that will appear in the future?

THE PRESIDENT: Mr. Gull...?

MR. GULL: Yes. Mike Gull, for the record.

I think the high level answer to that one is we have a -- we run the decommissioning program, the whole program across CNL as exactly that, a program of work, where we share information between the sites and we share people between the sites and we have regular, if you like, opaque sharing kind of programs between those sites. So, you know, we do have an effective knowledge management transfer system that allows us to spread learning from each of the buildings and each of the sites to each other to avoid, again, having, if you like, any repeat event to make sure that we do learn from our experience.

I think I would like to pass that across to Mr. Kristan Schruder for any further specific comments on his part of that reactor decommissioning program.

MR. SCHRUDER: Thank you, Mr. Gull. I think it's -- just one important thing to note is that, you know, we do have a comprehensive operating experience program which is captured underneath our CNL's performance

assurance program.

As we spoke a little bit, we do obtain OPEX from a large number of sources, including the generation of bulletins as a result of CNL activities, external OPEX from across the industry. We've spoken about the CANDU owner's group. We also from the IAEA and some other international decommissioning sites like Oakridge and Fernald, and regulators as well, such as the CNSC.

So this program shares OPEX across the organization for implementation of all aspects of our work. So our internal sharing is, you know, is done through bulletins to all CNL staff and we've had in excess of 250 bulletins between 2015 and 2020.

You know, this helps ensure that we are sharing that knowledge across our industry and particularly in our area of decommissioning.

THE PRESIDENT: Thank you. Dr. McKinnon?

MEMBER MCKINNON: Yes, thank you. I also would like to ask some questions about operating experience. It is a very important topic.

Most of the issues have been answered very clearly but I note that a lot of the activities proposed for Phase 3 are similar and some of them have already been

done in the current phase, 1 and 2. So there's a fair amount of direct operating experience at the site and especially with demolition.

And the point I want to ask for of CNL is it was mentioned in the CNSC reports that, in the past period, 2014 to 2019, that CNSC staff had conducted a number of inspections resulting in some actions and recommendations and these have all been completed.

But I'm curious as to what kind of issues come up? If you could just describe some of these actions and recommendations that were addressed in terms of the lessons learned. Thank you.

THE PRESIDENT: Mr. Schruder?

MR. SCHRUDER: Yeah, Kristan Schruder, for the record. Thank you for that question. Before I do pass the question over to Ian Bainbridge to speak a little bit about some of the issues and how we've resolved those.

As we did point out, you know, through our presentation as well as through CNSC's presentation, we've had a number of inspections completed over the last number of years, since 2014, to ensure that we are following, you know, the required regulations as required as per our site licence. So I'll pass it over to Ian Bainbridge.

MR. BAINBRIDGE: Ian Bainbridge, for the record. Yeah, I don't have the entire list of the recommendations with me but the ones that leap immediately to mind, we have walkaround and, as we're doing some of the inspections, there was one example, one of the fire doors didn't quite latch again properly so it needed a bit of maintenance work just to repair that door.

There was -- during the work we're doing currently to put some new lighting systems into the reactor building, as part of that work, they've moved one or two of the fire indication signs that tell you there's a fire extinguisher here. They'd had to move it because that's where they were going to place something and we haven't quite updated the position of the new sign.

Another example would be on some waste drums. They were actually empty but we hadn't labelled them properly as empty just yet.

So it's recommendations along those lines that we've been dealing with and working our way through.

MEMBER MCKINNON: Okay. So you could generalize that these are all very minor issues?

MR. BAINBRIDGE: I would consider them, yes.

MEMBER MCKINNON: Okay. Thank you very much.

THE PRESIDENT: Thank you. Dr. Demeter.

MEMBER DEMETER: Thank you. I just wanted to follow up on my first question for CNSC. So there's going to be a lot of accelerated activity going from storage with surveillance mode to an accelerated decommissioning.

I wanted to know if CNSC has evaluated the capacity of Bruce to provide medical, hazmat, fire and security services? And is there a separate consideration that there's going to be more individuals coming on site to go to CNL but are having to go through Bruce Security and have to transverse through Bruce property to get to CNL?

So, first question, has there been a capacity analysis to make sure they can manage this surge? And, two, are there any additional security considerations that you've had to take into consideration on all these contract workers coming through Bruce itself?

MS MURTHY: Thank you. Kavita Murthy, for the record. I would like to have us specialists in emergency management and -- emergency management division and nuclear security division to add to the response to

this question.

I would like to start off by saying that the overarching responsibility for maintaining site safety and security is the responsibility of CNL regardless of whether the services are being provided by Bruce or provided by CNL.

So, as the site owner and as the licence holder, they are responsible.

CNL also needs to have good oversight over the contractors that work on their site and make sure that the contractors are doing their work properly. And these are all requirements that CNL has managed at their other sites as well as on this site very effectively because they -- many of their activities across Canada are, in fact, activities that are conducted by contractors.

I see that my colleague from emergency management is on so I'll have her start the response, followed by nuclear security division.

MS KANASEWICH: Good afternoon or good morning, my name is Elaine Kanasewich. I'm the Acting Director for the Emergency Management and Programs Division.

Indeed, as was mentioned before, there is

a contract in place between CNL and Bruce Power where they provide emergency response services using the Bruce Power emergency response team and, in this contract, CNL must provide the Bruce Power emergency response team with access to the site so that they gain familiarity with the locations of buildings and any changes to the configurations of the site.

And, as a result, they are also familiar with how many people will be on site at any one point in time and the EMPD staff are confident that there is enough capacity in the Bruce Power emergency response team at this time to adequately respond to any additional site present on -- site staff present on the site.

MS MURTHY: Thank you, Elaine. Kavita Murthy, for the record. I have a colleague from nuclear security division to address the question related to site security, please?

MR. SNOW: Michael Snow from the Nuclear Security Division of CNSC.

Bruce Power has physical protection systems and a security program that's equivalent to high security nuclear facilities. It has a very robust site access clearance program for all persons and materials

accessed on the site.

CNL has formal arrangements with Bruce Power, which has nuclear security officers and armed nuclear response force officers to respond to security incidents and to perform routine patrols at Douglas Point Waste Management Site.

There are no security concerns with persons accessing this facility by going through the normal Bruce Power access process.

MS MURTHY: Thank you, Mike Snow. I would like to now ask Mr. Ramzi Jammal because he would like to wrap up this response. Thank you.

MR. JAMMAL: Thank you, Madam Murthy. Mr. Ramzi Jammal, for the record.

I would like to reiterate to the Commission what my colleagues have done. We did review the program of the licensee. The licensee is responsible for implementing the programs as established by the Commission.

We had a discussion about the OPEX. the PDP requires CNL to have OPEX in place and, for us, we do regulatory oversight on an ongoing basis at two levels. First, we will go back and review the program based on any experience we gain internationally or nationally. Second,

if there are non-compliance or deficiencies in the regulatory oversight, we do -- we did take action and we will stop the fact that the operations are not being safe or if the OPEX information we gain requires changes to the program, we impose such changes to the program.

To close, the licensee, as mentioned by Ms Murthy, is responsible for the safe operations and their obligations to contractors just as equally to us, no difference between an employee of CNL or contractor of CNL, CNL must control the licensed activity to our satisfaction.

So all these programs are in place and, for now, the programs are adequate for us to propose our recommendation and we will do the oversight accordingly and take actions if needed based on the performance of the licensee. So thank you.

THE PRESIDENT: Thank you. I have a question for CNSC staff, Ms Murthy. The intervenor made some comments around the SCA framework and why did the CNSC staff submission only look at five. Maybe you can clarify that for the record, please?

MS MURTHY: Kavita Murthy, for the record. CNSC staff regulatory oversight, over the years, expanded the review and assessment of all safety and control areas.

When it comes to specific requests, we will get -- we will review all the documents in the context of the request and we will also review any other relevant programs that are impacted by the request.

So the impression that we have not looked at the other programs or we are somehow dismissing the other safety and control areas as not important, I wish to state very clearly that all safety and control areas are looked at on an ongoing basis and, as the Commission knows, we do come to the Commission every year and present our review of the licensee programs and we do report on any highlights on any safety and control areas that are worth -- that have -- that capture major changes to those.

I would like to also speak to the subject of the transport safety and control area. The Intervenor is right, there is going to be, in fact, less transport during this licence period than there has been in the past. However, from our experience with these hearings and other hearings, and understanding that the Intervenors and the intervening -- the host communities have expressed consistently concerns about transport, we wanted to bring it up here so that it was going to be one of the featured ones today so that we could, if needed, give you more

information on that.

That does not mean that we have singled it out because it is a more -- they are going to undertake more hazardous activities on transport. Transport has been and remains a very safe activity that has been conducted by this licensee and others very safely across all types of nuclear activities. Thank you.

THE PRESIDENT: Thank you for that clarification. So, Mr. Poulet, thank you for your intervention and we will now move to our next one.

The next presentation is from the Métis Nation of Ontario as outlined in CMD 20-H4.6 and I understand that Mr. David Dusome will present this submission. Mr. Dusome, the floor is yours.

CMD 20-H4.6

Oral presentation by Métis Nation of Ontario

MR. DUSOME: Thank you. My name is David Dusome and I am the chairperson for the Métis Nation of Ontario, Region 7 Consultation Committee representing the Georgian Bay Traditional Territory.

I sit on the provincial council of the

Métis Nation of Ontario and I am the councillor with Region 7.

I have been involved with the MNO Region 7 governance since 2007. I am supported today by members of my Region 7 Consultation Committee and MNO staff, including Erin Hadaway, President of the Moon River Métis Council; Greg Garratt, President of the Georgian Bay Métis and Captain of Hunt; Tony Muscat, Chairperson of the Barrie Simcoe Métis Council; Peter Coture, President of Great Lake Métis Council; Roxanne Shanks, the President of Barrie South Métis Council; Robert Pinkney, Youth Representative with the Georgian Bay Traditional Territory; Alden Barty, Consultation Advisor with the Métis National of Ontario, Lands, Resources and Consultation Branch; and Jesse Fieldwebster, Manager of Nuclear Energy for the Lands, Resources and Consultation Committee.

Within the MNO, Regional Consultation Committees are composed of the presidents of the community councils within the region plus a chairperson, regional councillor and captain of the hunt.

The Regional Consultation Committees' role is to represent the right to holding citizens of a region for the purpose of the duty to consult and accommodate.

Leaders are elected for each of the community councils every four years. These community councils serve as the main connection point between MNO citizens and the provincial leadership.

The provincial leadership takes the form of provincial council of the Métis Nation of Ontario. The BC MNO deals with issues and decisions that affect the Métis as a whole throughout Ontario.

The BC MNO has an executive section with five members, nine councillors for the different regions of Ontario, representatives for the youth and four senators.

The Métis Nation of Ontario and the government of Canada also recently signed the MNO-Canada Métis Government Recognition and Self-Government Agreement on June 27, 2019. This was the first time that the Métis' inherent right to self-government was recognized.

This process is the beginning of the MNO peeling back the policies that have historically encroached on Métis rights through an inherent colonial relationship.

Region 7 is an area that has deep historical roots based on locations, customs and traditions. Region 7 includes many verified Métis family lines that were in the area before effective control.

We are here today because it is important that we continue to show Canada and proponents that Métis people continue to occupy our lands and territories and decisions made about our territory requires our involvement.

Over the past few years, Region 7 and the CNSC have been working together to build a more collaborative relationship. This is represented with the CNSC-MNO agreement signed in December 2019.

Our participation in this hearing today will help further this relationship. I would like now to pass it the remainder of the presentation over to Germaine Conacher. Thank you.

MS CONACHER: Thank you, Councillor Dusome. My name is Germaine Conacher. I'm from MNP and work as a consultant to the MNO.

So my team and I have supported Region 7 in the Indigenous Consultation Process for several nuclear energy projects in the area.

Part of that support is to review applications like the one before the Commission today as well as conduct community-based research.

For the Douglas Point Decommissioning

Application, we note that consultation is on the lower end of the spectrum, however, this determination does not mean that there are no potential impacts to Métis rights and interests. Consideration should not only be given to current use of the site.

A way to approach assessment of harvesting rights that is more inclusive of the right itself, beyond current use, is through consideration of perceptions and behaviours.

This type of work was previously done or was executed by Region 7 with the support of both Ontario Power Generation and Bruce Power to assess trends not specifically tied to physical impact.

So, while this wasn't done for the Douglas Point Project, there are concepts from that research that can be considered here. As for example, do MNO citizens avoid harvesting on lands and waters in proximity to nuclear energy projects? Do MNO citizens avoid harvesting during construction or demolition activities and how does transportation of nuclear waste impact citizens?

So, through this earlier work, we found that there were negative perceptions held by citizens on a variety of aspects. So, as an example, one question asked

was how far Métis harvesters stay away from nuclear developments while exercising their rights? And in year one of the survey, the majority of respondents know that they would stay more than two kilometres away from nuclear developments.

So we categorize this as a negative perception or a negative trend.

In year two, the number of people that indicated they would stay more than two kilometres from nuclear developments actually increased. So the negative trend was continued.

Another question asked of participants was would Métis harvesters avoid consuming resources collected in proximity to nuclear developments and this result remained consistent over the two years of survey data, with respondents noting they would avoid consuming resources in proximity to nuclear developments.

So while harvesting rights are typically considered as part of regulatory processes, we want to note that the MNO also asserts a variety of other Indigenous rights and those include commercial right to harvest, the right to continue to exist as a distinct Métis community, the right to protection of Métis culture, language,

traditions and way of life, the right to continue to rely on sustenance, cultural, social and economic resources within their territories and the right to be meaningfully consulted and involved in decisions that will affect the youths and future of those territories and the right to share in benefits flowing from the development and youth of those territories.

So, in addition to consideration of the project on harvesting rights, the CNSC has the opportunity to further consider some of the other rights asserted by the MNO such as governance and the right to have input on the future use of the Georgian Bay traditional territory.

So while we understand the duty to consult is not triggered by historical impacts, historical context can inform the scope of that duty and, where resources have long since been altered, the issue is not about the duty to consult but negotiations around accommodations.

As we know, the original construction and operation of Douglas Point was in the 1960s which displaced Métis peoples from the area without consultation. So this has resulted in restrictions on the exercise of harvesting rights on the project site today.

But, in 2016, Canada declared its full

support of the United Nations declaration on the rights of Indigenous peoples and there's -- UNDRIP talks about negotiation being about accommodation where Indigenous peoples have the right to redress by means that can include restitution or, when this is not possible, just fair and equitable compensation for the lands, territories and resources which they have traditionally owned or otherwise occupied or used which have been confiscated, taken, occupied, used or damaged without their free prior and informed consent.

So Region 7 believes this approval process, as well as any process use that occur within the Georgian Bay Traditional Territory are an opportunity to build a government to government relationship and we hope that a strong relationship with CNSC and CNL can continue to be built that's future-looking, collaborative and based on these principles of reconciliation.

So, additionally, we also hope that, through the submissions and the presentations, MNO's rights are better understood and assessed in a meaningful way that past impacts can be understood. Thank you.

THE PRESIDENT: Thank you very much, Mr. Dusome and Ms Conacher, for the presentation.

I'll open up for questions and start with Dr. Berube.

DR. BERUBE: Yes, well, thank you for your presentation. It's always a pleasure having you come before us and speak on your concerns with MNO's experience, especially historical experience and ongoing relations across the board, as you pursue your agenda to rectify historical issues.

One of the questions I need to ask you is given Douglas Point in particular, because this is what we're dealing with here, looking at your experience with both CNSC and CNL in terms of the consultation process, could you speak to me about your experience to date that you've had with both of these agencies, and do you believe there's any room in that for improvement and what that would be?

MS CONACHER: I'm going to let Councillor Dusome respond to that one.

MR. DUSOME: Our relationship with Bruce Power and CNSC have been very very forthcoming and very welcoming. We've had nothing but good consultation committees and meetings with them, so everything's a plus there.

MS CONACHER: I guess I would add -- sorry, Germaine Conacher, for the record, add to that in terms of just some broader context around the relationship with CNL.

I know that -- you know, Councillor Dusome explain the sort of governance structure of the MNO. So the relationship with CNL would be fairly new for Region 7, because this is one of the first CNL applications that Region 7 has been involved with. However the MNO in other regions has been working with CNL. So, you know, it might be more in its infancy in this region, but is perhaps more established in other regions.

THE PRESIDENT: Okay. Moving on to Dr. Lacroix then.

MEMBER LACROIX: Well, thank you very much for this presentation. Madam Conacher already raised this issue, and I would like to pursue on this matter.

You've mentioned that you maintain or you keep a good relationship with CNSC through consultation meetings. But what would be, according to you, the next step in a sense that you would leave I would say a stronger footprint on the safety issues that are of concern to the MNO within a safety context of CNSC?

MS CONACHER: David, do you want me to answer that one?

MR. DUSOME: Yes, please. Would you?

MS CONACHER: Okay. So Germaine Conacher again. So I think one of the things that we've understood from sort of the previous community-based research is -- I don't know if it's necessarily as much about specific concerns with the safety program, it's more understanding and providing information that is meaningful and accessible to Métis harvesters and Métis citizens.

So what we've been trying to do with the community-based research is look at attitudes and trends with peoples perceptions and fears, and see is there things that can be done by either the regulator or different proponents that can impact that perception or those fears and, you know, does doing those things actually help alleviate some of those concerns? So education programs, tours, accommodation measures, MNO involvement in decision making or processes, sort of looking at those things, does that help with concerns about safety?

And I don't think we have the answer for that yet, we've only been able to kind of collect the two years of data, but I would say that I think it's more about

how people perceive those things unnecessarily than specific concerns around -- well, I mean the concerns are around safety, but it's about people's perceptions of that safety and their ability.

MEMBER LACROIX: Okay, that's great.

Thank you.

MR. FIELDWEBSTER: Jesse Fieldwebster here, also from the Métis Nation of Ontario, Manager, Nuclear Energy Lands Resources.

Just to add to Germaine's point. One of the collaborative items that we've been working on with the CNSC is MNO involvement. So just an involvement in CNSC monitoring, and that does help to bring some level of certainty with regards to the stringency of the CNSC's ongoing monitoring programs. It's just an example I'd like to throw out there is a positive ongoing relationship.

THE PRESIDENT: Great, thanks for sharing that. Over to Dr. McKinnon.

MEMBER MCKINNON: Yes, thank you. I have a specific point that was raised in the interventions. The question is to the Métis Nation of Ontario.

In the intervention it was recommended that air quality, noise and visual quality, specifically in

relation to Métis rights and interests be explored during the decommissioning.

So my question is is the consultation process sufficiently addressing these interests, and how would you like to see it change if not?

MS CONACHER: Germaine Conacher, and the maybe I'll pass it to Jesse if he wants to elaborate on that, or I can provide a bit of context, Jesse.

MR. FIELDWEBSTER: Germaine, feel free to go ahead, and then I will come in after you.

MS CONACHER: Okay. So what was intended by the comment was the idea that our -- I referenced it in the earlier part of the presentation around understanding the kind of scope of impacts to harvesting rights, and do we know if -- you know, sometimes we talk about construction, in this case it's demolition. Does the demolition activities impact people's willingness to harvest in a certain area?

And so the idea of tying in receptors around noise, visual quality, air quality, would be to say if a receptor was a Métis harvester out on the water would they experience change from dust, noise, those types of things that would affect their current experience? And so

is there a receptor that would be reflective of that person's experience?

MR. FIELDWEBSTER: Jesse here. So to provide a little bit further detail on how we could engage on that is wanting to have a continued relationship with the CNSC with regards to their ongoing monitoring plans, not only understanding the monitoring plan, but also having Métis citizens being involved in said monitoring plans. And items such as that can provide further confidence.

It might show that there are significant impacts, but whatever the results are it provides further confidence in the results that are drawn from any studies.

THE PRESIDENT: Thank you. Maybe I can ask CNSC to comment on that and just confirm your commitment in doing so.

MS MURTHY: Kavita Murthy, for the record. I may have misunderstood. I believe some of -- the monitoring programs on site are the responsibility of CNL. So if I misunderstood -- please correct me if I misunderstood.

So what you are saying is you would like to have a better understanding of how all of those aspects that you have outlined are being taken into account by CNL

as the licence and the site owner.

On the other side, the CNSC's activities related to independent environmental monitoring program. That's an aspect CNSC Staff are happy to speak to.

Going back to the environmental monitoring program that CNL has, that is also subject to CNSC Staff review, so I can also ask the reviewers of -- the subject matter experts in that to comment too.

But to start with, I will ask from the Directorate of Environmental and Radiation Protection and Assessment, Ms Kiza Sauvé, I see she's online, to please speak to that. And then perhaps we can have specialists who looked at the environmental monitoring programs. Thank you.

MS SAUVÉ: Hi, good morning. Kiza Sauvé. I'm the Director of Health Science Environmental Compliance Division.

So I'll speak to -- I'll start with independent environmental monitoring program. And we are engaging with specifically the MNO on the independent environmental monitoring program around the Bruce site where the Douglas Point facility is located. So in 2019 in fact we consulted with the MNO and they provided us

invaluable information about plants of significance. And then two members, two of their community members joined our staff on a half day sampling campaign and I think that's what Mr. Fieldwebster was likely referring to.

We also are hearing from MNO that they want to understand monitoring more. And so that's important to us as well. And when we go out and speak about the independent environmental monitoring, we also speak about what the licensee is doing to make sure that the full picture is shown.

Something important that we need to talk about for this facility is that the Douglas Point does have an effluent verification monitoring program. And so that's a program that's under the CSA Standard N 288.5, and that addresses the design and operation of the effluent monitoring program. So it talks about what's happening on site, sampling and analytical procedures related to effluent monitoring, the interpretation of that data and whatnot. But that's really at the facility.

Due to the extremely low releases at this facility, once we move into the CSA Standard N 288.4 and we look at the requirements for environmental monitoring, there are no requirements for environmental monitoring

because the releases at this facility are so low.

So Douglas Point and CNL are not required to do environmental monitoring. Having said that, Bruce Power does have a comprehensive environmental monitoring program and they take into account the small amounts that come from the Douglas Point facility. So the Bruce Power environmental monitoring program is one that does take into account Indigenous communities around and the areas that they're involved in.

So it's a big picture and we try to explain that, and we need to get out, we need to do that communication as we're talking about environmental monitoring, and we want to continue that discussion with the MNO.

I hope that gives you the picture of where we're at in terms of all the different monitoring that's going on.

MS MURTHY: Kavita Murthy, for the record. So if I have permission, then I believe CNL as the site owner and responsible for their site activities may have something to add on the subject of environmental monitoring.

THE PRESIDENT: Mr. Gull.

MR. GULL: Mike Gull, for the record.

Just to start, I've got a contribution to this question before I handover to Mitch MacKay, just a kind of a wider view of the Indigenous engagement that we have ongoing.

It's just to confirm that CNL is absolutely committed to ongoing and long-term meaningful relationships with their Indigenous communities. And the reason for this is because it makes sense for us, as a nuclear company, to build trust with people who view our activities with fear or perceive problems.

So as an overall nuclear industry we've learned that having, you know, meaningful and open engagement and trying to explain what we do and be more open with what we do and show people what we do so they can either bridge the gaps that they have in their fear or change their perception, hopefully. It's something we're absolutely committed to. And we're doing this and continuing to improve how we do this around these states. We've learned an awful lot from our three kind of EA projects on how to do this better.

And so I think with that kind of an overview and clear statement to our commitment and why we think it's not only good for CNL, but good for the industry

and good for the communities.

I'd just like to hand it over to Mitch MacKay to probably kind of a wider description of that before probably going to Mr. Dolinar for a description on kind of the environmental monitoring program.

MR. MacKAY: Thanks, Mike. Mitch MacKay, for the record, the Manager of Stakeholder Relations for Environmental Remediation Management at CNL.

I echo much of what Mike just said. And, you know, as a proponent on this licence CNL has initiated engagement with the Métis Nation of Ontario in the context of this licence amendment with a view to ensuring that MNO involvement is throughout the planning and decommissioning in the five stages that we've talked about, or planning envelopes within the Phase 3.

And to demonstrate our early commitment on this we did provide capacity and information to the MNO so that they could fully participate in this licence amendment application and hearing process.

And this agreement is really a view to working towards a broader agreement on engagement regarding the Douglas Point site. You know, specifically, CNL would like to engage and collaborate further on the topic of

adapting its monitoring programs and to explore aspects of the Métis rights and interests.

So maybe now I'll pass it off to George for more information on environmental monitoring. Thank you.

MR. DOLINAR: George Dolinar, for the record, CNL. So, as mentioned by CNSC Staff, CNL has an effluent monitoring program associated with the Douglas Point facility where we look at air emissions and water effluents from the facility. These are reported in our annual compliance monitoring report to the CNSC. They're summarized and available in a summary fashion on the CNL website as well.

As was mentioned, we provide effluent information to Bruce Power who incorporate that in their environmental monitoring program for the larger Bruce Power development and site. We review that report primarily to ensure that our emissions are appropriately captured in that report.

And I guess my summary would be that Bruce Power is a large Class 1 nuclear facility, they cover all the aspects that are intended with an environmental monitoring program and certainly capture our emissions

within their report as well.

It was also mentioned and I think it's worthwhile reiterating that the CNSC conducts independent environmental monitoring. So that's a further sort of verification or validation of the work that Bruce Power does.

And I just want to again point out that we provide the information from Douglas Point to Bruce Power, which gets incorporated into their environmental monitoring report.

I want to pick up on one other item that was mentioned, and this is the topic that was raised by the MNO, I think it was Germaine Conacher that mentioned perception of risk.

And this has come up in our discussions with Indigenous communities and, as was mentioned also with some of our discussions with the Métis Nation of Ontario in other regions, and this is certainly something that we're building upon. You know, learning and trying to understand more where CNL can provide information, provide access to promote a better understanding and hopefully, through that a better appreciation of the risk level associated with our facilities.

So we do a lot of work now on providing results, which all indicate that risk are very low, but we recognize that there is still some work to be done, so that perception of risk is more broadly shared.

Thank you.

THE PRESIDENT: Thank you. Let's move on. Dr. Berube, did you have any further questions on environmental monitoring?

MEMBER BERUBE: Not per se with environmental monitoring, but more with the Captain of the Hunt issues, with the harvesting issues. The question that pertains, and this is for MNO, I'm just -- what I need to know, there's some discomfort that I've heard about actually harvesting around nuclear facilities with your peoples.

And if you could explain to me basically, how information flow from MNO, the people that are doing most of the consultation, to your actual people. For instance, is the Captain of the Hunt actually engaged in these consultation activities, and how does that information get transferred to the actual people that are doing harvesting around these facilities? If you could, you know, give us a little bit of background on what

happens there?

MS CONACHER: Germaine Conacher, I can start and perhaps Councillor Dusome or Jesse Fieldwebster would like to kind of fill in some more of the context.

But I think there's a number of ways that that occurs in terms of communication between the governance structure of the MNO and the citizens of the Métis Nation.

So the regional consultation committee is made up of, like you mentioned, the Captain of the Hunt, as well as the Presidents of each of the community councils. And those Presidents are tasked with communication with the citizens within their communities.

So that kind of flow of information occurs on a pretty regular basis.

For not this project specifically, but other nuclear energy projects in the area, we held community information sessions. So either the regulator or the proponent has come out, presented, citizens are invited for either a dinner or a gathering, and information flows in that context as well.

Specific information often gets to harvesters as well when we're conducting traditional

knowledge and land use studies. So when we conduct those studies we also share project information and provide details to the citizens that are participating.

So there's probably a few different mechanisms where information goes from the elected officials to their citizens and back, right, so from the citizens back up to the elected officials and to us.

I don't know, Councillor Dusome, do you want to add to that, or Jesse?

MR. FIELDWEBSTER: Jesse Fieldwebster here, for the record. I just want to -- well, in echoing part of Germaine Conacher's comments, our Captain of the Hunt who is present, Greg Garratt. He is very involved with the Métis Nation of Ontario Harvesters through Region 7.

If you are a harvester in Region 7, you have to get a harvesting card, and Greg Garratt is the only individual who can sign off on those. And he would also be engaging with harvesters on a regular basis with regards to providing information on harvestable areas and questions with regards to their rights and responsibilities with regards to being a Métis harvester.

For those who aren't as familiar with the

MNO's governance structure, I sometimes liken the Captain of the Hunt role to a Conservation Officer, but a Conservation Officer whose role extends into the households of all of the harvesters within Region 7.

THE PRESIDENT: Thank you very much for that. Dr. Demeter.

MEMBER DEMETER: Thank you very much for your presentation. Actually, all my questions have been answered through the previous questions, so thank you.

THE PRESIDENT: Okay. Well, thank you. And thank you, Councillor Dusome, Ms Conacher, and Mr. Fieldwebster for participating and the rest of the team that's here.

Any final comments before move to the next intervention from you?

Okay, not hearing any. Then we'll move to our next presentation, which is by Dr. Sandy Greer as outlined in CMDs 20-H4.19 and 20-H4.19A. Dr. Greer, over to you.

CMD 20-H4.19/CMD 20-H4.19A

Oral presentation by Sandy Greer

DR. GREER: Good morning. Thank you Madam President for offering this opportunity for me to speak.

First of all, out of respect, I would like to publicly acknowledge the passing of Eugene Bourgeois a few months ago following the passing of his dear wife Anne.

I mention them because Eugene was supposed to be one of the intervenors at this public hearing. And he also contributed a lot of knowledge and life experience at previous public hearings and submitted several government submissions which are well worth reading, because he and his wife had a sheep farm in close proximity to Bruce Power.

So I just want to acknowledge his passing, given the fact that his name also showed up a few minutes ago on one of the screens.

Now, I would like to begin my own presentation this morning.

So I look at watersheds and ecosystems, that's basically the focus I've contributed through my interventions, through various public hearings through the

past eight years. And I would like to invite clarifications on some of my concerns and I will try to speak as quickly as possible to a series of concerns I have in each of the slides that I have here this morning.

So could someone please bring up the next slide? Either Mario or André at the CNSC staff are helping me to change my slides, so I would like to see my next slide, please.

And I have printouts in front of me, so someone needs to change the slides.

MR. LEBLANC: Dr. Greer, this is Marc Leblanc. We just managed. We were having some technical issues, but I think they have just sorted it out. So please proceed. Thank you.

DR. GREER: Well, thank you. And here it is showing up. Thank you very much for that.

So here, just briefly for this next slide, now this image here is the nuclear hotspots around the Great Lakes Basin and it is a little bit out of date. I think it was 2012 it was put together, but the point is that this decommissioning for Douglas Point could set a precedent. There are -- according to an International Joint Commission newsletter from 2019, there are 30 nuclear

reactors at 12 generating stations in the Great Lakes Basin. So it is so important about what is undertaken through this decommissioning process because it can set an example for many future decommissioning projects.

Thank you. So the next slide, please.

So this is one of my major concerns because I am currently very actively working with a grassroots community in South Bruce about the proposed NWMO DGR and what concerned me in the literature from Canadian nuclear industries is the assumption that the high level waste will go into a high level DGR. However, I would really urge the CNL to please explore other options and don't assume necessarily that there will be a willing host community for this high level DGR.

And another point of confusion I found in the literature from CNL was for example a statement here on my slide:

"Consolidate packages at CRL in engineered storage until a geological disposal facility becomes available for intermediate level waste."

Now, the public understanding is that only high level waste will go into a DGR, but just the language

here referring to a geological disposal facility in reference to intermediate level waste just raises a question which I would like to receive some clarification about. Is this yet another assumption and is the purpose of a proposed DGR, if it were to happen, that it will then at a future time also take intermediate level waste? Because that is not what is being communicated to communities at this time.

The next slide, please.

So another issue that needs clarification is the reference to determinations about significant adverse environmental effects. Now, I recently did some research again online and even many years ago I first discovered, participating at the OPG DGR hearings, that there never was a clearly defined reference to what is significant adverse environmental effects. There does not seem to be an existing definition.

And the other problem is that significant adverse environmental effects can only be determined after certain mitigation measures have been put in place. But there are two problems here. First of all, how does one know whether mitigation measures will be effective and isn't it too late if there are already radionuclides being

released into the environment? You can't just bring them back and collect them all again because they are out there in various organisms at various multiple levels in the environment. And also, a lot of mitigation measures have not even been invented yet, let alone tested. I have done a lot of research in international science journals through the years and I try to keep up on that research and that is why I am just very concerned about, you know, the potential dangers that can happen that we cannot know of at this time.

So I would like the next slide, please.

I like to look at things in terms of watersheds and ecosystems and I just believe it is just more instructive to sort of think of -- and I have been advocating this for a number of years, is an ecosystem approach to the reality of what could be impacted in a very harmful way in terms of the larger environment. I don't feel that only doing studies on a very limited geographic site study within those constraints is sufficient and that the whole ecosystem needs to be looked at visually and considered in terms of the various species that migrate and move through the site itself. So it is not only the site that would be impacted if anything were to go wrong or if

like there were extreme weather events in the future, and so on, that we have to -- I believe we have to understand everything in relation to the interconnectedness of all living organisms in a larger area such as an ecosystem.

And another concern I had here is that in the CNL's submission it says that there are no threatened wildlife species aside from the barn swallows. However, if you look at the Saugeen Valley Conservation Authority Watershed Report, and the latest one was 2018, they have a much longer list of rare species and therefore potentially there is a much larger, more inclusive list of potentially threatened wildlife and other types of species. So I just feel that there should be more inclusiveness in terms of what can be impacted at a future time through the decommissioning process.

Thank you. Next slide, please.

So again, looking at things from a watershed perspective, what I found, too -- and just this is a concern of mine in terms of, you know, studying Western culture and having very excellent experiences with indigenous people through decades, because a lot of my journalism work was trying to build cross-cultural understanding. I attended a lot of Elders' gatherings and

ceremonies back in the 1980s and it really changed my life forever to understand that the way the Western culture perceives, you know, our connection with the environment is so disconnected in comparison with the traditional teachings of indigenous people. So for example that mindset is reflected in the language in the CNL documents, such as for example just commenting:

"The immediate land surrounding the Bruce site also includes former gravel pits, fragmented woodlands, streams, and wetlands."

So that is giving a certain type of intended actual physical representation of what is surrounding the Bruce site. But even so, even though the natural environment has been altered by human intrusion and industrial intrusion, the environment still is alive and functions through the interrelationships at all levels of organisms. So I think that just again to kind of reframe the interaction here of anything that is going to be happening it's still impact on life that is still moving through that whole region, in and out, different types of organisms at different levels.

So again, I really like the systems view

of life, which has been written about at length by Fritjof Capra and his other -- his colleagues. Fritjof Capra is a physicist, he is a world-renowned physicist and also a deep ecologist. So he reminds us about these interconnections and ecosystem way of thinking. And even in technical and scientific journals in Canada too, for example the Impact Assessment and Project Appraisal Journal, it points out back in 2009 that it suggests that in Canada there is now a collective understanding that environmental assessments must go beyond the evaluation of site-specific. But it just seems to me that that hasn't really been embraced by the nuclear sector and so it just raises the question of how that could be improved on.

Next slide, please.

MR. LEBLANC: Dr. Greer, I just want to mention that it has been 12 minutes now, so if you can take a few minutes to summarize your key points, please.

DR. GREER: Okay. Okay.

Here again I was just showing visual imagery and then obviously this could be studied. The text that I wrote here can be studied at a later time. So maybe we could move to the next slide, please.

And drainage issues, okay. So I just

appreciated the transparency and honesty of certain issues being mentioned, but I was really concerned that additional barriers are not mandatory, instead of just something to consider, if mitigation measures cannot eliminate potential groundwater seepage. So I just -- I would really like additional barriers of that to be more mandatory than just a possibility, given future weather patterns.

Okay. The next slide please.

And then basically what this describes on the slide is just pointing out that I really think that the Douglas Point Waste Facility site should have its own system for all environmental monitoring and not rely only on Bruce Power systems because, again in the 2018 environmental protection report from Bruce Power, it was very transparent about a lot of problems regarding equipment breakdown and also the technological limitations that do exist and that not all radionuclide phenomena can be covered. So this is just an ongoing issue of ongoing vigilance to make sure that everything is regularly taken care of as much as is humanly possible.

So that basically sums up my concerns and, please, just show the last slide, perhaps to keep that on while I take any questions from the Commissioners. And

thank you very much again for allowing me to speak.

THE PRESIDENT: Thank you for your intervention, Dr. Greer.

Let's start with Dr. Lacroix, please.

MEMBER LACROIX: Yes. Can you hear me?

DR. GREER: Yes.

MEMBER LACROIX: Okay, that's great.

Dr. Greer, thank you very much for your presentation. I really appreciate your point of view, especially about the ecosystem approach and your perception of Western culture. I do share many thoughts on this with you.

One of the -- you have raised a number of very good points in your submission and most of these issues have been addressed by CNSC, but this time I would like to hear the point of view of CNL. One of the issues that you -- or one of the concerns that you have is the possibility of contaminants reaching and being discharged to Lake Huron during the demolition and the dismantlement of the buildings. I would like to hear from CNL what is being done to minimize the risk of the contaminants reaching and being discharged to Lake Huron and what are the measures that are taken to mitigate the consequences of

an accidental discharge.

THE PRESIDENT: Mr. Schruder.

MR. SCHRUDER: Yes, thank you. Kristan Schruder, for the record.

I just first want to point out before I pass it over to George Dolinar that CNL ensures that protection of the environment is an integral component of our decision-making in all phases of our activities. Specifically in relation to protection of the environment, CNL has prepared an environmental effects review and it has identified mitigating measures that we are going to employ as we move forward with decommissioning activities.

I will pass it over to George Dolinar just to speak to some of those mitigation measures and how we are protecting the environment.

MR. DOLINAR: George Dolinar, for the record.

Yes. I just want to maybe start off by saying that, you know, CNL looks at our responsibilities and treats those responsibilities for environmental protection very seriously. Having said that, you know, I think it is also important to recognize that for the intended decommissioning activities that have been outlined

for the proposed or requested licence much of the activities are happening inside of buildings and some of the concerns that have been raised around dust and noise are mitigated by the presence of structures. It is important to mention that.

The facility has also been non-operational for almost 40 years now. So a lot of the contamination, as was illustrated on a previous slide in the CNL opening presentation, have decayed away to very minimal levels.

We do monitor, however, and so with any of the proposed decommissioning activities we would have our Effluent and Emission Monitoring Program. We evaluate that. We also look at any additional monitoring that may be required to support a specific type of decommissioning activity. So it was mentioned again in our opening presentation. For example, carbon-14 we monitor depending on the systems that might be accessed or the type of activity that is being undertaken. We can step up monitoring to, you know, make sure that we are not releasing any contamination.

Just to be full in my answer, the other I guess comment that I have is I will refer to the Independent Environmental Monitoring Program executed by

the CNSC. This is sort of overarching, so anything that we would be doing on the Douglas Point site in the realm of decommissioning activities would be detected by the Bruce Power monitoring and also the Independent Environmental Monitoring Program executed by the CNSC.

So in summary, the facility has been shut down for many, many years. The levels of radioactivity with what we are contemplating doing during the upcoming licence period would be low on the risk profile. We do have monitoring and we stepped that up as appropriate for any of the decommissioning activities or envelopes.

MEMBER LACROIX: Okay. Thank you very much.

THE PRESIDENT: Thank you.

Dr. McKinnon...?

MEMBER MCKINNON: Yes, thank you.

That was a very interesting presentation and I would like to echo the comment of Dr. Lacroix on the importance of a system approach to problems.

The question I have is for CNL and it is in relation to the point that Dr. Greer brought up about the difficulty in defining what is a significant adverse environmental effect. I know that trying to anticipate

what could happen is often a part of design in engineering systems. So could CNL discuss their process for identifying potential significant adverse environmental effects and how you check the integrity of your assessment and also is this integrated into for example the monitoring program design?

THE PRESIDENT: Mr. Gull...?

--- Pause

THE PRESIDENT: Who from CNL is going to be answering that question?

--- Pause

THE PRESIDENT: Maybe we will start with Mr. Gull.

MR. GULL: Yes. Apologies, Madam President.

I think I am just going to commence the answer before passing it across to Mr. Dolinar.

The whole environmental remediation management mission, which is to deal with the legacy waste, is really all about understanding the environmental impact of what we have as legacy waste and taking a series of decisions across the entire set of sites and on all the waste that we have to overall adduce a beneficial

environmental improvement from our actions. And this always requires, if you like, a balance of the site-specific kind of requirements in terms of the immediate impact of, say, making some noise or creating some dust when dealing with some waste, compared to the longer-term, if you like, benefit of dealing with that legacy.

So overall we have an entire program kind of dedicated to looking at the various options that exist before us today for each and every kind of waste stream that we have and to find a way through a series of various options analysis to reach a particular waste stream on each particular facility we need to decommission to try and understand and evaluate what is an appropriate way forward for that activity. And within that of course we have a whole series of kind of arrangements and processes, starting with overview decommissioning plans, moving through to more detailed plans, moving through to designs of facilities and designs of retrieval equipment, waste management plans to decide how we are going to process these wastes. So we have a whole hierarchy, if you like, of decision-making to try and get us to a point where we were doing, if you like, the optimum solution for any

particular waste stream.

So in the round, you know, our entire mission is about trying to get an improvement in the environmental situation by doing something appropriate with our legacy waste. We have a hierarchic structure of dealing with it and, you know, that is kind of what we spend a lot of our time kind of doing and dealing with.

So I think with that I would like to hand it over to Mr. Dolinar, please.

MR. DOLINAR: George Dolinar, for the record.

What I will start with is maybe I will just highlight the fact that we produced an environmental risk assessment for the Douglas Point facility and one of the questions was how do we determine significant or determine that we don't have significant environmental impacts or effects, and I think that was tied largely to a discussion that was about the number of different species that were present in and around the Douglas Point site and the broader sort of geographic area.

So much of this is tied, like how do we assess impacts, much of this is tied to, you know, looking at contaminant or potential contaminant concentrations

provided that we are below thresholds. We would then assess the impact based on how far we are from any thresholds of no impacts. So there are industry benchmarks that are used for that type of assessment.

I guess I would categorize this as a risk quotient approach. So if we know a threshold for a particular impact and we know what the contaminant is -- and I am using contaminant in the broadest sense -- so if it is noise for example or dust or radioactive contaminant or a non-radioactive contaminant, that is how we go about assessing whether or not there is any significant impact associated with that particular item or constituent.

I should mention that as part of the assessment process, this is when, you know, mitigative measures come into play as well. So I think, as Mike Gull mentioned, this starts with how we package, how we characterize the facility and waste within the facility or contaminants within the facility for both radioactive and non-radioactive.

So the mitigation measures start very early in how we handle, characterize package, contain materials, and then we apply additional mitigative measures. If for example we feel that we are beginning to

encroach on a risk quotient type approach, we can introduce additional mitigative measures.

So that would be sort of my generic type answer to, you know, how we approach determining significant environmental impacts and how we stay away from providing any significant impact. Thank you.

MEMBER MCKINNON: Okay, thank you.

I was very glad to hear there is a well-defined process in place.

Is it a strictly internal process or do you engage with independent audit or review of your assessment just to check if there would be anything missing?

MR. DOLINAR: George Dolinar, for the record.

So depending on our facility, yes. For example, for Douglas Point, the environmental risk assessment was prepared by a consultant acting on our behalf. We of course review and comment on their reports, so there is some level of independence there.

There is also I guess, which has been pointed out several times -- but again, just for completeness, we were talking about the Douglas Point

facility, which is nestled within a much larger nuclear facility operated by Bruce Power. So there is sort of a check and balance with what Bruce Power is also estimating as part of their environmental risk assessment for the broader site.

In some instances for environmental risk assessments, and I can speak to the one for Chalk River, there is quite a broad number of reviewers that go beyond just the CNSC. So it depends on I guess the complexity and the kinds of issues that are raised in the environmental risk assessment how broad the consultation goes.

Also related to this, and I don't want to get a long way down this particular discussion avenue, but these are the types of things that, you know, we communicate or discuss with the local affected communities. This is the public, but also in the context of the presentations we have had so far this morning, certainly the indigenous communities. So these are the types of things we have raised in presentations with the Métis Nation of Ontario for example. So we receive feedback, not specifically on the report, but as a result of these discussions we will receive feedback from these different organizations and we take that into consideration.

MEMBER MCKINNON: Thank you.

MR. DOLINAR: Thank you very much.

THE PRESIDENT: Thank you.

Moving on to Dr. Demeter, please.

MEMBER DEMETER: Thank you for your presentation.

I wanted to talk to CNL about an issue that probably needs some clarification that the intervenor raised. It's dealing -- I think the word she might have used was sump pumps, but I wanted to talk about the active liquid handling system and based on your detailed decommissioning plan, Volume 1, it ceased to be functional following the reactor shutdown and having achieved Phase 1 decommissioning objectives. And there is still collection of liquid waste from condensate of the service building basement. So I just wanted to get confirmation that there are no further effluent discharges from the reactor building that would be harmed by removing the service building and its tanks, so that there is no further need for those collection tanks and there is no further need for an active liquid handling system as it was shut down during Phase 1. So just to confirm for the Commission, there are no more effluents from the reactor building that need to be

collected through the system that was shut down and after the service building is taken out of commission in envelope B, that is not going to harm the mitigation of further effluent or liquid collections?

THE PRESIDENT: Thank you.

To Mr. Schruder for response.

MR. SCHRUDER: Yes. Kristan Schruder, for the record.

I am going to ask Ian Bainbridge, our facility authority and Director for the Decommissioning Project, to speak a little bit about the configuration management of that system that you referred to. Thank you.

MR. BAINBRIDGE: Okay. Ian Bainbridge, for the record.

The active liquid waste handling system was a system that used to process any active liquids that were generated in the operation of the facility. As has been mentioned, it was shut down in the mid-80s when the facility was shut down. It had held two very large -- well, it consisted of two very large delay tanks that had held very low active water for about the last 30 years and about two years ago we actually took that water after appropriate sampling and characterization and that was

shipped to Chalk River's processing plant where the water was adequately processed.

The amount of volume that is now generated is in the order of 50 litres a year from these -- the sump pumps in the reactor building and the service building. So we will continue to collect any water from those active sumps, but it does not need something of the enormous capacity of the active liquid waste handling system. So we will put in a new collection tank for that when we remove the system from the service building.

THE PRESIDENT: Thank you.

And then over to Dr. Berube, please.

MEMBER BERUBE: Well, thank you very much for that presentation, Dr. Greer. I found it very informative. I'm going to ask you a general question. You touched on, you know, this particular decommissioning activity as having potential impact on a number of other sites in the future and of course the Commission is a very concerned about all of it, not just this one site, but if you could, given your background and your understanding of ecological systems, could you describe when an ideal end state would be for a site like this post decommissioning?

DR. GREER: Oh, my goodness.

Well, yes. In my reading of the literature from CNL and CNSC, it appears that OPG would take ownership of the property and the intention was to do some other type of industrial activity on that site. But I think -- and this would definitely I think really necessarily involve the input from all of the indigenous groups locally who might feel that further environmental remediation to perhaps restore the ecosystem would be perhaps a more -- a preferable scenario in the future rather than just another industrial activity, to actually re-ensure that whole lake fringe watershed, that sub-watershed region remain healthy or become healthier than it is right now. Because really I feel that the given -- the state of our planet and what continues to unfold through industrial destruction, that we need to really change direction as a human species to really do more restorative work and to really appreciate what the natural environment offers us on many levels.

So I cannot speak for the indigenous groups, I would never presume to, but just from my own heart and soul and my own understanding about life and why we are here, to care about each other and to care about all planetary life, I think it would even benefit the workers.

For as long as Bruce Power operates its reactors, everyone who works in that vicinity and who lives there and who -- and the people that still would continue traditional harvesting, whether they are fishing, and so on, that everyone would benefit from just the -- from the beauty and the energy that the natural environment sustains us with, like just to -- so, you know, that is what I would love to see happen, but it is not for me to decide and I won't be still living on this planet at that future time, but just for the children to come. I care about -- why I do all of this work is for the children to come. So, you know, what kind of future are we going to bestow on them? So that is my answer.

THE PRESIDENT: Thank you. I hope a lot of people are listening to you at the moment, Dr. Greer, to that response.

Ms Murthy, did you have something you wanted to add?

MS MURTHY: Yes. And thank you for giving me the opportunity, Ms Velshi and Dr. Greer.

I would like to ask the Acting Director of Waste and Decommissioning, Ms Nancy Greencorn, to provide a little bit of information on end states and what CNSC

expects in terms of end states from licensees.

MS GREENCORN: Good morning. For the record, my name is Nancy Greencorn and I am the Acting Director of the Waste and Decommissioning.

Just to first start, the program overview DDP provided by CNL states that the proposed end state for Douglas Point would be clearing it for unrestricted access suitable for industrial or commercial use consistent with OPG's anticipated end site for the Bruce Power site. I do think one thing is important to note here, that the current application before the Commission is not looking to authorize the end state. That will have to come at future proceedings. But to go to our expectations, in the detailed decommissioning plans licensees are required to include the proposed end state for the sites and these are to be reviewed regularly. We have the DDPs expected to be revised on a five-year basis. In reviewing the end state they would look at any changes in technology, new information or conditions in the sites, changes to decommissioning technologies or stakeholder engagement that we would have in with this.

We set out in CSA standards our expectations for divining end states and what is needed for

discussions with stakeholders in obtaining their input, their views and any concerns. Any of this feedback needs to be done, included into the decommissioning plans. And when we look at the decommissioning plans, we look at any concerns that were raised by members of the public, how these comments were dispositioned and we continue to do this on a regular basis.

So again, the DDPs are reviewed on a five-year basis and these include end states, and through this we expect the end states to be communicated through engagement with the public and indigenous groups.

But again, I do think it is important to note for this one that the final end state objectives for Douglas Point are not before the Commission today.

THE PRESIDENT: Right. I think we were all aware of that, but thank you.

Dr. Greer, I know you raised a number of other issues, particularly around any long-term solutions around DGRs for used fuel or intermediate level waste and I know there are many other intervenors that have raised similar concerns, so we will get to them either later today or tomorrow, but in the interest of time we will move on now, but I wanted to give you, you know, any last comments

you would like to make before we wrap this up.

DR. GREER: Well, I -- yes, I appreciate there are other interventions that will address some of the issues I raised and I wasn't expecting that all answers could be given immediately of course, but what I would like to say is I really appreciate the questions from all the Commissioners and your words as well, Madam President, because I just want to help and it's just nice to feel that I think I have been a little bit helpful today and given people some thoughts and feelings to reflect on. So thank you very much for this opportunity again. I am going to be watching the whole public hearing and I wish everyone well. So thank you.

THE PRESIDENT: Thank you very much for your intervention. It was most valuable.

So we will now take a break for lunch and we will reconvene at 1:30 p.m.

So we will see you then. Thank you.

--- Upon recessing at 12:37 p.m. /

Suspension à 12 h 37

--- Upon resuming at 1:30 p.m. /

Reprise à 13 h 30

THE PRESIDENT: Good afternoon, everyone, and welcome back to our public hearing. We will move on to our next intervention.

The next presentation is by the Historic Saugeen Métis, as outlined in CMD 20-H4.11.

I understand that Ms Jenna McGuire will present this submission.

The floor is yours, Ms McGuire.

CMD 20-H4.11

Oral presentation by the Historic Saugeen Métis

MS MCGUIRE: Thank you.

My name is Jenna McGuire and I am Vice President on Council and Executive Director for the Historic Saugeen Métis.

Historic Saugeen Métis [indiscernible] environmental interests. Historic Saugeen Métis is an independent Métis community that represents the descendants of Métis in the Historic Saugeen community prior to

settlement. The community has been along the Lake Huron shoreline with continuity for over 200 years. HSM's long-term vision...

--- Technical difficulties / Difficultés techniques

MR. LEBLANC: Excuse me, Ms McGuire, I think you have the webcast with you. So that is why there is a bit of a -- so if you can close the webcast.

MS MCGUIRE: Where would the webcast be? Sorry.

MR. LEBLANC: Okay. I think you are okay now.

--- Pause

MR. LEBLANC: So people whose buttons are on mute, please do not put your webcast. Thank you.

Please resume, Ms McGuire.

MS MCGUIRE: Thank you.

The community has been along the Lake Huron shoreline with continuity for over 200 years. HSM's long-term vision and objective is focused on promoting and protecting the sustainability of the environment as it relates to local Métis interests, rights and ways of life. Today the Historic Saugeen Métis continue their subsistence fisheries and land-based harvesting practices and assert

Métis rights over the lands and waters surrounding the Bruce site. These lands and waters provide vital support for our Métis culture, way of life, as well as economy, health and social relationships in the HSM community.

Our concerns are for safe decommissioning of the former Douglas Point Nuclear Generating Station, with minimal imprint on the water and lands that support our community's asserted Métis rights.

Engagement activities with...

--- Technical difficulties / Difficultés techniques

THE PRESIDENT: Ms McGuire, you are on mute.

MS MCGUIRE: Oh.

HSM has been engaged with CNL on the proposed licence amendment since the fall of 2019. There have been four formal working group meetings, a virtual community meeting and an on-site tour of the Douglas Point Waste Facility. An engagement record has been maintained by HSM and will continue to be maintained through the proposed licence period.

CNL has made timely and effective efforts in addressing HSM's interests and comments related to the licence amendment. CNL staff have also been very adaptive,

given the new challenges with COVID-19. An open line of communication has been maintained with staff to assist with exchanging information and planning for engagement activities.

CNL and HSM collaborated together to plan and execute a virtual community meeting and information brochure. HSM and CNL will be formalizing a long-term agreement for the duration of all project phases. This agreement will bring certainty to the community over the long term by ensuring that the beneficial consultation and engagement activities will continue to be a priority.

MR. HACHEY: My name is Chris Hachey, I am the Coordinator for Lands and Resources and consultation for the Historic Saugeen Métis and I am going to go through our comments for the documents that were submitted by CNL.

So HSM or -- the Historic Saugeen Métis, or HSM, has taken the time to carefully review and consider the key decommissioning and environmental reports as related to this licence amendment. The information has been shared with the HSM community and comments have been invited throughout the application review process. The following comments have been shared with CNL and, more importantly, have been summarized in next steps to help

bring certainty to the process for the HSM community.

So comments in regards to the detailed decommissioning plan, or the DDP, HSM -- and these comments are directed towards the storage and surveillance. HSM recognizes that the DDP has considered the long-term health of the surrounding environment. The Douglas Point Waste Facility is precariously situated adjacent to Lake Huron, which places strong emphasis on mitigation and monitoring as the project proceeds.

The next steps for HSM. The HSM community will work with CNL to monitor the effectiveness of these mitigation processes and measures by reviewing reports, attending site visits, and providing comments.

In regards to the hazard assessment. HSM is satisfied that the storage and surveillance phase of the plan underlines the critical need to continually monitor, update and consult. The deterioration of facilities that store and protect high-level hazardous waste and materials may need to be re-evaluated over the longer term, given the uncertainty and timeline for a DGR.

Next steps. HSM will continue engagement with CNL over the long term to ensure that storage and surveillance, life management programs, corrective action

plans continue to be relevant in protecting the environment.

In regards to hazards during the decommissioning phase, HSM has emphasized throughout the engagement process that environmental protection is of prime importance to the community. Actions to prevent, control or mitigate the potential risks are vitally important to ensure all potential hazards do not impact the environment.

Next steps for HSM. HSM will continue to consult with CNL officials on a regular basis during Phase 3 to ensure that decommissioning activities related to hazardous waste do not impact the environment.

With regard to characterization and next steps for HSM. HSM will consult with CNL's officials to understand and comment on characterization planning envelopes as this work proceeds. And we understand that some of that work is a work in progress.

With regard to inventory of stored waste. HSM is satisfied that the current level of storage and monitoring will adequately protect the stored waste. HSM also understands that the duration of storage for some items such spent fuel bundles may be dependant upon

long-term solutions such as a DGR. The existing monitoring protocols that are in place will be vitally important as existing storage facilities age and reach their life expectancy.

Comment under environmental protection and monitoring. HSM is satisfied that the environmental protection and monitoring program will ensure that effluents will remain below annual dose limits. HSM also understands that the project will be carried out in phases and that many factors will influence future monitoring programs to ensure public and environmental safety.

Next steps for HSM. HSM will work directly with CNL officials to maintain good understanding of the protection and monitoring protocols that are current and in the development stages as decommissioning out of the project proceeds. HSM will commit to keeping the community informed regarding this information and provide timely comments to CNL.

In regard to the environmental effects for the Phase 3 decommissioning, under the topic of hazard assessments and effects. The hazards identified as radiological and chemical are of particular interest to HSM due to their potential risk to the environment.

During the Douglas Point site tour HSM counsel and staff were able to better relate to the site layout, identify hazards that exist and inquire about the safe removal during decommissioning activities. HSM is confident that the mitigation measures identified in this report will ensure no residual effects to the environment.

Next steps for HSM. HSM will work closely with CNL officials throughout all planning envelopes of this project to confirm that mitigation measures are carried out to protect the environment in the interest of the HSM community.

Item 4 is CNSC engagement with HSM. CNSC Staff are committed to ongoing discussions with HSM on the CNL licence amendment application and have made themselves available to provide assistance. CNSC and HSM held meetings on February 19th, 2020, March 12th, that was an in-person meeting that we got in right under the deadline there, and August 21st we had a virtual meeting on the proposed licence.

To further address issues due to the lack of in-person communications, CNSC has also been checking in on a regular basis to maintain an open line of communication.

With regard to the CNSC Commission Member Document, within the document the document states that the carrying out of the proposed project is not likely to cause significant adverse effects. In relation to the *Nuclear Safety Control Act*, the document quotes, "In that CNL will carryout the licence activities, has made and will continue to make adequate provision for protection of the environment and the health and safety of persons and in the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

HSM's comment to that is HSM is satisfied that CNSC Staff have thoroughly considered the licence amendment documents and that the protection of the environment is upheld, thus protecting the rights and interests of the Historic Saugeen Métis community.

Next steps with CNSC. HSM will continue to work closely with CNSC Staff throughout the term of the licence by attending meetings, reviewing updated information and providing timely comments.

I'll now turn it over back to Jenna McGuire for final conclusion.

MS MCGUIRE: Jenna McGuire here. Given

HSM traditional use of the lands and waters in the surrounding areas of the Douglas Point site, the Historic Saugeen Métis have a profound need for involvement during the licence period.

Furthermore, the duly-elected local Historic Saugeen Métis Council who have been entrusted to protect the local Métis communal rights must be part of any process that determines what is being done to monitor and ensure the safe decommissioning of the Douglas Point Waste Facility.

HSM is committed to track the comments and carryout next steps that are identified within this document. With this in mind and continued engagement throughout the licence period, the Historic Saugeen Métis Council supports the licence amendment application from the Canadian Nuclear Laboratories.

THE PRESIDENT: Thank you very much, Ms McGuire and Mr. Hachey for your presentation. And it looks like things are moving long quite well, at least for now, with both CNL and CNSC and HSM.

So let me open it up for questions, and we'll start with Dr. McKinnon.

MEMBER MCKINNON: Thank you very much for

the intervention, a lot of very good points were brought up. I was very glad to hear that you had an opportunity to go on a site tour. There's no substitute for that compared to just reading reports.

So my question to CNL is in connection with some observations that you made during the site visit. And it was noticed that there was a shared storm water management drains where on site and the issue of the potential risk of contaminants reaching Lake Huron was brought up. And CNL's response was -- it was stated that a risk would be mitigated when dealing with surface water run-off during decommissioning activities.

So I know that there was a question earlier about the surface water, but shared stormwater management has some very specific civil engineering connotations. So I would like CNL to just explain that aspect and also to explain how the mitigation will be done.

THE PRESIDENT: Mr. Schruder please.

MR. SCHRUDER: Kristan Schruder, for the record. Before I pass the details of the specific site visit and some of the concerns that were discussed to Ian Bainbridge, I just want to acknowledge that CNL recognizes the connection that the Indigenous communities have to the

land and the waters around the Douglas Point site.

Throughout our engagement, which as has been pointed out, which began about a year ago, CNL and HSM have indicated their mutual interest in engaging throughout the full course of the planning and the decommissioning activities, including any applicable mitigation and monitoring to ensure the highest standard environmental protection.

So I'll pass it over to Ian to speak about the specific concerns that were raised during the site tour.

MR. BAINBRIDGE: Thank you. Ian Bainbridge, for the record. Yes, as we toured the site, and please correct me if I've missed anything here, we were worried about -- through the site there are various roads and they do have storm drains associated with those roads and they do feed into the main storm drain that leaves the site and goes into Lake Huron.

The main measures will take is the vast majority of the decommissioning work with any designated substances or radioactive substances, they'll be dealt with while the building structure is still there. So they will be protected from the weather and the current arrangements

will continue.

It's only when we come to finally demolish the building structure, which is now being decontaminated of designated substances and radioactive substances, such as the straightforward industrial dismantling, it's not even a full demolition, that we would then be exposing ourselves to the elements and that water could then flow inside the building and perhaps get to a storm drain.

So that's the main way we'll protect any unwanted substances from getting into the drain systems.

Additionally, when we're doing demolition work, you can create dust and things which floats away, so we will be using, if we're in large concrete areas, misters that will keep the dust down and stop that heading to the drains. If there are local drains, we will actually seal them off to prevent any small rivulets, if you wish, going through the demolition pile and actually making its way to the storm drains.

The main one is we will do all of the removal of the substances while the building is still intact.

THE PRESIDENT: Okay, thank you. Dr. Demeter.

MEMBER DEMETER: Thank you very much for the presentation. Forgive me if I don't get the pronunciation, but I have a question for Ms McGuire or Mr. Hachey. I notice that your interaction with -- on your submission with CNL was in December of last year, and I'm not sure if that was your major interaction with CNSC as well.

Have you had opportunities to interact with CNL or CNSC since 1984 when they went into storage and surveillance? Like, it's sort of a year before the licence for decommissioning. But what's happened before that? What's the relationship been prior to this intervention?

MR. HACHEY: Chris Hachey, HSM. Prior to that, I've -- I have been with the -- in this position for three years now. I have a fairly good view of what the back record has been with our files, and it has been fairly quiet. We do get annual reports and updates from CNSC with regard to the site. So each year we were given, at a minimum, an annual report of what's happening on site. And one year previous to when we started our engagement with CNL we were notified by CNSC that this Phase 3 decommissioning would be taking place.

THE PRESIDENT: Thank you. Dr. Berube.

MEMBER BERUBE: Yes, thank you for your presentation. This question's for HSM. Based on what I've heard so far, is that you've been fairly satisfied with the interaction with both CNSC and CNL on this particular project to date. I'd just like you to confirm that.

But second of all, given that, where do you think there are areas for improvement in communication between your organization and both CNL and CNSC at this point?

MR. HACHEY: Chris Hachey, HSM. Just for the first part of the question, the relationship has been I'll just say excellent.

Given that both parties, CNL and CNSC, you know, got caught in the middle, like all of us, with a pandemic, with things happening, we've been involved with very many -- with quite a few proponents. And we find that a lot of them aren't prepared to conduct consultation events. We found that CNL was very prepared, very open, extended that openness to call many times. So we did have a regular communication that was open.

The same with CNSC. We found we were having actually more communication, given the situation.

So I think if I was to say anything, and I

don't say this very often, but if another proponent wanted to take something out of someone else's playbook with regard to consultation and engagement, I would tell them to contact CNL because it's been very good. And I think going forward, if that same relationship is to maintain itself, and I can't see it being any different, then I think the community will be satisfied moving forward.

THE PRESIDENT: Mr. Hachey, that's very reassuring. When you've had these virtual sessions, whether it's CNL or with the CNSC, what's the level of participation? I'm just trying to get a handle on how well these virtual sessions work. Do you find more members of the community attend? Is their interaction as effective? What are your thoughts?

MR. HACHEY: Chris Hachey, HSM. It was very different this year. When we do a community engagement we usually meet on a face-to-face basis. And that usually means having a community get-together and to be able to talk and see each other.

This year was a challenge that way. So when I say that we were able to meet the different challenges and I think that was through different forms of media. We did develop a brochure together with CNL that

put forth the issues that HSM was interested in and it said what CNL was interested in getting out as far as the project goes. So we did video for people that were setup to do that. We did brochures, we put information out through our Facebook pages.

So we used a lot of multimedia to get in touch with people and to make sure that they had different avenues to bring their comments back to the community.

One particular thing of interest that we did say to CNL was their virtual open house platform that they developed through a third party was very well done. In fact, that was something that we are taking a look at for our own resources for the future to be able to replicate to be able to deal with future parties in the future.

THE PRESIDENT: Great, thank you. Very helpful. Dr. Lacroix.

MEMBER LACROIX: Hello there. Thank you very much for this submission and the presentation, quite interesting. I'm glad to hear that you're on good terms with CNL and CNSC.

But aside from attending meetings and being consulted and provide feedback and comments to CNSC,

are you actively engaged in this decommissioning project? For instance, are you involved in the monitoring of the land and of water around the Douglas Point site, for instance?

MR. HACHEY: Chris Hachey, HSM. At this point we have not developed what that next step is going to look like through the mitigation and monitoring. Whether we get involved directly on the land or it's a combination of being involved on the land and actually starting to review those monitoring and mitigation documents that come back, I think our preference would be a combination thereof.

And we're a smaller community, but we have the opportunity to go out and meet on site and actually get involved on site. We do that with Bruce Power quite a bit. So any opportunity to get involved and to be involved with the process we look forward to doing that.

THE PRESIDENT: Thank you. I don't see any -- Ms Murthy, you wanted to add something?

MS MURTHY: Yes. Thank you, Ms Velshi. I wanted to echo what Mr. Hachey has been saying, that just under days, literally days before the pandemic was declared a whole team of CNSC was in the community and had really

good meetings with both HSM and other Indigenous groups.

I want to ask Adam Levine from the Policy Aboriginal and International Relations Division to speak a little bit to what we are thinking will be a good way forward, given the pandemic, and also speak a little bit to the involvement of Indigenous groups and some of the knowledge that we gained from their way of life. Thank you.

MR. LEVINE: Thank you. Adam Levine, Team Lead for Indigenous Relations and Participant Funding, for the record.

So we've been working a lot with HSM and all the Indigenous communities in the Bruce area with regards to Douglas Point over the last year, and also the Bruce site and other projects around these very complex sites at Bruce.

And so we've signed long-term engagement relationship agreements, terms of references, with each of the Indigenous groups, including HSM, and there's a commitment to meet regularly. So with HSM we have a commitment to meet biannually or more upon request. And that's going to continue from now into the future, and we'll revisit that on an annual basis to see if there's

additional things we can add on for our relationship and collaboration.

So one thing we did last year was collaboration on the independent environmental monitoring program where we worked with HSM on taking samples from their gardens and other valued components of interest to them as part of our sampling campaign in the area. That's definitely something we want to continue to do and work with them on that.

And we're definitely happy to adapt, especially as there's a lot of unknowns out there in terms of what the future will hold in terms of our ability to get back into the community specifically in the coming years due to the pandemic.

But we've successfully transitioned to the virtual communications world and really continuing that relationship what we've been working on for so long. And we really appreciate HSM's willingness to continue to engage with us and really be a constructive partner in all of that.

So we really look forward to the ongoing engagement and adding anything specific to Douglas Point in the future should they wish.

THE PRESIDENT: Thank you, Mr. Levine. So Ms McGuire or Mr. Hachey, any final comments before we move to the next intervention?

MR. HACHEY: No. Just thank you very much for giving us the opportunity to speak to day, and we appreciate this. Thank you.

THE PRESIDENT: Okay. Thank you very much for your intervention and for coming out to day.

So moving on to our next intervention. The next presentation is by the Canadian Environmental Law Association, Concerned Citizens of Renfrew County and Area, Nuclear Waste Watch, and Northwatch, as outlined in the joint submission CMDs 20-H4.17 and 20-H4.17A.

I understand, Ms Kerrie Blaise will be making the presentation. Ms Blaise, the floor is yours.

CMD 20 H4.17/20-H4.17A

Oral presentation by Kerrie Blaise

MS BLAISE: Thank you, Madam President and Commissioners. Before I begin, I will just confirm that you are able to hear me?

THE PRESIDENT: Yes, we can.

MS BLAISE: Wonderful. Thank you. I am Kerry Blaise and I am legal counsel at the Canadian Environmental Law Association and today I am joined by co-counsel Morten Siersbaek and international energy and environment expert, Dr. Krugmann.

Next slide, please. So, today, CELA intervenes on its own behalf and also the non-profit of Northwatch, Concerned Citizens of Renfrew County and Area and Nuclear Waste Watch.

In the 10 minutes we have today, we will explain while a record before the Commission does not make it impossible to grant the requested decommissioning licence amendment to CNL for its Douglas Point facility.

Next slide, please. And next slide, please. Wonderful. I'll just confirm we are on the same slides. If we could go back the slide that says, "Summary of Findings" at the top? Wonderful. Thank you.

As you have our presentation before you, in the interests of time, I am going to focus on three key points in particular. One, what is the adverse environmental effects assessment required under CEAA 2012 and why must it be fulfilled before the state commissioning licence is considered. Two, how CNL's licence application

CMD and Detailed Decommissioning Plan referred to as the DDP do not sufficiently set out how it meets the requirements of the *Nuclear Safety And Control Act* and its regulations. And, three, how CNL's new strategy for decommissioning set out in the DDP is a marked departure from its earlier preliminary decommissioning plan, which is neither justified nor explained in the record before the Commission.

Throughout, in the interests of time, I will be pointing the Commission to some key sections of our written submission for your later review.

Next slide, please. Thank you. I will now turn to the first item regarding CEAA 2012 and the Section 67 analysis as found at pages 6 through 11 of our written submission and summarized in Recommendation 2.

As a prerequisite to this licence request, the CNSC is required, pursuant to Section 67 of Canada's Federal Environmental Assessment law, to first determine whether the project will likely cause significant adverse environmental effects.

As listed on this slide, we submit the CNSC's approach to this environmental effects analysis and the depth it employed was not commensurate with the risks

and likelihood of significant adverse affects associated with the decommissioning activities.

For instance, in conducting its assessment, the CNSC should have sought the expert advice of other federal departments like Health Canada, who possess specialist knowledge and knowledge with respect to health and safety aspects of the proposed decommissioning operations. Their input should have been referenced in how their input was used/incorporated into the Section 67 assessment.

Instead, the health studies relied upon in the CNSC's Environmental Affects Assessment were not health assessments completed directly for this purpose. Rather, the CNSC imported existing health data from CNL and CNSC.

Further, when considering mitigation measures, the CNSC's analysis again does not demonstrate a requisite degree of detail. What should have been undertaken is a detailed review of environmental affects of each project within the proposed decommissioning envelopes and phases and analysis of potential mitigation measures from that point.

For each mitigation measure proposed, the likelihood for success should have been discussed as well

as the extent to which they would avoid, reduce, repair or compensate for the adverse affect.

Lastly, I'd like to comment that the CNSC reached its determination of no adverse environmental affect without initiating any public review or comment opportunity. So, as CELA highlights in its written submission at page 9, in instances where other EA authorities have conducted a Section 67 Environmental Affects Analysis, there were significant opportunities for public engagement throughout the process. This includes 30 day public comment periods, expert review by independent experts and then those comments, again, reiterated within the environmental impact assessment process.

Next slide, please. Thank you. So now with the slide titled, "Omissions in licensed application" at the top, I will now turn to our second key submission that, due to deficiencies and omissions in the licence application, the CMD, the DDP, the Commission cannot fulfil its mandate pursuant to the *Nuclear Safety and Control Act*.

So, as found at pages 12 through 24 of our written submission, and recommendations three through nine, CELA reviewed all hearing documents against the statutory requirements of the *Nuclear Safety and Control Act* as well

as the relevant regulations, including the general nuclear and safety and control regs, the Class 1 nuclear facility regulations and the nuclear security regulations.

Throughout, we found the licensee did not include full citations so that intervenors and members of the public could easily and quickly verify the data upon which their conclusions were based.

For instance, a general reference to DDP volume 1, which is 170 page document, is not specific enough nor sufficient in determining the basis upon which regulations were fulfilled.

We're also concerned that, should the CNSC choose to proceed with licensing in lights of these deficiencies, it would set a poor precedent for the content and form allowable and future decommissioning licence applications.

CELA also found it highly problematic that safety assessments are planned to take place host granting should the licence be granted. So, for instance, in addressing the safety analysis control area, CNL proposed that safety assessments will be conducted for each planning envelope with areas and facilities containing radiological contamination and materials.

CELA disagrees with this post-licensing approach and submits that such assessments are needed now.

Next slide, please. So, on the issue of IAEA guidance, I direct the Commission to our submission at page 27 and recommendation 13.

Next slide, please. And, finally, turning to our third point regarding the revised decommissioning planned, I will now turn the mic over to Dr. Krugmann.

DR. KRUGMANN: Okay. Can you all hear me?

THE PRESIDENT: Yes, we can.

DR. KRUGMANN: Okay. Now, could you please flash up the slide 11? Would that be possible? Okay. I can start here and then, later, please, if we could move to slide 11.

I'm an independent consultant and worked with CELA on the review of this application. I undertook a thorough review of the detailed decommissioning plan, volume one, in short DDP1, that CNL submitted in support of its application.

I also reviewed CNL's recent preliminary decommissioning plan PDP published less than four years earlier in April 2016 and I compared the two documents.

There are three key findings that have

resulted from my review. The first one is that CNL's proposed new strategy for the final decommissioning of the Douglas Point Waste Facility marks a major departure from CNL's original strategy.

The first strategy, as set out in the DDP1, and the last strategy, the original strategy in the PDP. Major strategic points of departure are summarized on this slide. I don't think I'm going to go through it but, I mean, obviously, much earlier decommissioning parts of the nuclear facility is to be fast-tracked for completion by 2030 and very importantly the last two points, final decommissioning of the Douglas Point Waste Facility is no longer to wait for waste disposal facilities to become available or for the nearby Bruce Power nuclear plants to be decommissioned.

Next slide, please. My second major finding is summarized on this slide. And it's addressed in Sections 61, 62 and 63 of my report.

Judging from the Commission's regulatory guide, G-219, for Commissioning planning, the substantial deviations of CNL's proposed new commissioning strategy from its original strategy and CNL's request for the PDP to be superseded, are unusual and should therefore be

justified fully and in detail; yet DDP1 leaves these strangers and CNL's request completely unexplained.

DDP1 fails to provide a comprehensive and coherent rationale for the proposed decommissioning strategy, no attempt is made to analyze and compare advantages and disadvantages of earlier vis-à-vis later decommissioning in terms of radiation related risks and overall decommissioning costs and DDP1 also fails to consider alternative options and scenarios against which the advantages and disadvantages of their proposed strategy could and should be compared in terms of risks and costs.

And two of such alternative options are listed at the bottom of this slide.

Next slide, please.

My -- the third major finding is shown on this slide. DDP1 lacks transparency and displays major discrepancies and inconsistencies as far as quantitative estimates of projected decommissioning waste inventories and costs are concerned. Assumptions underlying these estimates are often not revealed, they remain hidden.

If you look at this first bullet, it's amazing to see that the DDP1 estimates eight times less low level waste from decommissioning than the PDP and, in the

CNL CMD, the difference is even greater. It's 33 times less low level waste yet it is not explained how. These differences are not explained.

With respect to the decommissioning cost estimate, it is substantially lower than in earlier the decommissioning cost estimate of 2013 and the explanation -- but DDP1 fails to explain why -- I'm sorry, DP1 does try to explain the difference but the explanation is not really credible.

Finally, DDP1 accounts for cost escalation to the extent decommissioning projects are delayed beyond the cost base 2019 but DDP1 fails to explain why it would be reasonable to expect cost escalation to be exponential, at the rate of four percent per annum.

Next slide. So my report has a number of recommendations, nine in total. And they are listed in Section 8 of my report.

The first eight recommendations suggest concrete ways in which particular gaps, discrepancies and inconsistencies in the DDP1 could and should be addressed.

And the final recommendation recommends that CNL should not be granted the requested licence amendment at this stage. Rather, CNL should be requested

to revise the DDP1 on the basis of the recommendations one through eight and resubmit their application, accompanied by a revised DDP1.

That's it. And back to Kerrie.

MS BLAISE: Thank you, Dr. Krugmann. Next slide, please, to one that starts with the recommendations at the top.

Next slide as well. Thank you. So in Appendix A of CELA's submission, you will find a lengthy review of our 20 plus recommendations and they're also summarized at slide four of this presentation.

Next slide, please. So, Madam President and members of the Commission, while a response is provided by CNSC staff and CNL during the course of the hearing thus far have shed some light on these issues, CELA and those we represent in this hearing remain of the view that the record before the CNSC remains unchanged and insufficient and it's on this basis that we do, again, request the Commission deny CNL's request to amend the decommissioning licence for the Douglas Point Waste Facility and, further to Dr. Krugmann's remarks, remit a licence application to CNL with the direction that all deficiencies be remedied and the information demonstrating fulfilment of all

statutory and regulatory requirements be clearly set out prior to proceeding with the licence and application.

Subject to your questions, those are our submissions. Thank you.

THE PRESIDENT: Thank you very much, Ms Blaise and Dr. Krugmann for your presentation. Let's start with Dr. Demeter with the questions.

MEMBER DEMETER: Thank you very much for the presentation. I want to focus, because through the course of the hearing we'll talk about questions along the way so some get answered here and some get answered later but this one is dealing with recommendation number 12 and this is for CNSC staff.

It deals with IAEA guidance and CELA's contention that IAEA guidance was not duly considered for two reasons that I think CNSC should address.

One, they allege that or they assert that IAEA would suggest that intermediate and high level waste should not be moved around and should be stored on site until a permanent solution is found. So this sort of intermediate movement is not in the IAEA guidance.

And the second one is a little bit more confusing to me, that the -- this is right out of their --

the IAEA guidance -- it must be demonstrated that waste from the decommissioning site is properly managed in meeting this threshold. CNL should not be permitted to rely on ongoing federal and environmental assessment but CNSC. And I don't know how IAEA guidance would dictate why the regulator cannot undertake an environmental assessment.

So maybe the staff could deal with those two issues of moving waste around, that's intermediate or high level, and the issue of guidance on who does the environmental assessment.

MS MURTHY: Thank you, Dr Demeter. Kavita Murthy, for the record. While we are getting the right people on this, could you please -- you're talking about recommendation in Appendix A of CELA's intervention? Is that what we're looking at right now? Or --

MEMBER DEMETER: I'm looking at page 27 of their CMD, recommendation number 12.

MS MURTHY: Okay.

MEMBER DEMETER: Which has two parts -- well, and it's VIII so Roman numeral eight essentially alleging that the IAEA guidance is not being duly considered for those two reasons. The sort of moving of waste. And about who should do the environmental

assessment, whether that's --

MS MURTHY: Thank you.

MEMBER DEMETER: Okay.

MS MURTHY: Thank you. Thank you. I have found it. I will ask the acting director of the waste and the decommissioning division to respond to this question, please.

MS GREENCORN: Nancy Greencorn, for the record. So first with respect to the movement of high level waste. Currently, that is not being requested as part of this licence. CNL is indicating that high level waste will remain on site for this licence period.

From a CNSC perspective, we do not prescribe waste management strategies. CNL would have to put forth, in their decommissioning plans and their waste management plans, how the waste will be dispositioned and CNSC staff would evaluate it at that time and ensure, from a regulatory perspective, that the high level waste was going to a secure waste management facility licensed by the CNSC.

So, for the licence period coming up, the high level waste will remain in the current storage facilities and storage with surveillance activities will be

taken -- continue on for that waste.

MS MURTHY: Thank you and Dr. Demeter, I believe the second part of your question was related to the federal and --

MEMBER DEMETER: I'll just make sure there's also a comment on the intermediate level waste and whether that will be moved and whether moving that is within the IAEA guidance or not.

MS GREENCORN: Nancy Greencorn, for the record. Specifically for the movement of waste, the IAEA does not prescribe how and where waste should be managed in respect to transporting it to different locations.

Again, in this case, CNL is proposing to move the intermediate level waste to a licensed waste management facility so CNL currently, at their Chalk River laboratory, has a licence that enables them to possess and store the intermediate level waste. So that would be an acceptable solution to who move the waste there.

Again, it does fall within a licensed waste management facility. So, from a regulatory perspective, it would be acceptable. Does that answer your question?

MEMBER DEMETER: Yeah, I didn't know

whether IAEA specifically talked about reducing the number of stops that waste has before its final disposition.

MS GREENCORN: Within the IAEA safety standards for fuel, specifically, GSR Part 5, which is the predisposal of waste in SSR-5, there is no specific requirements on limiting the number of transfers that would take place. However, there would be considerations for, you know, doses to workers when moving and stuff and so there is an optimization perspective and an ALARA perspective on this but there is no specific requirement within this -- those safety standards on the movement of waste.

MEMBER DEMETER: Okay. That answered the first question, thank you.

MS MURTHY: Thank you, Nancy. And now for the second part of your question related to environmental assessments, I'd like to call upon Dr. Nana Kwamena of the Environmental Assessment Division to please provide a response.

DR. KWAMENA: Good afternoon. My name is Dr. Nana Kwamena and I'm the Director of the Environmental Assessment Division, for the record.

So for this particular licensing hearing,

there is no actual federal EA decision that needs to be made. As we've made very clear in our presentation with respect to the *Canadian Environmental Assessment Act 2012* with respect to the Federal Land Review, if this is with respect to the other federal environmental assessments that are being conducted by the Canadian Nuclear Laboratories, that is a separate environmental assessment process that will be before the Commission under separate proceedings.

I'm not sure if that fully answers your question.

MEMBER DEMETER: I guess the question was within an IAEA guidance framework, the assessment that CNSC has done, environmental assessment, is well within or not well within the guidance.

DR. KWAMENA: So there is -- sorry, Dr. Nana Kwamena, for the record. So there is a requirement to conduct an environmental review prior to a licensing decision and, in that case, the type of environmental review that is appropriate is this federal lands review.

So, with that respect, yes, that would be the appropriate type of environmental review that would be required prior to this type of decision.

MEMBER DEMETER: Okay. That answers my

question. Thank you.

THE PRESIDENT: Dr. Berube?

MEMBER BERUBE: Thank you for your presentation and taking the effort and time to put all this together for us. In general, I'm very happy with the staff dispositions on this particular intervenor. There is one thing that I agree with, with the intervenor here and that is the reasoning for the acceleration of the decommissioning process.

The documentation was a little vague in this area. So if CNL -- could you speak to the prominent reasons for basically pulling the decommissioning timeframe forward this much?

THE PRESIDENT: Mr. Gull?

--- Pause

THE PRESIDENT: Mr. Gull...?

MR. GULL: Yes, sorry. My apologies.

Mike Gull, for the record.

One of the things the nuclear industry has learned really across the pioneering nuclear countries is that we have learned that the skills required to deal with the legacies that have been left behind now is a safe and correct thing to do. International experience increasingly

is dealing with what could be called an accelerated hazard reduction program because we have learned to keep the waste where it is, you know, enables -- you know, effectively allows kind of further deterioration or requires additional monitoring or physical interventions from staff to effectively continue, as illustrated by Douglas Point, into the storage and surveillance kind of regime to keep the waste safe. So international experience is increasingly leading towards accelerated cleanup programs where it can be done.

I think Douglas Point, the kind of scope of work in terms of the remediation that is covered by this licence period is entirely consistent with what has been done globally and can be executed safely. So effectively we are in a position to safely execute an earlier program, which brings the environmental benefits of the risk reduction that that program brings to the environment forward. And we know we can do this safely in respect to worker dose and we know we can do this safely in respect to industrial safety. We know that we can do this within our -- the requirements of our licence and all the regulations that pertain to that.

THE PRESIDENT: Mr. Gull, just a follow-up

to that. What -- and I know the plant has been shut down for a number of decades -- what would be the increased worker dose as a result of bringing these packages forward?

MR. GULL: I think at this point the answer to that is there would be in the near term some potential increase in worker dose because that is an inevitable consequence of taking some action to perform the remediation. Over the lifetime of the plant it is very difficult to give a precise answer and part of the reason for that is because, you know, actually techniques continue to evolve and we continue to effectively gain from our experience. We have to do things in a slightly more effective way, both in terms of time, dose, safety and money.

So I think the very important point I would like to stress at this point is just a repeat reference to some of the data that was presented in the initial presentation in that CNL has a very mature radiological program and now worker doses are controlled well within the safe limits that are globally recognized at 50 microsieverts per year and therefore we can assure the safety of our people. And even if the doses are slightly higher as a consequence of the acceleration, they will be

well within safe limits and the workers will remain safe. You know, we are, as a nuclear business, I would say very, very expert at dose management, as our historical records will illustrate. I think our maximum dose was about 1/5 of the legal limit because of the effectiveness of our dose management program.

THE PRESIDENT: Right. But I think what I would like to understand is as you are assessing these options, do we expedite decommissioning or not? The radiation dose is a key consideration and I just wanted to get a sense of the level of your assessment around that, on how much higher the dose would be certainly for, you know, your packages 3 and 4.

MR. GULL: I would say it would be impossible for me to give a precise numerical quantified answer. You know, we undertake kind of like dose assessments and we exercise ALARA. So really all I can answer, Madam President, is that we will continue to maintain worker doses at safe limits as we continue to maintain worker exposure to industrial safety and other hazardous waste at safe limits, you know, well below the kind of requirements of legislation and accepted global standards.

THE PRESIDENT: Thank you.

Dr. Lacroix...?

MEMBER LACROIX: Thank you very much for the presentation. My question follows that of Dr. Demeter. With respect to the management of waste and for the purpose of public knowledge, is there a well-defined, a clearly defined blue line between the IAEA recommendation and guidance on one hand and legal requirements on the other hand? Could staff elaborate on this?

MS MURTHY: Dr. Lacroix, I will just take a minute to see who is ready to respond.

Okay, thank you. Kavita Murthy, for the record. I will ask Ms Nancy Greencorn to please provide the response. Thank you.

MS GREENCORN: Nancy Greencorn, for the record.

I will start on this and then I will ask our Legal Services to complement my answer.

In developing regulatory documents in the areas of waste and decommissioning, we look at the IAEA safety standards and the requirements and guidance that are put out in them. So we look at each of the requirements that are provided in those standards and see if they make

sense in the Canadian context to our regulatory framework and incorporate them in such matter. So to a legal perspective how they are -- I think it is called soft law, but I will let legal talk into that, but from a regulatory perspective what we do at the CNSC, we look at those requirements and then we map them to our framework and ensure that our regulatory framework holistically includes all their expectations that would be set out in the IAEA safety standards. But I will let our Legal Services talk to additional if you need that.

MS MURTHY: Thank you, Nancy.

I do want to stress that anything that the IAEA produces is taken by countries as guidance and whatever rules, laws and regulations are passed in the country, those are the ones that we enforce.

If there is an outstanding question related to anything related to the legal aspect of it, we can get back to you on that. We are not at this point in time tied in any -- other than the agreements that Canada has signed, there are no other legal requirements placed on us because of IAEA guidance.

MEMBER LACROIX: Okay. No, my question was pertaining to the -- I presume that the NSCA prevails

on any guidelines from the IAEA. On the other hand, we are inspired by their guidance.

MS MURTHY: Yes, you are right.

MEMBER LACROIX: Am I right if I say that?

MS MURTHY: Yes. Kavita Murthy, for the record. That is exactly how it works. The IAEA is -- all the documents basically are the framework upon which our regulations are based, but our regulations and our laws are the ones we can enforce in Canada.

MEMBER LACROIX: Okay. Okay. Thank you.

THE PRESIDENT: All right.

Dr. McKinnon...?

MEMBER MCKINNON: Yes, thank you. I would like to follow up on the issue of lack of providing the detailed decommissioning plans in advance of the licensing decision, which might seem a bit odd, but I guess an important aspect is whether there would be any significant differences in the practice compared to what you are currently doing and that depends on what conditions would be encountered.

So I have a question, a general question for CNL. The DDPs require characterization surveys to establish the hazards and the mitigation measures.

However, based on the current management in the storage and surveillance phase, how well are the site conditions and the classification of materials currently known and do you expect any surprises from doing those surveys?

THE PRESIDENT: Mr. Schruder...?

MR. SCHRUDER: Kristan Schruder, for the record.

I can assure the Commission that CNL is well aware of the radiation hazards and the materials that we currently, you know, are responsible for storage for surveillance. Where we could get into some unknowns, and this is where our characterization programs will continue to evolve and will get into our detailed characterization, is once we start to open up systems. So we will do some intrusive characterization of any sort of systems within the facility that we are moving forward to in the next planning envelope in order to, you know, do the sampling, to identify any of the contaminants, whether they be radiological or non-radiological such that we can identify those hazards and ensure that we are putting the appropriate mitigation measures in place and personal protective equipment for our staff once we move into decommissioning.

By providing or completing this detailed characterization, it also allows us to do more dose assessments, ensure that we can do the work safely and prepare that detailed decommissioning plan for that planning envelope to submit to the CNSC in order to get their approval and acceptance to move forward with that decommissioning planning envelope.

MEMBER MCKINNON: Okay. But based on your current experience, do you expect any significant changes from what you have been dealing with so far?

MR. SCHRUDER: Kristan Schruder, for the record.

Based on the next three planning envelopes, no, we do not expect a significant change. You know, as we mentioned in our presentation, planning envelope A is largely non -- it is non-nuclear structures, so there would be no nuclear contamination detected or, you know, part of that work. As we move into planning envelopes B and C there are very low levels of low-level waste. We have one, you know, shipment, or one of intermediate-level waste and it is largely stored legacy waste right now that we need to retrieve and package and ship to Chalk River safely.

THE PRESIDENT: Thank you.

Dr. Demeter...?

MEMBER DEMETER: Thank you.

I wanted to follow up with Dr. Berube's question on accelerated timelines, because I look at CNL's presentation slide from H4.1B, Slide 35, and it shows rapidly declining radiation fields with data presented in the year 2000 and then actually no data presented for 20 years after that, which is an observation that is interesting, but by the year 2000 you saw that the radiation fields were going quite low and the data thereafter shows it is almost asymptotic and low.

So around the year 2000 the radiation fields, the residual radiation fields were known, the physics and decay properties and characterization were known. So it is 20 years hence and what paradigm shift, what really caused a shift to make, you know, very significant changes to the accelerated timeline? I haven't heard sort of what happened in that 20 years to say that the plans we had previously for the same physics and the same decay and the same characterization, has there been a new technology? I still don't have a good sense of what the accelerated timeline was based on the information

presented. That is for CNL.

THE PRESIDENT: Mr. Gull...?

MR. GULL: Mike Gull, for the record.

So I think I will try and explain. I think the nuclear industry has learned how to do decommissioning and, you know, I think the fact of the matter is we could have done Douglas Point 15 years ago safely had we learned what we know now as an industry today, with the various tools, techniques, skills and experience that we have learned. So what we are really dealing with here is that now we know what to do and how to do it. We think we can safely eventually bring forward the hazard reduction and the improvements to the environment that that will bring and therefore if we can do that safely as a responsible operator, then surely we should. You know, it is one of those if we can reduce the hazard, mitigate the risk to the environment and we can do that safely, then I think we should and that is what we are seeking to do.

In that 20 years, if you look at that time period, that is the time period by which effectively decommissioning started. If you look around the globe, you know, initially in the United States, which then flowed

through into Europe and is now flowing back into Canada as operational learning and operational experience. So because we think we can safely mitigate this hazard, that is what we are seeking to do rather than just leave it there for future generations.

I think just another point to make is sometimes one of the other things that the industry has learned is just by leaving it, some of the waste can deteriorate further and ultimately it can become harder to handle the longer you leave it. And therefore if we think we can safely execute the scope now, bring about the environmental hazard reduction of that, that we will realize and we can do that safely, then we believe that it is our duty to do that.

MEMBER DEMETER: Just so I understand what you are saying, you are saying that the industrial and technological evolutions of decommissioning as an engineering solution have significantly changed through this period of time to guide you towards a more accelerated timeframe?

MR. GULL: Yes. Mike Gull, for the record.

We have certainly learned a range of I

would say operational skills along with technological skills to deal with waste retrieval and packaging in a way that keeps our workers safe and provides, you know, risk reduction to the environment by improving the way that our waste is managed and conditioned.

MEMBER DEMETER: Okay. Thank you.

THE PRESIDENT: Mr. Gull, a follow-up to that. I very much appreciate the hazard reduction and now with your experiences, or the more recent experiences, the additional driver to proceed with that. What impact does this have on your surveillance efforts, with the expedited decommissioning of certain aspects?

MR. GULL: I think in the round, you know, we rely on our surveillance efforts which obviously flow through into our characterization. So all of the things that we have been learning through the storage and surveillance time period is built into our kind of level of knowledge and understanding of the buildings and the waste within it, which is why Mr. Schruder was able to say with confidence that he doesn't see any surprises during these next three phases.

I mean ultimately of course once we have removed the waste and dealt with the internal hazards and

removed the buildings, the scope of work required to continue with storage and surveillance is reduced, which again, not only does it reduce the worker risk exposure of carrying out that storage and surveillance operations, it kind of reduces the kind of cost liabilities that Canada has. So there are other benefits of bringing this work forward in terms of it reduces the duration of storage and surveillance and the risk associated with that.

THE PRESIDENT: So give me some numbers. How many staff do you have on-site right now and what would that look like 10 years from now if you got the licence amended as requested?

MR. GULL: Before I pass that question over to Mr. Schruder for some of the detailed numbers, I think, you know, what we are likely to say should this licence amendment get agreed is we have a relatively small team of I would say core CNL staff at Douglas Point and then we would expect to see a rise in the number of people who are there to perform, if you like, the decommissioning work. That would probably be a contracted workforce predominantly with some increase in support from CNL staff. And then obviously once the scope is executed, the contractor's workforce goes away and then the CNL workforce

is then the right size for whatever the scope of work is thereafter, which would be storage and surveillance of the plants in phase D and E, and then eventually a remobilization of a workforce to deal with those phases. So, you know, that is the general pattern and if we have any specific numbers I would just like to pass it over to Mr. Schruder, please.

MR. SCHRUDER: Kristan Schruder, for the record.

We have approximately, you know, 12 staff that are located at the site directly who are there providing the ongoing storage with surveillance activities. We also have staff that are located at the Chalk River Laboratories that travel down to support the storage with surveillance activity, as well as some of the hazard reduction. So that number of 12 can go to about 20.

As we move into, you know, planning envelopes A, B and C with contractors and others CNL support staff that could be going down there, we could see numbers upwards of around 50 to 70 people that could be, you know, multiple crews going. You have to imagine that you will have radiation protection staff, you will have your OSH safety staff, you have your workers, your

supervision, so there will be, you know, a number of staff that will be required to provide the adequate oversight, ensure that the operations are being done safely when we move into the full decommissioning should we be successful in our application.

THE PRESIDENT: Right. But then the question was when you get to after completed C and then you are in D, well, where do you expect to be?

MR. SCHRUDER: I'm sorry. Thank you for -- Kristan Schruder, for the record.

Once we move out -- once we finish C, our numbers would go back down similar to what we currently have on-site, close to 12. We would still be doing planning activities and characterization to support, you know, the planning envelope E, the ultimate decommissioning of the reactor building.

THE PRESIDENT: Thank you.

Dr. Lacroix, did you have a question?

MEMBER LACROIX: No, my question was answered. Thank you.

THE PRESIDENT: Okay. Thank you.

So I have another follow-up question, perhaps two.

Maybe I will ask our guests from Environment and Climate Change Canada, Ms Ali or Mr. Kim, to comment on the Environmental Protection Review done by CNSC staff and from their professional perspective the adequacy of that or if they have any concerns.

Ms Ali...?

MS ALI: Can you hear me?

THE PRESIDENT: Yes, we can.

MS ALI: Okay. So Nardia Ali, Environment and Climate Change Canada.

So I will just sort of give our sort of general involvement in the file. So I know a Memorandum of Understanding with the Canadian Nuclear Safety Commission, we have reviewed the ecological risk assessment and several of the environmental protection documents from the perspective of our mandate. And for the benefit of people, their mandate includes things like water quality, air quality, wildlife, toxic sun, applicable legislation, toxins like PCBs, things, materials that they could come across in the decommissioning and other sleeper, you know, legislation.

So we are, based on our review, currently satisfied with the work being done by CNL to identify, to

monitor and develop mitigation strategies for potential environmental effects as they go through the next phase of the decommissioning.

From the wildlife perspective, our wildlife experts encourage CNL to, you know, restore ecological functions as part of decommissioning and there are certain guidance documents on Environment Canada's website, things about how much habitat is enough, recovery strategies for different species at risk, and we encourage CNL to consult with the CNSC who brings Environment Canada in as necessary as they move along or as they adapt their plans. And yes, so for now I think we are pretty -- you know, we are satisfied with the work being done and have no concerns.

THE PRESIDENT: Okay. Thank you for that.

And then my next question, and perhaps CNL can comment on this, the intervenors raised concerns about the lack of ease to get to references and a rather tortuous path that is required because the right citations haven't been made or life hasn't been made easy for them. Perhaps too late now for this application, but what are your takeaways from this?

--- Pause

THE PRESIDENT: Mr. Gull...?

You are on mute.

MR. GULL: My apologies, twice now. Mike Gull, for the record.

One of the -- at risk of kind of repeating myself a little bit, I think we are continuously learning as an organization about how to make our documentation easy to read and provide an easy track from our documents and to perhaps be more specific in the reference points from rather than just general statements and saying it is covered in the resubmission, a more specific reference to the area in a document that it is. I think this is one of the key learning from the 3A projects that we are conducting that, you know, in order to make it easy for people to see how we have responded to their specific questions or the specific interventions is to actually refer them to a much more specific part of what is quite a large documentation pack.

So I mean that is kind of my view. Would you like to comment further, Kristan?

MR. SCHRUDER: Kristan Schruder, for the record.

No. I found that guidance or the

intervention on this quite informative and, you know, I do acknowledge that we could do a better job at pointing out specific page numbers, specific sections in order to help the members of the public, the indigenous groups and the different intervenors to ensure that they can get -- they find the information more easily.

THE PRESIDENT: Thank you.

And with that I will turn it to Ms Blaise for any final comments.

Ms Blaise...?

MS BLAISE: Thank you, Madam President.

First, in response to a number of the questions that were raised, I just want to clarify two of Dr. Demeter's points regarding our recommendation number 13 and the IAEA guidance. We do recognize that the CNSC is the authority for EA on the radioactive waste projects that are currently undergoing review. Our recommendation was just simply that the IAEA's requirements for the proper management of waste cannot be met when the proponent relies upon EAs which are still undecided. In other words, EAs must be completed before they can be relied upon.

Secondly, regarding the effects of the revised decommissioning plan on worker dose, we again

submit that the licensee hasn't provided the information necessary for the Commission to make their decision and it must be demonstrated and assurances do not fulfil the applicant's burden of proof.

Third, in response to the questions, I would just like to turn it over to Dr. Krugmann for his expertise as well.

DR. KRUGMANN: Okay. Thank you.

I would like to comment on the interesting discussion about the earlier decommissioning and I think arguments were made it is important to remove the hazards, hazard reduction, as early as you can, but it is actually an illusion to think that the hazard is removed. The hazard is removed from that particular facility, but it is shifted to other facilities because at the moment there are no licensed waste disposal facilities available.

The attraction of the old strategy was to wait until such waste disposal facilities would be available and then, you know, transport the waste directly there. Now what we are having, we are removing the hazard from that particular facility, but we are shifting it to another one for interim storage and in the process we transport the waste from one place to another, creating new

hazards during transportation. So I don't think that argument holds water. That is my comment.

THE PRESIDENT: Okay. Okay. Thank you.

Ms Blaise, did you have anything else you wanted to say?

MS BLAISE: Yes. Thank you, Madam President.

In closing, I would like to remind the CNSC and the public who is listening today through the webcast that it was nearly 50 years after the establishment of Canada's nuclear regulator and also our first nuclear laws that decommissioning plans became a general licensing requirement for nuclear facilities. This is recognized by the IAEA and they caution that it has only been more recently that attention has turned to focus on a generation of radioactive waste and new radiological hazards associated with decommissioning.

So in light of these historical deficiencies in our nuclear law, we put to you that it is even more pressing that the Commission review the decommissioning of Canada's first full-scale nuclear power plant and require far greater clarity in the licence application, greater expert review, including from

Environment and Climate Change Canada and Health Canada on matters of health, and this must be justified in the analysis throughout the CMDs and licensing decision. This is especially vital when more decommissioning licences are anticipated in the coming years.

I want to thank the Commission Members for their time today and also those who have assisted in allowing our virtual attendance today. Thank you.

THE PRESIDENT: Thank you. Thank you for your intervention.

Just for the record, we had started decommissioning of another CANDU reactor in 2012, Gentilly-2, so Douglas Point isn't the first one.

So with that let's move to our next intervention and it is a presentation by the Canadian Nuclear Association, as outlined in CMD 20-H4.4.

Mr. Steve Coupland will be presenting the submission.

Mr. Coupland, over to you.

CMD 20-H4.4

Oral presentation by the Canadian Nuclear Association

MR. COUPLAND: Thank you, Madam Chair.

Can everybody hear me okay?

THE PRESIDENT: Yes, we can.

MR. COUPLAND: Great.

Well, thank you and good afternoon, Madam Chair and Commissioners. My name is Steve Coupland, I am the Director of Regulatory and Environmental Affairs for the Canadian Nuclear Association.

I appreciate the opportunity to say a few words in support of CNL's application for a licence amendment to proceed with Phase 3 decommissioning at Douglas Point.

You have already received written comments on behalf of the CNA and its members, but I would like, for the record, to briefly expand on some of the key points we addressed in the letter and address some of the -- try to address some of the concerns raised by some of the interventions.

Let me begin by emphasizing that the Canadian nuclear industry is a cradle-to-grave industry and

that the proper decommissioning disposal of nuclear material and the ultimate return of nuclear facilities to a state where they are available for alternative use is a responsibility that our industry takes seriously and is a top priority for us.

As this Commission knows, under Canada's Radioactive Waste Management Policy, waste producers and owners are responsible for the funding, organization and management of waste. Waste owners are responsible for finding safe, practical and environmentally acceptable solutions for long-term management of radioactive waste. That is our industry's responsibility.

Planning and funding are obviously essential first steps, but ultimately plans have to be implemented. Douglas Point Generating Station was shut down in 1984. The first phase of decommissioning, which involved placing the fuel in dry storage and draining the reactor coolant to place the site in a safe shutdown state known as storage with surveillance, was completed in the late '80s.

The second phase of decommissioning, which CNL is currently involved in, involved the removal of peripheral buildings such as the guard house and machine

shop, as well as a hazardous reduction campaign which was designed to prepare the site to move to Phase 3.

This application, as you know, has allowed CNL to move to Phase 3 or final decommissioning. This phase involves dismantling and demolition of all remaining facilities on-site. It is proposed to start in 2021, pending the decision of this hearing of course, and be completed in 2070.

At this point I think I want to just highlight that this licence amendment -- the Commission knows this, but for the public -- this licence amendment is not a carte blanche for a 50-year green light. It is important that the public and stakeholders understand that the decommissioning plan follows a very detailed step-by-step process that the CNSC must approve and the CNSC must approve each step before it can begin. In addition, the CNSC will continue to provide its ongoing oversight of all nuclear activities.

Under the proposed approach, CNL is required to submit a detailed decommissioning plan prior to commencing any decommissioning or demolition activities. CNL plans to submit six volumes in succession. Each volume must be approved by the CNSC before activities under that

volume can begin. As part of this licence amendment, the first volume, the program overview, has been submitted.

The decommissioning plan involves five planning envelopes. For each planning envelope a detailed decommissioning plan will be prepared and, as I said, these plans must be approved by the CNSC before proceeding, and of course are subject to ongoing oversight.

Now, I recognize that some members of the public have concerns over the proposed licence amendment and the commencement of the decommissioning program. I had hoped -- the reason I went into the detailed program planning, I had hoped that that would give the public some comfort and reassurance that this process will be carried out with the same dedication to protecting human health and the environment that our industry prides itself on.

Now to some of the concerns.

One of the biggest concerns expressed by many intervenors is around the disposal of waste from the decommissioning process. I would like to address that concern briefly.

First, all waste from decommissioning activities will be carefully characterized and managed in an approved way according to the waste type. In addition,

the decommissioning will be carried out in such a way that the non-radioactive and low and medium or intermediate level waste will be addressed first. The reactor building, which contains higher level radioactive materials and the spent fuel, will be among the final items dealt with and of course are subject to other licence approvals.

In Canada the ultimate responsibility for spent fuel rests in the hands of the Nuclear Waste Management Organization, which is in the process of developing a permanent repository for spent fuel. As the intervenors correctly point out, a permanent repository has not been developed yet. However, the NWMO is well under way of choosing a site and beginning the process to develop that permanent repository. Of course, it still has to go through the licensing process, as you well know.

It is very reasonable to expect that the repository will be operational long before the spent fuel will be removed from Douglas Point. That said, the intervenors should take some reassurance that before the spent fuel can be moved, CNL must submit a specific detailed decommissioning plan that must be approved by the CNSC. The same thing applies to decommissioning the reactor building.

The CNA recognizes and respects the intervenors' concerns, but we fundamentally believe that the decommissioning plan proposed by CNL is the correct approach, ultimately making Douglas Point site available for alternative use. We base that on the following:

- one, CNL is committed to an open, transparent process, ensuring the public, local communities and indigenous peoples are kept informed every step of the decommissioning process;

- two, the decommissioning plan is a systematic step-by-step approach designed to minimize risk to workers, the public and the environment;

- three, the systematic approach to decommissioning contains the five planning envelopes I spoke of, each of which requires a detailed decommissioning plan that has to be reviewed and approved by the CNSC before proceeding;

- fourth and finally, the CNSC is in place to provide the independent ongoing regulatory oversight.

For those reasons the CNA would ask the Commission to approve the CNL licence amendment application and allow this crucial process to begin.

I am going to close by thanking the

Commission for the opportunity to provide our views and happy to answer any questions you might have.

THE PRESIDENT: Thank you, Mr. Coupland. Let's start with Dr. Berube.

MEMBER BERUBE: Well, thank you for your submission and taking the time to come and speak before us.

Because you are looking at the entire industry and have a fair amount of experience with that industry, I'm going to ask you an opinion-based question. In your opinion, do we have the resources in Canada to start undertaking projects of this size in a safe and environmentally friendly or environmentally safe manner?

MR. COUPLAND: Yes, I believe we do. We have developed a fair bit of expertise in this country in waste management and decommissioning. We have been handling waste for decades now in a very safe way with no incidents. In addition to that, we have through COG, the CANDU Owners Group, there is a Radioactive Waste Management Group among the VPs that work on facts and provide -- share information. In addition, we are -- our industry is well plugged into the international community and we pick up OPEX from around the world as well.

One of the interesting things about our

industry is that while we may compete in certain areas, we also share information extremely well, so there is an interesting dynamic there, but ultimately not just in Canada but worldwide it comes down to if anybody finds an improvement and a safer way to do things, we share that.

MEMBER MCKINNON: Does that include human resources at all? Do you track human resources for this or people that are available to do this kind of work? If you could give us some insight into who is out there that could do this stuff safely.

MR. COUPLAND: I know there are a number of companies that work in this field, but I can't get specific with you. Maybe CNL might have some sense of it. But I know that OPG has a large group, I know that CNL does, I know that a number of -- there are a number of supply chain companies. I am drawing a blank on a couple of them right now that are involved in waste management as well. So there is a wide range of companies.

THE PRESIDENT: Okay. Let's move to Dr. Lacroix.

MEMBER LACROIX: Thank you very much, Mr. Coupland, for your presentation. Quite interesting.

The decommissioning industry is a

relatively new industry and if I can put it bluntly it is a demolition industry, and as a member representing 100 members and 70,000 employees, are you preoccupied by a shortage of highly qualified and skilled people? How will you attract new faces and highly skilled people in an industry that does not build something, in an industry that simply demolishes and cleans stuff?

MR. COUPLAND: Well, I think -- first of all, I think we do -- the industry, I would hope, is growing, not diminishing. Certainly decommissioning is a part of the -- a big part of the industry and an area that is going to grow, but I would also point out that here in Ontario we have two massive refurbishment projects underway that are actively bringing new people into our industry and they will be in a position -- well, they are not doing decommissioning, they are doing refurbishment and many of those skills will be applied to decommissioning.

MEMBER LACROIX: Okay.

MR. COUPLAND: We also have a -- our industry as a whole has a pretty active program in terms of trying to promote engineering and technical expertise and we work very closely with the unions in terms of building our skilled trades. It is actually the skilled trades that

are part of the challenge particularly. I can speak more to the refurbishment than the decommissioning, but I am expecting the same thing.

MEMBER LACROIX: Okay. Thank you. Thank you.

THE PRESIDENT: Dr. McKinnon...?

MEMBER MCKINNON: Thank you. I have no questions.

THE PRESIDENT: Dr. Demeter...?

MEMBER DEMETER: Thank you for your presentation. I don't have any further questions either.

THE PRESIDENT: Mr. Coupland, maybe -- and I don't know whether you can opine on this, but if you can it will be helpful. So last week Natural Resources Canada announced the launch of the review of the waste policy for Canada, but more importantly as it pertains to this particular project was also on an integrated strategy for radioactive waste management. From your perspective, what impact is that strategy likely to have on this decommissioning of the Douglas Point project?

MR. COUPLAND: I'm not just sure yet because part of it will be determined what comes out of the policy review and what direction it ends up going. But as

a starting point, it makes sense to take a look at an integrated approach to it. We will see, you know, how that timing comes forward and how it works with the projects that are underway. It may well turn out to be more applicable to future decommissioning projects than existing once. I think, you know, to speak to this specific project, CNL has laid out a very detailed plan forward with a pretty comprehensive strategy of how to get there, with significant planning envelopes and opportunities for Commission review and licensing and, as I said, Commission review and of course the ongoing oversight. So we need to start the process at some point. I think this is a well laid-out plan and I would encourage the Commission to approve it and allow it to move forward.

THE PRESIDENT: Okay. Thank you very much.

Any final words from you?

MR. COUPLAND: No, I think I just said what I really want to say. This is a good, a well laid-out plan and, you know, we need to -- we are responsible for our waste and we know that and we know how to deal with it and we need to proceed.

THE PRESIDENT: Okay. Thank you --

MR. COUPLAND: Thank you.

THE PRESIDENT: -- very much for your intervention and for joining us today.

We will now take a break and we will resume at 3:25 p.m.

So we will see you then.

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

Suspension à 15 h 07

--- Upon resuming at 3:25 p.m. /

Reprise à 15 h 25

THE PRESIDENT: Welcome back everyone. Let's move to our next intervention which is from the Organization of Canadian Nuclear Industries as outlined in CMD 20-H4.7.

And I understand that we have Dr. Ron Oberth with us for the presentation. So, Dr. Oberth, over to you.

Is Dr. Oberth with us?

MR. LEBLANC: He is there. He's just not connecting with us, but he registered and I can see his name on the list of participants.

We also have the next intervenor that's already registered, Madam President, so...

THE PRESIDENT: Okay. We'll move on to there. Okay, and then just keep an eye out for Dr. Oberth.

Well, then let's move to the next one which is a presentation by the Municipality of Kincardine as outlined in CMD 20-H4.16.

I understand that Mayor Anne Eadie will present this submission. Mayor Eadie, the floor is yours.

MR. LEBLANC: Okay, Madam President, Mayor Eadie is there. Mario is looking at where they may be. Because we had our three intervenors for this afternoon all registered and linked during the break.

So is Ms Sandra Datars Bere available, Mario? Let's see.

I just want to verify, Ms Bere, are you able to link in?

MS DATARS BERE: I am here.

THE PRESIDENT: Perfect. Then we'll move to our presentation from Bruce County as outlined in CMD 20-H4.13. And Ms Bere, you're here to make this submission, so the floor is yours.

CMD 20-H4.13

Oral presentation by Bruce County

MS DATARS BERE: Thank you, Madam President and the Members of the Committee. Can you hear me okay?

THE PRESIDENT: Yes, we can, thank you.

MS DATARS BERE: Okay, thank you. My name is Sandra Datars Bere, I'm the Chief Administrative Officer of the County of Bruce. I am here on behalf --

I'm hearing a couple of echoes here in my presentation to you, so --

THE PRESIDENT: We can hear you just fine without the echo.

MR. LEBLANC: The echo, Ms Bere, is coming from your end, you maybe have a webcast open or another -- two computers working at once or...?

MS DATARS BERE: Apologies. That's much better, thank you. My apologize to the Commission.

MR. LEBLANC: No problem.

MS DATARS BERE: As I said, I'm the Chief Administrative Officer for the County of Bruce. We are the Corporation of the County of Bruce. We are an upper tier

municipality located in Southwestern Ontario approximately two and half hours west of the Greater Toronto Area.

We are bounded by Lake Huron on the west, Georgian Bay on the peninsula on the east, and we are predominantly a rurally-based municipality, an upper tier municipality that is composed of eight lower tier municipalities.

We feature prominently in the areas of agriculture, in tourism because of our great opportunities for outdoor activities, and also we're well-known for the work that's been done in our community for many many years in the nuclear industry.

I am here on behalf of Warden Mitch Twolan, he's unable to join with us today and he sends his regrets, but he did ask me to share with you the information that has been sent already to the Commission, it is a letter that was sent on behalf of County Council, signed by Warden Twolan.

For your benefit, Bruce County is approximately 70,000 people. As I mentioned earlier, comprised of eight smaller municipalities. The County Council is composed of the Mayors of all of the lower tier municipalities. They received a presentation from the

Canadian Nuclear Laboratories in February 2020 and in March received a Staff report on the decommissioning of Douglas Point and they, at that point in time, moved a resolution supporting the phasing of this project and amending Douglas Point's Waste Facility licence to proceed with the final decommissioning, the Phase 3 of it.

As Warden Twolan's letter indicates, nuclear industry plays an important role in Bruce County. Douglas Point holds a significance not only as the first commercial nuclear plant in the region, but also in Canada. We are pleased to be able to write this letter supporting a decommissioning licence amendment and wholeheartedly support this application.

It has been the County's standing position that Douglas Point should be decommissioned as quickly as possible without compromising the safety of people or the environment. And we feel on behalf of Council that CNL is a valued and environmentally responsible corporate citizen in Bruce County, and we feel strongly that they will be able to do this work effectively.

I bring these comments on behalf, again, of the Warden and of all of Council. I appreciate this is a short presentation to you, but it speaks for itself in

terms of support from the upper tier municipality.

I'm happy to take any questions.

THE PRESIDENT: Thank you, Ms Bere. Let's see, I'll start with Dr. Demeter please.

MEMBER DEMETER: Thanks very much for the presentation. I wanted to get a sense if, as an upper tier municipality, you have an opportunity or a mechanism to get feedback from your constituents regarding this industry and concerns that they may have, and how do you do that if you do that, and what sort of themes arise from your constituents?

MS DATARS BERE: Sure. And I acknowledge the fact that I'm speaking as a public servant on behalf of the Council, so I just want to be clear about that. So it's not really my role to speak on behalf of our Council, it's certainly the role of the politicians to do that.

But what I can tell you from an administrative perspective is we do rely on engagement with citizens across the County, we rely on the feedback we receive from our politicians, our County Council members, but we also rely on the feedback we receive from the lower tier council members as well.

So when you think about there's eight

municipalities, they each have their own council in addition to the County Council. So I'll get feedback, I'll use that to inform the positions and the directions they bring forward to the County and the actions they ask us to take on their behalf.

I think it's probably fair to say that the nuclear industry in Bruce County and the surrounding communities has had a significant impact on the economic development of this community, these organizations have been here for many years, they continue to expand, there is a major initiative happening with one of our largest companies here right now and it's having a significant impact on the community.

Having said that, I think it's probably also fair to say that not everybody is always as supportive of the nuclear industry as others. And so we're aware of that, that is clearly made out to us through delegations from people in our community, both at the county level and at the local tier level as well.

THE PRESIDENT: Thank you.

MEMBER DEMETER: Okay, thank you.

THE PRESIDENT: Dr. Berube.

MEMBER BERUBE: Yes, thank you for your

presentation, being aware that you're the CAO of Bruce County. Because a number of shipments are going to actually go through your county from the facility to various other disposal sites, whether they're active or inactive type of material.

I just wanted to ask you, are you comfortable with the movement of such materials and do you have the ability to meet any emergency response requirements, if that's the case? You would know that obviously.

MS DATARS BERE: Thank you for the question. Bruce County is composed of three different levels of highways and roads, the lower tier municipal roads are county roads, which there are many, and also there are provincial roads within the county.

We have a fairly comprehensive and strategic emergency management plan in addition to a specific plan that Kincardine, that's the Municipality of Kincardine, manages as well as it relates to our nuclear industry. And so I think we have always been well-positioned to understand if there's an emergency in our community, and what that means.

And never more than recently, I suppose

with the pandemic, have we really understood how important it is to have that updated and current, and that does include a response in the event of any nuclear challenges or issues.

THE PRESIDENT: Thank you. Dr. Lacroix.

MEMBER LACROIX: Thank you very much, Ms Bere, for your intervention. How many people are employed by the nuclear industry in Bruce County?

MS DATARS BERE: Dr. Lacroix, I can tell you that our largest employer, Bruce Power, has approximately 4,500 employees. There are also a number of companies outside of Bruce Power proper, over 60 companies have come into our community over the last number of years to support major repair to one of the activities within Bruce Power.

I can't tell you exactly, and I wouldn't want to mislead you by giving you the wrong information. I would suggest to you that in addition to people living in Bruce County, the draw for the nuclear industry in our community extends as far south as Huron County, probably as far east as Perth County and Grey County, and people not only live here, but travel here to do work. So I think I could get that information for you, I don't have it in

front of me at this point in time.

THE PRESIDENT: Thank you. Dr. McKinnon.

MEMBER MCKINNON: Thank you for your discussion and your answers. All of my questions have been answered. Thank you.

THE PRESIDENT: Ms Bere, a quick question. Any of your landfill sights likely to be used for the demolition waste coming from Douglas Point?

MS DATARS BERE: Thank you, Ms President, through you the Members of the Committee. At this point in time, the County of Bruce does not maintain landfill sites, so those questions are best directed to our local municipalities to get some sense of them, but I'm sure they can provide some feedback to you as well.

THE PRESIDENT: Okay, thank you. Thank you very much for coming today and subbing in for Warden Twolan, very much appreciated.

Any final words you'd like to say?

MS DATARS BERE: Thank you very much for the opportunity, and I know that Warden Twolan, if he could have been here, would have joined you and would have enjoyed the opportunity to have a discussion with you as well.

THE PRESIDENT: Okay, thank you. So we're going to have another try to try to welcome the Organization of Canadian Nuclear Industries as outlined in CMD 20-H4.7.

Dr. Oberth, if you're with us, the floor is yours.

MEMBER DEMETER: I can't hear him.

MR. LEBLANC: We can't hear him from Ottawa either. I know he's there, we just spoke to him. There's just a technical glitch.

Madam President, with your indulgence, maybe try with the Mayor of Kincardine, while we try to fix things with Dr. Oberth?

THE PRESIDENT: Okay. Have we confirmed that the Mayor is here?

MR. LEBLANC: Yes, we have.

THE PRESIDENT: Okay. So --

MAYOR EADIE: Yes, I'm here, finally.

THE PRESIDENT: Okay.

MAYOR EADIE: I don't know what happened to our connection here at the Municipality of Kincardine, but luckily I brought my iPad that's on cellular, so it seemed to work.

THE PRESIDENT: Well, the floor is yours, Mayor Eadie.

CMD 20-H4.16

Oral presentation by the Municipality of Kincardine

MAYOR EADIE: Thank you. So good afternoon President Velshi and CNSC Commission Members. My name is Anne Eadie, and as Mayor of the Municipality of Kincardine I'm here today to make a presentation on behalf of our council, our staff, and our residents.

I trust that somebody has our presentation, because I can't do it with my iPad. Or do you just want to listen?

THE PRESIDENT: Well, we'll be listening and I'm sure they'll try to put your slides up.

MAYOR EADIE: Yeah. It doesn't matter, it's okay.

So the Municipality of Kincardine is a strong supporter of the nuclear industry as the host of the Bruce Power reactors and site, and the Ontario Power Generation's Western Waste Management Facility. We are also the host municipality for the former Douglas Point

reactor.

So we're very familiar with all things nuclear.

The next slide is the Municipality's position on the decommissioning. The Council of the Municipality of Kincardine has approved an intervention in the hearing proceedings and supports the decommissioning of the Douglas Point reactor.

Canadian Nuclear Laboratories attended Council on February 3rd, 2020 to provide an overview of the decommissioning project, and has subsequently been working with municipal staff to provide specific information about the decommissioning waste.

After CNL's presentation to Council some of us had concerns about the volume of nonradioactive waste and the nature of it. As you know, in the 1960s when Douglas Point was under construction materials such as asbestos were used, which were found later to be hazardous.

Also each additional cell of our landfill is very expensive, so the amount of extra volume from the nonradioactive waste was important extra information for us to receive.

So I'm at my page 5, if the person with

the -- that's right -- no, one before. There, that's good.

CNL Staff developed a plan for the decommissioning. They have been engaging in discussion with members of Staff, our Staff I mean.

CNL Staff have provided waste projections as a result of the decommissioning and have further discussed the management of these materials over the next decade if the licence amendment is approved.

CNL representatives have shared analysis from recent project and emphasized a priority on reusing viable materials and properly disposing of contaminated materials. Next slide please.

So of the approximate projected total of 120,000 metric tons of waste, approximately 100 tons of safe construction waste will be landfilled in the first half of the project with 15 tons, metric tons, being landfilled in the second half.

Most of the waste will be repurposed or diverted out of the community including hazardous materials.

Therefore, we are satisfied that our concerns have been addressed. There will be no hazardous waste like asbestos, lead or PCBs going into our landfill

from the decommissioning.

I would just ask that the Municipality of Kincardine be notified in the future if the repurposing and diversion plans change.

The Municipality of Kincardine, as the host municipality, should always be adequately compensated for nonradioactive waste from nuclear. We are a small, lower tier municipality of 12,000 people with a lot of infrastructure to maintain, including our landfill facilities.

So the Municipality of Kincardine is confident that CNL will continue to work with the Municipality to determine acceptable volumes of clean waste to be received at our landfill sites and appropriate compensation for waste disposal.

CNL did attend the council meeting on November 2nd, 2020 to provide an update from February regarding the project and decommissioning waste projections.

So in conclusion, the Municipality of Kincardine is satisfied with CNL's decommissioning plans and supports the approval of a licence amendment for active decommissioning.

Thank you.

THE PRESIDENT: Thank you very much for your presentation, Mayor Eadie. Let's open the floor for questions and start with Dr. McKinnon.

MEMBER MCKINNON: Thank you, Mayor Eadie. I have a question for you. I'm quite aware that landfill capacity is and has been an issue in Ontario for quite some time. So my main question is about whether the Municipality does have sufficient space for the clean material and, you know, if the schedule of the waste delivery has been reviewed as well?

The second question I would like CNL to comment on because the figure of 120,000 tons that was mentioned in the presentation is substantially different from what is in the CNL report. So if CNL could later comment on the volume to be delivered? Thank you.

MAYOR EADIE: Thank you. Currently, of course, we have enough capacity. We have two landfill sites in the Municipality of Kincardine; one in the former Bruce Township, and one in the former Kincardine Township.

So our main site is the one in Kincardine Township and it was built around 2012 it opened. I would say that it is very well done compared to a lot of rural

landfill sites. However, each cell is very very expensive. And so we are a growing community along Lake Huron here, so we have to think into the future, we have to think long-term.

And we want to make sure that we are compensated. Because in the future one new cell at the Kincardine Township, former Kincardine Township, Ward 2 landfill site, it started at a million dollars for the first cell, and I have staff on the line, they can correct me, Adam Wiser, but I think he told me that the next cell would be over \$2 million, and that is a lot of money.

So that's why we were concerned about the amount and the quantity of nonradioactive waste that would be going in. But, as I said, our staff have been working with CNL and with all the recycling they plan to do and repurposing it looks like the quantity will be manageable, quite manageable.

But you are correct, they are very very expensive. That landfill site we put there is -- I was amazed how much it cost and how much it cost to... So we have started with Cell 1, now we're on Cell 2, then there's Cell 3, 4, 5, 6 and 7. The original plan was for seven cells.

MEMBER MCKINNON: Do you have the environmental approvals for the future cells, if they will be required?

MAYOR EADIE: As far as I know. I can refer to Adam Weishar, but as I recall at the time that was under the environmental approval was the -- in general was the seven cells. That was back in about 2012.

So Adam, are you on the line?

MR. WEISHAR: I am, Mayor Eadie. So Adam Weishar, for the record here.

With regards to a few of the questions that have been posed to Mayor Eadie, the Waste Management Centre was initiated around the 2012 timeline that she mentioned. The information that I have reviewed indicates September of 2011 is when we commenced with that site. There are seven stages and the planning at the time projected a site life based on the capacity and annual fill rates to be projected to February 2047. We are currently in the first of three phases of stage 2, so stage 1 has been completed.

With regards to the approvals, so with our ECA and the plan of development for the operation of the site, it is comprehensive of all seven cells and we do have

the approvals to construct each stage as necessary and with applicable engineering and applications to the Ministry.

MEMBER McKINNON: Okay. Thank you very much.

THE PRESIDENT: And I guess the second part of the question was to CNL around the numbers.

MEMBER McKINNON: Yes.

MR. SCHRUDER: Kristan Schruder, for the record.

Thank you for that question. As we have discussed, you know, engagement with our local stakeholders is extremely important to us and before I pass it over to Ian Bainbridge to speak specifically to the waste volumes, I just want to confirm that the numbers that you are referring to are in Table 14-2 in our CMD, Dr. McKinnon?

MEMBER McKINNON: Yes, that is correct. That was 34,000-odd cubic metres, whereas the volume or the amount mentioned in Mayor Eadie's presentation was 120,000 tonnes. But when they are converted they are quite different. So that was my question.

MR. SCHRUDER: Okay. Thanks. I will have Ian Bainbridge provide a response to that question. Thank you.

MR. BAINBRIDGE: Ian Bainbridge, for the record.

As quite rightly pointed out, Table 14-2 does say under planning envelopes A, B and C combined it will be just under 35,000 metres cubed, just over 34,000 metres cubed. The majority of that will either be concrete or steel. So depending on exactly what density you use obviously for the different concretes and steels, that does multiply out to about approximately 120,000 tonnes. The steel is very heavy, it is six or seven specific gravity; concrete is more like 2 1/2.

THE PRESIDENT: Mr. Bainbridge, I am actually looking at a table in the CNSC's Environmental Protection Report, it is Table 1.3, and it has both cubic metres and metric tonnes, and the 33,000 cubic metres has been converted to 5,000 metric tonnes. So I'm not sure if we are all speaking to the same thing.

MR. BAINBRIDGE: I'm not sure, but I certainly wouldn't expect 33,000 metres cubed to be only 5,000 tonnes. I would need to go and look at the exact table you are referring to to try and explain that one, I'm afraid.

THE PRESIDENT: Staff, do you have ready

access to that? It is actually in one of the interventions we are going to see later on, but I think it's pages -- it is Table 1.3 in the CNSC EPR. Maybe we can come back to that later --

MR. BAINBRIDGE: Please.

THE PRESIDENT: -- once you have the references and we will talk about it.

MEMBER MCKINNON: I would just like to add to that. If you use solid concrete density, yes, you do get a multiplying factor of two, but for waste material it is usually substantially less than one. So the volume would be -- or the weight would be quite a lot smaller or the volume would be quite smaller that we are talking about.

THE PRESIDENT: But maybe we can -- if you can just take that away and come back tomorrow and we will come back to this question. Thank you.

Dr. Demeter...?

MEMBER DEMETER: Thank you very much for your presentation.

This is actually just a question for CNL and CNSC to deal with, perhaps for tomorrow, but I had the question of trying to reconcile Table 1.3 from CNSC, which

is page 12 of 69, and CNL's Table 14.2. The numbers are different and they shouldn't be different because they are based -- they should be based on the same estimates. So the volumes are different between the two of them and some of the planning envelopes have zero metre cubed, but a whole bunch of metric tonnes. So you can't have zero weight with 596 metric tonnes, or zero -- so that Table 1.3 of the staff CMD doesn't reconcile internally or in comparison with Table 14.2. So I don't want to get into those details now, but I hope by tomorrow we will have some reconciliation.

MR. BAINBRIDGE: Madam Velshi, if I could, please. I think I understand what the difference is here now. In our original cost estimate we had performed to carry this out, when they estimated the initial volumes of waste, some waste were given in metre cubes and some in tonnes. The CNSC table here is showing you the metre cubed and the tonnes. We have converted that tonnage that is shown in the CNSC tables into metre cubed and totalled them. So that is why our metre cubed is slightly higher and we have no tonnage.

THE PRESIDENT: Okay. So let me clarify then. So in the CNSC table it is not the metre cubes that

has been converted to the metric tonnes, they are just two different volumes altogether?

MR. BAINBRIDGE: Correct. They are cumulative, yes. They are not equal representation of each other.

THE PRESIDENT: Okay. So, Dr. Demeter, that answers your question, too, why zero and still some metric tonnes.

MEMBER DEMETER: Yes. It wasn't clear from the table, but I understand that now.

THE PRESIDENT: Okay. It wasn't clear and there should have been a footnote if there wasn't one, yes. Okay. But we will -- I know there is an intervenor who has some questions on this and we will come back to that. I appreciate that, Mr. Bainbridge.

Dr. Demeter, did you have another question?

MEMBER DEMETER: No, I didn't. Thank you very much.

THE PRESIDENT: Okay.

Dr. Berube...?

MEMBER BERUBE: Yes. This is for CNL. Again, we are talking about waste at this point. With this

intervenor, it seems to be a critical issue. Could you explain to me how you are doing waste management separation here currently? Are you doing that onsite for categorization and separation or do you have a third party that is doing that for you? How is that proceeding?

MR. GULL: Mike Gull, for the record. I'm sorry, I was...

I think in general our approach to waste source and separation is where we can we do segregation when we generate a waste into appropriate waste streams and then we -- according to what we have, we can kind of transport it to a subsequent waste processing facility if that is required. There are, as I say, several -- if I use Chalk River as an example, because that is effectively where we are doing the bulk of our decommissioning and waste generation at the moment, you know, we have waste management plans in each of the buildings that we are decommissioning. We kind of target our separation of the waste as we generate it and then we send that waste down various routes. In concrete for example, which was the last example, we have, you know if you like, a grinding and recycling facility here where we take large lumps of concrete and grind it back into material for, if you like,

beneficial reuse on the site itself. Other waste we would send off to a supply chain if there is a subcontractor who can provide further post processing of the waste, all of which is really designed to allow us to follow the waste hierarchy and, you know, reduce, reuse, recycle in the way that we effectively manage each of the waste streams that we generate. So there is a combination and, again, it just kind of depends on exactly the configuration and the level of, if you like, contamination or activation of any of the particular waste streams as to how we process it. And a lot of this is determined with our integrated waste strategy which comes up in a number of the interventions. It is really the document where we try and identify all of our waste streams as the owner of these waste streams and try and understand how we are going to reconfigure and disposition these wastes through initial generation through to, you know, interim storage and then ultimately dispose should that option become available to us.

THE PRESIDENT: Thank you, Mr. Gull.

Dr. Lacroix...?

MEMBER LACROIX: Yes. If I may add some confusion over these baffling numbers. It is not so much the 120,000 metric tonnes of waste that bothers me, it is

the 100 tonnes of safe construction waste. Are you saying that the remaining 119,900 metric tonnes, what will we do with it? And if you take a truckload, a truckload is about 50 tonnes, so that would be something like 2,500 truckloads over a period of five years. So that is 500 truckloads per year, which is roughly 2 truckloads per day. So I cannot reconcile these numbers with the numbers that are provided in CNL CMD. So could anybody explain to me where I am wrong?

MR. BAINBRIDGE: Ian Bainbridge, for the record.

Certainly the heaviest part of the waste consists mainly of three elements. There will be recycled metals, a lot of the buildings have much metal structure to them, a great deal of concrete, certainly in the foundations and some of the building walls, and a great deal of soils. Those soils that are excavated are expected to be confirmed as we excavate them by our radiological surveyors as clean waste. That can be stockpiled on the site and when we are finished doing the excavations that we need to do, that soil will be reused. So probably half the waste will never leave the site.

The concrete waste, again, we excavate

that and that usually goes to a local contractor's yard where it will be more firmly broken up and rubblized and depending on its destination where it is going to be reused.

The steels, that is, as I said, building structures. A lot of the rebar that comes out of the concrete, that does get loaded and shipped to -- we mentioned in our presentation a couple of companies we use for metal recycling. That is the vast majority of the weight of the wastes.

MEMBER LACROIX: Okay. And what about contaminated concrete, what do you do with it?

MR. BAINBRIDGE: Contaminated concrete, if it is contaminated through the bulk of it, then it will all be treated as low level waste and that will be shipped to Chalk River. If it is surface contaminated, we will clean the surface off, either cut the surface off or scabble the surface off until the remaining block is clean, non-contaminated waste and then that will go the same way as the rest of the concrete waste -- clean concrete waste.

MEMBER LACROIX: Okay. Thank you.

THE PRESIDENT: Okay. I see there are no more questions, so back to you, Mayor Eadie. Any final

words?

MAYOR EADIE: Well, I just wanted to say, President Velshi, that after listening to the discussions today I once more have learned at a hearing how thorough the hearings are and I thank our staff Adam for coming on. I don't know as he has attended a hearing before, but I kept telling him it would be very thorough. So thank you and thank you for your patience, me trying to get on another way.

But I will conclude by saying I am confident in the process, I have learned that being Deputy Mayor and Mayor and a Councillor in another municipality. I am very confident in the CNSC process. Over the years I have gone to many public meetings, many meetings specifically for Council, but also invited to OPG meetings, Bruce Power meetings, and I have learned that everything is gone over with -- in great detail and that there is always a backup plan to a backup plan to a backup plan. So I am quite confident that this decommissioning process will roll out in a manner that protects the environment and is good for nuclear in general. Thank you.

THE PRESIDENT: Thank you for coming today and thank you for having a backup plan as well, because

that came in handy. So thank you.

MAYOR EADIE: Okay. Thanks.

THE PRESIDENT: Okay. Let's try for the third time in welcoming the organization of CANDU Nuclear Industries in CMD 20-H4.7.

Dr. Oberth, are you with us now?

DR. OBERTH: I can see myself. Can you hear me?

THE PRESIDENT: Yes, we can.

DR. OBERTH: Okay.

THE PRESIDENT: Over to you.

CMD 20-H4.7

**Oral Presentation by the
Organization of Canadian Nuclear Industries**

DR. OBERTH: I am glad this movie is going to be a sound movie, the silent movie era is long past.

So thank you to the Commission Members, CNSC staff and of course experts from CNL for listening to my presentation today, which I am very pleased to give on behalf of the Organization of Canadian Nuclear Industries. You have heard me say this many times, but I guess I will

just remind you that we represent 230 Canadian suppliers to the nuclear industry of all sizes, from small companies to some of the larger tier 1 organizations.

I am very proud to be here today to support the application of Canadian Nuclear Laboratories, who happens to be a member of our Association, for the licence amendment to authorize Phase 3 decommissioning on the Douglas Point Waste Facility.

OCNI believes that the decommissioning of the Douglas Point facility will help to minimize and consolidate Canada's nuclear waste liabilities and will thereby reduce the risk to the public. OCNI is confident that CNL's primary consideration through all phases of this project will be the protection of the environment and the public and we believe that their track record of managing that site is a testament to that care and due diligence.

We feel that they have demonstrated this also on related decommissioning and waste management projects and I might add that although Douglas Point is only the second official decommissioning project, in fact the refurbishment of a CANDU reactor involves a decommissioning at the front end. You basically remove pressure tubes and other active components, safely

transport them and store them. So in fact refurbishment is partly a decommissioning of a reactor core and then the reconstruction of that reactor core. I think that experience positions Canadian industry and our suppliers with the ability to do this safely and efficiently.

We are also confident that CNL will continue to carefully follow Canada's regulatory process, which is among the best in the world, and we feel that they also have demonstrated the ability and the desire to consult with the public, as you saw earlier today with presentations by Kincardine, Bruce County and the indigenous communities, to help them shape and plan the decommissioning project effectively.

We also endorse CNL's plan to characterize, or one can say categorize, each type of waste so that each type of waste is managed in the optimal manner. I mean we have had a long discussion about how you manage the huge amounts of non-radioactive waste such as concrete and metal, and that has to be managed in a way which is very different from how you manage some of the active components.

We also support CNL's plan, as you heard from CNL, to package the radioactive waste in licensed

containers to safely transport those loaded containers to the Chalk River site, where the final disposal site will be located. Canada has over 45 years of experience in transporting radioactive materials by road, rail, water and air, without a single radiological incident. We feel that that speaks for itself.

And also, we believe that also the consolidation of waste at one location at the Chalk River site is in the best interest of Canadians and the environment.

We also applaud CNL's plan to recycle more than 90 percent of the so-called clean waste from the facility at recycling facilities, once again demonstrating care for the environment.

We also commend the plan to segregate certain types of waste such as asbestos, PCBs, lead, asphalt, roofing and other hydrocarbons at other hazardous waste sites that don't require -- that are specialized in handling these types of facilities. In other words, the waste sites are characterized and organized along the types of waste that will be coming out of the facility.

And finally, CNL's parent organizations under the GoCo model, organizations such as Energy

Solutions, have a lot of experience in the U.S. decommissioning industry and we believe that they bring a lot of capability to the project that will be augmented by a number of OCNI member companies that have also acquired experience through their work on the refurbishment projects at Darlington and now Bruce and previously Pickering.

I just might add that one of the projects that OCNI is now working on is we have retained some consultants to help us prepare a Canadian Decommissioning Capabilities Directory. This has two purposes. It is to help position Canada as a competent and capable nation to bid on some decommissioning projects offshore, but this directory will also be very useful by CNL. Kristan Schruder in fact is providing some oversight to the preparation of this directory and we also know that the Canadian Centre for Nuclear Sustainability here in Durham Region will benefit from this directory, which will lay out in some detail where the Canadian expertise lies in decommissioning and how also we plan to build on the capabilities of major offshore decommissioning organizations such as Energy Solutions, United Engineering and Construction, Fluor and Cavendish so that we can create a strong and capable and very competent Canadian

decommissioning industry to undertake other projects beyond Douglas Point.

So that is my presentation, ladies and gentlemen, for the record. I appreciate your time and I am certainly happy to answer any questions you may have.

THE PRESIDENT: Thank you, Dr. Oberth.
Let's start with Dr. Lacroix.

MEMBER LACROIX: Thank you very much, Dr. Oberth, for your presentation.

You mentioned -- and I'm glad that you made this comparison of a refurbishment project with a decommissioning project. You mentioned that in a refurbishment you remove the pressure tubes and I was wondering -- and this is a question for CNL -- in program envelope C, which is the reactor building clear-out, will you remove the pressure tubes from the calandria or is it postponed to program envelope E, which is after 2034?

THE PRESIDENT: Mr. Schruder...?

MR. SCHRUDER: Yes. Kristan Schruder, for the record.

Just to clarify, Dr. Lacroix, as part of planning envelope C, the reactor building clear-out, we will be removing equipment outside of the calandria and the

bioshield. So we will not be removing any of the pressure tubes under that planning envelope. That would be done under planning envelope E under a future licensing decision.

MEMBER LACROIX: Okay. Thank you very much. Thank you.

THE PRESIDENT: Dr. McKinnon...?

MEMBER MCKINNON: Yes. Thank you, Dr. Oberth, for your presentation. I was very interested to read about some of your members developing robotic equipment for working in hazardous environments, which could reduce a lot of exposure risks for workers.

So I have a question for CNL. I guess it would be more appropriate in phase --planning envelope C, working the reactor building. Is there any thought to using robotic equipment during those tasks in that environment?

THE PRESIDENT: Mr. Gull...?

MR. GULL: Yes. Mike Gull, for the record.

I think one of the slides I presented, the sixth slide, kind of demonstrated the use of a Brokk, which is effectively one of --kind of pieces of robotic equipment

commonly used in decommissioning. We are also using robotic kind of retrieval effectively in hot cells to retrieve some of the items that are in there, and we are also using kind of robotics kind of techniques over at Whiteshell. So the kind of robotic approach is one of the tools and techniques that the industry has learned in order to enable us to manage and control worker dose. So as part of our ALARA assessments which we conduct for every piece of scope within the detailed decommissioning plan, we will assess the options for dealing with the waste that is in front of us and if the right way to do it in order to maintain worker dose is to go for a robotic or remote-handled approach, then we have the skills and experience and the technology supply train available to allow us to do that.

If on the other hand, you know, a simpler approach is appropriate for that kind of form of waste, then we will do something different, but again, it comes down to this kind of dose question. This is how we manage with the array of skills, experience, techniques and tools available to the industry, how for each particular piece of the job we kind of manage that dose rate.

And I think if I could just reflect on Dr.

Lacroix's kind of comment earlier that decommissioning is effectively a demolition job, I think you have probably understood from the conversation over the last hour that actually at its essence decommissioning is a large waste management job, because if you are decommissioning a structure, the way you decommission it and the way you demolish it very much depends on the waste you produce and you need to figure out, you know, what waste you are going to produce, which affects your demolition plans.

So the real -- I mean the kind of physical removal of a building is the least of your problems, it is a fairly conventional thing. All of the skill, knowledge and experience is about, you know, understanding the characterization of the building, understanding your waste, understanding the techniques you have to deal with your waste, and then an ultimate safe position for interim storage and ultimate disposal.

So yes, robotics is one of the tools they use, to go back to the original question.

THE PRESIDENT: Thank you for that.

MEMBER MCKINNON: Thank you.

THE PRESIDENT: Dr. Demeter...?

MEMBER DEMETER: Thank you very much for

your presentation. I don't have any further questions.

THE PRESIDENT: Dr. Berube...?

MEMBER BERUBE: Again, thank you for your presentation. I have no questions either.

THE PRESIDENT: Okay.

So, Dr. Oberth, any final words then from you?

DR. OBERTH: Well, first of all, I mean I like this model where I do the presentation and CNL answers all the questions, so that is a good model.

And I just want to add that Canada has a lot of robotic capability and it derives from the fact that the CANDU reactor is a remotely robotically fuelled machine, so we have built that capability through years of remote handling capability.

And the other difference is refurbishment is more of a surgical process than decommissioning, but the sum advantage of some of that surgical aspect is that you can separate the wastes and handle each specifically. So I think CNL will decide on a case-by-case basis when a more surgical robotic approach is required and when it is a muck-and-truck kind of demolition approach.

But thank you for listening to me and I

appreciate your time today.

THE PRESIDENT: Thank you for your intervention today.

DR. OBERTH: Thank you.

THE PRESIDENT: This concludes the oral presentations scheduled for today and brings us to the close of the hearing for today. The hearing will resume tomorrow morning at 9 o'clock.

So again, thank you all for your participation and attendance today. Have a nice evening and we shall see you tomorrow morning.

Thank you.

--- Whereupon the hearing adjourned at 4:16 p.m.,
to resume on Thursday, November 26, 2020
at 9:00 a.m. / L'audience est ajournée
à 16 h 16, pour reprendre le jeudi
26 novembre 2020 à 09 h 00