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Safety Commission

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sûreté nucléaire

Public Meeting

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Le 10 décembre 2013

York Halls
Holiday Inn Toronto Yorkdale
3450 Dufferin Street
Toronto, Ontario

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Holiday Inn Toronto Yorkdale
3450, rue Dufferin
Toronto (Ontario)

Commission Members present

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

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Secretary:

Secrétaire:

Mr. Marc Leblanc

M. Marc Leblanc

General Counsel:

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Ms Lisa Thiele

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Toronto, Ontario / Toronto (Ontario)

--- Upon resuming on Tuesday, December 10, 2013
at 8:36 a.m. / L'audience reprend le mardi
10 décembre 2013 à 8 h 36

Opening Remarks

Ouverture de la séance

M. LEBLANC : Bonjour, Mesdames et Messieurs. Bienvenue à la continuation de la réunion publique de la Commission canadienne de sûreté nucléaire.

We have simultaneous translation. Please keep the pace of speech relatively slow so that the translators have a chance to keep up.

Des appareils de traduction sont disponibles à la réception. La version française est au poste 3 and the English version is on channel 2.

Please identify yourself before speaking so that the transcripts are as complete and clear as possible.

La transcription sera disponible sur le site web de la Commission dès la semaine prochaine.

I would also like to note that this

proceeding is being video webcast live and that archives of this proceeding will be available on our website for a three-month period after the closure of the proceedings.

Please silence your cell phones and other electronic devices.

Monsieur Binder, président et premier dirigeant de la CCSN, va présider la réunion publique d'aujourd'hui.

Mr. President.

THE PRESIDENT: Thank you, Marc, and good morning to everybody.

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

Je vous souhaite la bienvenue and welcome to all of you who are joining us through the webcast.

I would like to begin by introducing the Members of the Commission that are with us here today. On my right are Dr. Moyra McDill and Mr. Dan Tolgyesi. On my left are Dr. Sandy McEwan, Ms Rumina Velshi and Mr. André Harvey.

We have heard from Marc Leblanc, our Secretary, and we also have Ms Lisa Thiele, General

Counsel to the Commission, with us on the podium today.

We are really in Toronto today for the next two days in large part to consider the written submissions and oral presentations from a large number of citizens and organizations who wish to express their opinions on the performance of the GE Hitachi nuclear facilities.

The Commission understands that some in the community and elsewhere have concerns regarding the operation of the GE Hitachi facilities. We are here in large part based on requests made by several of the interveners and have changed our traditional annual meeting process which is normally conducted in Ottawa to provide a forum here in Toronto to hear your views. We are here to listen, to ask questions on the views, suggestions and concerns that many of you have expressed in writing and will further express orally today and tomorrow.

The CNSC is a quasi-judicial administrative tribunal and as such we expect every participant to be respectful and civil. The Commission will not tolerate inappropriate behaviour and will take measures necessary to ensure the orderly conduct of this proceeding. Thank you.

Marc, over to you.

MR. LEBLANC: The *Nuclear Safety and Control Act* authorizes the Commission to hold meetings for the conduct of its business.

The agenda was approved yesterday. Please refer to agenda 13-M48.A for the complete list of items to be presented today.

A copy of all written documentation is available at the reception desk at the back of the room.

So we are clear on today's and tomorrow's proceedings, as per the published agenda, we will start this morning with the 2012 Nuclear Fuel Cycle Industry Report dealing with nuclear facilities from across Canada.

This should take us at least to the morning break and would then be followed by the focus on the GE Hitachi nuclear facilities. At that point, there will be presentations by the CNSC staff, GE Hitachi, after which we will start with the oral presentations by members of the community and other interested persons, who we refer to as interveners.

As per the agenda, we plan to hear presentations and consider written interventions until about 9:30 this evening. We will resume tomorrow morning at 8:30 with the remaining presentations.

We will try to follow the agenda as much as possible. Please consult CNSC staffers Louise Levert or Marie-Claude Valade at the reception desk if you require additional information.

Mr. President.

THE PRESIDENT: Thank you.

The first item on today's agenda is the CNSC Staff Report on the Performance of Uranium Fuel Cycle and Processing Facilities: 2012. This is outlined in CMD 13-M51.

The public was invited to comment in writing on this item and also by making oral presentations on the GE Hitachi facilities. The Commission received 89 requests for participation.

I understand that CNSC Staff have separated the presentation into four components, so I recommend that the floor be opened for questions after each industry sector component and ending with a separate presentation regarding the GE Hitachi facilities.

We have representatives from the industry in attendance and by teleconference available for questions after the presentation.

Before moving on I'd like to verify that a representative from AREVA Resources Canada Inc.

is on the line.

Ms Van Lambalgen, can you hear me please?

MS VAN LAMBALGEN: Yes, we can.

For the record, this is Tammy Van Lambalgen. I'm here with Jack Richards and Dale Huffman from AREVA Resources.

THE PRESIDENT: Okay. Thank you.

I will turn the floor now to Mr. Jammal. That's what it says here. Who is speaking?

Mr. Elder.

13-M51

CNSC Staff Report on the Performance of Uranium Fuel Cycle and Processing Facilities: 2012

MR. ELDER: Good morning, Mr.

President and Members of the Commission. My name is Peter Elder. I'm the Director General of the Directorate of Nuclear of Nuclear Cycle and Facilities Regulation.

With me doing the presentations today are Mr. Jean LeClair, Director of the Uranium Mines and Mills Division, and Mr. Michael Rinker, Director of the Nuclear Processing Facilities Division.

We also have staff available, involved in this report, here in Toronto as well as via teleconference from our CNSC offices in Ottawa and in Saskatoon.

So we're here to present this report on -- the CNSC Staff Report on the Performance of Canadian Uranium Fuel Cycle and Processing Facilities in 2012.

As has been mentioned, the report covers four parts. It provides details on the compliance performance of the operating facilities across these four areas.

They include:

- uranium mines and mills;
- uranium processing facilities, which includes uranium refining, conversion and fuel fabrication;
- processing facilities for tritium;
- and finally, Nordion's medical isotope production facility.

We note that while the performance data presented in the report is to the end of 2012, the report also provides any major developments or events that happened at any of these facilities over the past year, so up until the point where the report was

issued.

CNSC staff have committed to a continuous improvement of this report. This year we have added a brief overview of the radiation protection principles at the beginning of the report to provide some context on how we look at radiation protection across this industry.

As we did last year, the report provides overall ratings for the CNSC safety and control areas for each sector.

The report also includes performance data in the areas of radiation protection, environmental protection and workplace health and safety. This includes a comparison of the environmental performance of uranium mines and mills to that of other metal mines.

As part of the improvements, we have added a comparison of safety performance in the area of lost-time frequencies and severities for the mining sector in Saskatchewan.

And as directed by the Commission for last year's report, a further improvement has been to add appendices that include production data and the financial guarantees for each facility.

So while the report, as I mentioned,

highlights any of the major events that have happened in these areas and we also have provided five-year trending data on our three areas of radiation protection, environmental protection and conventional health and safety, I would note that the report is not supposed to be a comprehensive review of all the data that is collected by the licensees in these areas. All that data -- there are links in the report to the licensee's website where that more detailed data is available.

We also highlight any areas of increased regulatory focus that we've taken in the past year and identify any changes to the licence or the licence condition handbooks associated with these facilities.

This report will continue to evolve based on the recent feedback from the mine relicensing hearings in October and other feedback both internally and externally before the next report is issued.

As we have done since March 2011, we are providing a quick overview of the work undertaken by the CNSC following the Fukushima nuclear accident.

In March of 2011, a CNSC directive was issued requiring all major licensees in Canada to review the initial lessons learned from the accident in

Japan and to re-examine the safety cases of their facilities in the light of this information.

All Class I facility licensees were required to review their safety cases and report on implementation plans for short-term and long-term measures to address any identified gaps.

As well, there was an internal group, the CNSC Fukushima Task Force, and an external advisory committee that reviewed the response to Fukushima and made recommendations on potential improvements stemming from the lessons learned. As appropriate, some of these recommendations were then turned into requests to industry to improve certain aspects of their operation.

These reviews and recommendations have been consolidated into a single integrated action plan that applies to all operating nuclear facilities. It consists of five categories:

- strengthening defence in-depth;
- enhancing emergency response;
- improving regulatory framework and processes;
- enhancing international collaboration;
- enhancing communication and public education.

In August of 2013, CNSC staff provided an update on the implementation of this action plan. At that time we noted that all actions were either closed or on target for the facilities covered by this report.

Some specific examples would be a review -- every facility review their emergency response plans and made sure that there are appropriate arrangements with the local authorities. This resulted in some changes to procedures. For example, with GE Hitachi, they changed the frequency of their training with the Toronto Fire Department to an annual basis.

I would now like to pass the presentation to Mr. Jean LeClair to proceed with Part I of this report.

M. LeCLAIR : Bonjour, Monsieur le Président et Membres de la Commission.

Mon nom est Jean LeClair. Je suis le directeur de la Division des mines et usines de concentration d'uranium.

I'll be presenting Part I of the 2012 report, which is focused on operating uranium mines and mills.

There are currently five operating uranium mine and mill facilities in Canada. The

facilities are all located in northern Saskatchewan in what's commonly known as the Athabasca Basin.

Cameco Corporation operates the four facilities of Cigar Lake, McArthur River, Rabbit Lake and Key Lake, while AREVA Resources Canada Inc. operates McClean Lake.

Over the last year or so the CNSC has been very busy as we have proceeded with the review of applications and hearings for licence amendments or renewals for each of the uranium mine and mill facilities.

We began last year with a licence amendment for the McClean Lake mill that would authorize for the processing of high-grade uranium ore from the McArthur River Mine. At this time, we introduced the first reformed licence and licence conditions handbook for uranium mines and mills. Since then, all the licences for operating uranium mine and mill facilities have been reformed and now include a licence conditions handbook.

Following last fall's hearing, a licence renewal hearing was held in Saskatoon, Saskatchewan, in April 2013 for a licence to operate the Cigar Lake uranium mine. This time the licence was renewed for an 8-year period.

More recently, in October of this year, licence renewal hearings were held in La Ronge, Saskatchewan, for the continued operation of the Rabbit Lake, Key Lake and McArthur River uranium mine and mill facilities. The licences have been renewed for a 10-year period.

As such, this year's annual report contains much of the information that has already been the subject of detailed hearings and discussions.

As a quick status update, the Rabbit Lake, McArthur River and Key Lake operations continue to operate. The startup of uranium mining operations at Cigar Lake and the startup of uranium milling operations at the McClean Lake have been delayed as each facility continues to complete the commissioning of its operating circuits. Startup of operations at each facility is now scheduled for early to mid-2014.

As was previously communicated to the Commission, the rating for all 14 safety and control areas for the facilities remains satisfactory, with Cigar Lake having fully satisfactory in the area of conventional safety.

At this time I would also like to report a recent incident at the Key Lake mill.

As a result of operational

difficulties at the reverse osmosis plant there was a short-term release of treated water with a pH greater than 9.5, which is in exceedance of the limit. Approximately 200 cubic metres was released to Horsefly Lake over a period of approximately one hour. I should mention that this incident occurred on December 2nd, 2013.

The release of treated water was terminated and the plant was shut down. Samples were collected for further analysis. Downstream receiving environment was monitored for pH, with results indicating minimal impact as the pH was found to be within acceptable ranges.

Cameco is currently conducting a more detailed investigation and a CNSC inspector will be going up to the mine site next week to conduct an independent verification of the event and the actions taken by Cameco.

The following graph shows the maximum annual effective radiation doses for uranium mine and mill workers from 2008 to 2012.

As indicated by the red line and the results for each site, while the average doses range between 1 and 2 mSv per year, even the maximum effective radiation dose to workers over the last five

years has remained well below the annual regulatory limit of 50 mSv per year.

As part of routine and focused compliance inspections, CNSC staff verified and confirmed that licensees have effective radiation protection programs to monitor and control radiation exposures. Consistent with the principle of as low as reasonably achievable, CNSC staff continue to verify and licensees continue to work at reducing worker exposures.

This slide provides the lost time incident statistics collected by Saskatchewan Labour Relations and Workplace Safety for the mining industry in Saskatchewan.

We have included the statistics across different mining sectors in comparison with uranium mines and mills and provide some specific data for three of the mines, the Rabbit, Key Lake and McArthur, where we have the largest number of employees in a currently operating mine.

When reviewing this data, it is important to consider the level of industrial activity and the relative hazards associated with each mining sector. Conventional safety hazards in potash mining and hardrock mining such as gold mining are most

similar with uranium mining and milling.

It is also worth noting that significant construction activities, including equipment refurbishments, facility improvements and reclamation activities, have occurred at each of the uranium mines and mills. Despite significant increases in personnel and industrial activity at several of the sites, CNSC staff noted that the frequency and severity of lost-time incidents remained well below the industry average in Saskatchewan.

CNSC staff and mines inspectors from Saskatchewan Labour Relations and Workplace Safety have confirmed through inspections and report reviews that uranium mine and mill licensees are providing effective oversight of health and safety at their facilities.

In 2008, as part of licence renewal hearings for each of the uranium mines and mills, the CNSC directed licensees to implement improvements to their water management and water treatment systems to reduce the concentration of molybdenum, selenium and uranium in treated effluent.

Licensees submitted detailed plans and implemented various improvements at each of the facilities to further reduce contaminant concentrations for those elements of greatest concern for each site.

CNSC staff note that significant reductions have been achieved for given elements at each of the sites and are satisfied that each of the uranium mine and mill facilities has undertaken the necessary actions to reduce these concentrations and keep them as low as reasonably achievable.

As we did last year, this year's report includes a table that compares the level of compliance with the *Metal Mine Effluent Regulations* across the different mining sectors in Canada based on the most current information in Environment Canada's published annual reports. The table in this slide presents the information updated to include 2011 performance data.

CNSC staff calculated the percentage compliance as shown on this slide. The mines from across Canada reporting under the *Metal Mine Effluent Regulations* have been grouped into four metal mining sectors. The number of mines and mills representing each sector varies. There are 5 uranium mines and mills, 43 base metal mines, 50 precious metal mines and 7 iron mines.

The table provides the percentage of mines and mills in each sector that were "in compliance" for each year. For a mine to be "in

compliance," their effluent must have met all of the regulatory effluent release limits of the *Metal Mine Effluent Regulations* for the entire year.

For a sector to achieve a 100-percent compliance rating, all the facilities in that sector must have met all the parameter limits as shown on the previous slide for all submitted samples for that entire year. For example, if a sector had a 50-percent compliance rating, this would mean only half of the facilities in that sector met all of the requirements for the full year.

Please note that the list of parameters includes the radioactive element Ra-226.

As shown, the uranium mines and mills sector maintained 100-percent compliance with the effluent parameter concentrations and pH limits from 2007 to 2011. This means that all 5 uranium mine and mill facilities met all of the *Metal Mine Effluent Regulations* effluent release limits from 2007 to 2011.

On a final note, the CNSC is currently part of a working group with Environment Canada as part of a review of the *Metal Mine Effluent Regulations* to review existing limits and are considering the possible expansion of the list of parameters to be regulated to include elements such as

selenium, which CNSC staff has already identified as a contaminant of concern and taken action to reduce the levels of this contaminant at uranium mines and mills.

The following table provides a detailed list of parameter results for each of the mines in 2012.

As I mentioned earlier, CNSC staff, working with Environment Canada and also the Saskatchewan Ministry of Environment, have been reviewing the regulatory limits for certain parameters, including uranium, selenium and molybdenum.

That being said, as demonstrated by the results on this table, all operating uranium mines and mills have successfully reduced the concentrations to levels that remain protective of the environment.

Health studies conducted over the years have concluded that exposure to elevated concentrations of radon can increase the risk of lung cancer. This has led to several improvements at uranium mines and mills.

In addition, Health Canada has also undertaken an important education program to help Canadians better understand the potential risks from elevated concentrations of radon in home basements and measures that can be taken to reduce these

concentrations.

CNSC staff have participated in different international studies that have concluded that the radon exposures and overall radiation doses resulting from currently operating uranium mines and mills is low and do not measurably increase the risk of cancer.

Health studies show that workers and the public living near uranium mines and mills are as healthy as the general population.

The CNSC has in place strong regulatory requirements and regulatory oversight by CNSC staff ensures that radiation continues to be effectively managed and mitigated to protect workers and the public.

Based on CNSC staff's compliance activities, which included site inspections, review of performance indicators, desktop reviews, event and incident reviews, general communication and exchange of information with the licensees, CNSC staff concluded that a "satisfactory" performance rating was assessed for all 14 safety and control areas for the uranium mines and mills facilities; Cigar Lake's conventional health and safety control area received a "fully satisfactory" rating.

We also concluded that the licensees' radiation protection measures were effective in keeping doses as low as reasonably achievable, that their environmental protection programs were effective at keeping impacts to the environment as low as reasonably achievable and that their conventional health and safety programs continued to protect workers.

CNSC staff conclude that in 2012 each regulated facility operated safely and met performance expectations with respect to the health and safety of persons and the environment and Canada's international obligations.

This concludes the presentation on Part I, Uranium Mines and Mills.

THE PRESIDENT: Thank you. So before getting into questions, I would like to hear whether Cameco Corporation has any comment. Please proceed.

MR. MOONEY: Thank you. Good morning, President Binder and Members of the Commission.

My name is Liam Mooney and I am a Cameco's Vice President of Safety, Health, Environment Quality and Regulatory Relations. With me today is Kevin Nagy, our Saskatchewan Operations Director of Compliance and Licensing.

Our brief comments here today are with respect to the summaries of the performance of our uranium mines and mills within the 2012 CNSC Staff Report. As you can see and have heard, staff's report reflects the information you saw and heard more about in the recent relicensing processes for these facilities in 2013.

As noted during those hearings, the year 2012 in particular saw a high level of activity at all of Cameco's northern operations, including new construction and continued work on improvement projects such as mill revitalization. We are particularly proud that we continue to have such strong performance in conventional safety, radiation and environmental protection during such a period of high activity.

Further, we are proud to report that the McArthur River, Key Lake and Rabbit Lake operations have continued their strong performance in 2013 in achieving safe, clean and reliable production. Also, our strong performance in a period of high activity continued throughout 2013 at the Cigar Lake project as construction of underground infrastructure was completed and the focus of activities moved to commissioning.

As required by our licence, we will

be providing a report to the CNSC once we have had a full years' experience with the jet boring production process.

One final note, since we were before the Commission we have completed the November segment of our twice yearly polling for Saskatchewan residents. This research is conducted in cooperation with AREVA Resources Canada. The most recent poll found that 79 percent of respondents in Saskatchewan support the continuation of uranium mining in the province.

Our oversampling of people who reside in Saskatchewan's northern administration district, the area in which we operate, showed support to be at 76 percent. A summary of these results is posted on our website.

In closing, our highest priority remains the health and safety of workers and the public, as well as the protection of the environment. We look forward to continuing to operate these facilities in a safe, clean and reliable manner while following through on our commitment to continual improvement.

Thank you.

THE PRESIDENT: Thank you. Any comment from AREVA?

MS VAN LAMBALGEN: Tammy Van Lambalgen, for the record. We are I guess here prepared to answer questions. We would add that we support the recommendations and the findings I guess in the Annual Report. And I would also note that I'm here with Jack Richards, who is the General Manager of McClean Lake Mills, and Dale Huffman, who is the Vice President of Safety, Health, Environment and Quality at AREVA.

THE PRESIDENT: Thank you.

Okay, questions from Commissioners. Let me start with Ms Velshi.

MEMBER VELSHI: Thank you, Mr. President.

A quick note on slide 11. It would be helpful if you put units on the Y axis on what the severity rate and frequency rate are.

MR. LeCLAIR: Jean LeClair, for the record. Yes, we can do that. So these are based on frequencies that are in consideration of 200,000 hours, for every 200,000 hours worked. So number of lost time injuries or number of lost days per 200,000 hours worked.

MEMBER VELSHI: Thank you. And slide 13, this enviable environmental performance record that

the uranium mining sector is showing here. I guess with the exceedance at McArthur River in 2012 that you report on page 43 of the CMD, exceedance of pH in TSS, does that mean 2012 will not be 100 percent then?

MR. LeCLAIR: Jean LeClair, for the record. That is correct.

MEMBER VELSHI: Okay.

THE PRESIDENT: Sorry, can I jump on this one. I'm trying to understand this chart. So uranium mines are 100 percent compliant. I assume it's because of the regulatory oversight.

What happened to the other mines? So let me start base metal. I mean, I know it's not our mandate, I'm just trying to understand the process. Is Environment Canada doing anything about the non-compliant mines? Go ahead.

DR. THOMPSON: Patsy Thompson, for the record. I am the Director General responsible for Environmental Protection and Radiation Protection.

CNSC, with Environment Canada and Natural Resource Canada, undertook a review of the environmental performance of all the mining sectors in Canada and that study -- if it hasn't been posted on our website will be shortly -- indicates that the sectors that are regulated fairly stringently, so

uranium mining sector by the CNSC and the gold sector, have very stringent regulations, are the better performers in terms of the mining industry.

There is currently a working group and a review of the metal mining effluent regulations and part of that review is looking at performance of the different sectors and what can be done to improve performance, but it's clear that the good performers have strong regulators.

THE PRESIDENT: Ms Velshi...?

MEMBER VELSHI: Yes, it's unfortunate that 2012 and what you reported at the outset of the presentation with this recent incident that in 2013 we will no longer have that perfect record.

So talking about incidents -- and this came up at yesterday's Nuclear Substance 2012 Report discussion -- for this sector, do you categorize the events by their potential risk? Again, the incident that you mentioned at the outset, you know, is that very significant, is it medium, high?

MR. LeCLAIR: Jean LeClair, for the record. So both Cameco and AREVA have rating systems they have in place for rating the different incidents.

I will let Cameco perhaps speak a bit more to the rating system, but I do want to note,

though, that we have identified this as an area we are going to work on actually and, for next year's annual report, I'm hoping that we will have in place a rating system to in fact be able to address this, because often we find that we have events that are really quite small in terms of the overall volumes, they have really no impact at all and it's very hard to differentiate between those that might be of more significance. So, we are looking currently at that. We will be working closely with Cameco and AREVA to come up with a rating system, particularly for environmental events so that we can provide a way of categorizing them and making it a bit easier to communicate those.

MEMBER VELSHI: Thank you.

MR. MOONEY: It's Liam Mooney, for the record. We do have means of categorizing these sorts of events on a scale of 1 to 5. It's a significance matrix that's included as part of our non-conformance and corrective action process.

The Key Lake incident that is posted on our website, we show it rated as a level 2, having regard for the environmental impact being negligible given the very small quantity of water involved and the downstream monitoring that we carried out since that time that has confirmed the pH levels have remained

within acceptable levels.

MEMBER VELSHI: Thank you. So we should see something in the 2013 report then?

MR. LeCLAIR: That's the plan, yes.

MEMBER VELSHI: Thank you. My last question for this round. If we turn to page 22 of the CMD, please, and I look at -- a question for Cameco.

For Key Lake, the lead level, the release is like a couple of orders of magnitude higher than for any other facilities, even though it is well within the discharge limit, but can you help me understand why that would be the case?

MR. MOONEY: It's Liam Mooney, for the record and I will ask Kevin Nagy to expand on that, but we do take protection of the environment very seriously and, again, the releases, as you noted, are well below any regulatory limits.

MR. NAGY: For the record, Kevin Nagy. I noted that as well when I was reviewing the report and looking at the table. The difference you see in the table as a result of Key Lake having their own laboratory and the method detection limit is higher at Key Lake than at the Saskatchewan Research Council where the other facilities send their samples.

Key Lake does send, I believe

quarterly, samples to SRC for analysis and when you do look at the lead results, the results are similar as what you see for the other operations.

MEMBER VELSHI: So which one is the right number? Is the Key Lake laboratory more sensitive? I mean, isn't there some kind of quality control to make sure that we are actually comparing apples to apples?

MR. NAGY: Kevin Nagy, for the record. I would say both numbers are correct. In both cases the concentration of lead in the water is below method detection limits. The Saskatchewan Research Council has more sensitive equipment that's why you see this difference in the results in the table.

MEMBER VELSHI: Thank you. Does Staff want to comment on that?

DR. THOMPSON: Patsy Thompson, for the record. The method used at the Key Lake facility has a higher detection limit, but for process control purposes it's adequate because it essentially provides information to the operator in terms of the performance of the effluent treatment system.

In terms of reporting environmental performance, the preferred data would be the data from the Saskatchewan Research Council because it has an

appropriate detection level for environmental samples.

MEMBER VELSHI: Thank you.

THE PRESIDENT: Thank you. Monsieur Harvey...?

MEMBRE HARVEY : Merci, Monsieur le Président. I just want to come back to the slide 13 and just concerning the fairness of the comparison with other sectors and because of the definition you monitor maybe 5, 6, 10 contaminants and if you have one out of the game which might not be the worst one and not so detrimental to the environment and others, but you are out of the game.

So when you have got, for example, 67 percent, how far is it from 100 percent depending? Have you made any analysis of the sensitivity of that graph and the significance of that table, which looks very good, but it has many parameters involved in the table.

MR. LeCLAIR: It's obviously because there is so many parameters and so many mines it's a compilation of data from several sources, so it is a rollup of data. Certainly in next year's report we can provide more details.

I think we can add -- for instance, if we look at iron, we know that often these are

associated with higher concentrations of total suspended solids, so we can expand on next year's report to provide further detailed information across the different mining sectors.

MR. ELDER: Just if I could add? Peter Elder, for the record. This stems from a question we were reporting two years ago that all the mines were in compliance with these regulations and got the question, "Well, how do other sectors do?" So it's not a question, it's a comparison against compliance with the regulation.

We also do separately for this one, for each facility, there is environmental risks assessment that looks at the impacts of the releases that are actually happening on the local environment. Now, we don't have that data for all the other mines to say this -- you know, we can say for the uranium mines, which is the one that's most important; we can't say that one for all the other mines in comparison.

So it was trying to answer a question around, well, how do other sectors do, and rather than giving a lengthy table of trying to compare all 11 or 12 elements for each sector, we have rolled it up into one comparison.

You are right, it just gives you

overall impression, it doesn't necessarily tell you the importance of this one.

I would only add, these are national standards that apply to all metal mines in Canada.

MEMBER HARVEY: Another question is about the incident or accident in Key Lake. You mentioned that somebody from the Commission will be there next week or in two weeks.

What can be observed and what is the -- when you go there two weeks, three weeks later, what can you observe and what kind of judgment or appreciation can you have at that moment?

MR. LeCLAIR: Jean LeClair, for the record. So as part of that verification activities the inspector will meet with the licensee, meet with staff that were there and were involved with the incident when it occurred, can review the data that was collected from during that time period.

There are systems that are continuously collecting and gathering data on the operating facility, so CNSC staff can verify that.

We will conduct interviews with staff to verify what actions were taken and can also go out in the field in the receiving water body of the actual lake to confirm and verify that the pH concentrations

are low.

I should add that we are very confident with regards to the conditions in the receiving environment because of the quantities that we can again verify how much was released in the environment and knowing how large Horsefly Lake is, it's not that difficult to be able to confirm. It's reasonable that the pH values would have stayed within the ranges that we expect.

So our main concern is the receiving environment and we are quite confident that the conditions in the receiving environment are okay.

So really this is the focus on what led to the event, to verify, again through interviews, observations and review of records on-site what happened.

MEMBER HARVEY: But it's not possible two weeks later to just verify the pH, for example?

MR. LeCLAIR: No, we can verify the pH as it currently stands, as it is today, or next week when they go, the rest of it is a verification of the data that was collected at the site and the samples that were taken at that time.

MEMBER HARVEY: Okay.

THE PRESIDENT: Thank you. Dr.

McDill, please...?

MEMBER McDILL: Thank you. Two questions. On page 52 of the report there is a list of spills from Rabbit Lake and staff concludes that there was negligible environmental impact. But, in a more general sense, how is the industry working to reduce these kinds of events? For example, there was a damaged liner in a holding pond, so has there been an increase in inspection frequency for liners, for example, and how is staff monitoring the continuous improvement efforts to reduce these numbers from 6 to 4 to 2 to 0, hopefully?

So it's a general question to staff and to the industry.

MR. ELDER: Peter Elder. I will start in terms of with the staff approach. Cameco has mentioned one of the things that is part of their management system is a corrective action program which is actually very similar.

Cameco's is based on some of the adaption of what's done in power reactors, so there is a database that would identify the event and then identify -- record what corrective actions were taken. So it's something that we can go in and inspect and draw the conclusions around, were those corrective

actions effective.

So when we look at a trend on this one, we go in and look at those databases and look for trends. Cameco is also required to look at trends within that database as part of their ongoing corrective action program as well.

MR. MOONEY: Liam Mooney, for the record. The non-conformance and corrective action process is critical to identifying those trends, as Mr. Elder indicated, and putting in place corrective actions the management responses to the findings of any investigation.

I think the value of the Cameco incident reporting system is a visibility that that system provides for the corrective actions and looking for similar potential incidents at other facilities.

I think it's important to emphasize in relation to all of our facilities that we have been more recently upgrading key infrastructure such as process tanks and mine water pipelines to ensure safe operation and reduce the risk of spills to the facility and that effort is, in large part, informed by the experience at our various operating sites throughout Canada.

MEMBER McDILL: So is there a comment

on a general perspective from our other industry out there listening?

MR. HUFFMAN: This is Dale Huffman with AREVA Resources.

THE PRESIDENT: AREVA, would you care to comment?

MR. HUFFMAN: Yes, thank you. Thank you. I think at AREVA our processes are quite similar to what Peter Elder has described and so has Liam Mooney.

We have a corrective action program in place which seeks to investigate events, put robust corrective actions in place and review these actions periodically to ensure that they have corrected the situation.

And I think the other component that we have to emphasize is the communication within the company on the event. So when spills of any nature occur there is broad communication across the company on the cause of the spill and the corrective actions put in place.

Thanks.

MEMBER McDILL: Thank you. One more question and it's the same operation; it was the incident of the individual who was struck by a scoop

tram. Has the dose been defined at this point now -- this is on page 56. There was a preliminary estimate of the dose, but has that been verified as 10 to 20 mSv?

MR. LeCLAIR: It's Jean LeClair, for the record. Yes, we do have a report that the dose has been estimated at 16 mSv, which remains below the regulatory dose limit of millisieverts -- of 50 mSv per year.

MEMBER McDILL: It's something to watch over five years.

MR. LeCLAIR: Yes.

MEMBER McDILL: Over five years it's a hundred, so...

MR. LeCLAIR: Correct, yes.

MEMBER McDILL: Thank you, Mr. Chairman.

THE PRESIDENT: Thank you. Monsieur Tolgyesi...?

MEMBRE TOLGYESI : Merci, Monsieur le Président. I think it's a typo, because in Appendix G you repeat the table twice. When you look at page 162 and 172 is the same, Cigar Lake starts again.

--- Pause

MEMBER TOLGYESI: It's something --

it's kind of a minor correction, you know. The number two question I have, you know, when I look on page 13, this uranium mines and mills production data, when you look at total production from mines and milled ore the milled ore is higher. It's quite -- I believe it's because you process also mineralized waste. And if you process mineralized waste how do you count that in the balance? Because you transport it as ore or you transport it as waste but you process it. So how do you balance that?

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

The calculation on the production is based on the metallurgical analysis of the materials that are put through the milling facilities at Key Lake in this regard.

MEMBER TOLGYESI: It doesn't really clarify how you process, you know how you classify it.

It's waste for one side when you transport and after you process it that's ore.

MR. MOONEY: So the transportation of mineralized waste from McArthur River to Key Lake is carried out in accordance with the *Transportation of Nuclear Substances Regulation* as well as any other applicable regulations in that regard.

MEMBER TOLGYESI: Okay. When you go to these concentrations released to the environment do you have one effluent release per site or do you have several of them per site? That means it's only one site where you measure what effluent is released to the environment or you have two or three.

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

It varies from site to site but the discharge points are tracked as required by the Environment Canada regime as well as CNSC's regulatory framework.

MEMBER TOLGYESI: So if you have several how would I present that as the average? Because you could have, I don't know, two, three sites when you do lots of sampling and you have one or you have a very high result but only one sampling. So how do you represent that data as the average, then?

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

We report on our effluent performance on an individual site-basis. So the requirements are laid out in the Environmental Effects Monitoring program requirements established by Environment Canada and our own environmental monitoring programs that are

reviewed and accepted by the CNSC. They are site-specific and they are reviewed and verified for their accuracy through our own audit process as well as the CNSC's inspections of our facilities.

MEMBER TOLGYESI: Staff, do you have a comment on that?

MR. LeCLAIR: It's Jean LeClair for the record.

So as part of the annual reporting, all of the detailed information submitted while we look at averages we also do look at individual results. We do get the data. We review it to be able to identify any results that would be higher so they can be looked at further.

But the regulations are established that are set based on the composite samples depending on frequencies that are set on each individual site. So it could be a sample that's taken over a period of several hours that then gets analyzed and then those results are looked over periods of weeks to months and into quarters or years depending on the monitoring programs for each site.

And I should mention again that all the -- perhaps Dr. Thompson can speak about this a little bit further, but all the limits and all the

releases are tied to environmental assessments that have been conducted for each of the mines and mills that set out the protective -- what concentrations, what releases would be permitted to ensure that the environment is protected to keep environmental effects to a minimum.

So perhaps Dr. Thompson can speak a bit more to environmental assessments and all those are tied to releases and limits.

DR. THOMPSON: Patsy Thompson, for the record.

When you question about the different points of discharges all the points of discharges are identified and there is a requirement -- the monitoring requirements for each of those points of discharge have been established on the basis of the characterization of the effluent, what is expected to be a discharge and the stability of that effluent. So those are the requirements.

The environmental assessments take into consideration not the discharges at the regulatory limits but the expected performance of the treatment facilities. And so we look at expected performance and make allocations for the upper percentile so that we have conservative assessments looking at what could be

released in the worst of conditions with the operating facilities.

There is also requirements for mine sites to have what's called Environmental Effects Monitoring programs where we do monitor downstream effects on sediment on benthic invertebrates, on fish. So that comprehensive monitoring provides information on whether or not the effluent controls are appropriate.

The Commission is aware that for substances like selenium, uranium and molybdenum and depending on the sites that the results of the monitoring programs indicated that there was a requirement for further controls. The Commission took action to require that the licensees reduce submissions for those substances.

So it's a combination of effluent monitoring and downstream environmental monitoring that provides that basis for the assessments and the ongoing review of performance.

THE PRESIDENT: Can I remind everybody that we just spent three days in La Ronge dealing with some of those issues and we have got three other parts? So please, you know, let's be concise with our questions and replies, please.

Mr. Tolgyesi.

MEMBER TOLGYESI: My last question is that you have at Cigar Lake action levels for molyconcentration. However, on other sites you also use Cigar Lake action levels as a reference. Does it mean that other sites they should have also some action levels?

MR. LeCLAIR: We've used -- the action levels vary for each of the sites depending on the conditions of their sites. We needed -- there is no limit, regulatory limit for molybdenums.

So we've used an action level here as a point of reference so that we can look at it and see it, as we mentioned through the actions of CNSC staff as a requirement. But they need to put enhanced controls for molybdenum and further reduce the concentrations, which is why you'll note even in the -- in staff's report we've actually added some data on molybdenum for other mines in Canada because this was one contaminant that was of particular interest.

So there is not a -- like I mentioned, there's not an actual regulatory limit. However, there are controls that are in place at each of the sites. They vary from one site to the next and we've just used this one just for ease of reference so

that you can see one line and be able to see it as a point of comparison.

THE PRESIDENT: Can I jump on this one?

So in your table in page 26 when you show molybdenum in uranium mine, I mean, this is a remarkable improvement. But you set up the benchmark on Cigar Lake which is really not in operation yet. So I'm trying to understand how -- what will be the final kind of benchmark.

MR. LeCLAIR: The actual Cigar Lake action level is actually based on what's expected when Cigar Lake is in operation which explains why if you look at the Cigar Lake number and the action level there is quite a large difference between Cigar Lake's performance and the actual action level. But that action level was an action level that's established based on an assumed -- operating with full operation of the mine. So that's Cigar Lake.

THE PRESIDENT: So how is it calculated? I'm trying to understand how was it calculated. Maybe Cameco can tell us about it or maybe staff.

MR. LeCLAIR: Jean LeClair, for the record.

So when the environmental assessment for Cigar Lake, the environmental screening was done on Cigar Lake, there were calculations based on the considerations of the ore that would be produced at Cigar Lake and the anticipated performance of facility, that I had anticipated what the potential releases from the site might be based on the operations that would be in place once the actual mining of the ore would be done. So it's based on screening assessments. It's the original modeling that was done when the environmental assessment was done for Cigar Lake.

THE PRESIDENT: So once it's operational it will be reviewed and revised. Is that the plan?

DR. THOMPSON: Patsy Thompson, for the record.

Just to provide a bit of background information, the screening assessment for Cigar Lake was done about the same time we were doing detailed assessments for Cluff Lake where we first noticed the impacts that modeling had had on the environment. And after that we started looking at treatment technology available for modeling.

At that time Cigar Lake had identified the space in their treatment facility for

modeling and we required it as part of the outcome of the environmental assessment that they put in place that treatment circuit. We know from engineering design and emission factors what the performance of that circuit would be and the action level was defined in relation to the actual performance of the treatment.

So presumably, once performance information is acquired we'll be able to review that action level that it was based on what the actual engineering of the circuit could achieve --

THE PRESIDENT: Thank you.

DR. THOMPSON: -- with some margin for operational differences.

THE PRESIDENT: Thank you.

Dr. McEwan.

MEMBER MCEWAN: Thank you, Mr. President.

If I can go back to the spills on page 72 -- and this has happened a couple of times in the report -- the second bullet has radiologically contaminated pond water and the third bullet has slightly contaminated. It seems in an area where measurements are very exact to be a very imprecise description. Would there be any help in considering a more quantitative descriptor of the contamination?

MR. ELDER: Peter Elder, for the record.

As we've noted before, the industry now has a way to rate these spills on severity. We will start using that severity rating once we have confirmed that Cameco and AREVA are using the same type of rating systems so that we can get a common comparison. So we do recognize that there needs to be a better way to communicate around the significance of those spills.

MEMBER MCEWAN: Thank you.

And one other question on radon. In your presentation you noted that Health Canada have developed significant interest in household exposure to radon. What is the natural background of radon in northern Saskatchewan?

And, can you just give me a sense of how the ventilation works and does that do anything to natural background?

DR. THOMPSON: Patsy Thompson, for the record.

The CNSC, on our website, we've published a report on radon around mine sites, and so as a result of ventilation systems on the mine sites you do get concentrations of radon above background

where the waste rock piles, for example, and the ventilation shafts. But, once you get to the outer perimeter of the mined area, or the mill area, then you quickly reduce radon concentrations to background in the region. And so the footprint -- the radon footprint of the mining activities is very localized to the mine site.

And, that information is on our website. If I can come back after the break, I will give you the information document number.

THE PRESIDENT: Thank you.

MEMBER MCEWAN: And so around the shafts presumably there is a defined protection area where additional precautions would be required?

MR. LeCLAIR: Perhaps just to bring a bit of perspective to -- so, to add what Dr. Thompson is mentioning, we're talking in a range of a few kilometers. The closest communities are tens to hundreds of kilometers from the actual mine site, so there's no real risk to anyone from a public perspective. So, the workers understand the operations and how they work and, generally speaking, people would not want to be standing near the exhaust of the mine anyway just because of the volume of air that's moving out as well is quite -- is quite substantial.

So, the main thing is, is that there's no risk from a public point of view because it is quite localized and there are no resident communities that are anywhere near where they could potentially be exposed to those levels.

DR. THOMPSON: Patsy Thompson, for the record. If I could add, in the environmental assessments we do take into consideration the radon exposure to members of the public. And on many sites we assume that there is a trapper, for example, spending -- or, trapping families spending part of their year close to the mine site, and the doses to those hypothetical residents are very low, including from radon exposure.

And, in terms of worker protection the doses to workers are monitored and reported. And, as we have seen in the graphs, are very low, and those include from radon progeny.

THE PRESIDENT: Thank you. Anybody else have a question?

MEMBER TOLGYESI: It's not a question, it's a comment. When you're going back to page 43, we are talking about this one regulatory effluent exceedance. It was not one, there were two, because one was for PH, and one was for to test

suspended solids.

MR. ELDER: Sorry, if you could just

--

MEMBER TOLGYESI: In your report on page 43, at the top of the page you are saying, Cameco reported one regulatory F-1 exceedance when PH and total suspended solids reached different levels. So, if you had only a PH, it will be one. If you have only suspended solids, it is also one. So, in one sample you had two exceedances, no?

MR. LeCLAIR: That's correct. The one sample exceeded two limits. So, the reference to one is one sample exceeded the limits, so it exceeded on two parameters.

THE PRESIDENT: Anything? Any other questions?

Just one. Your reportables, the Appendix G, reportables, are they all posted, all those events? Were they all posted? All the reportables in Appendix G, were they all on the web somewhere?

MR. ELDER: Peter Elder, for the record.

Yes, they are. There's a link from Cameco's website and they are also all reported to the Saskatchewan Ministry of Environment that also has a

database that's publicly available.

THE PRESIDENT: Thank you. Cameco, Areva, final words? Anything you want to add? Areva?

MR. HUFFMAN: Dale Huffman with Areva. Nothing to add, thank you.

THE PRESIDENT: Okay. Thank you.

I would like to move on to the next section which is a presentation on the Uranium processing facility on Cameco Corporation facilities in Port Hope and Blind River. The GE Hitachi facility also falls into this category, however, there will be a separate presentation on this licensee.

Mr. Elder, the floor is yours.

MR. ELDER: Thank you. For this part of the presentation, I will turn it over to Mr. Michael Rinker.

MR. RINKER: Good morning Mr. President and Members of the Commission. My name Michael Rinker and I am the Director of the Nuclear Processing Facilities Division of the CNSC.

I will be presenting to you Parts 2 to 4 of CMD 13-M51 that provides information on uranium processing facilities, nuclear substance processing facilities and Nordion, commencing with the uranium processing facilities.

There are five uranium processing facilities in Canada. All are located within the province of Ontario. Cameco is the operator of three facilities: the Blind River refinery, the Port Hope conversion facility and the fuel manufacturing facility.

The fuel fabrication facilities in Peterborough and Toronto belong to GE, Hitachi Canada, and they operate under a single license. Owing to the public interest in GE Hitachi's Toronto facility, a separate presentation will be made to discuss facilities, specific performance of these facilities, as well as to provide additional information on safety. However, general performance information of the GE facilities is provided here for comparison with the other uranium processing facilities.

The 2012 performance ratings for the uranium processing facilities were determined and CNSC staff have rated each safety and control area based on the results and observations from inspections, compliance activities and licensing activities.

For 2012 all of the uranium processing facilities received a satisfactory rating in all safety and control areas, including conventional health and safety, radiation protection, and

environmental protection.

GE Hitachi Canada also received a rating of full satisfactory for environmental protection in recognition of their releases being well controlled.

Overall, these ratings indicate consistent management of safety systems at all facilities.

This slide provides a comparison of the annual average and maximum effective dose to workers at each uranium processing facility during 2012. The maximum dose received by the nuclear energy worker was 12 millisieverts at the Blind River refinery. The average doses at each facility ranged from 0.7 millisieverts to 3.7 millisieverts.

Effective doses to nuclear energy workers were kept well below the annual regulatory limit of 50 millisieverts at all uranium processing facilities.

Additionally, worker exposures to ionizing radiation are being kept as low as reasonably achievable by all five uranium processing facilities.

This slide provides the dose to the public from each uranium processing facility for 2012 which is calculated using environmental monitoring

results.

The public doses from operations at Ge Hitachi facilities are the lowest, below 0.001 millisievert per year since these facilities have very low emissions.

Doses to the public from all uranium processing facilities continue to be well below their applicable regulatory and license limits.

To confirm the effectiveness of emission abatement systems and to monitor the impact of uranium emissions from the facility on the environment, all facilities except GE Hitachi Canada in Peterborough operate high volume air samplers at the perimeter of their facility. A risk assessment for GE Hitachi Peterborough has demonstrated that ambient air sampling is not required since the measured releases from the stack would result in levels that are very low.

The results from the high volume samplers for 2012 are shown in this slide and indicate that the maximum annual average concentration of uranium in ambient air measured around any uranium processing facility was less than 0.03 micrograms uranium per cubic meter, which is the Ministry of Environment's new air standard for uranium that will take effect on July 1st, 2016.

These results indicate that all uranium processing facilities have controlled the releases of uranium and that the environment and people are protected from airborne releases.

Soil monitoring programs are intended to monitor the long-term effects of air emissions to show whether there is an accumulation of uranium in soil in the vicinity of the facility.

This slide shows the annual average uranium concentrations in soil. This data for all facilities is well below the most restrictive guideline of the *Canadian Council of Minister of Environment's Guideline* of 23 micrograms per gram for residential parklands land use.

The marginally elevated results at the Cameco fuel manufacturing facility are due to historic uranium contamination which is common the Port Hope area.

The GE Hitachi Canada Peterborough facility does not conduct routine uranium in soil as part of its environmental monitoring program because the uranium releases to the environment are extremely low and environmental risk assessments indicated that soil monitoring is not required.

So, our sampling results in 2012

continue to indicate that current uranium emissions from the uranium processing facilities are not resulting in levels observed in soils that would pose a risk to people, nor to the environment. Moreover, these results verify that controls in uranium emissions within the facilities remain effective.

As summarized in this slide, the frequency of recordable lost time incidences reported by all facilities has remained low to zero in 2012. There are no trends with respect to the number of lost time incidents reported to the CNSC.

CNSC staff conclude that uranium processing facility licensees have been implementing their conventional health and safety programs satisfactorily in 2012, and that programs were effective in protecting the health and safety of persons working in their facilities.

In the next few slides I will provide some specific highlights for each uranium processing facility for 2012.

This slide is specific to the Blind River Refinery. The Blind River Refinery operates a Class 1B nuclear facility in Blind River, Ontario.

The refinery processes natural uranium ore concentrates into natural uranium trioxide.

Cameco receives uranium ore concentrates from mines and mills worldwide, and during 2012 there were no significant process modifications that affected the safety-significant systems.

CMD 13-M51 describes two action-level exceedances at the Blind River facility relating to radiation protection of workers.

The first relates to a significant event at this facility, when a Blind River employee was exposed to uranium in air inside the facility. This is described in more detail in my following slide.

A second action-level exceedance occurred when an employee's dose to skin exceeded the skin dose action level. Investigations were performed. A reinforcement of the principle of ALARA was imposed, including minimizing time spent in high dose areas. CNSC staff are satisfied with Cameco's response to this event.

There was a third action-level exceedance originally reported by Cameco that is not described in CMD 13-M51.

This third action-level exceedance relates to a worker who left their dosimetry badge on a workbench. Cameco investigated and a dose change request was reviewed and accepted by CNSC staff. This

action-level exceedance did not result in an actual dose to a worker.

The Blind River Refinery continued to operate within the framework of the *Nuclear Safety and Control Act*, and it met all requirements as per its operating licence. Its conventional health and safety record is excellent and, overall, this facility operates safely.

A significant event occurred in June 2012 at the Blind River Refinery when an employee opened a drum of uranium concentrate, originating from the US, that was pressurized. A plume of approximately 26 kilograms of uranium was released into the facility. This event was reported to the Commission in 2012. The dose to the employee from this event was approximately 1.7 millisieverts.

The CNSC issued a 12-2 Directive to Cameco to determine the cause and take necessary corrective actions.

The cause of this incident relates to mills that use hydrogen peroxide in their processes. Corrective actions are now in place regarding drum handling and steps to identify any pressurized drums, if received, at the Blind River facility.

CNSC staff also inspected Canadian

uranium mines to verify that the conditions causing pressurization would not occur.

And, finally, a working group was established that included the US Nuclear Regulatory Commission, Cameco and CNSC staff with the mandate of issuing an information notice to disseminate lessons learned from this incident to the public and to industry.

The Port Hope Conversion Facility is located in the municipality of Port Hope, Ontario, situated on the North Shore of Lake Ontario. The Port Hope Conversion Facility primarily converts uranium trioxide powder produced by Cameco's Blind River Refinery to uranium dioxide and uranium hexafluoride.

Uranium dioxide is used in the manufacturing of CANDU reactor fuel, whereas uranium hexafluoride is exported for further processing into fuel for light water reactors.

During 2012 there were no significant process modifications that affected the safety significant systems.

There were two action-level exceedances reported for the Port Hope Conversion facility. The first related to a uranium spill from a waste container. Cameco submitted a corrective action

plan that was reviewed by CNSC staff and was part of a CNSC inspection. Staff are satisfied that corrective actions were implemented and there were no impact to the environment nor to persons as a result of the spill.

The second incident related to an indoor leak of hydrofluoric gas. Four employees required medical evaluation and observation, but were released with no impact to health. The release did not affect the health and safety of the public nor to the environment outside the facility. Corrective actions were found satisfactory by CNSC staff.

There was one lost time incident in 2012 related to a person falling from a ladder. Cameco updated their training for proper ladder use and purchased additional equipment to minimize the need for ladders. CNSC staff found these corrective actions to be acceptable.

The Port Hope Conversion Facility continued to operate within the framework of the *Nuclear Safety and Control Act*, and they met all the requirements as per their operating licence. Overall, this facility is operating safely.

In 2012, the Minister of Environment approved the environmental assessment for Cameco's

Vision 2010 project, now called Vision in Motion. Staff anticipate a licence application for this project in the next fiscal year.

The Port Hope Conversion Facility continues to evaporate rather than discharge processed liquid effluent. This practice has been ongoing since 2007.

In January 2010, Cameco submitted a site-wide environmental management plan for the Port Hope Conversion Facility. The objective of the plan is to identify additional options that will further reduce contaminant discharges to the Port Hope Harbour and Lake Ontario to as low as reasonably achievable.

As a result, Cameco added additional groundwater capture wells. These wells commenced operation in October 2011. CNSC staff note that the effectiveness of these new wells will not be fully-appreciated until several years of sampling data is collected for a proper trend analysis.

CNSC staff find that groundwater quality across the Port Hope Conversion Facility site remains stable, and there has been no change in the harbour water quality.

However, CNSC staff are working closely with the Ontario Minister of Environment staff

and staff at Environment Canada, who also have an interest in these groundwater releases.

The Port Hope Conversion Facility soil monitoring program includes annual sampling in the municipality, including the waterworks parking lot.

The average uranium-in-soil concentrations in 2012 remain similar to past years. This indicates that current emissions from the Port Hope Conversion facility have had no measurable impact on soils.

Cameco Fuel Manufacturing offers a Class 1B nuclear facility in Port Hope, Ontario, where they primarily produce natural uranium dioxide fuel bundles for CANDU reactors.

During 2012 there were no major facility changes that impact safety systems. The automated equipment implemented in 2011 have been working successfully in 2012.

There were two incidences in which action levels were exceeded in 2012.

The first relates to how Cameco calculated internal dose to workers; errors were found in the calculations. When the internal dose was recalculated, starting from 2003, Cameco Fuel Manufacturing's action level was exceeded. Regulatory

limits, however, were not exceeded.

The second reportable action level was reported for building ventilation as a result of a spill of uranium powder. While the action level was exceeded, licence limits were not exceeded, and uranium was not released from the facility. Corrective actions have been put in place, and CNSC staff are now satisfied with Cameco's response.

MR. ELDER: Peter Elder. That concludes the portion on the fuel cycle of the facility. So if you want to stop and ask questions now of Cameco...

THE PRESIDENT: Before asking questions, I always like to give opportunity to Cameco to add whatever comments you have.

MR. MOONEY: Thank you. Good morning, again, President Binder and Members of the Commission. For the record, my name is Liam Mooney and I am Cameco's Vice-President of Safety, Health, Environment, Quality and Regulatory Relations.

With me today is Dave Workman, the Director of Regulatory Compliance and Licensing for Cameco's Fuel Services Division.

We are pleased to have the opportunity to participate in this meeting on the CNSC

staff report.

As you heard, Cameco owns and operates the Blind River Refinery, the Port Hope Conversion Facility and Cameco Fuel Manufacturing Inc., which together comprise our Fuel Services Division.

As a company we are proud of the 2012 performance of the Fuel Services Division as has been detailed here today by the CNSC staff. Our highest priorities are the health and safety of workers and the public as well as the protection of the environment.

Although the focus of today's meeting is on 2012, I am pleased to report that the division is having its safest year in history in 2013. Our focus on enhancing safety culture over the past several years is clearly having an impact as all three sites celebrated key safety milestones earlier this year.

The Blind River Refinery achieved seven years without a lost time incident, while Cameco Fuel Manufacturing reached two years without a lost time incident, and the Conversion Facility has gone over a year without a lost time incident. New employee-led safety steering committees are now in place to help guide us towards an injury-free workplace.

We also take great pride in the

strong relationships we have built with residents in the communities in which we operate. We take our responsibilities in this regard very seriously.

We regularly engage with community members through our community forum series. We have now held 24 over the last seven years; our major presence at the Port Hope Community Fair; our regular community newsletters; and ongoing communication with local elected officials as well as community leaders.

In May of 2013 public opinion research found that 93 percent of Blind River area residents and 87 percent of Port Hope residents are supportive of Cameco's continued operation in their communities. These results are also posted on our Web site.

We are committed to continual improvement in all aspects of our performance to ensure our operations continue to be safe, clean and reliable.

Thank you.

THE PRESIDENT: Thank you. So let's open up the floor for questions, starting with Ms Velshi.

MEMBER VELSHI: Thank you, Mr. President.

THE PRESIDENT: Sorry. I guess I'm

supposed to mention that we have one written intervention that we will do after. As part of the question period, there is a written intervention filed by Northwatch on the Blind River facility, as outlined in CMD M51.17, so we can ask questions on all the material we just heard about.

Ms Velshi...?

MEMBER VELSHI: Thank you.

A couple of questions on the incidents at Cameco's facilities and then some on Northwatch's submission.

On slide 26 on the Port Hope Conversion Facility, the lost time incident, the details around that incident -- it's a question for staff, or more of a comment. Even as I looked at Appendix H-2, it's still pretty scanty. It doesn't tell you what the severity is in days for that particular incident. I think even as a standard practice moving forward, whenever you give details on lost time injury, it would be helpful to provide what the severity is.

So for this particular incident, can you tell us what the severity was?

--- Pause

MEMBER VELSHI: It's a question

for -- well, Cameco can answer it if they have that.

So this is that the Port Hope Conversion Facility, the lost time incident where the contractor fell off a ladder.

What was the severity in days?

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

We don't have that information immediately available to us, but we can provide it. The worker in question has returned to work and it would be a measurement in the course of days.

MEMBER VELSHI: So again, for staff, a suggestion that going forward, in your appendix, where you give details on lost time injuries, it would be helpful to provide the severity and days.

MR. ELDER: Noted, yes.

MEMBER VELSHI: Thank you.

My second one, it's again for staff, and it's around the issue on internal dose calculation. You know, there is another licensee where there have been issues around dose calculation, this particular error was from 2003 on, and my question is more around oversight by CNSC.

Is this something that you should have, could have picked up in your oversight role in

any audits that you do, because this pretty much shakes up confidence in our dosimetry program?

MR. ELDER: Peter Elder. I will start and then pass it to Caroline Purvis about how we do the dosimetry ones.

What we had noted -- in the last 10 years I guess, we have done a lot of work with all the licensees about management systems and making sure that that they have appropriate systems and processes in place. Now that we have a situation where most of those management systems, the programs, are acceptable, we are starting to look at moving towards inspections and focusing on the key outputs of those programs rather than looking at the entire program.

So I will ask Caroline Purvis to comment on how we are looking at dosimetry programs in that context.

MS PURVIS: Good morning. Caroline Purvis, Director of the Radiation Protection Division, for the record.

I think it's fair to say that this particular incident was certainly a surprise to both the licensee and to us. There was a technical basis document drafted a number of years ago, in the early 2000s, that described how internal doses would be

ascertained for this licensee, and in that it described the calculation methods.

For this particular licensee, the way that they did the ascertainment of dose was to use your analysis, and they would get a raw result that they would then enter into a spreadsheet, and of course the spreadsheet had behind it the calculations.

Unfortunately, the spreadsheet had some errors in it, so although when we went to do inspections we would validate the process being used by the licensee, no one had gone in to really look behind the methodology that was embedded in the spreadsheet.

So certainly there were lessons to be learned on both sides in terms of how we were going to, moving forward, ensure that these types of errors didn't propagate, not just for this licensee, but for others, recognizing also that this particular method for ascertaining dose was not a licensed dosimetry method, therefore specific in-depth audits, as they were, of the licensed dosimetry process that you might see at other facilities, had not been done here.

So I think, as I mentioned, it's fair to say that, moving forward, we certainly have to maybe revise our methods to really apply the same rigour when we are going to look at those dosimetry programs that

aren't licensed, but against the same expectations for the licensed facilities.

MEMBER VELSHI: Thank you. Because there have been a couple of other incidents with at least one other licensee, and that may be not -- I don't know what term you use, on the unapproved or not the standard methodology and that may be a standard methodology -- I guess the issue I'm getting at is the regulator, in its oversight capacity, has a role to providing us assurance, the public assurance that indeed the right doses are being calculated and assigned.

I guess you are saying, yes, you are going to be looking at that and there are lessons learned for you in this as well.

So for Cameco for this particular incident when you had to go back to your employees and tell them, "Oops, we have assigned you the wrong dose the last 10 years or so", what kind of feedback did you get from them?

MR. MOONEY: It's Liam Mooney, for the record, and I will ask Dave Workman to provide you some insight into the reaction there.

I think it's important to emphasize this error was detected as part of our own improvement

efforts and was reported promptly to the CNSC and has been investigated in accordance with our corrective action process. Again, none of the results, as was emphasized by staff, speak to exceedances of regulatory limits, but perhaps Dave could talk about the efforts made communicating the error to our employees.

MR. WORKMAN: Dave Workman, for the record.

Once the investigation was completed, the findings were communicated one-on-one with the employees that were affected, and because there was no extreme exceedances they understood the situation and found it acceptable.

MEMBER VELSHI: Thank you.

I have, I guess, three follow-up questions from the Northwatch submission and they're all for staff, please.

So the disparities around number of action levels, you covered that there were actually three and not two, as per the CMD.

But the second one that I really wanted to follow-up was on facility performance, where the intervener has raised concerns around the dose being, you know, at a 5-year high and not much analysis or discussion around that in the report.

Can you comment on that, please?

So this is in the intervention on page 2 on facility performance.

MR. RINKER: It's Mike Rinker, for the record.

We have inspected that facility 4 to 6 times per year. Our initial observation is it's something we should look at, but it is within the range of what we would say is normal fluctuations for that facility. We didn't observe a specific activity or a specific practice that would result in this.

MEMBER VELSHI: So I guess the comment here is that perhaps the report should state that, that this is not an area of concern for these reasons.

On releases to the environment, there is mention made of some sampling being done by Ontario Ministry of Environment.

Any update on those results?

MR. RINKER: Mike Rinker, for the record.

We do not have those results yet. The sampling I believe was conducted in September of this year. The CNSC lab did have a component of that, if you would like some details, but those reports are

in draft form, they are not yet available.

MEMBER VELSHI: And once they are available, they will be made public? Right.

DR. THOMPSON: Patsy Thompson, for the record.

Our plan is to make that report available on our website before the end of this fiscal year. So the data is being analyzed as we speak and we are developing a report that will be public-friendly with interpretation of information and the actual data.

MR. RINKER: Excuse me, if I could make a correction? MOE has done some sampling in 2011; they have not published those results yet. The CNSC lab on their own did -- CNSC has done some sampling in September 2013.

THE PRESIDENT: You will notice our preoccupation with posting data whenever it's available. I assume every time I hear about measurement and data it will be nice to actually say that they are posted, okay, so we don't have to ask on practically every item here whether it's going to be posted or not.

Ms Velshi...?

MEMBER VELSHI: To get back to the MOE, the intervener says their sampling was done in

summer of 2012, but you are saying it was actually done in 2013?

MR. RINKER: Mike Rinker, for the record.

CNSC's September 2013. We are not exactly clear on the date when MOE did their own sampling; it may have been correct in 2012. We do know that we have asked for the report. The report is not yet available.

THE PRESIDENT: I am told we have a Ministry of Environment representative here in the audience.

MR. CHARRON: They were sitting right here.

THE PRESIDENT: There they are.
Please, can you --

MR. CHARRON: Can you identify which facility you are talking about?

UNIDENTIFIED SPEAKER: These would be for the Toronto region and not necessarily for the Blind River region, which the intervener is referring to.

THE PRESIDENT: Okay.

MR. CHARRON: I'm sorry, which facility are you talking about? Cameco, GE or Blind

River.

THE PRESIDENT: Blind River.

MR. CHARRON: Yes, we were there in 2012. (Off microphone).

THE PRESIDENT: Can you speak to a microphone, just for the record, please.

MR. CHARRON: Good morning. My name is Chris Charron, I'm sorry, I'm with the Ontario Ministry of the Environment.

We did do sampling, soil sampling, in the vicinity of Blind River chemical facility in 2012. There is a draft report, it's in the process of being finalized, should be released shortly to the district, at which point they decide I guess how further it is shared, but I imagine it will be made publicly available. That's the usual process.

THE PRESIDENT: Thank you.

Ms Velshi...?

MEMBER VELSHI: Thank you.

Did Cameco have anything to say on that? I know Mr. Mooney was going to. Anything to add?

MR. MOONEY: Not at this time. We just wanted to clarify that there was a 2012 sampling campaign carried out by the MOE, but they have done

that.

Thanks.

MEMBER VELSHI: And my last question based on Northwatch's submission was around reporting on waste management at these facilities.

If staff can comment on that and your thoughts on including that in your report?

MR. BUHR: So currently Blind River has an incinerator at their facility and they are receiving combustible waste from the Port Hope conversion facility and they are also processing waste from their own facility.

We have had a look at their licence associated with the incinerator to determine whether or not they could process waste from their fuel manufacturing facility in Port Hope. We, to date, haven't noticed any discrepancies or any reasons why they couldn't do that and we are waiting on the Ontario Ministry of the Environment to also make a decision on that.

MEMBER VELSHI: Yes, though I think the comment was not so much on that as much as why does your report not address this development, and what is being done about it.

MR. ELDER: Peter Elder, for the

record.

Northwatch is noting that in Cameco's report they said they intended to do something. The fact is, they didn't actually do it in 2012, or even to date, because there haven't been the necessary regulatory reviews completed.

So our intention would be, when this new activity does start, we will report on the new activity, but we did not include the waste management in this report because there was no change in what they were doing from 2011 to 2012.

But yes, we will include it if there is a change.

MEMBER VELSHI: Thank you.

Thank you, Mr. President.

MR. MOONEY: Sorry, it's Liam Mooney, for the record, and we managed to get the information in relation to the severity of the LTI at the conversion facility, and the individual in question was off work for three days.

MEMBER VELSHI: Thank you.

THE PRESIDENT: Thank you.

Monsieur Harvey...?

MEMBRE HARVEY : Merci, Monsieur le Président.

My question is related to Table 10.2 on page 96. My question goes as well to the staff and Cameco.

What is your interpretation of that table, of the results? It is quite stable. I know that you stopped the water going in the lake, but when you look at the results it's quite stable in the total mass recovery from the wells and one could think that because it's stable that it might -- may be there is always leaks coming from somewhere.

In fact, could you just comment and say what you think of that?

MR. ELDER: Peter Elder, for the record. I will start and remind there was an incident where there was a known leak -- a leak found in one of the sumps under the UF₆ plant. There was a lot of remediation work done, but not all the contaminated soil was removed, so the temporary measure that they put in place was to put in these groundwater capture wells.

So that based on the modelling we have to date we would expect that the source of that, the contaminated soil, is still there. So they have not -- while they have plugged the leaks from the building, the contaminated soil is still present. And

part of what they are looking at in terms of the Vision in Motion Project is some further remediation around that site.

Maybe Mr. Rinker can add what our modelling would say

MR. RINKER: Mike Rinker, for the record.

We have been reviewing the modelling results and meeting with MOE, Environment Canada and Cameco on at least a minimum quarterly basis to look at progress. Steady-state, though, doesn't necessarily mean that there is a leak, it just means that the amount of water and mass that's being captured is equilibrating with what's getting released from the contaminated soils and that's not a surprise.

The question would be, how can we eventually remove the source and that's the work that still has yet to be done. The source is no longer from the building, the source is now contaminated soils, as Mr. Elder has indicated.

MEMBER HARVEY: You have an appreciation of the total mass which is always there and what is the importance of, let's say, 113 kg per year compared to the mass being under the ground?

MR. RINKER: Mike Rinker, for the

record.

We have some information on how much is there. Some of the soils have -- not all the soils have been sampled, but there has been a lot of samples. But what I would say is that by capturing the groundwater that is not -- and there is a fair amount of, you know, kilograms and kilograms of things that are being brought out of the groundwater, that is not going to over time remove the source, it is just an interceptor to make sure that the loads do not get to the turning basin.

There will have to be physical work done to get at the source.

MEMBER HARVEY: And looking at the numbers, you figure that there is no additional leaks, that it's coming from the mass there?

MR. RINKER: Mike Rinker, for the record.

It's difficult to discern at the perimeter of the facility in groundwater to say whether it's coming from soil or the building. Where we have comfort in the source of contamination is stopped is the work that was done in the buildings themselves. So there has been a significant amount of work done by Cameco on repairing the floors and areas of leak.

We have observed, we have inspected, and we can say that the source from the buildings has stopped, but there is a significant inventory under the buildings.

MEMBER HARVEY: Thank you.

Cameco, any comment?

MR. MOONEY: It's Liam Mooney, for the record, and there was a site-wide risk assessment that was completed and updated after the incident in question, and it had determined that there was no risk posed to the public. Since that time, the pump and collection wells that you have seen the details of were installed and further reviews have been undertaken with respect to the facility.

And I wouldn't have anything to add to the hydrogeological analysis, but Dave Workman might, as a hydrogeologist, have something more to add to what Mr. Rinker observed.

MR. WORKMAN: Dave Workman, for the record.

I know that you are commenting on the loading, actually, off-site to the harbour.

I think it's important to know that there is over a hundred monitoring wells that are part of our monitoring program, so they are located

throughout the facility in targeted areas that we would determine if in fact was another leak in one of the buildings, and it would be reflected in an escalation in the concentrations of contaminants of concern. So we look at that as well as the potential for off-site contamination.

MEMBER HARVEY: You didn't have any problem with the pumps? The pumps haven't stopped for a certain period of time, things like that? No?

MR. WORKMAN: Dave Workman, for the record.

The capture wells or the pumping wells that you are referring to, they have been designed and installed and operated such that they do -- if need be, for maintenance purposes, they would be shut down, but for a very brief period of time, and that is captured also in the loading estimates.

MEMBER HARVEY: Thank you.

THE PRESIDENT: Thank you.

Dr. McDill...?

MEMBER McDILL: Thank you.

I wonder if I could ask staff to talk about the difference between licensed and non-licensed dose calculations.

This spreadsheet error is not the

first one I have encountered on my time in the Commission, and I think it would be useful to the public to understand the difference, and me also.

MR. ELDER: I will ask Melanie Rickard to answer the question.

MS RICKARD: Melanie Rickard, for the record, Acting Director of the Radiation Health Sciences Division.

So there is a requirement in the *Radiation Protection Regulations* that states that if a worker may exceed 5 mSv a year they should use the licensed dosimetry service provider. With that comes certain requirements in the Regulations and, in addition, there is a standard that describes the technical and quality assurance requirements of a licensed dosimetry service provider.

In that standard there are quality assurance requirements, as well as several testing requirements that the licensed dosimetry service provider has to meet. As a licence holder, they are inspected on a fairly routine basis and annual compliance reports are submitted on an annual basis as well. So there is a significant amount of oversight with regards to a licensed dosimetry service provider.

Having said that, if the doses are

expected to be quite low -- less than 5 mSv of effective dose -- the radiation protection program does allow for dose calculations that lie outside of a licensed dosimetry service provider. As such, the oversight of that would be covered under the RP program and under the RP inspections that CNSC inspectors do.

So, considerably, the reason --

MEMBER McDILL: Can I just interrupt for a second? "RP" is radiation protection, right, for the public who is not into acronyms.

MS RICKARD: Absolutely. My apologies.

MEMBER McDILL: Thank you.

MS RICKARD: So essentially the distinction lies, if the doses are higher -- so, as I said, 5 mSv -- the risk is higher, the oversight is captured under a separate licence, captured under a standard which, as I mentioned, has several technical requirements as well as QA requirements; and if the doses are are lower, the RP program can assess those doses as part of the program and not part of the licensed dosimetry service.

MEMBER McDILL: Thank you, that's very helpful.

How many facilities that are licensed

by the Commission fall under the 5 mSv, roughly?

MS RICKARD: Okay. Well, I will tackle that perhaps in two steps. I believe we have 13 dosimetry services right now that have licences to conduct dosimetry, so we have three commercial dosimetry service providers who can go out and provide dosimeters or licensed dosimetry service to any client that wishes to use them. The rest are in-house, so those are bigger programs. For example, like, nuclear power plants, they all have their own licence to conduct licensed dosimetry services.

We heard yesterday, for example, in the DNSR report, they have about 2000 licenses. For those that choose to use a licensed dosimetry service provider, they would be going to the three commercial dosimetry services for service, essentially.

MEMBER McDILL: And as part of the lessons learned that were referred to a few moments ago, or minutes ago, is there a plan to test all of those facilities that may not be using one of the service providers to test the spreadsheets, send in a value and see what comes out and make sure this spreadsheets are properly calibrated.

DR. THOMPSON: Patsy Thompson, for the record.

We have, as you pointed out, Dr. McDill, have had a number of instances where the oversight that we've provided on the radiation protection program and the dosimetry calculations did not look at that level of detail.

We have been speaking with Mr. Elder, discussed the need to do different oversight, and one of the means of doing that oversight is, as you have mentioned, is to submit essentially a test case and see what comes back from those that are operating under a non-licensed dosimetry service.

We did something like that when, you recall, we came to the Commission with the National Dosimetry Service and the event that took place then. We did then require all of the dosimetry services licensees to validate the calculations they were doing for similar types of dosimetry.

THE PRESIDENT: I'm missing something. Why would anybody want to go to an unlicensed dosimetry service provider?

I still haven't heard a number; are any of our licensees using an unlicensed dosimetry service?

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

I want to talk about a couple of things. Everybody is focusing on the licensed dosimetry service, I am going to give a briefing of the process and then Ms Rickard will give you the detail.

The licensee is obliged to do two things, ascertain the dose and do screening methodology. What we are talking about here is creating methodology in order to determine what is the dose.

Dr. McDill asked the right question: What is it we are going to do to ensure that the screening methodology is adequate? So we have screening methodology, for example, for thyroid bioassays where, there are sometimes sources being sent around with unknown values so that the detector is measured for its minimal detectability.

So the enhancement of our regulatory oversight right now, is to look at the screening methodology to make sure that there are in place proper quality assurance because the licensee's responsibility is to have the measurement system in place and the quality assurance in place.

One thing, though, is the NDR. The dose to the worker, is not registered in the National Dose Registry unless the information is coming from a

licensed dosimetry service. So no dose record goes to the National Dose Registry without being submitted by the licensed dosimetry service.

So I will pass it on to Ms Rickard if she has anything else to add.

THE PRESIDENT: Is that true? I didn't know that either. So you can have a situation where you have an unlicensed dosimetry service measuring a reasonably high dose, in the case of an event, and it doesn't go into the Registry?

MS RICKARD: Melanie Rickard, for the record, Acting Director of the Radiation Health Sciences Division.

That is true. We have requirements in our regulations that specify, first, if you have a reasonable probability of exceeding 5 mSv, a licensed dosimetry service should be used and, second, the personal information that is collected that ties the person to the dose must be submitted to a licensed dosimetry service provider and it is the licensed dosimetry service provider that is required to submit to the NDR.

The NDR does not accept dose records from non-licensed dosimetry service providers.

Having said that, many of our

licensees choose to use a licensed dosimetry service provider even if they don't meet that dose threshold. Obviously, there is a quality element there. They want to know that their results are accurate and precise, but we do have examples of other methods that are acceptable for ascertaining doses that lie outside of that process.

For example, some workers who get relatively low doses may choose to use an electronic personal dosimeter that gives them active dose reading. Those are not licensed. They could be licensed, but no one has requested to provide this service as part of a licensed dosimetry service. There are methods in place that lie outside of a dosimeter, for example, just estimations using area monitor and time and occupancy, for example. That would be considered acceptable under some RP programs for ascertaining the dose.

THE PRESIDENT: Thank you.

Monsieur Tolgyesi...?

MEMBER TOLGYESI: Thank you.

On Northwatch's submission there is a question on the last page:

"... Cameco intends to add
combustible wastes from the
Cameco Fuel Manufacturing ...

Facility".

According to Northwatch, it is a major operational change that warrants a licence amendment. If it happens, when is it supposed to? And will it be a kind of licence necessary to this?

MR. ELDER: Peter Elder, for the record.

What we looked at in terms of the licensing basis for the incinerator is on the type of waste, it doesn't actually dictate the source of the waste. So they would have to show that the waste that would come from the Cameco Fuels Manufacturing is compatible with all the processes and the limits inside the existing incinerator, including the production -- the throughput of the incinerator is well.

So we look at it from -- is it possible to safely use the incinerator with this type of waste, including the production limits that are around that incinerator, and it is not necessarily a question of because it comes from a different off-site facility that would say it's a licensing amendment. A license amendment would come if there is something materially different around the incineration process.

THE PRESIDENT: Or volume.

MR. ELDER: Or the volume, yes.

THE PRESIDENT: Thank you.

Dr. McEwan, please.

MEMBER MCEWAN: So a couple of questions. One is, the statement "unknowingly opened a pressurized drum". I mean, presumably, he knowingly opened the drum and didn't know it was pressurized.

THE PRESIDENT: What page?

MEMBER MCEWAN: Page 79.

MR. ELDER: Peter Elder, for the record.

They did their normal procedure around opening the drums. The assumption going in was that none of the drums were pressurized, because they are not supposed to be sent pressurized. So they did not have the procedures in place to deal with pressurized drums. So he did not know it was pressurized.

MEMBER MCEWAN: Right.

MR. ELDER: Yes.

MEMBER MCEWAN: Something just -- again, the use of English.

MR. ELDER: It's use of English, yes.

MEMBER MCEWAN: But I mean, of slightly more of concern, how can a pressurized drum be in a facility and not known to be pressurized? It

seems to me that one of the fundamental descriptors of these drums must be whether a chemical process has been used which is likely to cause pressurization.

MR. ELDER: Peter Elder, for the record.

The root cause was looking in terms of how the drum was processed at the other end, and actually it was sealed at the other end before it was allowed to completely degas. So the pressurization took place inside the drum after it was sealed at the mill in the United States.

MEMBER MCEWAN: Okay. So is there a proactive way of identifying pressurization in drums?

MR. MOONEY: It's Liam Mooney, for the record, and I will ask Dave Workman to elaborate on that if my answer doesn't suffice.

But suffice it to say that the work procedure has been revised and there is a visual observation required of the incoming drums and then they do a test, a sounding test, to determine if in fact it has become pressurized.

I think the context -- and we did appear before the Commission before your appointment in relation to this particular event, but the Blind River refinery has put through hundreds of thousands of

drums, and this was the first instance where it came to us in such a pressurized state, so that the Information Notice that's being worked on with the NRC in the US, as well as the CNSC and Cameco, is looking at what can be done on the milling end to ensure that the event doesn't occur in the future.

Mr. Rinker mentioned the CNSC staff assessments of the facilities in Northern Saskatchewan which confirm that there are adequate processes in place to prevent a pressurized drum being shipped from one of those.

MEMBER MCEWAN: Thank you.

And on page 82, the 8.1.1, in the last sentence it says:

"In 2011, there was a noticeable increase in potential public dose ..."

-- due to storage in trailers. And then you had to create a specialized facility.

It seems to me that, again proactively, that would have been an obvious risk rather than something that had to be picked up later at inspection.

MR. RINKER: Mike Rinker, for the record.

I think in hindsight it seems obvious. There are fence-line TLD's in place to monitor, and so I don't think we are expecting to see the trend of higher possible public dose. The values are still very low and so, in general, that facility does not pose a very significant public dose consequence.

This is more a question of a measurement that indicated best practice or continual improvement.

MEMBER MCEWAN: Again, simplistically, storage in a trailer sounds to me to be fairly unsecure. I mean a trailer is just parked and sitting there.

MR. ELDER: Peter Elder, for the record.

It is within the licensed facility, so it is within the security fence of the facility. So it's not just outside, so it was -- and this was related to Cameco's plans to actually deal with that waste at Blind River as well. So there were -- you know, they are -- we are doing it.

What we found is, while they were working on that solution, the placement of the trailers was less than optimal.

THE PRESIDENT: Thank you.

Anybody else? Any other questions?

Just one. On page 93, I think, staff is saying that we are about to get *Vision 2010* -- we are still using *Vision 2010* in 2013 -- being submitted late 2013. I figure we are now in late 2013. When are we going to see this plan?

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

Our efforts continue to identify the preferred option in relation to *Vision in Motion*, as it is now called. We have submitted documentation as part of the effort to begin the licensing process, and that effort is planned to continue in 2014.

THE PRESIDENT: Okay. Thank you.

Anything else you want to add?

MR. MOONEY: No.

THE PRESIDENT: Thank you.

--- Pause

THE PRESIDENT: Okay. I'm told that we need a biological break here, so we will reconvene in about 10 minutes.

--- Upon recessing at 10:39 a.m.

Suspension à 10 h 39

--- Upon resuming at 10:59 a.m.

Reprise à 10 h 59

THE PRESIDENT: We are back and we will move on now to Part III of the presentation on the Nuclear Substance Processing Facilities for Shield Source Inc. and SRB Technologies.

I guess representatives from Shield Source Inc. are joining us by teleconference, so let me check the technology.

Mr. Lynch, can you hear us?

MR. LYNCH: Yes, sir, I'm here.

THE PRESIDENT: Thank you.

We have a representative from SRB also, SRBT here, but first we are going to hear from staff.

Mr. Elder, you still have the floor.

MR. ELDER: Thank you.

So I will turn it back over to Mr. Rinker to present this part of the report.

MR. RINKER: Mike Rinker, for the record.

There are two tritium processing facilities in Canada, both of which are located in Ontario, Shield Source Inc. in Peterborough and SRB

Technologies in Pembroke. Both facilities are licensed to process gas to produce gaseous tritium light sources and they manufacture different radiation devices containing these sources.

SRB operates under a licence issued in 2010 that expires in 2015.

In April 2012 Shield Source Inc. submitted evidence that its total tritium emissions had been underreported for several years. As a result, the Commission restricted SSI from processing tritium.

In March of 2013, SSI notified the CNSC of its plan not to apply for renewal of its operating licence. The current status of SSI and its activities is provided later in this presentation.

CNSC staff rated all safety and control areas for SRB as "Satisfactory", with the exception of the safety and control area for conventional health and safety which is rated "Fully Satisfactory".

All ratings for SSI were rated "Satisfactory" with the exception of management systems, operating performance and environmental protection, which are rated as "Below Expectations". The "Below Expectations" ratings are directly related to issues associated with SSI's exceedance of its air

emission limits.

The facility highlights for SRB include the following: The average annual effective dose received by workers at SRB was 0.1 mSv, while the maximum dose received was 0.8 mSv. CNSC staff are satisfied that SRB is keeping doses to workers as low as reasonably achievable.

SRB continues to effectively control air and liquid releases from their facility and all releases remain consistently below licence limits. The most exposed member of the public would receive a dose of 0.0045 mSv per annum as a result of these releases.

In 2012 there were no lost time incidences at SRB.

SRB continued to operate within the framework of the *Nuclear Safety and Control Act* and they met all requirements as per its operating license.

Finally, I would like to acknowledge the support received from SRB in enabling a joint CNSC-IRSN research project on the fate of tritium in the environment and, more recently, on a project designed to compare various methods of sampling for tritium in the environment and analyzing the different forms of tritium in the laboratory.

The next seven slides provide

information on SSI, including the current status of activities at that site.

As noted earlier, since the shutdown in March of 2012, the Commission has not allowed SSI to process tritium at its facility. SSI has announced that they will not apply to resume operations, and they have commenced clean-up activities on the site.

CNSC staff have intensified their regulatory oversight of the SSI facility. Four inspections were performed in 2012, including an unannounced verification that confirmed compliance with the restrictions set by the Commission.

CNSC staff requested that clean-up activities be conducted by qualified individuals and under the conditions of the current licence. Clean-up activities commenced in October 2013 under a plan that was accepted by staff.

The current regulatory oversight during clean-up activities includes:

Meetings with SSI and their qualified consultant on a regular basis;

CNSC presence during clean-up activities;

CNSC conducting independent monitoring; and

a packaging and transport inspection.

The majority of tritium processing occurred in the tritium fill room at SSI and a plan to clean up this room involves the following:

First, planning and characterization;

Second, clean-up and removal of equipment;

Third, once the room is clean to acceptable levels, the ductwork and stack would be removed; and

Finally, a report with the result of clean-up will be provided.

Steps 1 and 2 are near complete; step 3 will take 2 to 3 days to complete.

The photo on this slide shows equipment at SSI used to process tritium. This equipment is now removed and is appropriately packaged and ready for transport.

This slide shows the same tritium fill room with the equipment now removed. Core samples of the floor, walls and ceiling have been taken and submitted for analysis. The results will indicate whether further work would be required in this room. The ductwork and stack will not be removed until clean-up activities in this room are complete.

SSI and, independently, the CNSC have continually monitored tritium in the air within this room, outside of the room, in the stack and ambient air tritium levels during clean-up activities to ensure that workers and members of the public are protected. The results showed that tritium levels in the room, in the building and released in the environment are much lower than values observed during operations and much lower than the licence limits. Workers and the public are protected during these clean-up activities.

Material that is removed from the tritium fill room and other locations at SSI is packaged and it's ready for transport according to CNSC regulations. As mentioned previously, the CNSC has conducted a packaging and transport inspection during clean-up activities, and a CNSC staff member remains on-site during these activities.

The SSI licence expires December 31, 2013. In November 2013, SSI requested a two-month extension of their licence to the end of February 2014. This period would ensure that CNSC staff have appropriate time to review the status of the facility, perform verification activities and determine if the facility could be released from licensing.

That is the end of our section on

tritium processing facilities.

MR. RUITER: Can we ask a question on that?

THE PRESIDENT: No, you can't. Wait your turn, you will have ample opportunity for doing this.

MR. RUITER: On this (off microphone), Mr. Binder.

THE PRESIDENT: Can you stop here now. We are not -- you just wait until the process unfolds as it should.

MR. RUITER: No, but can you acknowledge our group here on that issue? You never gave us a hearing, you cancelled the May 2, 2012 hearing.

THE PRESIDENT: Are you going to stop or do I have to have you removed from this room?

Okay, Mr. Lynch, do you have any comments on what you just heard?

MR. LYNCH: No, sir, I have nothing to add.

This is Bill Lynch, for the record, President of Shield Source.

No, sir, I have nothing to add to those comments, other than I stand here ready to answer

any questions.

THE PRESIDENT: Okay.

SRBT, Monsieur Levesque?

MR. LEVESQUE: Stephane Levesque, for the record. I am here with Ross Fitzpatrick, Vice President for SRB.

I have no comment, just ready to answer your questions.

THE PRESIDENT: Okay. We are going to open up the question period, starting with Ms Velshi.

MEMBER VELSHI: Thank you, Mr. President.

Question for CNSC staff. Did you do a root cause analysis of what the regulator could have done different with regards to SSI in the underreporting of their emissions, and what were your key findings from that, please?

MR. ELDER: Peter Elder, for the record.

We have started that, but we have not finished it. Our focus has been for the last six months on making sure that the facility has been cleaned up appropriately. But we will finish that and report back to the Commission.

MEMBER VELSHI: Thank you.

A question for SSI. As you've pretty much completed all your clean-up activities, can you comment on the adequacy of your financial guarantee, and the funding that you had originally estimated would be needed for a task such as this?

MR. LYNCH: Bill Lynch, for the record.

The clean-up activities are not yet completed. We have in fact decommissioned the tritium fill room, taken the equipment out, we have taken out the drywall in the ceiling as well. We are waiting on the results of further sampling of the concrete floor. Although the rigs themselves are packaged and ready for disposal, we are just waiting for the appropriate permissions to do so.

As of the moment, we feel as though we are well within the funds already put aside into the escrow fund. We think there will actually be a surplus when this is completed, based on our current estimates of where we stand.

MEMBER VELSHI: Thank you.

And do you have any unused tritium in your inventory currently? Or if you don't, what did you do with what you did have on-site?

MR. LYNCH: We have no tritium -- unused tritium on-site at the moment. We sent what we did have at the time of our shutdown to another licensed facility.

MEMBER VELSHI: Thank you.

Thank you, Mr. President.

THE PRESIDENT: Thank you.

Dr. McEwan...?

MEMBER MCEWAN: Thank you, Mr. President.

So I have, I guess, a philosophical question. On page 112, in the last paragraph underneath the tritium Table 13-2, you note that the two companies used very different models for public dose calculations.

As a regulator, wouldn't it be helpful to have some genuine comparability of models from two different companies so that you do actually understand what the relative risks are?

MR. RINKER: Mike Rinker, for the record. I will pass the answer to Dr. Thompson if I miss anything.

In general, there is the CSA standard for the calculation of public dose and it is used throughout the industry. SRB has used that as well.

There was some results within the environment where the numbers were higher than could be determined by the model. So SSI switched to use direct environmental monitoring results. Rather than modeling from the stack and predicting what would be in the environment they used the environmental measurements which could be not explained by the model.

So there are different approaches and I think in both cases both facilities decided to take the most conservative approach to ensure public safety.

MEMBER MCEWAN: I think I understand.

MR. RINKER: I can sum. In general, the model would look at stack releases.

MEMBER MCEWAN: Yeah.

MR. RINKER: Predict what's in the ambient air, look at transfer to soil and vegetables and water. So that would be all modeled.

And then there would be confirmatory environmental monitoring to ensure that the parameters out in the environment are as expected.

There was a small body of water close to the Shield Source facility that had levels of tritium that were slightly elevated compared to the model. So those numbers were used directly as opposed to the estimated numbers.

MEMBER MCEWAN: I understand. Thank you.

Thank you, Mr. President.

THE PRESIDENT: Dr. McDill.

MEMBER McDILL: Thank you. In the slide on page 37 can you give me the rough dimensions of the tritium field room? Judging by a door at one end, I'm guessing it's sort of three and half metres by three and a half metres.

MR. RINKER: Mike Rinker, for the record.

That's correct.

MEMBER McDILL: Is that correct, SSI?

MR. LYNCH: Yes, that's surprisingly correct.

MEMBER McDILL: And will we have some sense at the end of this of the amount of contamination that was present in the room so that, you know, after the fact we can estimate the risks that really were there?

MR. RINKER: Mike Rinker, for the record.

At present, Shield Source is coring the floor and is waiting for results. They have cored the drywall and they've decided because there was some

evidence of tritium in the drywall they have removed that and packaged it for transport as well as the ceiling.

And the cores for the cement went fairly deep. So I think we'll have a very accurate; first of all, measurement of is the facility clean enough and, then if so, what are the consequences and, you know, can we inform the landlord that a new tenant can move in, which is our expectation.

MEMBER McDILL: And these results will be made very clear to the community so they can understand what was happening and what has happened?

How will they be made clear? Maybe that's a better question.

MR. RINKER: The answer is definitely "yes". How they will be made clear I would -- I'm not sure what the venue is but there is going to be a documented report on the status of the building, the status outside the facility and the environment in general. It will be published.

MEMBER McDILL: Thank you.

THE PRESIDENT: Mr. Harvey.

Mr. Tolgyesi.

MEMBER HARVEY: I have one to SSI.

What happens to contaminated waste?

How do you handle that? Where is it going?

MR. LYNCH: Bill Lynch, for the record.

The contaminated waste is packaged according to regulations and sent to a licensed facility for long term storage and disposal.

MR. ELDER: Peter Elder, for the record.

There is no secret. There is only one place in Canada it can go to and that's Chalk River that's licensed to deal with this material.

THE PRESIDENT: C'est tout?

Go ahead. Go ahead, Dr. McDill.

MEMBER McDILL: It's a question on SRB. So I thought we would finish on the SSI and then come back.

THE PRESIDENT: Well, they are both right now.

MEMBER McDILL: So the question to SRB is when we shut you down a number of years ago you were not very happy. How has the exercise been now to come? You have a full slate of satisfactory and one fully satisfactory. It's been a long journey.

Would you comment, care to comment?

MR. LEVESQUE: Stephane Levesque, for

the record.

We have introduced a number of controls and things in place to ensure that our facility will be above and beyond the regulator's requirements. But, that being said, we understand that our work will never be done. We try to strive to be better in following the issues that happened with SSI.

We have looked at it very closely. We instituted a committee to look and identify lessons learned from the Shield Source.

We have been doing every two years verifications of our emissions with our third party to ensure that the emissions will be well within what we were finding which was successful. We have now increased that to yearly.

We've purchased new monitoring equipment to make sure that we remain at the leading edge of monitoring tritium emissions.

And all the results that we have been reporting in the environment that have been undertaken by a third party are well within the low -- what our model was -- which is the model you were referring to earlier -- the model was expecting.

So looking back, I think all these things have allowed us to do changes and continue to be

better.

Thank you.

THE PRESIDENT: Dr. McDill.

MEMBER McDILL: Yes. I'll direct the question to staff perhaps.

How does staff verify the test results that are coming from SRB?

MR. RINKER: Mike Rinker, for the record.

There is a number of levels of verification.

The first is we receive quarterly and annual reports.

We conduct trend analysis to see if things are changing. We do observe changes in the facilities so we have expectations of whether emissions should be going up or going down.

We conduct routine inspections and we also monitor around that facility, often coordinated through our research and support program or we are investigating uranium or, sorry, tritium in the environment.

But we had provision from SRB of real-time data as we're monitoring things out in the environment. I think we have pretty solid assurance

that what is being reported is what is happening at the facility.

MEMBER McDILL: Is there still third-party analysis occurring?

MR. ELDER: Peter Elder.

All the analysis around SSI is done around -- sorry -- SRB is done by a third party. We've also done our own independent measurements around it as well.

MEMBER McDILL: SRB, can you comment, please?

MR. LEVESQUE: Stephane Levesque, for the record.

To answer your question and other questions I heard in the background, AECL has contracted to do monthly environmental monitoring measurements at our facility and those measurements include the 40 air monitoring stations, local, residential wells and monitoring wells on our site; vegetation, local milk and local water stream.

Thank you.

MEMBER McDILL: Thank you, Mr. Chair.

THE PRESIDENT: Anybody else have a particular question on this?

I have just one thing, just to remind

us again. How did we miss the SSI so-called measurement and what lesson have we learned from that?

MR. ELDER: Peter Elder, for the record.

As I have said, we're still doing internal lessons learned on this one. Again, we focused our -- we shifted our focus to actually looking at the cleanup.

I think it's looking at comparators of -- there was how much conservatives there was in the modeling and how you've factored that into what you would predict into the environment. So there wasn't necessarily some -- there was a little bit of inconsistency but it wasn't a wild inconsistency. But if there is a very conservative model you have to look again at making sure that you are doing verifications at each point along the way.

So we are comparing the stack emissions to what you saw in the environment and the modeling and they were relatively consistent with the uncertainties. But then you need to go back in and understand where you can have major sources of conservatism that they can actually lead to missing a real result.

THE PRESIDENT: Okay, anybody else?

Mr. Lynch, any final words?

MR. LYNCH: No, sir.

THE PRESIDENT: Mr. Levesque.

MR. LEVESQUE: Stephane Levesque, for the record.

No.

THE PRESIDENT: Thank you.

I'd like to remind everybody that we invited written submissions on this particular section. None was received so I'd like to move on to Part IV which is a presentation on Nordion facility.

Mr. Elder, you are still on. Go ahead, please.

MR. ELDER: So again, Mr. Rinker will go over the Nordion section.

MR. RINKER: We will now continue with the presentation focusing on Part IV of CMD 13-M51 and provide information on the final nuclear substance processing facility, Nordion Incorporated.

Nordion Canada is located in Ottawa, Ontario. Nordion's licence was renewed in 2005 and it expires in 2015.

Nordion processes unsealed radioisotopes, such as iodine-131, for the health and life sciences and it manufactures sealed radiation

sources for industrial applications.

Nordion continues to export sources internationally. Many of the sources exported by Nordion are high activity cobalt-60. These sources are subject to licensing controls under the *Nuclear and Safety and Control Act* and international guidance specified in the *International Atomic Energy Association Code of Conduct on the Safety and Security of Radioactive Sources*.

These specific exports involved Category 1 levels of the radioactive sources, as defined by the International Atomic Energy Agency. These radioactive sources require transaction-specific authorization of exports, consistent with the IAEA Code of Conduct on the Safety and Security of Radioactive Sources.

As such, the CNSC issued approximately 90 licenses to Nordion for these sources in 2012.

There were no major regulatory concerns since relicensing of this facility in 2005.

The main item to note for 2012 is that Nordion has made further enhancements to its security program. CNSC staff have rated this Safety and control Area as fully satisfactory for 2012.

This slide compares the average and maximum effective doses over five years for the workers at Nordion. In 2012 the radiation doses remained low at the facility, with a maximum annual effective dose of 5.2 millisieverts, approximately 10 percent of the annual effective dose regulatory limit of 50 millisieverts. This is compared to the maximum annual effective dose in 2011 of 5.1 millisieverts and in 2010 of 4.9 millisieverts.

This information provides evidence that Nordion is maintaining doses as low as reasonably achievable.

Air emissions and liquid releases from the Nordion Facility continue to be controlled and monitored. These releases are extremely low and result in public dose consequences of less than 0.001 millisieverts per annum.

The frequency of recordable lost time Incidents reported by Nordion remains low. Nordion continues to take corrective actions to prevent re-occurrence of injuries.

CNSC staff conclude that Nordion continues to implement its conventional health and safety program above expectations and its programs were effective in protecting the health and safety of

persons working at its facility.

In our final conclusion, these following comments are made for all nuclear processing facilities under the CNSC's mandate.

CNSC staff compliance activities have confirmed the following:

With the exception of SSI, all 14 safety and control areas were rated satisfactory or better.

Radiation protection programs were effective and kept doses as low as reasonably achievable and environmental protection programs were effective at keeping environmental impacts as low as reasonably achievable.

And, finally, conventional health and safety programs continue to protect the workers.

That concludes the presentation.

THE PRESIDENT: Thank you.

Before opening up the floor for questions I wonder whether Nordion has any comments to make?

MR. BEEKMANS: Rick Beekmans,
Director of Environmental Health and Safety.

We are supportive of the staff's report but we have no comments at this time. But we

are available to answer any questions that you might have.

THE PRESIDENT: Thank you.

So let me start. Mr. Harvey -- Me. Harvey.

MEMBER HARVEY: Merci, Monsieur le Président.

Well, looking at the result of Table 16-2 and 16-3, I mean, those are very good results. The only thing I can say is to congratulate Nordion for their efforts and their results.

I just had one question. It is on Table 16-2 on page 131 -- on figure, not table but figure.

What type of task makes that the maximum dose from 2008 to 2012 is almost at the same level for those years? Is there a specific task that makes it like this or it's just as --

MR. BEEKMANS: Rick Beekmans, for the record.

I'll ask Richard DeCaire, our Senior Radiation Safety Officer to answer that question.

MR. DeCAIRE: That's me, Richard, for the record.

It tends to be our cobalt shippers.

So it follows the shipments of cobalt-60. That task requires assembling of containers and being around those containers and tails dose. That's the group we watch the closest in managing our dose, is ALARA.

MEMBER HARVEY: Okay, thank you.

MR. ELDER: This is Peter Elder, for the record.

Just to add that that's the area that we have looked at very carefully on both their shipping and handling at Nordion because it is an area where you could have more doses to workers.

THE PRESIDENT: Thank you.

Dr. McDill.

MEMBER McDILL: One question relating to page 132 and Nordion is examining a slight increase in 2012. We are now at the end of 2013. Have you got any feeling for why it was a slight increase?

MR. BEEKMANS: Rick Beekmans, for the record.

Could you repeat the question, please?

MEMBER McDILL: Sure. On page 132 of the staff report there is a comment that:

"Nordion is currently examining the slight increase in 2012 to

ensure that releases remain in accordance with the ALARA principle."

So I'm wondering if you have completed examining the slight increase.

MR. BEEKMANS: Thank you. I'll ask Richard to respond to that, please.

MR. DeCAIRE: There is generally variations in our emissions for iodine-131. Those are quite a bit lower in terms of our other isotopes that we monitor for. So it is difficult at times to understand where the changes come from.

All of our iodine processes go through its three sets of charcoal filters. Of those three, two are tested on a six-month basis.

What we find is the charcoal tends to behave like a column where you can have an event but you don't see it right away. So we switch back and forth. So it's hard to be certain where these minor variations come from. So we haven't determined the root cause.

We have looked at -- we have a new processing facility that we use and doses have improved there for our non-tested filters which were inside the hot cells.

MEMBER McDILL: Thank you.

THE PRESIDENT: Mr. Tolgyesi.

MEMBER TOLGYESI: Merci, Monsieur le Président.

According to staff presentations you export your products to 30 countries. What are measures regarding packing, labelling, transportation or others to prevent situations where it could be -- your products could be stolen?

MR. BEEKMANS: Rick Beekmans, for the record.

There are -- it depends on the type of packaging. So the more critical cobalt shipments are shipped in accordance to all the security requirements as defined by the CNSC and the regulators where those products are shipped to the U.S. NRC in the States.

For the Type A packages we use carriers that are certified for the transportation of dangerous goods and we work closely with those carriers to ensure that they are complying and meeting all of the requirements.

MEMBER TOLGYESI: And what is your involvement when something like this happens outside of Canada?

MR. BEEKMANS: Rick Beekmans, for the record.

Thank you for the question. So it's kind of a hypothetical question and it really depends on the situation.

But what we would do is we would work closely with everyone involved. If it's our carriers that are involved then we would work closely with our carriers to do an investigation and get to the root cause and understand any issues that may have occurred.

THE PRESIDENT: Can I jump on this?

It's not hypothetical. What happens if there is an accident of real shipment to some other country? Do they -- is there mandatory reporting and posting of the fact that it happened?

Staff, what's the regulatory obligations here?

MR. JAMMAL: Ramzi Jammal, for the record.

There are several things. I'll start first of all, is the import and export controls under the *Code of Conduct of Radioactive Sources* for the safety and security of radioactive sources.

Before Nordion is authorized to ship, we confirm from the recipient country that they have

the capacity to manage the sources. Then it becomes an international transfer for that country.

In the case of an accident there is a database at the International Atomic Energy Agency that actually talks about and literally a database identifies almost all the sources that are manufactured around the world identifying by the serial number, it's characteristics, its activities and so and so forth.

So the national authority, for example in Mexico or other events that were -- other places or events that take place, there is a contact with the IAEA. There is support that can be provided internationally if the national authority requests that support. It is their responsibility to manage. If they seek assistance Canada will be providing assistance if it is required but the IAEA can respond.

The obligation of the Canadian with respect to the source itself; to provide the characteristics and confirm the fact it is in the database and what it means. But the national authority is responsible for the safety of the source and if they request assistance we will provide it.

And we do collaborate with multiple national authorities.

THE PRESIDENT: Thank you.

Mr. Tolgyesi.

MEMBER TOLGYESI: C'est tout.

THE PRESIDENT: C'est tout?

Dr. McEwan.

MEMBER MCEWAN: Thank you, Mr.

President.

Just a couple of questions. On page 132, Table 16-2, there is a fourfold increase in xenon emissions from 2010-2012. Is that significant? Does it imply an issue? Is it of concern?

MR. BEEKMANS: Rick Beekmans, for the record.

The reduction in xenon in 2010 was related to the reduction in manufacturing as a result of the shutdown in the NRU reactor. I might get my dates wrong here, but May 2009 to September 2010.

So these results are reflective of that.

MEMBER MCEWAN: So the 35,000 gigabecquerels is the norm?

MR. BEEKMANS: Rick Beekmans, for the record.

That's correct.

MEMBER MCEWAN: Thank you.

And you made a statement that

contracting staff are not licensed as nuclear energy workers. Is there any mechanism in the report for identifying the dose to the contractors as opposed to the NEWS which is what is, of course, the nature of the tables?

MR. BEEKMANS: Rick Beekmans for the record.

I'll ask Richard to respond, please.

MR. DeCAIRE: Hi Richard DeCaire, for the record.

We have a separate account that we monitor contractors who are allowed to go into our facility, of dosimeters, so it's easier to review them, and we hold them to a lower action and investigation levels. Contractors or visitors who are only there very temporarily for the day, we assign them dosimeters and we record those results.

THE PRESIDENT: You are obviously dealing with a lot of kind of new medical procedures requiring some -- many isotopes.

Do you monitor the alpha, beta and gamma, or is it just a gamma monitor? What is -- what are you doing about monitoring alpha?

MR. DeCAIRE: I'm sorry, you're referring to contractor dose, or just internal doses in

general?

THE PRESIDENT: In general, to everybody.

MR. DeCAIRE: Well, we start out with a very extensive air monitoring program which CSNC staff has reviewed on many occasions. And what we have identified that we need to monitor for internal dose routinely is radioiodines. So, we monitor for radioiodines. I think it's been mentioned about blind inter-comparison programs. We've been participating in those that Health Canada, though the human monitoring lab, has been organizing for quite some time now. I'm not aware of any result that we ever had though that was -- all our results have been -- our blind submissions have shown that we are within all the tolerances that they've set since memory, and I have been at Nordion for seventeen years. That's the routine monitoring that we do for internal doses.

We tend to find airborne radioiodines. They are volatile. Other radionuclides we're not finding them with the exception of radon which is naturally occurring, and we identify those radionuclides if we find them in the air. We have had very few instances of finding other airborne radionuclides and we look at that on a special bioassay

basis in which case we would take the appropriate Biolyse method whether that's urinalysis -- we would not do that internally -- we would send that to either Health Canada or Chalk River, someone who has procedures to evaluate the isotopes we're interested in.

THE PRESIDENT: Thank you, Dr. McEwan.

Ms Velshi?

MEMBER VELSHI: Thank you.

On page 133 -- it's a question for Nordion -- under Other Monitoring, in section 6.3, there's a statement that in 2012 Nordion conducted groundwater sampling but did not do any radioactive sampling due to low water levels. So, there are two parts to my question. One, is, help me understand what due to low water levels means. And, does that mean there just wasn't enough water to do sampling? And, if that was the case, why was no priority given to radioactive sampling?

And, the second part is, with any sampling that you did in 2013 -- and I know this is a 2012 report, but was there any finding of concern?

MR. DeCAIRE: Richard DeCaire, for the record.

Last year we had installed another well in our parking lot that is a good sampling point for how the underwater -- the groundwater moves through our facility. We have always had on our site a sampling point within the building. And this goes to the other side of that sampling point, so we're monitoring external to the building.

We have never had a requirement from the CNSC to report on that. We do expect one at some point with the document that was out for review on groundwater sampling.

Recently, as in a couple of weeks ago, we did do all the water sampling and I'm reviewing that data right now personally, and what we're finding is the presence of naturally occurring radioactive materials which we don't process at our site. But that's preliminary.

MEMBER VELSHI: Thank you. Thank you.

THE PRESIDENT: Okay. Anybody else?

While we're on this page 133, just an observation about this Table 16.3. You notice that any constraints between the derived DRL and the actuals are so way off that I don't think it's a useful limit.

Any comments about that?

DR. THOMPSON: Patsy Thompson for the record.

As you are aware, Mr. Binder, we have issued for public comment a discussion paper on our revised approach for setting limits on licenses that would serve to actually control the process and be meaningful.

We have conducted a public review. We also held a workshop in June to get clarity on some comments on -- on four issues that had been of most concern to the stakeholders. That document is now -- the workshop results was posted on our website for an additional round of comments. And following that sixty day comment period we will be working internally with a proposal to move forward on both a new process for limits on effluence and actual levels.

THE PRESIDENT: Okay. Thank you.

Dr. McDill?

MEMBER McDILL: One more question, and it -- it is with respect to releasing to the municipal sewers. The numbers are very low here. But, as a general question to staff, how are decisions made about how much can be released in a municipal sewer by any licensee?

DR. THOMPSON: Patsy Thompson, for

the record.

Most municipalities have sewer use by-laws, and the sewer use by-laws often refer to the allowance for discharges of nuclear substances that are licensed -- from facilities that are licensed by the CNSC, and the --- the amount that we would allow is based on a derived limits calculation where we take into consideration the amount of water being discharged from the facility, the amount of water in the sewer lines, taking into consideration that dilution before it is discharged to a river.

And, we also look at potential exposure to sewer plant workers, for example, as well in terms of doses to members of the public from that practice.

And, essentially, that way of allowing discharges to the sewers have been accepted by municipalities under their sewer use by-laws.

MEMBER McDILL: In this particular case the values are given in gigabecquerels per year. In other facilities it's done in grams of. Is there any way of making it consistent for the public? I mean, I have a sense of what a gigabecquerel is but you know it's sort of a number that just seems awfully big. It's like measuring kilometers in millimeters.

DR. THOMPSON: Patsy Thompson, for the record.

When it is expressed in grams it is usually because it is a chemical toxin -- you know, the chemical toxicity is a larger concern, and that's why in, for example, Table 16.3 we have put percent of the DRL, which is an expression. And we could have said percent of the public dose limit, because the DRL is based on one millisievert public dose limit. So, it is a very small fraction of the public dose limit and a small fraction of natural background radiation.

But, I agree, it's not -- it is not clear for -- it is not very informative for members of the public.

MEMBER McDILL: So, basically grams. And if it is coming up in grams we're talking about a chemical toxicity as opposed to a radiological effect? Thank you.

Yes, please. I'll -- yeah.

MR. ELDER: Peter Elder, for the record.

Because, there are some that were both. So when we are talking uranium you have to consider both, the chemical toxicity and the -- the radioactive, as well. So, in this one they are

strictly in the radioactive. But we will note the comment about how to convert, you know, and get a standard unit.

MEMBER McDILL: Thank you.

MR. DeCAIRE: Sorry, Rick, I was just going to say something. Richard DeCaire, here.

You just mentioned the municipal governments, and I just wanted to make you aware, and the Commission aware that we are in close communications with the City of Ottawa, and all of our water that comes out of our processing facilities are held in delay tanks and measured before they are released to municipal sewers. And when that's done, we send them a fax of the results on each occasion, and a monthly report, as well.

MEMBER McDILL: I think the information to the public that there's a hold point is a valuable contribution. Thank you.

THE PRESIDENT: Okay, thank you.

Dr. Thompson, I understand you have clarification on the radon question?

DR. THOMPSON: Patsy Thompson, for the record.

Yes, Dr. McEwan had asked questions about radon, so there's a document on our website, it

is called Radon in Health. It's Info 0813, Revision 2. And it provides information on radon levels in the environment on around mine sites and far away. It provides radon levels in underground mines, as well as radon levels in homes, taken from Health Canada.

THE PRESIDENT: Okay. Thank you.

This concludes this part.

I would like to move on to the GE Hitachi component of the meeting, and I would like to start -- I guess Mr. Elder, you still have the floor.

MR. ELDER: Thank you.

Good morning, again. I'm Peter Elder, Director General, Directorate of Nuclear Cycle and Facilities Regulation. In this portion we are also joined by -- again by Mr. Michael Rinker. Director of the Nuclear Processing Facilities Division. And, as well, we have Mr. Robert Buhr, who is the project officer responsible for the GE Hitachi license.

Again, we have staff available both here in Toronto and joining us as well via teleconference from Ottawa.

We are here to present the performance of the GE Hitachi Nuclear Energy, Canada's facilities, located in Toronto and in Peterborough.

GE Hitachi's performance has been

independently verified by the CNSC and by the Ontario Ministry of Environment. After more than fifty years of nuclear operations, our conclusion remains that the facility is safe for both the people of Toronto and the environment.

I will now pass the presentation over to Mr. Rinker.

MR. RINKER: Good morning, Mr. President and Members of the Commission. My name is Michael Rinker and I am the Director of the Nuclear Processing Facilities Division. I will present to you the performance of the GE Hitachi Nuclear Energy Canada or GE Hitachi facilities, located in Toronto and in Peterborough.

The presentation will focus on the performance of GE Hitachi in 2012 and also provide additional information regarding the Toronto facility in order to respond to recent public interest and concerns.

The presentation will describe GE Hitachi's updated public information and disclosure program.

And, finally, we will present CNSC staff's findings regarding uranium levels in soils at the facility and also in the local neighborhoods.

GE Hitachi is a Canadian company that operates two Ontario sites under one CNSC license. One site is in Toronto. The other site is in Peterborough.

GE Hitachi manufactures nuclear fuel bundles from uranium dioxide powder. The company makes fuel bundles exclusively for Canadian nuclear power plants.

The Peterborough facility is located on a part of a larger industrial site that belongs to General Electric Canada within the municipality of Peterborough. It has been located there since 1955.

The Peterborough facility takes uranium dioxide pellets fabricated in Toronto and assembles them into CANDU reactor fuel bundles.

In addition, GE Hitachi Peterborough has a nuclear services and design business which includes work associated with receiving, repairing and modifying contaminated equipment from off-site nuclear facilities.

There have been no changes to the operations at the GE Hitachi Peterborough facility in 2012 that would affect the safety systems of the facility. The Peterborough facility has performed satisfactorily in all safety and control areas except for environmental protection where its performance is

rated as fully satisfactory.

In 2012 this facility has had no reportable events, no regulatory action level exceedances, and no lost time incidents.

GE has been located in Toronto's Davenport area since the construction of the first building in 1905. At that time GE's buildings were located in an industrial area conveniently located close to a major rail line as shown in the picture on the left side of this slide.

The Toronto facility produces uranium dioxide powder into ceramic pellets. The majority of these pellets are shipped to their Peterborough facility and assembled into CANDU reactor fuel bundles while the rest are sent to the US fuel manufacturing facility in Wilmington, North Carolina.

In 1955 GE Hitachi started its nuclear fuel operations in Toronto. Over GE Hitachi's 50+ years of operation, much of the industrial area transitioned from an industrial area to residential properties. As such, the GE Hitachi Toronto facility is now surrounded by residential homes. The current facility is shown on the right side of this slide.

Notwithstanding, the CNSC provides regulatory oversight to ensure it's operations remain

safe, thus, ensuring that the public and the environment are safe.

There were no changes to the operations of the Toronto facility that would affect the safety of the facility.

For 2012 the CNSC staff rated thirteen of the fourteen safety and control areas as satisfactory, while the environmental protection safety and control area was rated as fully satisfactory.

In 2012 there was one action level exceedance related to radiation protection. A worker at the GE Hitachi Toronto facility received an annual extremity dose that exceeded the extremity dose action level, but was below the regulatory dose limit and well within doses that are known to cause considerable health effects.

There was one last time incident resulting from a trip and fall when an operator was working the facility.

And, finally, GE Hitachi has strengthened its public information and disclosure program in 2012, as discussed in my next slide.

In 2012 the CNSC published a new regulatory document, rd 99.3, on *Public Information and Disclosure*. Its publication coincided with a

heightened level of public concern regarding GE's Toronto facility. Accordingly, GE Hitachi was required to undertake several new initiatives to inform residents about its nuclear activities.

GE Hitachi has committed to establishing a community liaison committee, distributing an annual newsletter to residents, holding an annual open house, and it has improved its website.

CNSC staff have required GE Hitachi to provide quarterly updates on its activities and will continue to closely monitor the implementation of this program.

Releases of uranium from the Toronto and the Peterborough facilities into the environment continue to be controlled and monitored to ensure compliance with the conditions of their license.

GE Hitachi controls and monitors emissions from their stacks to ensure that the public is protected from air emissions. The air is also monitored at the boundary of the facility.

And, finally, for verification that emissions are low, GE Hitachi conducts soil sampling at its Toronto facility as part of its environmental monitoring program.

In addition, wastewater from the GE

Hitachi facilities is collected, filtered and sampled prior to its discharge to the sanitary sewer.

In 2012 all releases from the GE Hitachi facility were well below the license limits.

A decrease in uranium emissions to the sewer has occurred at the Toronto facility due to changes in the wastewater mixing and treatment process.

Air emissions and environmental monitoring results are provided in the following slides.

GE Hitachi's Toronto and Peterborough facilities perform continuous in-stack sampling to ensure emissions remain within their applicable license limits. The emissions limits are based on a 0.05 millisievert per year public dose. This is twenty times lower than the prescribed regulatory public dose limit of one millisievert per year.

In 2012 emissions remained well below the license limits for both facilities. The emissions from the Peterborough facility are so low they cannot be discerned from zero on this graph. The results demonstrate that air emissions are being controlled effectively at the Toronto and the Peterborough facilities.

Air is monitored, at the locations

shown with red dots, around the Toronto facility using high volume air samplers. The high volume air samplers are at fixed locations. The locations of the samplers were chosen based on the direction of the prevailing winds.

Air filters are collected weekly by GE Hitachi and sent to a qualified third party, McMaster University, to measure the quantity of uranium collected in the filter.

The results from the high volume air samplers show that the average concentration of uranium in ambient air measured around the facility in 2012 was 0.001 micrograms per cubic meter.

The MOE has developed a new standard for uranium in air. This standard will become effective in 2016 but is provided here for comparison to GE Hitachi's monitoring results. As shown on this slide, the monitoring results for the GE Hitachi Toronto facility are about thirty times lower than the MOE's new standard for uranium in air.

The Canadian Council of Ministers of the Environment, or the CCME, provide guidelines for soil quality which include levels for uranium in soil. The guidelines are dependant on land use.

The area shaded in red is the Toronto

facility. This area is bounded on the north by the security gate and Building 9. On the east and west by a security fence. And, this area has a CCME guideline value of 300 micrograms per gram because it is classified as industrial land use.

The area shaded in yellow is the rail line and is bounded on the north by a security fence. This yellow area has a CCME guideline of 33 micrograms per gram because it is classified as commercial use.

All other areas are considered residential or parkland use, and have a CCME guideline of 23 micrograms per gram.

Should any result exceed these guidelines, an investigation would be conducted and the results submitted to the CNSC.

GE Hitachi conducts annual soil monitoring in areas that would provide the best locations for observing releases of uranium from the facility. Values have remained relatively stable and within the Ontario typical ranges for uranium and significantly lower than the CCME soil quality guideline value for residential parkland use.

Samples are taken from forty-nine locations annually around the facility and analyzed for uranium content. The average concentration of uranium

in soil in 2012 was 1.9 micrograms per gram. The maximum concentration of uranium in soil in 2012 was 10.8 micrograms per gram. The higher values observed occur along the rail line located immediately adjacent to the facility.

All values in 2012 were below the CCME soil quality guidelines for uranium at 23 microgram per gram for residential and parkland use.

The high values along the rail line have been investigated and are attributed to a past practice of cleaning and washing in the parking lot and not to emissions to air.

AUDIENCE MEMBERS: Wow! Whoa!

MR. RINKER: In June 2013, the CNSC performed verification monitoring of GE Hitachi's soil monitoring program. This program involved CNSC staff accompanying GE staff during monitoring and randomly selecting samples for confirmatory analysis at the CNSC laboratory in Ottawa.

The result of CNSC's verification are provided in a Table and the values are coloured according to the relevant CCME criteria. Yellow indicates a criteria of 33 micrograms per gram, and no shading or white indicates a criteria of 23 micrograms per gram.

A very good agreement was obtained which verified GE Hitachi's capacity to monitor their surroundings. Only one sample exhibited an important difference. Sample location number 16. This location is on the fence line, along the rail line, in an area of known contamination.

The CNSC staff make the following points in summary of the verification activities of GE Hitachi soil monitoring program.

First, there was close agreement of GE Hitachi results.

Second, the highest uranium values occur on commercial property, the rail line. All other locations, away from the rail line, are at or near background values.

And, finally, uranium emissions from the GE Hitachi facility are not posing a health risk.

The CNSC also accompanied the Ontario Ministry of Environment in a program to sample and analyze soils in the residential parkland area surrounding the Toronto facility.

The purpose of this exercise was to provide local residents with scientifically defensible information about the state of their environment in which they live.

Twenty-four locations around the GE Hitachi facility were selected and 164 samples were analyzed by the MOE and, separately, by the CNSC laboratory in Ottawa.

The CNSC results ranged from 0.3 to 2.9 micrograms per gram uranium. These values are approximately 10 times lower than the CCME guideline for uranium in soil. And all but two samples are within the typical ranges found in Ontario.

The two values above background were both below 3 micrograms per gram, again, well below the CCME criterion of 23 micrograms per gram for residential and parkland use.

After much study by the MOE and the CNSC, we conclude the following:

Uranium concentrations in soil around the GE Hitachi facility in Toronto are well below criterion for the protection of people and the environment.

The public living near the Toronto facility are safe from GE Hitachi activities after 50-plus years of operation. Uranium emissions from the GE Hitachi facility do not pose a health risk.

And fourth, the CNSC has routinely conducted regulatory activities to ensure the

protection of the public and the environment, and we will continue to do so.

That concludes the presentation.

THE PRESIDENT: Okay. Thank you.

Before opening the floor for questions, I will now turn it to GE Hitachi for their presentation as outlined in CMD M51.1, M51.1A.

I understand, Mr. Mason, you will make the presentation? Please proceed.

13-M51-1 / 13-M51.1A

Oral presentation by

GE Hitachi Nuclear Energy Canada Inc.

MR. MASON: Good afternoon, Mr. President, Members of the Commission, ladies and gentlemen.

First of all, I'd like to introduce my colleagues who join me today. On my left-hand side is Paul Desiri, who is our Manager of Environmental Health and Safety programs as well as our Nuclear Regulatory Officer.

And on my right-hand side is Mark Ward, who is the Manager of Manufacturing Operations for our fuel facilities.

If we look at what we have for our presentation, what I'd like to do for the benefit of those who are not familiar is to just give a very brief overview of our company and our facilities, and then jump in to talk about some of the performance metrics that some of which we've just heard. And then, finally, talk about the public information program, which we're very proud of what we've worked on in the last year or so.

So turning the page, if we look at our parent organization, the General Electric Company, General Electric is a global company with approximately \$150 billion of revenue a year in 140 countries. And you can see a wide range of the products that we manufacture.

And, of course, part of that range of products is energy. And we are part of the power and water group, and, of course, we're associated with nuclear energy.

The company was founded in 1886 by Thomas Edison, and also, here in Canada in 1892 in Peterborough, in fact.

And you can imagine with that breadth of products and that long experience that we have developed great expertise in the running of

manufacturing operations, and we are able to draw upon that expertise as we strive for excellence in our facilities.

So if you'd like to turn the page, Paul.

If we look at the history of our nuclear business in Canada, we were, if you like, one of the founding members of the nuclear industry in Canada, and, together with ACL and Ontario Hydro, built the first commercial reactor in Rolphton, Ontario. And it was in our Toronto pellet plant that we actually manufactured the pellets for that reactor.

And then later, in the early sixties, when the Pickering Nuclear Power Plant was being built, we started to manufacture pellets for that facility, and we still do today, as well as for Darlington.

So through the years we focused on the fueling of reactors, both the manufacture of the fuel; the components in the reactor that hold the fuel; the fueling machines and; the control systems associated with that.

And you'll see right at the bottom there, in 2007, a milestone for the business was when GE and Hitachi joined together their nuclear operations in a global alliance. So we benefit from their

expertise as well.

As far as our managerial organization is concerned, the middle line is basically our operation staff. The lower line is the support staff. And that functional expertise has access to all of the functional expertise within the larger GE organization.

The next slide.

The facilities, as the CNSC pointed out, our two nuclear facilities, Class 1B facilities; one in Toronto and one in Peterborough.

In the Toronto facility we take in uranium oxide powder and we convert it into hard ceramic pellets, which are ground into precision dimensions and sent to the Peterborough facility for inserting into the zirconium tubes, which are then formed into the fuel bundles which are transported to our customer, to Pickering and Darlington.

Also associated with that, in our Peterborough facility, we have our services organization and our engineering operation, where we design and build and assemble equipment for fuelling reactors and also for the inspection and maintenance of reactors as well.

A nice aerial shot of downtown Peterborough with the GE industrial campus there. You

can see in the larger ellipse is the service operation where we have our machine shops and assembly shops. And then in the smaller ellipse is the fuel assembly operation in Peterborough.

Next slide, here's some photographs of the Toronto operation. As was mentioned earlier, GE built an industrial campus known as the Davenport work area, back -- it started in 1901, and our plant was built in 1907.

And, gradually, as was mentioned earlier, the residences have surrounded the operation. In fact, most recently, across the Lansdowne Road you can see in the bottom right-hand corner the new condominiums which have been built and people started to live in as of 2012.

Next page.

Jumping into the environmental performance, as was mentioned earlier, it's very difficult to show on a chart. And this is a linear axis chart, so we've actually put in the numerical values in the chart.

On the left-hand side, for Peterborough, air emissions, you can see that our discharge limit is 550 grams per year. In actual fact, because in Peterborough we're dealing only with ceramic

pellets, not powder, one would expect it to be very, very low. And you can see the results there; approximately 10 milligrams for the entire year in terms of emissions.

On the water side, for the same reasons, very, very low emissions. And if I look at the results there for complete years, it's less than one gram, hardly detectible, which is about one millionth of the limit.

Turning the page to Toronto, and here I think it's important to differentiate in that Toronto we handle powder. The powder is then compressed and sintered into pellets.

The powder, for the benefit of the public, is not like talcum powder or that type of thing. It has like a feel of sand, but it's also a very heavy element. And certainly it's not flammable, it's not combustible.

We sinter the uranium oxide to 1,400 degrees centigrade. And so from that perspective it's very safe.

We're very pleased to note that in 2012 we invested in some state-of-the-art filtration equipment to upgrade our filtration -- two main filtration units. And you can start to see the results

in 2013.

For the first three quarters, our emissions, as measured in the stacks, has accumulated to 4.4 grams. We estimate by the end of the year we'll have achieved a 50 percent reduction in our annual air emissions from the Toronto plant.

We think we'll be at about six grams by the end of the year, which represents about .13 percent of the discharge limit. So we're very pleased with that activity.

On the water emissions, again, we have spent a good deal of money over the years gradually implementing state of the art technology for our filtration of the water.

We do use water in our manufacturing processes, and all of that water is gradually filtered down to the basement where we have our filtration operations. And you can see there that typically our discharge to the sewer in any given year is less than one kilogram, which is about six thousandths of one percentage point of the permissible amount.

Turning the page and addressing the health and safety aspect. From a full body dose perspective, you can see that in Peterborough the dosage is fairly stable. We have a very active Joint

Health and Safety Committee and ALARA Committee.

But as you can imagine, after doing the same thing for 50 years, we're reaching a point of diminishing returns in terms of improving that.

We have made some engineering changes and procedural changes in Toronto. And you can see some affects there, but, again, they're well below the limits, as was identified by the CNSC staff.

On the health and safety in Toronto, unfortunately, we had one lost time accident, and that was the first one since October of 2007, when a maintenance employee tripped on one of the skids of maintenance parts that he had. So we take our safety very seriously. Our employees are very enthusiastic and participative, and that's the only way that we can achieve these sorts of results.

The next slide goes to the soil sampling which, I must admit, we were very pleased to do because it does a number of things.

The validity of our results had been questioned, and I think that this has done that. It's verified what we've been doing for many, many years. And also, it has validated the controls that we have on our air emissions because it shows that, even after almost 60 years of operation, that there's no

accumulated effect in the soil of the residential areas around our plant. And we are very pleased with the results, and we will continue to strive for minimizing the emissions from the plant.

The next slide; some of the questions we were asked about was emergency preparedness. And in 2012 we did an emergency response exercise in Peterborough with the local emergency response people. We simulated the crash of a truck in downtown Peterborough.

And then this year in Toronto we did an emergency exercise with the local emergency response teams where an employee was injured, and that employee was contaminated with the natural uranium. And that is a great opportunity for the local emergency response teams to get to know our staff, our facilities and our procedures.

Transportation safety is -- our containers are specifically designed for the transportation of the material. It's highly-regulated both by the CNSC and the Ministry of Transport. And on the slide there you can see some of the issues that we have reported; a wing mirror, a reverse into a gate post, that type of thing.

And we have had no issues as far as

transportation is concerned. We have a specific transportation carrier, and we work closely with that firm for that.

Just for the benefit of people who have asked, we do not use trains for the transportation of our product, either coming in or going out of the property.

Finally, I'd like to talk about the public information improvements. You know, off and on through our 60 years of operation in Toronto we have had liaison with local groups. We have certainly complied with the requirements of CNSC in terms of public information.

But with the introduction of new residents in the area, it became very apparent that we were not doing sufficient to inform people of what we did, how we went about it and that type of thing.

So we've put a lot of effort into upgrading our Web site, an interactive Web site, and that's under constant review for continuous improvement; we've introduced annual newsletters to residents both in Peterborough and Toronto; we've had open houses.

And I must say, probably the most valuable one's been the tours that we've had in our

facilities, both in Peterborough and Toronto.

Some of our public meetings have, perhaps, been a little more interesting. We have a public email and toll free line. And I'm pleased to say that, for the vast majority of the inquiries, we've been able to respond within 24 hours. And that is our goal to do that.

So we will continue to work on this particular thing for improvement as we do in every other facet of our business.

So in conclusion, I think we can say that our safety programs are effective and robust. If they were not, we would not have such a long history of excellence in the operation and compliance operation of our facilities.

As I said earlier, I think that the soil tests that have been done not only verified the measurements that we take ourselves, but also confirm that there's been no long-term impact to the environment around our facility.

As I said in the previous slide, we're committed to continuing communications and also outreach to the community, and we will definitely continue that effort.

The General Electric Company is a

world class company. We are part of that. And it employs the best people, the best practices and the latest technologies to achieve that excellence.

Thank you.

THE PRESIDENT: Thank you.

So instead of opening up the floor for questions, I'd like to move directly in the interventions. After all, we are here to listen to the people who bothered to write to us. And after we finish listening to 88 oral and written submissions, if there is further questions, Commissioners, then we'll have one last round of questioning.

So before I start, I'd like to remind the interveners that we have allocated 10 minutes for you to make the oral presentation because we're going to hear -- we'd like to have as much time as we can for the question period where we can actually engage in some discussion.

We also have representatives from the Ministry of Environment and from the Toronto Public Health that can help us in understanding some of the interventions.

So the first oral presentation is from Ms Sheila Muir -- sorry.

MR. LEBLANC: Mme Adler. Sorry, she

is not here.

THE PRESIDENT: So the first oral presentation is from Ms Judy Adler, as outlined in CMD 13-M51.3.

Ms Adler, the floor is yours.

13-M51.3

Oral presentation by Judy Adler

DR. ADLER: Hi. Thank you very much. Microphone is working.

MR. LEBLANC: I will just apologize. Are you Mrs. Muir?

MS MUIR: Yes.

MR. LEBLANC: Oh, we could not locate you, so we proceeded. You'll be next, if it's okay. If you want to sit down right behind Mme Adler, that'll be fine. Thank you.

DR. ADLER: Hi, Commissioners. I didn't know how to address you, Your Radiance, or...
--- Laughter / Rires

DR. ADLER: My name is Dr. Judy Adler. Like many others around the world, I've become concerned about nuclear energy since Fukushima, but -- and by the way, that is a GE operation as well.

I was concerned about the proximity of Darlington to Toronto and to my house, and then discovered that, in fact, I live right next door to a nuclear facility. I live and practise less than one kilometre from the GE Hitachi plant in the lovely neighbourhood called Regal Heights.

I lived in this neighbourhood for over 20 years, and practise out of my house.

Not me, not my neighbours, not my friends, not my patients, not the school around the corner from the plant, not the junior high where my son attended, not the high school around the corner within one kilometre, not the businesses on St. Clair ever knew about the existence of this plant.

And I can tell you with 100 percent certainty, had I known that this plant existed there I would not have bought my house there.

And I understand that, you know, we are ALARA. You're within reasonable blah, blah, blah, blah, but there is still no guarantee of zero -- there is no --

--- Applause / Applaudissements

DR. ADLER: Thank you. As a resident, and the picture that GE Hitachi showed, it didn't show the aerial -- that it is a very

highly-dense residential neighbourhood. And like I said, zero probability of any kind of accident is, I think, what the population would accept.

I understand that this facility has been working for 50 years -- more than 50 years, and that it has been recently re-licensed for another 10 years by yourselves.

Fifty years ago it was industrial. Like I said, right now it's highly residential, and I was not informed that it was going to be licensed -- re-licensed, although they put an ad in the newspaper, I do not read that particular newspaper.

In fact, from the two community meetings we had about this issue, people living across the street still don't know. And I take the facility to task on saying that they informed the public. They're still not informing the public. Still I'm talking to friends, people who go to the school, completely uninformed. So I question that very strongly.

You know, like all things, when you start to look into them you end up knowing way too much than you want to know. And I have discovered that 2,000 kilos of uranium are being transported through my neighbourhood in trucks. That's to and fro. So you

have to double the trip, so it's almost like 4,000 kilos of uranium that are being transported within my neighbourhood and within the residential streets in Toronto.

This plant is also beside the CP Rail line, which, I don't know if you gentlemen and ladies have heard, yesterday there was a report from CP and the incidence of derailments is actually much higher than reported, to the tune of 2,000 I think in the past seven years. So this also, in my mind, poses a threat to the facility, which lies right next to the rail line, and knowing from Lac Mégantic what happened I think this possibility cannot be -- should be entertained.

I was further shocked to discover that this plant is allowed -- now, we saw the tables -- is allowed to dump a maximum of 9,000 kilos of uranium into the sewage. Now, they're well within -- well lower than those levels. However, what concerns me is that this is an allowable maximum. That is, 9,000 kilos is within the allowable limit.

--- Applause / Applaudissements

DR. ADLER: So what happens if they have a spill and they dump 5 tonnes of kilos into the sewage? It's still within allowable. And I think one

of you brought up that you should change the allowable limits because they are incomprehensible to me. My dentist can't wash his amalgam into the sewage but uranium is okay.

The facts have got me seriously concerned about the role of the Canadian Nuclear Safety Commission. I incorrectly assumed that the CNSC is here for the safety of the population. I have come to doubt that assumption and conclude -- perhaps incorrectly, but this is a conclusion that is logical from what I have looked at -- that the CNSC is more concerned with the safety of the nuclear industry and the safety of the jobs rather than the safety of us people.

--- Applause / Applaudissements

DR. ADLER: I cannot understand why this nuclear facility is right in the middle of the most densely populated city in Canada. We have a large country. You're taking this stuff to Port Hope, then to Toronto, then to Peterborough, then to Darlington. Why don't you just put it all in Darlington? Why don't you just coalesce the thing and remove the possibility of any kind of accidents happening? It's not a question of if an accident will happen, it's a question of when.

Trucks -- I'm driving all the time on the 401, the same probably routes that these trucks are taking. They are completely unmarked and I ask you why if it's so safe?

--- Applause / Applaudissements

DR. ADLER: If this is so safe, why all the security, why all the standards, why all the secrecy?

In conclusion, I would like to say that the existence of this facility in the middle of the city is completely incomprehensible. It makes no sense. GE Hitachi should be shut down and the processing of uranium should be coalesced into Darlington or even further away in my preference.

AUDIENCE MEMBER: Or not at all.

DR. ADLER: Or not at all, but this is another meeting.

I understand through hearing Dr. Edwards speak that there is a stockpile of two years of fuel. So this is really quite doable.

I ask the Commission to either reopen the licensing issue, because obviously we were not informed, and I kid you not, no one knows and I live in a very, very well-informed area. We have a very strong residents association. We have a website. We know

what's going on. We did not know about its existence. And the whole thing about informing the public, that's only the last year because they are concerned, because they have done nothing up to now.

The continuation of this plant with its inherent risks makes absolutely no sense, and again, I ask you to reopen the licensing or, even better, shut this thing down. Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

Questions? Anybody want to ask questions?

Can I just -- I don't know if you had a chance to read the report from the Ministry of Environment and CNSC staff, et cetera. So the fact that they claim that everything is safe -- and the Toronto Board of Health -- that doesn't give you any comfort?

AUDIENCE MEMBER: No. (Off mic).

DR. ADLER: Well, I'm sure that Lac Mégantic, everything was within regulations as with -- all accidents are unpredictable. They're accidents because we can't predict them.

THE PRESIDENT: Okay.

DR. ADLER: And unless you can

provide us with zero risk, don't do it in the middle of the city.

--- Applause / Applaudissements

THE PRESIDENT: Thank you. Thank you very much.

MEMBER VELSHI: Dr. Binder?

THE PRESIDENT: Ms Velshi.

MEMBER VELSHI: Excuse me, before you leave, I just had a quick question for you. Thank you.

One of the concerns you raised was the public still not knowing about the facility, and both CNSC staff and GE have talked about what they have done over the last year. What more would you recommend that they do?

DR. ADLER: Well, I recommend that they start by a safety zone, nuclear signs on the plant, remove the propane tank that's sitting right beside the plant, and send flyers to within a one-kilometre radius so everyone is informed, because, believe me, people who live across the street still don't know and I don't have the time to go knocking on people's doors. I have a job and a life and it's not my job to inform the public, it's their job. Besides which it shouldn't be there. It's in the middle of the city. It's incomprehensible.

MEMBER VELSHI: Thank you.

THE PRESIDENT: Okay. Thank you.

I would like to move on to the next -- you had a question? Okay.

MEMBER HARVEY: Just one question.

I just want to ask GE: When did you start to inform the public, to do something for the public and what is your appreciation of the knowledge of the public about your activities around the facility?

MR. DESIRI: For the record, Paul Desiri.

First of all, I would like to thank the CNSC for coming to Toronto to give the opportunity for community members to attend and hear about our performance record.

And just to address some of the comments made earlier, you know, we're a safe and secure facility. We wouldn't be there if we weren't safe.

AUDIENCE MEMBER: ...if you don't tell the neighbours? (Off mic).

MR. DESIRI: But getting to the public information program --

AUDIENCE MEMBER: Are you going to

answer my question? (Off mic).

MR. DESIRI: -- back in 2010 for relicensing we met all of our requirements of our current procedure in terms of advertising the licensing hearing and advertising our activities and we had a website and we did other things that were listed in our procedure.

During the last couple of years, especially in the last year, the neighbourhood has changed a lot and the level of interest has obviously gone up, and as a result you can see all the improvements we've done to our public information program.

We are committed to continuously improving it and we're actually happy to hear the question that you asked the intervenor in terms of how could we better reach the public.

I do want to highlight one of the initiatives which I think has been very important and that is the Community Liaison Committee which was started in the past year. At the last meeting we had a fantastic discussion with the members about how to do exactly that, how do we reach the public, because we have to recognize there are some challenges. There are some challenges to doing this and we want to do it.

So, you know, there are other things that we're looking at as well. We did send out a flyer, just for the record. We did send out a flyer several times this year. So if it's not reaching people, you know, we're open to discussing what other activities we can do, but we are confident we've done, you know, significant improvements to our programs.

THE PRESIDENT: Okay. I'd like to move on to the next oral presentation, which is from Ms Sheila Muir, as outlined in CMD 13-M51.2.

Please proceed.

13-M51.2

Oral presentation by Sheila Muir

MS MUIR: Hello. My name is -- (off mic)

MR. LEBLANC: You have a mic. Please push on the button right in front of you.

MS MUIR: Hello. My name is Sheila Muir and I'm a resident of Toronto and I live within two kilometres of the GE facility. I'm a mother of three young children and I work for a transportation engineering firm.

I don't often find myself at protests

as I'm a very busy person but I sense it is important for me to speak here in front of you now with the hope that you and I both will understand more about safety issues facing this facility and why it is time for perhaps these operations to be located elsewhere.

I have some questions to present to you regarding the safe transport of uranium to and from the site, which I will address in a moment.

I originally began campaigning two years ago out of a general concern of not having been informed that there is a uranium processing facility so close to where I live and questioning why community participation meetings hosted by the CNSC were in Ottawa instead of within walking distance of my community.

The fact that all levels of government representatives in the area, including Andrew Cash and Jonah Schein, came to speak at public meetings regarding this facility over the past year may give some indication that we are not satisfied with the level of transparency about your presence in a mixed use Toronto neighbourhood, and if you read between the lines, most of us don't want the facility there anymore.

--- Applause / Applaudissements

MS MUIR: I'm hoping my presence here is not a waste of time because I ask myself what is the point of expressing my opinion to the CNSC when they disagree with my concerns and have already granted a 10-year licence extension to a facility that is going to remain.

My assumption also is that the CNSC is in fact pro-nuclear and will attempt to facilitate smooth operations of any facility that ultimately generates nuclear energy.

On November 15th, 2013, a journalist by the name of John Spears wrote an article titled "Trucks with radioactive cargo fail Inspections" and I would like to read that short article now.

"Since 2010, more than one truck in seven carrying radioactive material has been pulled off the road by Ontario ministry of transportation inspectors for failing safety or other requirements.

The information is contained in a notice quietly filed with a panel studying a proposal to store low- and intermediate-level nuclear waste in deep underground near Kincardine.

The information filed doesn't specify what sort of radioactive cargos the trucks were carrying. In theory, it could have been anything from

uranium fuel for nuclear reactors, to radioactive isotopes for medical use. ...

What the information does show is that since 2010, inspectors have examined 102 trucks carrying 'Class 7 Dangerous Goods (Radioactive material.)' Of those, 16 were placed 'out-of-service,' which means the vehicle 'must be repaired or the violation corrected before it is allowed to proceed.'

Among the violations: Faulty brake lights; unspecified 'load security' problems; flat tires; false log; damaged air lines; and driver with no dangerous goods training. ...

Some opponents of the site have closely questioned planners about transporting material to the site, which will contain waste from the Pickering and Darlington nuclear stations as well as the Bruce plant.

That material is already being trucked to the Bruce site, and stored in warehouses or shallow underground vaults.

Brennain Lloyd of Northwatch said in an interview that the number of trucks pulled over until defects are remedies (sic) is 'shocking.' 'It only heightens the need for a real substantive discussion on transportation and what are the

transportation safeguards,' she said.

The lack of detail in the statistics adds to the need for further information..."

So my questions are:

- Do any of these failed inspections discussed in the article pertain to trucks shipping uranium to and from Toronto or the Toronto site?

- And do these failed inspections pertain to any of your transportation vehicles in general?

I have been informed that the exact route of the trucks that are travelling through the Toronto streets is confidential, and if that is true I am curious to know why that is.

I wish to understand any transportation safety and security policies put in place for the transportation of the many tonnes of uranium that travel through the streets of Toronto. The reality is that Dupont and Lansdowne is now in such close proximity to be declared as downtown Toronto because of the size of the city.

Do any trucks transporting dangerous materials to and from GE facility have any issues described in this article: faulty brake lights, unspecified load security problems, flat tires, false

log, damaged air lines and driver with no dangerous goods training?

I'm not certain it is wise to allow a factory to process these resources in one of the most diverse and growing cities on the planet. In my opinion, this uranium factory has outlived its usefulness and practicality to be placed in such an environment.

And so, another question I'm asking is: It is practical to ship dangerous goods in and out of the largest city in Canada if another option is available?

If the primary argument for keeping the factory is that it was there first, it is costly to relocate and boasts the employment of 100 jobs, it doesn't compete with the safety, security and perhaps perception of danger of so many Canadians. After all, accidents do happen as indicated through numerous nuclear accidents that have occurred over the past 50 years.

Dupont and Lansdowne and the surrounding area have outlived their mixed use status ages ago, with residential homes planting roots now for many decades, and I find it alarming that the CNSC has allowed the GE plant to operate for so long.

What was your reasoning for granting this 10 year extension?

In conclusion, I want to remind everyone here how utterly futile and pointless it seems to me to attend this meeting where discussions have already been made without the opportunity for my community involvement.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

Dr. McDill.

MEMBER McDILL: Thank you.

I think the question I'd like to ask to staff and then to GE Hitachi is with respect to transportation. Transportation regulations are required for shipments in and out of the facility.

I don't know if you wrote down some of the intervenors' other questions but try to cover it sufficiently well that most of the questions are answered. Some of the questions probably can't be answered. Whether there was faulty brake lights, that's a toughie. You probably don't have with you, but maybe GE does.

So the article reports that a transport -- I guess it was the provincial transport regulators found flaws, but the shipments of nuclear

are covered by Transport Canada. So perhaps you can start at that point.

MR. ELDER: Peter Elder, for the record.

I'll add some context to the question in terms of the question was from the DGR hearings which went on for 25 days. The question was to the Ministry of Transport for Ontario. They do have the power to inspect any truck carrying dangerous goods and that includes the ones that are classified as Class 7, which are nuclear material.

So the question was to them what were the violations and nature of violations they had found around the Class 7 material. So it was very specific to trucks carrying nuclear material.

With that, I'll ask Sylvain Faille to give you an answer on their regulatory oversight of transportation.

MR. FAILLE: Sylvain Faille for the record.

Just in terms of the regulations, as Mr. Elder just mentioned, there's the CNSC Regulations, which are the *Packaging and Transport of Nuclear Substances Regulations*, that do apply to those shipments. And in addition, there's the *Transportation*

of Dangerous Goods Regulations from Transport Canada. In addition to that, every province has their own *Transportation of Dangerous Goods Regulations* that makes reference to the *Transportation of Dangerous Goods Regulations* from Transport Canada.

So that's where you have all the relations. They have provincial regulations which are identical to Transport Canada and that gives them the power to inspect road vehicles.

That being said, in terms of the other questions, the type of material that is being transported from GE Hitachi is categorized under the Regulations as low specific activity material, which is a very low risk material in terms of activity and those rates coming from the material itself.

And based on that, there's some requirements for the shipments which dictate the package type, which are packages that don't require certification by the CNSC due to the risk involved in the material itself, and for shipment they require labels on each package as well as a placard on the vehicle when they're shipping it as low specific activity material.

And on top of that, there's also a requirement under Transport Canada Regulations to have

an emergency response assistance plan developed for those shipments and GE Hitachi has a plan that's been approved by Transport Canada to deal with those shipments if there was an accident en route.

MEMBER McDILL: So, there has to be something on the vehicle?

MR. FAILLE: That's correct. When they're shipping as low specific activity material, there's a requirement to have placards on the vehicle.

MEMBER McDILL: And your sense was that there is nothing on the vehicle? I'm trying to bring (indiscernible) on vehicles and then we'll ask GE.

MS MUIR: I just read the article and I don't have a response.

MEMBER McDILL: So I'll ask GE to respond then please.

MR. MASON: For the record, Peter Mason.

From a high level perspective, for our transportation we have an approved vendor. That vendor has to go through EHS vetting, quality vetting, legal and financial vetting.

MEMBER McDILL: So for the sake of the community -- when people use acronyms, the

community may or may not understand. So EHS is...?

MR. MASON: Thank you. Sorry for that.

Yes. We have a process for vetting our vendors, first of all, from an environmental, health and safety perspective, from a regulatory perspective as well as from a quality and financial perspective.

We have used this particular vendor for pulling our trailers for many, many years.

And as far as the trailers themselves are concerned, we do a monthly inspection of the trailer and a more detailed quarterly inspection of the trailer, and when it's deemed necessary we replace the entire trailer, and that trailer is designed and built to regulatory standards.

I'll now defer to Paul Desiri who can give more detail.

MR. DESIRI: For the record, Paul Desiri.

So, just to answer the question about placarding, all of the vehicles are placarded in accordance with the Regulations and all packages are signed in accordance with the Regulations. This is confirmed by our staff at the site for all shipments.

And we're also subject to inspections from Transport Canada and we have a record of zero non-compliance with the exception of some minor documentation issues several years ago.

I just want to talk a bit about overall transportation safety. I've been with the company 14 years and we've been accident free. Peter Mason did a slide showing the three minor issues you've had in recent years and if you look at that it's a pretty good record.

Besides that, the packages themselves and the container they're shipped in are designed to withstand vehicle accidents. In the very unlikely event that you had an accident in which all of your measures failed -- again, this being very unlikely -- we have, as CNSC mentioned, an emergency response plan specifically for transportation. We have specific equipment and we have trained emergency responder teams and we also do regular exercises to make sure that our emergency response capability is adequate.

THE PRESIDENT: Dr. McDill...?

MEMBER McDILL: So, the intervener made a specific request to know if any of the incidents reported in that article related to GE Hitachi.

MR. DESIRI: For the record, Paul

Desiri. The answer is no.

MEMBER McDILL: Did we get all -- I wrote down six, I managed to write down six questions. So, it's not confidential. You said, why is it confidential; the shipping is placarded, so...

MS MUIR: It is not confidential, the location, like which streets are used and time of day.

MEMBER McDILL: That was the specific question. Okay, so let's go back to the company then.

MR. MASON: For the record, Peter Mason. That information is considered confidential for security reasons.

MS ADLER: Why?

MS DEH KWE: If it's so safe, why the security?

MR. MASON: Because, you know, to avoid the likelihood of theft of the product.

MS ADLER: Oh.

MEMBER McDILL: But it is identifiable; anybody can see it as it drives down the street?

MR. MASON: For the record, Peter Mason. That's correct.

MS DEH KWE: I didn't know that.

MS ADLER: It's natural.

--- Off microphone

THE PRESIDENT: Can you stop heckling in the back, please.

Okay, Dr. McDill...?

MS DEH KWE: You didn't answer my question.

THE PRESIDENT: Dr. McEwan...?

MEMBER MCEWAN: I wonder if I could go back to the staff description of the packaging requirements. You made a statement that this is a low risk product and I'm not sure that there isn't a disconnect in the public mind between the presence of uranium and a low risk product.

Could you define what you mean by a low risk product, in lay terms, so that the public can understand that, please?

MR. FAILLE: Sylvain Faille, for the record. The information that we're providing was the -- when you look at the material, the way that the material is characterized under the regulations it's based on the activity and the activity concentration, so the amount of radioactivity in the material.

And when we were talking about natural uranium, it has not been in a thermal reactor, the actual activity or the dose rate emitted from the

material also is very low and, therefore, the reason for the low risk, you can have large volume and you won't have a significant amount of material in terms of activity because it's mixed and it's very low in terms of the amount -- based on the waste.

THE PRESIDENT: Let me ask it in a different layman language, okay. Compared to chemicals, gas, all the other stuff that goes on our roads daily, thousands of them; is that in the same, lower, higher, what? What's the risk? Or is it just because it's uranium?

MR. FAILLE: Sylvain Faille, for the record. When you look at the other material, it's a little bit harder to compare to other types of material because the risks are different in terms of the consequences.

In this case the only consequence is the radioactive nature, which is the radiation, which is low and the dose rate -- they don't need any shielding in the package to meet the transport regulation or the requirements for doses on the outside of the package which is extremely different from sealed sources.

If we refer to what we heard earlier for Cobalt 60, for example, you need a very dense

material and shielding to protect the material to radiate the person outside and the package needs to be very robust and a lot of shielding.

On the other hand, for low specific material or this type of material, which is the uranium, you don't need any shielding because the dose is very low in its -- and that's where in terms of the exposure to the person, the risk is very minimal from the material itself.

THE PRESIDENT: But there's all kinds of hazardous material, we're looking at hazardous material. You're looking at strictly from a radiation perspective. What about the other hazardous material that travel all over the country all the time.

MR. JAMMAL: Ramzi Jammal, for the record. Are you asking the question about risk? There are two risks. Mr. Faille spoke about radiological risk where, in fact, it's non-existent, you can actually stand next to a barrel, next to the container, next to the truck without any exposure or any significant exposure.

You're asking, Mr. President, the question with respect to risk -- relative risk against, for example, if you take a tanker truck versus a uranium truck, the risk of the accident from a tanker

truck far exceeds any risk from a uranium truck.

So this is -- if you're asking for that relevancy, yes, it's very well known that the transport of the natural uranium is far lower from risk perspective, from fire hazard, ignitions and so on and so forth in relation to other, let it be toxic material or flammable material.

THE PRESIDENT: Thank you.

Dr. McEwan...?

MEMBER MCEWAN: Thank you.

MS DEH KWE: What about airborne (off mic)

MS ADLER: And it's not safe.

THE PRESIDENT: Mr. Tolgyesi...? Go ahead.

MS ADLER: (off mic)

MEMBER TOLGYESI: This is a correction for staff. Is CNSC advised when there is a regulatory or mechanical non-compliance by a transport provider? An intervener was saying that -- citing report where police stop so many vehicles with so many mechanical failures. Are you advised and what's the reaction or consequence?

MR. FAILLE: Sylvain Faille, for the record. We're not informed of the mechanical failure

of vehicles, like the one that were reported in the -- from the Ministry of Transport of Ontario because that's not part of our mandate in terms of the -- we're looking at the safety of the design of the package and the other requirements related to the shipment, but the vehicle themself and the mechanical order of the vehicle is not something that we're aware of.

But what we have done since the release of that information, we've tried to gather some information from other provinces and see if we can get more information in the future on what they're finding in terms of non-compliances that could also help us, because from the report there was some where it could be mechanical failures, but there might also be other areas that might be related to our umbrella.

So we're trying to find out if there's a way to get more information on that.

MEMBER TOLGYESI: My question will be then: what happens when -- is there recurrence in non-inspecting vehicles, because it's CNSC who gives out the transportation permit for this uranium goods, material. So, what's the consequence if a transporter on a recurrent basis has a problem; I mean, no inspection of car or failures or brake problems?

MR. FAILLE: Sylvain Faille, for the

record. In general, carriers are not licensed by the CNSC. There's only a few shipments or types of shipments that do require a licence from the Commission and, in this case, those shipments don't require a licence from the Commission.

And it's based on the risk, where only certain types of shipments, like I mentioned, require licensing requirements and those are for -- mostly for those that are including enriched uranium and plutonium shipments. So, those are for (indiscernible) material that we refer to and those that are in transit with large quantity.

MR. JAMMAL: Ramzi Jammal, for the record. This is not unique to Canada with respect to the licensing of transport or the carriers; this is the international regulations or requirements.

As Mr. Faille said, it's all based on risk. So high risk material from the fissile or enriched uranium or spent fuel requires a licence for transport and much more stringent security requirements.

On the low risk, as for Type A packaging that's been flown around the world or moved across Canada, or low specific material, the licensee is responsible to make sure that the packaging is

adequate at the point of origin, during the transport that they have a qualified transporter for dangerous goods. These are inspected by Transport Canada and by the province, so there's a regulatory oversight.

And then the destination itself, still is the responsibility of the licensee from Point A to Point B, from its origin to its destination. The licensee maintains control at all level, from the packaging, to the qualification of the transporter, to the packaging itself, leak testing after packaging, the dosimetry estimation for the driver, the dosimetry estimation for the cargo itself and the whole aspect with respect from Point A to Point B to maintain regulatory control and control of the shipment from its origin to its destination.

MEMBER TOLGYESI: Now, my last question, Mr. President, is to Hitachi, but Mr. Jammal just said that it belongs to the licensee to make sure that the transporter or transport provider respond to all requirements.

Do you have any policies which are telling how you communicate with transporters, how you make sure that they comply and, if they do not, are you aware and what's your reaction?

MR. DESIRI: For the record, Paul

Desiri. So the short answer to your question is yes, we do have a dedicated procedure for transportation that we follow for all shipments and each shipper has to be trained and certified according to *Transportation of Dangerous Goods Regulations*.

We go through a rigorous checklist with all the items for compliance and all other measures to ensure a safe shipment.

THE PRESIDENT: But would they report to you accidents, stoppage by Ontario Police, whatever; are they required to do this?

MR. DESIRI: For the record, Paul Desiri. Are you talking about shipments in transit?

THE PRESIDENT: Yes.

MR. DESIRI: Yes. So, for shipments in transit we have regular communication with the carrier. We have a security system to track in real time where the shipments are, so we need to know where the shipments are at any given time and we have communication protocols with the carrier, and we also have protocols for arrival times in case there's any problems.

So, that permits -- if, for some reason, they're not arriving on time within the specified margins, we can initiate our emergency

response plan which, by the way, hasn't happened.

So, getting back to your question, if there's a problem en route, the drivers are trained that they have a responsibility and requirement under the purchase order to notify us of any incidents because, as you can see, the threshold for reporting in transportation regulations of any incidents or accidents is quite low.

THE PRESIDENT: Okay, thank you.

I'd like you to have the last word here.

MS MUIR: I just wanted to ask one more question. So you guys do perceive this as a safe facility and I know that your job is to ensure the safety and this is what you do, but from a practical perspective, does that ever play into the response of whether or not this gets approved?

I mean, from a practical standpoint perhaps it no longer serves Toronto any longer to just simply have that kind of facility in a residential area.

Or are you guys even allowed, like because you're primarily safety, do you have that power to say, well, from a practical perspective: I mean, yes, I do perceive it to be safe, but from a practical

perspective, perhaps it's time that it gets relocated because that's...

THE PRESIDENT: Thank you for your input. We are here to listen and then we deliberate about what we hear and then we reach our own conclusions. So thank you for your input.

I think it's a good time for us to break for lunch and we'll reconvene at two o'clock.

Thank you.

--- Upon recessing at 1:02 p.m. /

Suspension à 13 h 02

--- Upon resuming at 2:00 p.m.

Reprise à 14 h 00

MR. LEBLANC: Thank you. We are going to resume.

Just for the record, the next submission was to be an oral presentation from Mr. James Ker, as outlined in CMD 13-M51.10. Mr. Ker has asked that his submission be treated as a written, so we will deal with that particular written submission with all other submissions later this evening.

So, Mr. President, we can proceed with the oral presentations.

THE PRESIDENT: Thank you.

So the next submission is an oral presentation from Dawn Withers as outlined in CMD 13-M51.16

Ms Withers, the floor is yours.

13-M51.16

Oral presentation by Dawn Withers

MS WITHERS: Hello. My name is Dawn Withers, I am a mother of four and I live in the Junction area of Toronto, about 5 minutes or so away from the facility at Lansdowne.

Really, I wish I didn't have to be here. Just, time-wise, I really would have liked to have had more time to spend preparing something, but I felt it was very important for me to be here and get my point across and my feelings about the facility being here at this time.

I moved to the area in the early '80s, my sister had lived in the area in the '70s, and when we came I was 13. My mother, you know, 30 years ago, didn't know about factories there. I certainly didn't, I didn't know what was in the area. You couldn't Google and find out what they were doing.

Surprisingly enough, so many years later, really, the information wasn't there either, and it wasn't until really, by accident, that we find out what was going on there and it was of concern, and I think the lack of disclosure was of concern to us.

I think one of the big concerns for me is that, you know, we feel, as a community, and the public in Toronto and Canada that we have some expectation of safety and that we don't need to really dig to find out what's going on and that we can assume that, where we live, care is being taken. So it just seems to me that the fact that, really, up until it came out in the open that we didn't know, it raises more red flags.

So, again, I understand, back when the facility was built, it was an industrial area and now it is really a mixed-use and probably becoming more of a residential area. At the time when it was built, you know, people could smoke in restaurants, you didn't need seatbelts. You know, as time goes on we learn to be a little bit more concerned about what's going on in our environment and the risks that we are taking and that our families are taking.

I get that GE will tell us and maybe some of, you know, the information that you have will

tell us that it's safe, that we can expect that everything is okay, but then the thing is, surely Pickering and Darlington are safe, Chernobyl, Fukushima are safe and you wouldn't build something that isn't safe. You wouldn't put any of these facilities near people that it could cause harm. And I understand it's different, this isn't a reactor, I get that, but my thing is that, you know, we are having this material transported through city streets, by parks, by schools.

Accidents happen. You know, there is a railway line right beside the facility, there is an apartment building on the other side. We have seen accidents quite recently with rail that I'm sure no one anticipated. You can never anticipate every instance of an accident. And the thing is that, until something happens, things are safe. They are safe, but you never know. You never know.

At the renewal hearing, when the license was handed over for -- extended for 10 years, it was on record that Peter Mason had said -- he was asked and pressed were the residents informed, and after being pressed, he said that they were and the public knew, and the people didn't seem concerned and that's why they didn't really I guess show up in Ottawa.

Well, clearly that's not the case, since it has come out in the public. It's clear in the case that the public didn't know and that they are concerned, so why was that not -- why was that not done? How difficult was it to mail out those flyers? Was it just an inconvenience, was it not important enough, was it just not a serious term of license to the company?

Also, then, the task of checking those conditions were being met. Why was it not easy to send -- was it not something that should have -- a letter sent out to the area, you know, are you informed? Is this term of license being followed? Because it would have been so easy to know. So then I worry about things that are a little less transparent. So you can find out if a neighbour knows about the facility, but how do we know that a driver didn't have a rough weekend that's bringing stuff into the facility? How do we know someone's not fighting a flu and decide to go to work anyway? How do we know that some guy is not racing up Dufferin Street and cuts off a truck going into the facility?

It's really disturbing that it's in an area that is so built up, that if something was to happen, that it could potentially be dangerous or

devastating. And I don't think there is anyone here -- maybe someone can stand up and say 100 percent that there is no risk at all to the people living across the street from this facility.

So I guess with us being informed and knowing that there could be risks, do we say nay at this time that it's a suitable place for it to be. To tell you the truth, I don't think it should be anywhere. I'm concerned about nuclear energy just from start to finish, but I certainly think that this facility, where it is right now, is a bad choice. I think things have changed and -- you know, I'm 45 years old, I have never had a serious accident, but I can never say that I won't have one.

Everything is safe until it's not safe. Everything is fine and is no risk, is limited risk, will not harm us, until something happens. Every single accident that has happened, whether nuclear or nonnuclear, if it could have been foreseen it would have been avoided, so therefore accidents can and may happen, and I don't think that there is enough of a reason to keep the facility there. Is it a money issue? I don't know, but I think at this point that, since they have already been shown that they haven't been quite forthcoming with some of the terms of their

licence, how do we know that all the other terms are being kept?

How do we know how strictly they are meeting all the regulations? How well are these things being -- these other tests being kept up. You know, we finally got some soil testing; why was that not done years ago?

So again, I just feel at this point that the facility has probably outlived its welcome in the community, and it really should be shut down. That's all I have to say.

THE PRESIDENT: Thank you.

Questions? Ms Velshi.

MEMBER VELSHI: Do we have folks from Toronto Public Health here?

I have a question for you. I know Toronto Public Health has a ChemTRAC program where information on materials of concern, whether they are chemicals are not, are assessed and you can go on the website and putting your address and it will show you what kind of hazardous substances are around your neighbourhood. So I have two parts to this question.

Is uranium considered to be a substance of concern and, if not, why not?

And is the GE-Hitachi facility one of

the areas of business of concern identified on your Web site? So that one of the concerns we have heard from a number of interveners is, well, how do we find out whether this was a good neighbourhood to move into and what are the hazards around it.

So if you can please comment on that.

MS LACHAPELLE: Sure. It's Barbara Lachapelle, Toronto Public Health, for the record.

We do have a ChemTRAC program right now in Toronto where we track what we call priority substances that are in Toronto's air, and what it means is that facilities that use these substances report to us fair use and what their projected emissions are.

Because there are hundreds and hundreds of different chemicals in ambient air anywhere, we had to prioritize as to which substances we can track through this bylaw. We call them priority substances, and the way we have decided which ones we can track is based on their toxicity, so how harmful are they to our health, and it's also based on their prevalence, how prevalent are they in Toronto's air.

So we are looking for substances that we know that we detect in ambient air in any one neighbourhood in the city, and we know that we detect the substances sometimes at concentrations that would

be of concern.

Uranium is not one of the substances that is currently being tracked under ChemTRAC and that's because the levels that we have seen in air are not over what would be considered a concern, and because there are other substances that we are seeing at concentrations where we have to allocate our resources to.

MEMBER VELSHI: So has Toronto Public Health made any communication efforts with folks in this neighbourhood to try to address their concerns around the GE-Hitachi facility?

MS LACHAPELLE: I believe that we have. We have been aware of this facility for a number of years. Toronto Public Health receives annual reports, environmental monitoring reports, from GE-Hitachi, and we review those reports as we receive them.

Over the years, having reviewed those reports, we did not see anything that, for us, it would indicate that there is a risk in a community based on the data that was presented and provided to us.

Since the public awareness of this issue, if you will, about a year ago, we have been very active in trying to obtain more data, looking at what

the concerns in a facility -- sorry, in the community are, and trying to do more of a health assessment as to whether there are any risks that we are concerned with. And so far, based on what we have seen, we don't have concerns at this current time, based on the information that we have reviewed and received.

THE PRESIDENT: This is very useful. So let me understand how the zoning changes over the years. We heard it was industrial, then became more residential, so whenever you do that, do you take a look to see what else is in there and whether you need to do something about an industrial facility near residential, or what looks like to become residential?

How do you calculate what to do?

MS LACHAPELLE: I'm not sure how much information I can provide on that, I'm not a planning expert. I do understand that, right now, that facility is still zoned when it used to be, that site, so the site itself did not undergo changes in zoning. That is my understanding.

However, if there are other facilities that move into the neighbourhood that become established, I believe that there are provincial guidelines on separation distances between sensitive land uses, which would most definitely be residential,

and less sensitive land uses, so that would be through planning tools and also through provincial guidelines on that.

MR. AYRE: For the record, it's Reg Ayre, Manager in Public Health.

This is a problem we very frequently have to deal with as the land-use changes, as we go into more sensitive land use. Industry has moved out, residential facilities encroach on industrial, and often they abut and you have incompatible land use. Unfortunately, public health legislation in Ontario doesn't permit us to deal very, very effectively with those issues, and then we have to respond on a reactive basis when these things come up, but it is a very, very common issue.

We have issues in Toronto where we have concrete batching plants right next to residential facilities, we have propane plants in inappropriate locations. It's something that developing cities wrestle with all the time.

THE PRESIDENT: So if we have an intervener here who asks the question, "Somebody tell me whether where I live is safe", what would you say? You are the Public Health Authority.

MR. AYRE: I would say to you that,

living in big cities, you assume a certain level of risk. Is that acceptable? You know, we have gas stations on the corners of residential facilities, you have gas tankers going in and filling up these gas stations, that's a level of risk you accept living in a city. You have apartment buildings right next to highways, the air quality, that is a level of risk you accept, but it's over and above that acceptable level that we try and deal with.

THE PRESIDENT: Thank you.

Dr. McDill...?

MEMBER McDILL: What are the elements of most concern? You said you are not monitoring uranium per se, but what are you monitoring? What are the, say, top five?

MS LACHAPELLE: So I don't have the comprehensive list right here. We are looking at air toxics and we are also looking at criteria pollutants, so things such as particulate matter, we are looking at NOX, we are looking at toxics such as trichloroethylene is on the list. I don't have the list, there's about close to 30 substances right now that are being tracked through our program.

THE PRESIDENT: Does staff by any chance know this or know some of them?

MS SLAVIK: It's 25. I work with the Toronto Environmental Alliance and they help Toronto Public Health actually implement this, so right now it's a voluntary basis, it's not implemented as a bylaw just yet. It's kind of in the beginning phase as businesses learn how to do it properly, and it's 25 tox substances that are of concern in Toronto.

So this includes things like mercury, cadmium, volatile organic compounds and some of the ones that she listed as well.

THE PRESIDENT: Thank you.

Just for the record, this was Ms Slavik, I think.

MS SLAVIK: Yes.

THE PRESIDENT: Thank you.

Anybody else?

Okay. I don't know if you got any comfort from what you heard here, but you have the last word.

MS WITHERS: I guess my answer to that is really, if it's not being measured, it's not a substance of concern right now, it is not necessarily being registered. Right now, maybe that's true, but if an accident happens, surely uranium at that facility or a truck coming, you know, down Dufferin Street or

Lansdowne, or wherever it comes from the highway, you know, is a concern.

I understand there are gas stations, there is a lot of things that, you know, are awry in Toronto, but this facility, I don't know how necessary it is for the residents to have it in their community. So again, the uranium may not be on the list right now because it's not something being sprayed through our air, but if something happens at that facility, I really don't have any comfort with knowing that it's not being tracked at the moment.

Thank you.

THE PRESIDENT: Okay. Thank you.

MS WITHERS: Thank you.

THE PRESIDENT: Thank you for your intervention.

MR. MASON: Dr. Binder, it's Peter Mason from GE. May I ask the intervener a question? I think it --

THE PRESIDENT: Go ahead.

MR. MASON: We've heard a number -- and they talk about "perceived dangers", and I would really like to hear from an intervener what danger is she really afraid of.

I think we have demonstrated that we

run a really safe facility. Certainly natural uranium is far safer than many of the elements that people are exposed to on a day-to-day basis, both in their homes, on the roads and in the streets.

What is the danger that these people are afraid of? I would like to hear that, if I may.

MS WITHERS: That would be particles. Dawn Withers for the record.

Far safer to me, it's far safer than other elements around us. It doesn't really make me feel comfortable with knowing what the company's cleanup plan would be should a train that's, you know, 10 foot away from the back wall of this building derails into the facility and, you know, how contained is the uranium in there?

What risks are there to people on the street around the corner if a truck crashes bringing uranium into the facility if it is breathed in by a child on the sidewalk. You know, again, GE seems to have very limited information sent out to the community before the community found out themselves, so I just think that really we don't know the risks. And I don't think that saying it's safe, it's pretty safe, safer than some things really -- if something doesn't have to be where it is, if it doesn't have to be there and

there is any risk, tell me there is absolutely 100 percent no risk, stand up and tell me that there is no risk to anyone in the community that anything could happen because that facility is there and I guess I can sleep easier at night, but I don't think anyone can tell me that.

Thank you.

THE PRESIDENT: Okay. We have to move on.

Yes, you have a quick addition?

MR. ELDER: Peter Elder, for the record.

I just want to make a note, GE is required to have a risk assessment of the facility that does look at the consequences not of normal operation, but of accident scenarios, that includes what happens if there is an accident on the train track, if there is an explosion because of the hydrogen tank. All these ones have been analyzed and show that the normal response that you would get from any type of explosion would also be appropriate to address any radiological risk from the plant as well.

THE PRESIDENT: Okay. Thank you.

I'm sorry, you want another question?
Go ahead.

MEMBER McDILL: I think the intervener poses a fair question and I think the community deserves a reasonably comprehensive answer to the "what if" questions, and I don't know, if they go to your Web site, if the "what if" questions are answered. I think those questions are not terribly difficult to answer.

Some of the "what ifs": What if a truck -- I think you said what if someone is having a bad day and they -- I mean lots of people have bad days, lots of people in the room are probably having a not-so-great day, that's a question that's probably answerable. What if a spaceship drops on the plant is probably a little beyond the scope of what's likely to happen.

So maybe I could get the company to respond to that tell the community how you will explain that to them, and to me?

MR. MASON: For the record, Peter Mason.

Well, that was one of the reasons why I asked the question, because I think those of us in the industry perhaps take it for granted somewhat, and so I think it's important for us to understand what are the public's genuine fears.

You know, I think to say that for any industry, nuclear or otherwise, to stand up and say, well, there are zero risks, that's not possible. We live in a modern industrialized society and there are risks in everything we do. People who have driven here today probably took the greatest risk.

But I think, to answer your question, we can relate it to what Mr. Peter Elder has just said, is that we do extensive analyses of "what if", and so I would say what if we thought of some of the scenarios and put those on our website.

Just imagine if the train was derailed and ploughed into the back of our building, what would happen? What if? What if that train was carrying gasoline or oil and it caught fire; what if? Those are scenarios that we can address, we can put together, and say, okay, this is what could happen in a worst-case scenario. So we could put our heads together, possibly with the CNSC as well, to put something on our website for people to read.

AUDIENCE MEMBER: But you don't know now.

AUDIENCE MEMBER: Can you answer it now?

AUDIENCE MEMBER: You don't know now?

AUDIENCE MEMBER: Yeah, what about now. How many years have you been there, 50 years, you can't tell us that now? You had long enough.

THE PRESIDENT: I understand you have an emergency plan, and in those emergency plans, I assume all of those things should have been done and posted, in fact, so if it's not done yet, maybe you are right, you give yourself good advice.

--- Laughter / Rires

MR. DESIRI: For the record, Paul Desiri.

Just to carry on with what Peter Elder said, all of the scenarios, all the credible scenarios have already been analyzed in detail in our safety analysis which was recently updated a couple of years ago, including the scenarios that Peter talked about. So I think --

THE PRESIDENT: Why don't you post it? Are they posted somewhere?

MR. DESIRI: I think we will have to look at the information and analyze it and see which can be submitted to the public forum and which cannot. There are certain pieces of information that are protected according to your regulations, security regulations, so those types of information will have to

be excluded, but anything that would be general in nature could be posted.

THE PRESIDENT: Okay.

This theme of transportation and security is throughout the next 80 submissions, so why don't we save some of them for other interveners. So thank you, thank you very much for that.

I would like to move to the next submission, which is an oral presentation from Ms Catherine Slavik, as outlined in CMD 13-M51.15.

Ms Slavik, the floor is yours.

13-M51.15

Oral presentation by Catherine Slavik

MS SLAVIK: Good afternoon. My name is Catherine Slavik and I am here to discuss some more relevant transportation issues related to the GE-Hitachi facilities.

Given the dense population residing between Peterborough and Toronto, I am particularly concerned with the number of residents living in close proximity to the transport routes who do not know that the transportation of uranium dioxide and uranium pellets currently occurs in their neighbourhoods.

Residents should be made aware if the transportation of dangerous goods is occurring in their community. As a young resident living and studying in the City of Toronto, I am concerned for the future safety of residents in neighbourhoods across the city and would like to ensure communities are properly informed about the safety of the neighbourhoods they live in.

I hope that all of you will share this concern.

I will start my presentation by discussing some relevant background information for those of you who maybe aren't as familiar with how uranium is transported in the Province of Ontario.

Yellowcake powder travels routinely from Saskatchewan to refineries in Ontario for processing. Since yellowcake uranium is comprised of about 70 percent uranium, it must be processed in order to remove impurities. Each of these loads from Saskatchewan to Ontario usually transports about 17 tonnes of yellowcake by truck.

From Port Hope, uranium dioxide is transported 110 kilometres by truck to Toronto's GE-Hitachi plant, where it is used to produce uranium fuel pellets.

From Toronto, the GE-Hitachi plant transports Class 7 Radioactive Material shipments on a regular basis.

After the plant is supplied with uranium dioxide from Port Hope, it is licensed to produce up to 1,800 tonnes of uranium dioxide pellets per year. These pellets are then transported 140 kilometres by road to the GE-Hitachi facility in Peterborough, where they are placed into fuel bundles for CANDU power stations.

How frequently do trucks transport uranium dioxide to the Toronto facility? How frequently are uranium pellets then transported to Peterborough's facility? These are questions I'm sure many residents living near both plants would like to know.

However, the trip from Port Hope to Toronto and from Toronto to Peterborough both entail driving through large sections of the Greater Toronto area and its densely populated neighbourhoods. Therefore, residents living in immediate vicinity to the facilities are not the only people who should be concerned about transportation issues.

Which neighbourhoods do these trucks pass through and how are transport routes chosen?

Exact routes cannot be disclosed for proprietary and security reasons, but residents living in these neighbourhoods have the right to know whether uranium is being transported within their boundaries. In the case of a traffic accident, people living nearby need to know what kind of emergency response will be available to serve their community and how best they can protect themselves from dangerous exposures.

Are the truck drivers licensed to transport the uranium dioxide and uranium pellets? Does their licensing need to be renewed? Residents of Toronto and Peterborough should know how these drivers that transport the uranium dioxide and processed uranium pellets through their neighbourhoods get licensed. Is a monthly inspection enough? How are they inspected?

GE-Hitachi's Emergency Response Plan for the transportation of dangerous goods should be accessible to residents near both facilities so that residents are ensured that drivers transporting these materials are in fact qualified to respond to any number of potential transport incidents.

Do the drivers transporting the uranium dioxide and uranium pellets undergo additional safety programs specific to the transport of these

materials? What standards exist for safe driving procedures according to the transportation of uranium dioxide and uranium pellets? Residents living in proximity to these transport routes deserve the assurance that all safe driving procedures and speed limits are monitored and routinely subjected to scrutiny.

According to GE-Hitachi, the transportation of uranium dioxide to the plant and the shipment of uranium pellets out of the plant occur in accordance with the *Transportation of Dangerous Goods Act and Regulations*. The Canadian Nuclear Safety Commission's Staff Report on the *Performance of Canadian Uranium Fuel Cycle and Processing Facilities: 2011* classified the GE-Hitachi safety controls for packaging and transport as "Satisfactory", but the report does not state how a "Satisfactory" level for safety control is achieved.

Are both GE-Hitachi facilities being encouraged to meet these controls for packaging and transport that go beyond satisfying basic requirements? Where is the waste produced from packaging and transport from these facilities transported?

According to the GE-Hitachi *Nuclear Energy Canada Inc. 2012 Report*, GE's Peterborough

facility performed a hazardous materials transportation emergency drill once during 2012. This kind of emergency drill was not performed in Toronto. In Peterborough, eight employees completed an emergency spill response course, but no employees in Toronto participated in an emergency spill response course.

According to this report, two recommendations were made on March 20, 2012, regarding the packaging and transport of nuclear substances at Toronto's GE facility after a self-assessment was conducted. The nature of the recommendations was concerned with the facility's hazardous waste procedures. What were these recommendations? Why were they made? Residents living near Toronto's GE facility have the right to know what these recommendations were and whether the facility has made any improvements to its hazardous waste procedures.

Although GE states that there were no reportable transportation incidents between 2005 and 2010, are there any transportation incidents that do not need to be reported? Residents living near any transport incidents have the right to know about the incident and how it was handled, even if all safety measures were successfully taken and no major damage occurred.

According to this same report, GE-Hitachi has an *Emergency Response Assistance Plan* for the transportation of dangerous goods that has been approved by Transport Canada. But what does this *Emergency Response Assistance Plan* address? In the case of a transportation incident, what is the emergency response procedure currently in place? Residents should always be notified of any transport-related incident and what specific plan is in place to ensure their safety.

Does every truck leaving and entering the facility contain a shipping document describing what is being transported? During transportation, is each truck's container correctly marked and labelled?

Licences for transferring nuclear substances require the knowledge of the route and schedule for transport, as well as the reason for selecting a particular route. Residents and communities have the right to know whether routes near their homes are being used regularly to transport nuclear materials.

Are emergency response personnel and local authorities always made aware of the transportation of nuclear materials in their jurisdictions? If a transportation accident were to

occur, would they be the first to know and how would they deliver assistance? In neighbourhoods through which transportation occurs, detailed presentations should be given to the residents in order to inform them of the emergency response plan that is in place.

Another serious concern regarding the transportation of dangerous goods from GE-Hitachi's Toronto plant to Peterborough is it's possible route taken along the greater Toronto area's highways. The portion of the 401 passing through Toronto, for example, is the busiest highway in North America and travels parallel to the pristine shores of Lake Ontario. If a transportation incident involving nuclear materials were to occur along this busy transport corridor, the consequences would be extremely serious for many thousands of people who traverse the routes and live nearby.

In the event of an accident, how with local traffic be impacted? Nobody has discussed this. What are the risks of contaminating local soils and streams near the designated routes? These issues need to be addressed in an emergency response plan and properly communicated to residents.

Transporting materials of low level radiation warrants just as much concern for communities

as transporting high-level radiation, and all of the risks need to be communicated properly.

A recent investigation in the Toronto Star that was referenced previously said that only 102 trucks transporting radioactive materials had been inspected by Ontario's Ministry of Transportation. Is this a satisfactory number of vehicles that are inspected? These violations that were mentioned in the report could be extremely serious in the event of a transportation accident.

In 1991, for example, a truck carrying uranium dioxide pellets was involved in a transport accident in Massachusetts, crashing into another vehicle and bursting into flames. The nuclear materials involved in this crash were the same as the ones that are currently being transported from Toronto to Peterborough. Even though the truck involved in this accident carried armoured metal containers, the container was still partially opened due to the impact of the crash, thereby releasing large quantities of uranium dioxide. Transport accidents do happen, therefore residents need to be assured that if and when an accident occurs, their safety and well-being will not be jeopardized.

The dangers of transporting nuclear

materials do not just include the local residents in proximity to these two facilities in Toronto in Peterborough. Accidents have happened in the past. OPG has documented at least six major accidents which have occurred during the transportation of radioactive materials in the last 40 years alone. Therefore, the transportation of uranium dioxide and uranium pellets potentially affects a very large number of people along these transportation corridors within a very densely-populated region.

In the case of a major transportation accident, residents need to have the complete confidence that they will be notified quickly and that the best possible emergency response plan will be implemented immediately to ensure their safety and health. Communities should get to decide whether they accept the risk of transportation incidents happening within their own neighbourhoods, but first they deserve to know all the relevant information regarding the transportation of nuclear materials within their communities.

In summary, I would like to ask GE-Hitachi to address the following questions to the many citizens of the Greater Toronto Area and elsewhere that may be impacted by transportation of uranium

materials.

How does your facility select its transportation route between Toronto and Peterborough and elsewhere?

When was the last transportation emergency response drill performed in Toronto?

Why aren't the procedures and results of these drills released?

How often are transportation vehicles inspected and how stringent are these inspections?

What is GE-Hitachi doing to ensure the transportation of nuclear materials is being conducted safely? You mentioned earlier it was a relatively low-risk operation, but you failed to mention the long-term remediation that might be required if and when an accident might occur.

Are all drivers properly trained to handle all potential transportation incidents?

What are the potential risks to residents if a transportation accident were to occur?

Are residents living along current transportation routes fully aware of all of these risks?

If your facility cannot answer all of these questions with full confidence, then the company

has no right to transport nuclear materials within our neighbourhoods.

Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

Questions? Who wants to start?

Monsieur Harvey...?

MEMBER HARVEY: At least one of your numerous questions has been responded to this morning, or earlier, maybe this afternoon, if you were there. Is the transportation of packaging of uranium dioxide or uranium pellets considered high risk? I think we had the answer this morning saying that's low-risk.

Starting from there, do you think that all your questions are legitimate?

MS SLAVIK: Yes, I would say so. I mentioned that it shouldn't matter whether it's low-risk or high-risk, people still have the right to know whether these things are travelling through their neighbourhoods. It's not an issue of how much risk, it's the fact that they are taking on this risk.

MEMBER HARVEY: So the same question could be asked to any dangerous goods transportation.

MS SLAVIK: I would argue that those documents are more publicly-released. I myself did

extensive research just for this hearing, and I could not find any emergency response plan that GE-Hitachi had mentioned on their Web site. It does not exist. Or at the very least they aren't communicating it to residents, so I don't think it's enough.

MEMBER HARVEY: Thank you.

THE PRESIDENT: Okay. Let me start with staff.

What are the requirements on emergency planning being in place and then, maybe for GE, what is on -- can somebody tell me about a doomsday scenario, a big truck carrying this stuff on the 401, gets into a big accident, what is likely to happen?

Speculate.

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

I will start with multiple things. Actually, the intervener asked about the emergency response plan. Every shipment, again, based on risk, has to have in place an emergency response plan.

So you talk about doomsday scenario. I mean it seems to me -- I have to go back to Dr. McDill's question with respect to the public information. GE-Hitachi has written its own public disclosure amendments that needs to be enhanced post

the new requirements for the public disclosure, so with respect to the "what if" scenario, to include your question.

What happens if a truck tips over, falls over and there is a dispersion of radioactive material? The emergency response plan has in place the requirement for the first responders in order to mitigate the accident. So for the intervener's knowledge, in the transport, it's not the "what if", we take into consideration the accident scenario and the response in order to provide safety and security for the public and the environment.

So from a radiological perspective, radiation risk exposure, external exposure is minimal. It's even non-existent because, again, the radiation level is very low from external radiation.

With respect to the response, so they have in place, they come in prepared with the equipment in order to remediate the accident -- let it be big cranes, trucks, suits, removal of substances and at the end, the CNSC will investigate. We have had multiple accidents, one of them is the Altona accident that occurred two years ago, of a shipment of yellowcake, as a matter of fact, overseas where we were able to -- not us, we overseen the cleanup procedure and the

decontamination of the vessel itself, and it was released for common use afterwards.

So my point is, that there is experience in place. We know the activity, we know the response, and the first responders are trained. They are required by law, by the license that GE-Hitachi informs the first responders, fire response, emergency responders. Our staff do train and supervise the training. So all these elements are in place.

In order -- we know what to do, we know how to oversee the regulatory aspects to order someone what to do, but before we get there, it's the responsibility of the licensee to have all these things in place, and every transport shipment has an emergency response, has an emergency response plan and capacity to mitigate what is required to do.

THE PRESIDENT: So is any of this described in any document that's available to the public without disclosing any confidential information?

MR. DESIRI: For the record, Paul Desiri.

At present, our emergency response plan is posted online. Our ERAP is not posted online on the Web site, but it is filed with Transport Canada.

THE PRESIDENT: Have you --

MS SLAVIK: That report is not easily accessible. I didn't find it, so it might be something worth putting on their Web site.

MR. DESIRI: For the record, we could take that as an action and look at how we could do that.

THE PRESIDENT: Thank you.

MS SLAVIK: There is a another question I had directed, how GE-Hitachi actually selects its route between Toronto and Peterborough. Is there a reason why certain neighbourhoods might be chosen over others?

THE PRESIDENT: I thought that question was answered before.

MR. MASON: For the record, Peter Mason.

I'm afraid none of us here know the answer to that, Mr. President, but we can certainly find that out.

AUDIENCE MEMBER: How come you don't --

THE PRESIDENT: Okay, thank you.
Ms Velshi...?

MEMBER VELSHI: I did have that question.

My other one, something that I may have missed in all these documents, how many shipments do you have a day or a week on an average coming in and going out?

MR. DESIRI: For the record, Paul Desiri.

It's about 10 shipments a month.

MEMBER VELSHI: Thank you.

THE PRESIDENT: Anybody else?

Dr. McDill...?

MEMBER McDILL: Thank you.

Could I ask staff to comment on the intervener's statistic of six major accidents during the transportation of radioactive materials in the last 40 years?

MR. ELDER: Peter Elder, for the record.

This is something else that came up at the hearings on the geologic repository. I would dispute the use of the word "major". None of these resulted in any release or any damage to the packages, the radioactive waste.

We are talking about fender benders. We are talking about ones where there was an accident, none of which were caused by the OPG drivers, but in

none of them was any radioactive material released and/or significant damage to the transport trucks.

So there were six accidents over a 40-year period, but they were all what you would, if you were talk -- what I would consider as minor in terms of from the consequence that no radioactive material or any of the packages inside the trucks were damaged.

HE PRESIDENT: So are we aware of any accident where some nuclear material was spilled out in Canada?

MR. ELDER: Peter Elder, for the record.

There is a requirement that any transport or any licensee that is transporting does report any accidents to us. The one I remember from a number of years ago the -- and you were wondering about -- answering your doomsday scenario type thing, there was a collision in the United States between a truck carrying yellowcake and a train. The result was that all the material was cleaned up, there was no permanent environmental damage, and the train was slightly contaminated and had to be sent for decontamination, but all the yellowcake was recovered from the environment.

THE PRESIDENT: Was that kind of a long-term or was it --

MR. ELDER: Within a very short period of time. We are talking a matter of weeks.

THE PRESIDENT: Thank you.

Anybody else? Okay. Thank you.

Any final comment?

MS SLAVIK: Yes, I would just like to address the vagueness that I think the responses that we have been getting from GE-Hitachi. I know some of my questions have been left unanswered, so if I could maybe redirect them again.

When was the last transportation emergency response drill performed in Toronto, and why aren't the procedures and the results of these drills released publicly? I think people deserve to know how safe their neighbourhoods really are.

THE PRESIDENT: GE-Hitachi?

MR. DESIRI: For the record, the last exercise was in 2012. As to whether we could post the findings, I think, first of all, all the findings are submitted to the CNSC so we do submit our exercise reports to the CNSC for review.

As far as whether the information can be put into the public domain, I mean, I think that's

one we could consider as well.

THE PRESIDENT: Okay, thank you.

Thank you very much.

The next submission is an oral presentation from Ms Jill Lennox, as outlined in CMD 13-M51.18.

Ms Lennox, the floor is yours.

13-M51.18

Oral presentation by Jill Lennox

MS LENNOX: Thank you. Good afternoon, everyone.

I share a lot of the feelings that have already been expressed this morning. I come here a little bit with that same feeling of the second speaker that I may be wasting my time. This will be my fourth public intervention since 2012 and I'm not a good speaker and I do not have a lot of scientific expertise. I simply keep reading and listening and doing what I can as a volunteer.

I teach at York University, part-time faculty, Humanities, and I'm a grandmother of three children -- three grandchildren. My grandchildren lived very close to this facility for the first couple

of years of two of their lives. The third one was born slightly east, where they live now, from the area.

What made me conscious of this incident, most of us, I think, was the actions of Zach who was actually a student at Trent when he sort of followed the chain and discovered the GE-Hitachi plant.
--- Applause / Applaudissements

MS LENNOX: So when CNSC speaks about their recent acknowledgement of the fact that now the public was more dense and they needed more information and they started putting out this more information in the last year, I don't think there is any doubt on our part that this is because the story broke with Zach's news and until then nobody new about this.

--- Applause / Applaudissements

MS LENNOX: So when I got involved was when we decided that the public did have a right to know and we sort of organized this meeting with GE-Hitachi.

For the very first meeting I was one of a whole team of volunteers that went door to door with little notes, giving people information as to the public meeting, when and where it would be and what the purpose of it was. Many times there were people in front of their houses or standing inside their doors

and I would have conversations with them.

And I just wanted to share a little bit about what I learned about what I learned about the two different communities at two different times actually, that I was, as it were, canvassing, giving out these notices.

One -- and the first that was totally across the board and it's been mentioned by a doctor here this morning in her hill there -- office -- is that no one, but no one knew about what going on behind the doors of GE-Hitachi. They had all seen the doors. Everybody knew the building by sight. They knew where it was, "Oh, GE-Hitachi".

"Yes, well, what did you think it was?" "Well, we probably thought it was refrigerators or air conditioners or whatever" but nobody -- now, in the first community that I can -- they were the people that were south of Bloor, east of Lansdowne as far as Dufferin. It was a pretty big spot.

Now, the majority of the people, probably all when GE-Hitachi first set up there, were new Canadians. Even 50 years later the majority have very little English.

In fact, many of them said that they would like to be a part of that meeting but they didn't

feel they could because they had found out that they just get overwhelmed in meetings. They had found this out when they went to parent-teacher meetings with their children. They were all very proud that their children spoke English, but their English still wasn't up to going to a public meeting.

I understood where they were coming from. I knew they would feel quite overwhelmed. But all were very interested and very concerned and you could see the wheels going around.

I've got to say I didn't enjoy my job very much because in a sense with us -- the time I remember really enjoying going door to door was when I was 10 years old and throwing Globe & Mails as a papergirl. That was fun. I was doing something people had asked me to do and I was okay. I didn't speak to anybody.

But this going door to door in a neighbourhood where I'm a stranger and telling people something about their own community who have lived there for 50 years don't know, didn't feel very good. I would try to be as gentle and as kind as I could in the situation. I thought the people were just amazing because they were all quite shocked and, yet, none of them kind of blamed me or told me to get off the

property or anything like that. They were -- they truly got involved and were interested and wanted to know more and so on. There was no sense of rejection, just kind of discomfort on my part.

There was another group of people in that neighbourhood, a smaller group that were new people. They were young couples who had bought up certain houses that had come up for sale and were renovating them. And clearly, this was their starter home for their new family.

They were equally shocked, determined to get to the meetings, very concerned. I think a lot of them were saying things to do with the value of their property because they had just bought it and they were probably mortgaged to the hilt and wondering if this knowledge once it became public wouldn't affect their property.

Later with another meeting, I was doing my role as door to door distributor of bad news and meetings at the new townhouses that are just north of the GVD. This is the Davenport Village Development. Those people equally concerned, maybe even more so, as they had recently invested. A lot of them said that they knew this had been an industrial neighbourhood and that with their real estate agents and so on they had

done a lot of investigation.

They knew about the industries that had been there and the PCBs and the lead and so on had been left in the earth and convinced that there had been a general overall cleanup before they built up this area that they are living in and the park for their children and so on, and that they had convinced themselves that more or less things had been cleaned up. But nobody dreamt that there had been a nuclear and nobody had heard. It's incredible even after all the research that they did do that there was a nuclear facility sitting right there across the street.

And that was a bit later because we had while I was present at least three different meetings. Different experts were brought to the meetings. But this very first one was at a library, I think at Dovercourt and Lansdowne -- no, at Bloor and Lansdowne, a public library. And it was a packed house.

So from the sense of having done a good job I think all of us felt good that we at least got word out to enough people that the place was packed and the people were there and respectfully listened as GE-Hitachi, who also obviously felt they had a tremendous responsibility, turned up, gave their

reports and so on.

This feeling that the reports are always going to be positive it's just something we grow to expect. There is not much I don't feel we can do about that, no matter how much we learn about the substances that come out of the stack and so on and so forth.

But one of the things that I wanted to address in this whole situation was quite beautifully summed up by a woman called Lois Wilson in a book on nuclear waste. She said that -- I think I kind of actually wrote about it.

--- Pause

MS LENNOX: She talked about what she felt difficult in the hearings was what she called a "climate of adversity". And this is what I always feel, the "us" against "them". She wondered why that was possible given that all of us are concerned about humankind. We're all human beings and we all should be ideally working towards a solution in these hearings.

But she found that the attitude was always just kind of adversarial and that basically you have the people that the question of nuclear waste in her case was sort of jobs, the people that were concerned about their work, their profession, their

jobs against the people that cared about the planet, basically. And that she wished that there could be a way in which people could work together and really look for what was clearly a problem and find the solution for it.

But I pondered these things as I pounded the pavement and made other observations as I went.

Now, one anecdotal thing which sort of sums up that feeling is that on my way home one day from my first round in the below Bloor group, I was going along Dufferin and I was giving out these notices to shopkeepers and people that were just walking along and sort of would look me in the eye and we'd strike up a conversation.

One woman when I gave her the little notice as to the meeting that was coming up, she said, "Where is this?" And I told her and she said, "Oh, my God". And she looked like a light bulb had gone on. She said, "Now, I understand". And I said, "What?" And she said, "Well, about" -- I think it was about eight years ago, I think she said -- she said, "There was a fire. We lived kitty corner from that building and firemen came to our house in the middle of the night and we were evacuated. And we were..."

I said, "Where did you go?" She said, "Well, I happen to have family, a sister, I think, that lived west of there and I took my child and went. And I remember thinking at the time it doesn't look serious enough that we should have to leave our homes. There was no fire, flames or anything coming out of the building. But we went and we came back". And she said, "I just -- it was the whole building and I guess other buildings had to do the same thing".

So in the first meeting one of the --

THE PRESIDENT: Ms Lennox, can you please --

MS LENNOX: Yeah.

THE PRESIDENT: -- time is up so can you -- you've got one minute to finish, please.

MS LENNOX: In the first meeting the people listened respectfully to GE-Hitachi. And at the end of it when they were asked if there were any questions there were many questions.

But the one fundamental question beneath it all was, "Why didn't we know? How come we've been here this time all these years and didn't know? No one has ever told us."

One of the women, I think, with GE-Hitachi -- I believe she was the publicity person --

what do you say? Now, I can't remember the word now.
Pardon?

MR. RUITER: (Off microphone) Kim
Warburton.

MS LENNOX: Yeah, well, it isn't her
name I was looking for, but her public relations role.

MR. RUITER: Vice-President, Public
Relations.

MS LENNOX: Thank you. She said that
she assumed that the reason people hadn't heard is
because there had been no accidents. So nothing had
drawn attention to the building because it was so
accident free.

Nothing had happened. Everything
went by every day quite perfectly and smoothly.

So at that point I couldn't resist
and I just said, "But was there not -- one of the
people I ran into said there was this terrible
accident, a fire X years ago and they were evacuated".

And she hardly blinked. She just
said, "Oh, yes. Well, yes, well, that was for safety
reasons". I said, "I understand there was a fire in
the stack". She said, "Well, that was immediately put
under control and the evacuation was done for security
reasons" and she went straight on to the next point.

And that to me was exemplary of what somehow is going wrong in a lot of these hearings. This could have been dealt with differently.

THE PRESIDENT: Okay. Thank you.

MS LENNOX: Can I read my last page?

MR. RUITER: (Off microphone) the fire?

THE PRESIDENT: No, we have read your submission in detail.

MS LENNOX: I think it's quite different.

THE PRESIDENT: Please give us time to ask some questions.

So I'll give you one more minute to summarize.

MS LENNOX: Okay. I want to get to my last page.

Okay. So I amend -- talk about a solution. I hope I have time.

The GE-Hitachi plant is an essential link in the nuclear industry chain in southern Ontario. I think we all know the process by now. It's been talked about even today and the root of the uranium -- I'm skipping the whole process because we just heard it.

Most countries are now admitting that nuclear power is a failed experiment with still no answer to the question of what to do with the internally-lethal nuclear waste and the insane billions that are now required to refurbish the old nuclear power plants. We need to do the same.

Oh, wait! Yeah, I say that Point Lepreau is a good "bad example" of people going ahead with refurbishment and Gentilly reactor in Quebec is a good example of the decision to stop before it's too late. We need to do the same.

GE-Hitachi is the elephant in the room and is presently an important link in the chain that supplies 53 percent of Ontario's nuclear power. There is nowhere they can move to now because the secret is out and no one wants that link in the chain in their backyard. No one in the populated area between Port Hope and Peterborough would want it.

So they can be the catalyst to GE-Hitachi to shut down the whole nuclear industry in southern Ontario. The other links will necessarily follow like a house of cards. This will bring forth a new -- like magic, a new southern Ontario which like otherwise in progressive areas on the planet, put their energy and jobs and tax dollars into creating a green

and unthreatening sustainable future for the present and future generations.

AUDIENCE MEMBER: Here, here!

MS LENNOX: It's true that --

THE PRESIDENT: Okay, thank you.

Thank you. That's it, thank you.

You've got to give time to other interveners.

MS LENNOX: I've just got one sentence more.

It's true there will be jobs in the cleanup process but better to be cleaning up waste now than making more of this stuff that no one wants or has a clue how or where to safely store. The cleanup will take place energetically alongside a growth of ingenious green sustainable alternatives and our children and grandchildren will inherit an exciting new world that could reverse planet change and make overuse of energy and all other reckless life choices a thing of the past.

THE PRESIDENT: Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Okay. Anybody questions?

Can somebody tell us a little bit

about this fire and what happened and how serious was it, et cetera?

MR. MASON: For the record, Peter Mason.

A number of industries use hydrogen in their industrial processes. We do in Peterborough. We did in our lighting plant in Oakville and we do in the propeller plant in Toronto.

Praxair used to supply hydrogen in the form of -- in a gaseous form at approximately 2,000 pounds per square inch in the tanks and, as you would expect, the refilling mechanism to those high-pressure tanks had an exhaust vent and when you release hydrogen to the atmosphere it ignites. It's meant to do that. It just exhausts off any excess pressure.

At our request, Praxair have changed all of our hydrogen installations in GE Canada to low-pressure liquid hydrogen tanks which avoid that high-pressure release valve which does tend to frighten people that are near it. But in actual fact it's behaving perfectly normal when that happens. A similar event occurred in Oakville and a hotel next door to it had to be evacuated.

But there was no fire as such on the premises.

MR. RUITER: That's a lie.

THE PRESIDENT: Okay. Thank you.

We have got to move in. Thank you for your intervention.

I'd like to move on to the next submission which is an oral presentation by Dr. Dorothy Goldin Rosenberg, as outlined in CMD 13-M51.66.

Dr. Rosenberg, the floor is yours.

13-M51.66

Oral presentation by Dorothy Goldin Rosenberg

MS ROSENBERG: Is this? Okay, thank you.

And I should almost say hello to everybody again as I think it's the fifth time I'm presenting in recent times. So we can get very, very busy with our Canadian Nuclear Safety Commission hearings.

I'm Dorothy Goldin Rosenberg and I teach about environmental and ecosystem health to graduate students at OISE/UT. I also work with the Women's Healthy Environments Network, Prevent Cancer Now, the Toronto Cancer Prevention Coalition Environment and Occupational Working Group and the

stakeholders group of the Canadian Cancer Society.

Once again, I'm addressing the health impacts of ionizing radiation amongst many other things to the CNSC, and as I've done several times in recent years, this time regarding the health and safety related to harm from the GE-Hitachi Uranium Fuel Processing Plant in the area near where I live in Toronto.

As I am a sessional instructor I do not have a regular salary but I'm only paid when teaching, not for all the other things that I do for and with students and others. And I'm not paid to be here as most of you are, but I research, prepare and present these deputations because of the seriousness of the issues at hand.

At this point I implore you to please act accordingly as to what you are hearing over and over again at these hearings. This is so important because it can't be ignored. Your scientists versus my scientists must give way to the precautionary principle well recognized in environmental health matters nationally and internationally. It means acting for prevention in the face of scientific uncertainty of which one of the criteria is reverse onus, meaning proof of safety beforehand.

Now, that's how the no smoking legislation was designed and legislated in the United States many years ago, long before they had proof of the actual carcinogens such as benzo[a]pyrene that led to the smoking. So it's time that we adopted this principle of reverse onus relating to nuclear issues in radiation.

A quick story of my own history with the plant. Many years ago, probably 15 years ago Voice of Women for Peace had a vigil, a Mother's Day vigil outside the plant. There were no fences. There was no protection. There was no security. We went right up to the window and we looked inside, went around the backs, saw all the trucks with the little nuclear signs in the back, saw the puff of smoke coming out of the chimney and we knew -- we were concerned about the health impacts because we knew what the plant did.

And our concerns arose from the research we had learned about the impacts of radiation at the plant and that was the reason for the vigil. We were mothers and we were grandmothers and we were very, very concerned.

Now, much more is understood about the continued operation of the plant and that it poses serious cumulative health impacts in our area. You've

heard statistics. You've heard how much is coming in and out. The plant processes 150 tonnes of yellow cake uranium powder per month and into the fuel pellets, et cetera and they are trucked in and out of the residential areas. You've heard all of that from others so I won't dwell on them.

But people are very, very concerned that CNSC, GE-Hitachi and the Ministry of the Environment have not properly addressed the known negative health impacts from the routine releases of low-level ionizing radiation from alpha particles released at the plant.

Surprisingly, the regulators apparently only measure gamma radiation. So I have some questions about alpha that I would like somebody to answer.

Although alpha radiation is non-penetrating, when you inhale alpha you get a serious dose of radiation to your lungs. My questions about this include: What are you doing to measure and monitor alpha radiation? How much goes up the stacks?

Very serious questions that we would like answered.

In terms of the sewers I was shocked to learn that they were putting the uranium incident

into -- the waste into the sewers. So the question is how much goes in? How much has gone in, in the last 50 years? How much has been monitored in the last 50 years? And how much is going into the sewers today and why is it going into the sewers? Why isn't it being treated and removed?

--- Applause / Applaudissements

DR. ROSENBERG: With regard to radon gas, how much radon gas is emitted from the plant and it's going into the air.

And with regard to air quality, there are lots of home and rooftop gardens growing up all over Toronto. We know that what comes up must come down. And it's particulate matter that people are concerned about.

I'm going to come back to the ChemTRAC discussion afterwards because I'm part of the TCP -- Toronto Cancer Prevention Coalition Environmental and Occupational Working Group, and we've been very closely involved with Toronto -- the issue with Toronto Public Health. In fact, Rich Whate would come regularly to my class to talk about it. But I'm going to come back to that afterwards because I have some things I want to say.

So, following those particular

questions, I just wanted to mention the emergency plan because it's of great concern to the community that there is no guarantee of the safety and well-being of the surrounding area despite the known issues raised by informed citizens in recent years.

And it's most disappointing that no action has been taken. Indeed, there have been no community alerts or notices to warn of either the ongoing levels of radiation or accidents at GE.

You all have before you, and I won't dwell on it, but there's a wonderful comprehensive submission by Andrew Cash, the Member of Parliament for Davenport, who eloquently addresses the issue of public information and the program that is supposedly guaranteeing the community relating to participation in issues and, particularly, the licensing requirements, and there wasn't that meaningful input.

He also points to the lack of discussion of what is actually happening at the plant -- and I think that was mentioned earlier -- that it doesn't say what it actually does. It doesn't say "GE Hitachi Nuclear Energy Canada." It says just "GE Hitachi Canada." There's no nuclear mentioned in there.

So I hope you will take his

information very seriously.

In any case, it's disappointing that well-informed, local citizens, including their federal, provincial and municipal representatives have had no influence in the decision to renew the GE Hitachi licence, nor were they consulted about details for emissions testing.

There's little confidence in this process because of testing actions and decisions that are undertaken by different industry and government agencies. And this situation must be seriously rectified in the future activities.

And as the other person has mentioned, there are many -- this is one of many links in the nuclear fuel chain. I have spoken before you many times about tritium in the drinking water, and the Ontario Drinking Water Advisory Council hearings and recommendations and so on.

And, well, tritium is a known radioactive carcinogen, mutagen and teratogen. And if stuff is going into the sewers and getting into the drinking water, you're getting a lot of radiation in your drinking water.

And as I noted to you recently in the Nuclear Waste hearings, since there's no safe way to

dispose of nuclear waste, we, in the area of the plant, live with a nuclear waste site in our midst. The plant contains nearly 50 years of toxic waste and materials.

With regard to the electricity demand, it was spoken about what's going on in other countries. They're way ahead of us in terms of energy efficiency, conservation and renewable's and meeting reliability with a legacy of clean water, air and land for a sustainable future.

Thankfully, Premier Wynne of Ontario is seeing the light and has put a stop to the Darlington new builds, hopefully, forever.

Because of all these realities, I urge the CNSC to please advise the closing of the GE Hitachi plant in the immediate future, the planning and closing of the plant.

The neighbourhood citizens who are already and will continue to live with the consequences of the 50-year legacy of the plant must be heard. They are calling for active engagement in the process of testing, emergency planning, all decision-making and decommissioning of the plant.

In particular, the citizens need to be able to oversee the direct testing of the sources of contamination from the plant, notably the air emissions

coming from the stacks and; the uranium and other hazardous substances being poured into the sewer; detailed emergency planning and; community notification for the ongoing, routine low level emissions of alpha particles and; transportation of uranium and other materials in and out of the neighbourhoods and; accidents at the plant.

So with regard to the details of the commissioning, our citizens are insisting on including evidence of a surety to cover the full costs, as determined by the community, on the recommendations of their independent advisors.

They want to be engaged in all relevant matters at the plant, and want full documentation regarding the updated evaluation of the costs of the decommissioning of the plant; the sources of the evaluation and; the assumption that they are derived from.

I just want to return for a moment to the issues around the Toronto Public Health question because I have been very involved all along the way because our Toronto Cancer Prevention Coalition has been working very closely with Toronto Public Health. In fact, a representative from Toronto Public Health is on our committee.

And the thing is, with regard to asking the questions about what is a priority substance; the question would be about alpha radiation. Did Toronto Public Health ever get any information about alpha radiation? Because what we've been hearing about is that they only measure gamma.

So we want -- I pose that question to you because if you don't ask the question, you won't get an answer. Does TPH, Toronto Public Health, ask about alpha? That was very important.

So, in closing, I speak, too, as a grandmother and a mother, and very concerned about the future of the world.

And I've been doing this work for so many years and I really believe that the time has come for making wise decisions for a safe and healthy future.

So please advise the proceeding with the planning and organizing for the decommissioning and moving of the plant immediately. Thank you very much for your attention.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

Okay. Questions?

You want to start, Dr. McDill?

MEMBER McDILL: Thank you for coming.

Did I understand you correctly? You said that you had a picnic? You --

DR. ROSENBERG: We had a vigil.

MEMBER McDILL: Vigil. Thank you. I was looking for the right --

DR. ROSENBERG: I don't think we brought food. I don't remember. But there were kids around, so they -- we may have.

MEMBER McDILL: There was certainly food then.

When was that?

DR. ROSENBERG: It was probably 15 years ago.

MEMBER McDILL: So you were aware that there was nuclear there 15 years ago?

DR. ROSENBERG: I was. We were -- Rosalie Bertell --

MEMBER McDILL: Okay.

DR. ROSENBERG: -- had written an article about it in the newspaper. I can't remember if it was The Star or the Globe and Mail, but there had been one article about it, and that's why we went to the plant. And we had talked about it to people.

And then it just seemed to die away

and we all got on with other issues because the reactor isn't -- and I am involved in a whole lot of environmental health issues, and I'm also a film producer, and I was making films and writing resource guides and finishing a Ph.D. at OISE/UT et cetera, being a grandmother, going to France every time they had a new baby to take care of my daughter and her family.

MEMBER McDILL: I wish I had had you in my family.

DR. ROSENBERG: Thank you.

MEMBER McDILL: But you were aware 15 years ago. We've heard quite a bit that the community has been unaware. So this is a slightly different thing.

When did you -- did you have a sign that said "GE Hitachi Nuclear" on the plant?

DR. ROSENBERG: I don't think it was Hitachi then. I think it was just the GE plant at the time.

MEMBER McDILL: Let me redirect it to GE.

MR. MASON: For the record, Peter Mason. Now, the GE Hitachi alliance took place in June of 2007. Prior to that date, it would have been GE

Nuclear.

MEMBER McDILL: So up until 2007 there was a sign over your front door that said "GE Nuclear"?

DR. ROSENBERG: I don't think so. I think it just said "GE."

MR. MASON: I think it just said "GE Canada."

THE PRESIDENT: When did the trefoil sign got removed?

AUDIENCE MEMBER: It's still not there.

THE PRESIDENT: I thought that sometimes it was the sign -- I read somewhere that the sign was on was it not?

MR. DESIRI: For the record, Paul Desiri. So it does say "GE Hitachi Nuclear Energy Canada Ltd." on the front door.

DR. ROSENBERG: But it doesn't say "nuclear."

MR. DESIRI: Yes, "GE Hitachi Nuclear Energy Canada," nuclear. Nuclear is on the front door.

DR. ROSENBERG: When was that put on the front door?

MR. DESIRI: Within the past year.

Probably April.

THE PRESIDENT: But I'm talking about the sign, you know, the nuclear sign, the yellow sign. Was that not ever on the fence? I thought --

MR. DESIRI: For the record, the signing is in accordance with regulations.

THE PRESIDENT: Okay, staff, what is the regulation requirement for signage on this facility?

MR. BUHR: Hi, I'm Rob Buhr, for the record. I am the Project Officer involved with the facility.

So in the Radiation Protection Regulations there is requirements for the trefoil to be posted on the entrance and exit of rooms or areas containing radioactive material. Therefore, you wouldn't expect to see a sign on the outside of the building but rather on the interior of the building to identify where materials are being kept or stored.

THE PRESIDENT: But not on the outside fence? There's no requirement to identify there is a nuclear facility on the outside fence?

MR. BUHR: For the GE Hitachi facility in Toronto and Peterborough no, because if there was dose, right, that would exceed 25

microsieverts per hour there would be, but in this case, the dose rates are so low there's no requirement.

THE PRESIDENT: Okay.

Dr. McDill, I interrupted you.

MS LESTER: Shame.

MR. RUITER: That's wrong. Well, then the regulation needs to be changed, and you need to recommend that.

MS LESTER: Who makes the regulations, the CNSC?

THE PRESIDENT: Dr. McDill, are you going to ask a question?

MEMBER McDILL: I was listening. Who makes the regulations?

DR. THOMPSON: Patsy Thompson, for the record. So more seriously, the Radiation Protection Regulations are made under the Nuclear Safety and Control Act.

And as people who are on the CNSC distribution list, there was a discussion paper issued earlier this year in terms of the proposals to review the Radiation Protection Regulations. The comment period is closing, and the CNSC is undertaking a review of comments to look at revisions that need to be made.

In terms of signage, having signs

with the radiation trefoil in areas where there is no radiation risk would be inappropriate. The sign is intended to alert people to a risk and a danger.

MR. RUITER: (Indiscernible) goes right through your (indiscernible), yeah, all 48,000 pounds worth.

AUDIENCE MEMBER: How do you sleep at night?

THE PRESIDENT: Can you please stop interrupting the speakers please.

MR. RUITER: Fifty-three percent of nuclear fuel cycle goes through there.

THE PRESIDENT: Dr. McDill, any other questions?

MEMBER McDILL: Just one I wanted to re-direct to Public Health, since the intervener had requested the question with respect to.

DR. YOUNG-HOON: For the record, Dr. Kit Young-Hoon, Acting Associate Medical Officer of Health, Toronto Public Health.

So I think the question you asked was that, did TPH look at alpha emissions. And I think that's a question that I would like to go back and ask, but my understanding of ChemTRAC, because I think you're referring to ChemTRAC, right?

DR. ROSENBERG: Yes, I was.

DR. YOUNG-HOON: Yes, is that --

DR. ROSENBERG: I'm quite familiar with.

DR. YOUNG-HOON: Yes. ChemTRAC does look at air quality. It's looking at chemical toxicity, and so, therefore, it tends to look at specific chemicals or materials. So I don't think they would necessarily look at alpha emissions in general. But I can go, take that back to the team that's in charge of that and ask them a specific question.

MR. RUITER: We've asked you all year and you haven't answered.

DR. YOUNG-HOON: I also have --

MR. RUITER: All year.

DR. YOUNG-HOON: -- another point to make and I think that it's an important point to make, is that with respect to uranium the main health hazard effect from uranium is from the chemical toxicity on kidneys, and it's not really from the radiation --

MR. RUITER: It's an alpha --

DR. YOUNG-HOON: -- effects. So I think --

DR. ROSENBERG: But it's an issue that has to be dealt with. That's my point.

THE PRESIDENT: Can we actually not have a dialogue, please.

DR. YOUNG-HOON: Yes.

THE PRESIDENT: Follow the procedures here that you are going to get a question and answer in a normal kind of a channel.

DR. YOUNG-HOON: Perfect. Sure, that's fine.

So, like I said, I can take that question back to get a specific answer on that particular question, but I do not -- the ChemTRAC program does look at chemical toxicity, air quality. They tend to look at specific chemicals rather than alpha emissions.

And then with respect to uranium itself it's the toxicity is from the chemical toxicity to the kidneys and not to -- not from radiation toxicity. So this might be less relevant for this particular site and situation.

THE PRESIDENT: Well, I'd like to follow-up on this with staff and GE Hitachi. It says in the intervener submission that the regulators measure only gamma radiation.

Okay, so somebody help us on the alpha side. How do you measure -- do you measure and

how do you measure alpha radiation?

MR. DESIRI: Paul Desiri, for the record. Yes, we do measure alpha contamination, air and surfaces, and it's contained -- the data's contained in our environmental report that's posted on our Web page.

AUDIENCE MEMBER: How do you measure it?

AUDIENCE MEMBER: How do you measure it?

DR. ROSENBERG: How do you measure it, yes?

THE PRESIDENT: So, I mean, are you using, you know, a device, or you're doing through biopsy? How do you do this?

MR. DESIRI: Well, it depends on what you're talking about; if you're talking about airborne?

DR. ROSENBERG: Yes.

MR. DESIRI: Yes, then we measure the uranium content. And our limits for our stack emissions are based on alpha contamination hazard. So in other words, the risk from alpha exposure, inhalation, determine our derived emission limits.

THE PRESIDENT: Is it all -- staff, is that what you understand?

AUDIENCE MEMBER: No.

DR. THOMPSON: Patsy Thompson, for the record. I think there is some confusion. There's some data that is monitored through the stack and there's a derived release limit based on radiation exposure, and that's essentially for inhalation of uranium and retention of uranium in the lung.

In that case, the exposure looks at an alpha emitter and an alpha dose to the lung, and that calculates to a release limit on 50 microsieverts per year.

A lot of the -- some of the uranium is not -- essentially is not inhaled, is deposited on the soil. And in terms of soil ingestion -- people have been talking about their vegetables -- the uranium that is ingested is essentially not a radiation hazard. It's a chemical toxicant to the kidney.

The other component as well is people tend to compare uranium coming out of this facility with natural uranium.

Natural uranium still has radium and polonium and other decay products in it that are strong alpha emitters. But those products are taken out of the uranium during the milling process and the other processes. So the uranium that's in the GE facility no

longer has those radionuclides in it so it's more or less pure uranium. And in that case, most of the alpha emitters have been removed.

THE PRESIDENT: Thank you.

Anybody else, question?

On the intervener, I think the intervener mentioned the notion of covering the full costs of decommissioning. Can somebody -- maybe I start with staff. What's your understanding? Is there full financed decommissioning plan with fully financed?

MR. ELDER: Peter Elder, for the record. GE does have a financial guarantee to cover the cost of decommissioning. Those requirements are, that they review that plan a minimum every five years to assess against any real experience based on of decommissioning other facilities. And this is done by a third party who's an expert in this type of decommissioning.

MR. RUITER: Name the third party.

THE PRESIDENT: So when was the last time that was done?

MR. ELDER: I would have to check. It was done around the licence renewal in 2010.

THE PRESIDENT: And is the actual amount of money known?

MR. MASON: For the record, Peter Mason. That evaluation was done last year, in 2012. And my recollection is it's about \$33 million.

THE PRESIDENT: Okay. Thank you. Anybody else has any other questions?

MR. RUITER: Can you name the third party?

THE PRESIDENT: Okay. Thank you. Thank you very much for the intervention.

Can you stop? I think you're going to force me to eject you out of this hearing.

MR. RUITER: It was a simple request.

THE PRESIDENT: I'm not interested in your simple request.

MR. RUITER: Simple request for the name of the third party.

THE PRESIDENT: You'll get your time.

MR. RUITER: Can you name the third party (indiscernible)?

THE PRESIDENT: Dr. Rosenberg, you have the last word.

DR. ROSENBERG: Okay. So my recommendation and my request is that the community be involved in all of this stuff and, therefore, Zach's question would be validated because we want to know

who's doing what, you know, what's happening. They want to be engaged in all relevant matters and full documentation regarding of the costs; the who's doing it; the sources of the evaluation and; the assumptions they are derived from.

So those are very serious questions. And I think they need to be responded to. And the community has to be engaged. And, certainly, these are the kinds of questions that people like the politicians are asking. They want their community to be understood and considered and respected. And that means direct engagement in all those decisions that are going to be made about the costs and the decommissioning and the decisions made about the future of the plant.

THE PRESIDENT: Okay. Thank you.

Thank you very much.

DR. ROSENBERG: Thank you.

--- Applause / Applaudissements

THE PRESIDENT: The next submission is an oral presentation from Mr. Dan Graeber. I don't know if I pronounce it right. His outline in CMD is 13-M51.19. Now, please proceed.

13-M51.19

Oral presentation by Dan Graeber

MR. GRAEBER: It's Dan Graeber. Hi, everyone. I want to especially recognize all the issue-based extremists and eco-terrorists who made it here today.

--- Applause / Applaudissements

MR. GRAEBER: Just a little humour, that's all that is.

Actually, just briefly, the "issue-based extremists" was the label taken from the NSA's language from recently leaked documents obtained by CBC from Snowden and Glenn Greenwald. And I think probably many social and environmental justice activists, I'm confident that they're pleased to be downgraded from eco-terrorists even though the Canadian government still keeps that label, because it seemed for a while there that we were approaching axis of evil designation, so that's wonderful.

And also -- so thank you NSA, because I'm sure they're watching and listening.

--- Laughter / Rires

MR. GRAEBER: Okay. So all joking aside, I would like to begin by acknowledging that we are on Haudenosaunee territory.

--- Applause / Applaudissements

MR. GRAEBER: I would also like to communicate my solidarity with the Committee for Future Generations.

--- Applause / Applaudissements

MR. GRAEBER: So, nearly one year ago I became aware of the GE Hitachi Nuclear processing facility. This was thanks to a documentary filmmaker and activist Zach Ruiters' community outreach efforts.

--- Applause / Applaudissements

MR. GRAEBER: It was a shocking revelation given that I've lived within a few kilometres of the facility for approximately four years now, and I had never been informed of its existence prior to that.

And I know a lot has been mentioned about the, you know, public information campaign by the company, but I think it's clearly absurd, you know, to imagine that a meaningful public information campaign had taken place given that a handful, a few people were able to inform so many residents who previously had zero knowledge of the facility's existence.

So if a meaningful public information campaign had taken place, there wouldn't have been turnout because people would have been aware. So I think it's absurd to imagine that they were just able

to reach people who hadn't been contacted.

So, clearly, that information campaign didn't take place or was designed to reach as few people as possible while giving the impression that people were meaningfully informed.

--- Applause / Applaudissements

MR. GRAEBER: So as I began to think about how to prepare my presentation, many difficult questions idled in my mind. I imagined that in addressing these questions to you, I would likely be told that some of my questions were out of the scope of the CNSC's mandate, outside of the power granted to you, or not related to the -- not closely enough related to the licence or operation of the GE Hitachi facility, but still these questions remained.

You know, why was the facility's existence kept secret if there was nothing to hide? What would happen if the train derailed and crashed into the facility? What would happen if there was an explosion at the facility? How could anyone consider it safe to operate this facility anywhere, let alone in the middle of a residential neighbourhood? How much pollution was being released into the air and water?

I began to wonder if I was already growing sick. I wondered if my girlfriend was already

growing sick; and what about my neighbours? I wondered if I should move.

I thought maybe we would be okay, you know, but would our children? What about their children?

As I begin to do more research into the history of nuclear energy, my questions became broader in scope, so I began to wonder how the nuclear industry could continue to operate despite its catastrophic effect on humans and the environment. I wondered what it would take to dismantle an industry conceived in the pursuit of weapons of mass destruction. I wondered --

--- Applause / Applaudissements

MR. GRAEBER: I wondered how many accidents would be one accident too many.

I know that human beings often repeat their mistakes, and I know that personally. So, I wondered if change could only come from a grave event that we have not yet experienced.

I wondered if it would take a national evacuation -- maybe Japan's.

I wondered if it would maybe take an entire continent to evacuated -- maybe ours.

I wondered if maybe only nuclear war

would do it, and would there be anyone left.

But, mostly my questions were about you, the CNSC. I wondered if there was anything that I could say to you to change your mind.

I wondered if I should shout at you.

I wondered if cursing would help. I decided it wouldn't.

--- Laughter / Rires

MR. GRAEBER: I wondered how you got to where you are now.

I wondered if your job was a difficult one.

I wondered if it often felt you to -- if it often caused you to feel conflicted.

I wondered how much illness it would take for you to change your minds.

I wondered if the people most affected were not and are not people you personally know. And I wondered if not knowing them and not loving them made it easier not to care about them.

I wondered if you thought that some scientists, doctors and activists were simply overreacting.

I wondered if you truly didn't believe there was any harm.

I wondered if you had convinced yourself that everything really was safe.

I wondered if you ever harboured doubts. I thought maybe you believe that change was impossible, too difficult, or that someone else would simply continue on if you chose to do something else.

I imagined how amazing it would be if one of you, if some of you, or if all of you chose to switch sides. I imagined how quickly things could change if people like you chose to abandon this oppressive system and join those who resist and work for change.

--- Cheers / Acclamations

MR. GRAEBER: Was there anything that I could say to you to change your minds. That was the question I kept returning to.

I thought about the world that we live in. I thought about all the problems that we face; the climate change, nuclear energy and nuclear weapons being the most immediate of them.

I worried that the public relations industry had created too many marginalized, obedient consumers with little regard for anything else.

I wondered if we would solve our problems or if the few with power would refuse to

change and wipe out the species as a result.

I hope that my words are not falling on deaf ears, and I hope that in telling you my questions you will ask them, too. So, I know that, you know, a lot of those questions are very broad, so my direct questions that I would like answers to today were -- the first one is, I'd like to know if the pellets produced at the GE Hitachi facility are used in any facilities in the world which contribute to the production of nuclear weapons? And I would like a response on the record to that question.

And my second question is, if there were an explosion at the facility, I know that it was mentioned that normal emergency responses or responders would deal with that. So, my question is, you know, how on earth would they deal with radioactive materials, whether or not it is less radioactive or deemed to be within some kind of acceptable limit, how would that possibly be cleaned up by regular responders when it rained down all over, you know, the surrounding neighbourhood and people and homes?

So, those are my two direct questions.

THE PRESIDENT: Thank you.

--- Applause / Applaudissements

AUDIENCE MEMBER: Very good!

THE PRESIDENT: Mr. Tolgyesi?

MEMBER TOLGYESI: The intervener was saying in his written presentation, in the second paragraph, that advertising the public hearings in the Toronto Star business section where it is likely to be missed by most of the interested members. Could you tell us where CNSC, the Commission, was advertising the hearing of license renewal -- on license renewal?

MR. ELDER: I'll ask Aimee Rupert who is our public information reviewer to answer.

MS RUPERT: Hello, Aimee Rupert, Senior Communications Advisor, for the record.

I'm just pulling up our records for our advertising for this meeting.

So, your question, Commissioner, was where we advertised for this meeting?

THE PRESIDENT: Yes.

MS RUPERT: Yes. So, we advertised in the Toronto Star.

THE PRESIDENT: Where, and when?

MS RUPERT: Friday, November 18th.

MEMBER TOLGYESI: What --

MR. ELDER: It says here, 2010.

MS RUPERT: Oh, in 2010, I apologize.

I thought it was for this meeting.

THE PRESIDENT: This meeting, or for this --

MEMBER TOLGYESI: No. We were talking first of all about license renewal in 2010. But my perception is that nobody knew there was a license renewal meeting.

MS RUPERT: Yes, I have that information. Just one moment, please.

THE PRESIDENT: While she's looking for the thing, can somebody answer the question about weapons?

MR. ELDER: Peter Elder, for the record.

One, Canada is a signatory to the Nuclear Non-Proliferation Treaty. That means that we can only export material to countries who have arrangements in place to make sure that any material, Canadian material, does not go into a nuclear weapons program.

MR. RUITER: Or, Pakistan and India. I mean, you have got to acknowledge that, you know --

MR. ELDER: Well, again, we do not export material. And that question was about the pellets. The pellets from this factory.

MR. RUITER: Or anything from this factory.

MR. ELDER: Anything. The factory produces pellets. The pellets either go in Canada or go to United States.

To be used in nuclear weapons, a pellet would only be useful if you were then -- they put it in a reactor and reprocessed that material. United States does not --

THE PRESIDENT: The answer is no, right?

MR. ELDER: No. The answer is no.

THE PRESIDENT: All right. Thank you.

MR. ELDER: There is no reprocessing technology in the States.

THE PRESIDENT: Okay, you have the advertising?

MS RUPERT: Yes. So it was in the Toronto Star and L'Express de Toronto, and also in the Peterborough Examiner, and the Aboriginal Multimedia Society website. Unfortunately, I don't have the exact dates. But also the invitation went out to our subscriber lists at that time.

THE PRESIDENT: For this particular

hearing where was it advertised?

MS RUPERT: Yes. So would you like the media outlets along with the dates, or just the outlets?

THE PRESIDENT: Just the outlets.

MS RUPERT: The Toronto Star; the Aboriginal Multimedia Society, which is an online newspaper; the Metropolitan Now magazine; Bloor West Villager; Inside Toronto; L'Express de Toronto; and, the Peterborough Examiner.

MEMBER MCEWAN: Thank you.

THE PRESIDENT: Thank you. Anybody else, other than Dr. McEwan?

MEMBER MCEWAN: To go to the intervener's sort of initial general comments, if you take -- you say you live within four kilometres, so if you take a four kilometre radius as the plant, how many people live in that area?

MR. GRAEBER: I don't have that, but I work in community health care. I have no idea.

MEMBER MCEWAN: Okay.

MR. GRAEBER: I mean, it's very populated. It's, you know, the north annex. I mean there's tons of people and homes, and it is very populated, yeah.

MS LESTER: The riding is 300,000.

MEMBER MCEWAN: The riding is
300,000?

MR. GRAEBER: Yeah, well, 100,000 in
Davenport. 100,000 just Davenport -- but Davenport
just touches down on the plant and then the plant kind
of is in the border between several ridings, so there's
easy, say, hundreds of thousands of people in --

THE PRESIDENT: Anybody --

MS McNEIL: Lots of people.

THE PRESIDENT: Member Velshi?

MEMBER VELSHI: The intervener has
raised an issue in the written submission, but it's an
issue that's come up over and over again, is, should a
facility like this be allowed in a residential
neighbourhood that is densely populated.

Tell us what some siting requirements
are? And I know the facility has been there for over a
hundred years, or at least the pre-GE facility. But if
a facility like this was being recommended today, are
there any requirements around siting of a facility like
this that would preclude it from being in a residential
area?

MR. RUITER: Is that --

THE PRESIDENT: Staff?

MEMBER VELSHI: Sorry, the question was to staff.

MR. ELDER: Sorry. Peter Elder, for the record.

The requirement is that in terms of they must be able to demonstrate that they meet all the safety requirements at the fence line. So there is not a requirement that says how far away that has to be, so the larger -- the area, you could say, you have more space to make your case. But in this case you must be able to make the case at the fence line.

You must also be able to show that you are in compliance with the municipal regulations, so the property is appropriately zoned for that industrial use.

MEMBER VELSHI: Thank you. So, today, in today's current standards it would still meet because it meets all the safety requirements as per the presentations by both staff and GE this morning that there would be nothing preventing a facility like that being built today, if it was zoned appropriately?

MR. ELDER: Peter Elder, for the record. That is correct.

THE PRESIDENT: Okay, thank you.
Member Harvey?

MEMBER HARVEY: Just one question. Would such a project be submitted to an environmental study?

DR. THOMPSON: Patsy Thompson, for the record.

A facility -- the construction of a new facility would need to undergo an environmental assessment if it meets the other requirements of the *Canadian Environment Assessment Act*, but even without that, there would be an assessment under the *Nuclear Safety and Control Act*. And in the case of the GE facility, in 2001 the *Nuclear Safety and Control Act* came into force. There had never been an environmental assessment, and we did require GE to do what was called at the time, an environmental effects review where they looked at all the activities being done on the facilities, all the points of discharges to the environment, and looked at the potential environmental impacts. So that work was done, and it was essentially shown to have, you know, very small releases. And an outcome of that was validation of the monitoring programs that are in place at the facility.

But, construction today for a new facility would require an environmental assessment.

MEMBER HARVEY: And probably

participation?

DR. THOMPSON: Patsy Thompson, for the record.

That's correct.

THE PRESIDENT: Okay. Anything else?

Thank you.

Do you have any final words, here?

MR. GRAEBER: Yeah. My -- my second question regarding an explosion at the facility wasn't -- wasn't answered. So I don't know if that's something that can't be spoken on because it's some kind of confidential information. But, I mean, if people are supposed to be so concerned about terrorism, that we'll support, you know, United States, you know, killing innocent human beings in Africa and the Middle East with drones, well, I think, you know, then if that's so likely then the possibility of a terrorist attack in my neighbourhood, say they blow it up -- say there's just an explosion, and forget about terrorists, say there's just an explosion, what would be the response? How would this be taken care of?

How can people feel okay about living across from the facility?

THE PRESIDENT: Do you want to answer that question?

MR. DESIRI: For the record, Paul Desiri.

All possible accidents that could occur at the facility are analyzed in detail, and that's all part of the safety analysis report.

MEMBER HARVEY: Including the security breaches and terrorism?

MR. DESIRI: Correct. Yes.

THE PRESIDENT: Okay, thank you. Now, some of them, obviously they will not necessarily read this, I guess.

MR. GRAEBER: But that specific question we can't have any details about it? I mean, I don't see how terrorists could use information about how we would clean up after they did something. How would that be -- how can you misuse that information?

If the reason that we can't know that is because then terrorists know that there is no preparation, they're likely to do it, well, then I'm worried, you know, not just because the terrorists may do that, but because then if it explodes or the train goes into it and it explodes, well, there's no remedy so then I have to you know move and I have to you know going door-to-door with (indiscernible) so I can get people to pressure you guys so much to do something

about it.

THE PRESIDENT: Thank you. Thank you very much for this intervention.

I'd like to --

MR. GRAEBER: I can't have an answer? I just -- for the record, if there's no answer, that's fine.

THE PRESIDENT: We just got your intervention and we got your input. Thank you very much for it.

MR. GRAEBER: But on the record can I just hear if there's no answer, then, no, and that's fine and I'll go away. If I just hear, no, there's no answer.

THE PRESIDENT: The answer is there is an emergency plan --

MR. GRAEBER: But the details of it, I can't have the details?

THE PRESIDENT: But the details are not being disclosed.

MR. RUITER: Answer his question. It's a valid question.

THE PRESIDENT: And we have heard that they will consider about what is it they can put into the public domain.

MR. RUITER: That's your answer?

MR. GRAEBER: Okay, so I accept that.

For the record, the details cannot be disclosed if there's an explosion at the plant by terrorists or otherwise. I accept that answer. Thank you.

THE PRESIDENT: Don't put words in my mouth, please.

MR. GRAEBER: No, I'm sorry, I thought that's what you said, the details would not be disclosed.

THE PRESIDENT: I didn't. So, we'll see what the GE Hitachi will do as a result of this hearing about improving their emergency plan disclosure. That's what I said.

MR. RUITER: There's no flexibility on that.

MR. GRAEBER: Oh, so there may be an answer in the future?

MR. RUITER: Why can't they answer now. We're the community. We're Toronto.

THE PRESIDENT: Thank you very much. I'd like to move on.

MR. RUITER: After all the talking you won't answer our questions --

MR. GRAEBER: Thank you for your time

anyway, everyone. Thank you.

THE PRESIDENT: Thank you.

I'd like to move on to the next submission which is an oral presentation by Families Against Radiation Exposure as outlined in CMD 13-M51.11.

I understand Mr. Kelly will make the presentation.

13-M51.11

Oral presentation by

Families Against Radiation Exposures (FARE)

MR. KELLY: Good afternoon, all.

Derek Kelly from Families Against Radiation Exposure out of Port Hope, Ontario.

I'm here today to help support the neighbours in the -- of the GE Hitachi facilities both around -- in Toronto and in Peterborough and to offer, as I say, our support with them.

Over the last year, in particular, we've seen an increase in the activity in our FARE facebook site with people from Toronto coming in to get information from us regarding the situation that they are battling right now. So, I'm acting in my role as

president of FARE today.

FARE has been around since 2004, and our mandate is to reduce or eliminate unnecessary sources to man-made ionizing radiation in order to make Port Hope a safe place, or a safer place, which is what the neighbours of the GE Hitachi facilities are also trying to do.

Over the years that we've been doing this we have intervened at a number of hearings, public hearings and public meetings, and we always learn a lot. And I'd like to share a few things with the public, the neighbours of these facilities today.

First off, wording. I mean, that's a tricky one. We always -- you know, today we've heard about high risk, low risk. Well, you know, risk is risk, it doesn't matter. There's always a potential or probability that someone could get sick no matter how low the risk, you know. And I'm wondering today if nuclear is so safe how come there's so many security guards and police officers and secret service guys here? It's baffling, I think, you know.

Nuclear itself, though, is dangerous. We all know that. There are risks, that's why we have the Canadian Nuclear Safety Commission. And you know, the name Canadian Nuclear Safety Commission, that's an

odd one. Shouldn't it be the Canadian Nuclear Danger Commission or --

--- Applause / Applaudissements

MR. KELLY: -- the Canadian -- I mean, at a bare minimum, let's be real.

And, you know the Canadian Nuclear Regulatory Commission. I have never quite -- well, I do understand why it's, you know, safety. But, let's -- what's the word safety? It's safe, without harm. So, isn't that an oxymoron, Nuclear Safety?

--- Laughter / Rires

MR. KELLY: You know, so it goes on from there.

One of the main things we've learned through our experiences with FARE is the difference between background natural radiation, external exposures, as opposed to internal exposures of manmade ionizing radiation. And it's a very important distinction to make, one that I know isn't being made by our regulators or those that are international agencies that are creating the models, the risk models for us.

And if one was to go to our FARE facebook site, we've got lots of articles and studies and such that would counter any of the things that

Patsy has said, and others, you know other experts that are here today would say.

One of our beefs that we always have is that we can't get a full debate out of this. And when we come here we're always left feeling somewhat empty and frustrated that it's feeling like we're talking to a brick wall. And, you know what, we kind of are. I've said it before to you at -- last year at a hearing in Darlington, that really what the commissioners are, is, you're a firewall to the people who are really making the laws that count for the residents and the neighbours in around the GE Hitachi neighbourhood. You know, it's -- so we've said, you know, why is -- why do we get this feeling of frustration? This should be, you know, open, transparent dialogue where we're all sitting down trying to come to a solution.

And it has led us to look at the actual regulatory framework that we're dealing with, the *Canadian Nuclear Safety and Control Act*. And, that's what has created this Commission, this Act created this Commission. It's an Act.

And the same way that I am acting in my capacity as president of FARE today, you are acting in your capacity as commissioners of the Canadian

Nuclear Safety Commission, and your mandate is to regulate the nuclear industry.

So, the good people that come here today questioning why there's a nuclear facility in their neighbourhood don't really get the answers because, while this is a hearing, it's a public meeting or a hearing, yes, you are hearing us, and you do as humans, I suppose to a certain level, listen to us, but from you know a legislation end of things you're not really, you're not really listening to us, you're allowing us to be heard. It's a court of record, and what we're saying is being recorded, but it's not necessarily being acted upon unless it's specific to the *Canadian Nuclear Safety and Control Act*.

So, where do we begin? What do we do?

You know, I don't know, other than to say -- and again I've requested that the Commission -- I was (indiscernible) on, because I said report to the Minister of Natural Resources that Canadians want a debate on the nuclear issues in Canada on such things as should a nuclear facility be located in a residential area. But I don't think -- and I do understand, Mr. Chair, that you -- you report through -- you report to parliament through the

Minister of Natural Resources, so I won't make that mistake again.

But, you have never actually done that. And I'm not sure that you can do that, because it doesn't fall within your mandate, the jurisdiction that you're responsible to uphold.

For the public really what it boils down to, the simplest analogy is, is that the Commission is -- they're law enforcement officers, really. They are regulators, they are enforcing law similar to the way that the police here in Ontario would enforce the *Highway Traffic Act*, the provincial *Highway Traffic Act*, and you know if they travel into Quebec they can't enforce that law because that's outside of their jurisdiction.

Well, likewise, a lot of the questions, a lot of the things that we want answers to as the public are outside of the Commission's jurisdiction so they can't give us the answers.

I noticed that one of the last presenters had asked about shutting the plant down in Toronto, and it kind of gets bypassed, there's never any question about that because as long as -- is it Peter Elliott(sic) from the staff of the Canadian Nuclear Safety Commission who kind of verified that as

long as they're meeting the Regulations they're allowed to operate and a new plant would be allowed to operate as long as they got through the environmental assessment and met the Regulations.

So what are Canadians to do who live in places where there are nuclear facilities? We can't get any satisfaction from the Canadian Nuclear Safety Commission. So what do we do?

Well, I'm sure there's a number of options, but first and foremost -- and I know speaking right after me is Andrew Cash, an MP for the neighbourhood that's in question here, and it's people like Mr. Cash that need to bring this issue to Parliament and ask that it goes to maybe some sort of committee or maybe a tribunal is created.

I don't know but something needs to be done because it's obvious from the 80 people who sent in written submissions asking that something be done with this plant -- that's 80 out of 88 submissions, written submissions.

Something needs to be done and so I'm not speaking to the Canadian Nuclear Safety Commission today, I'm speaking to Canadians and the public at this public meeting who I hope will more than just hear what's being said, will actually listen and try and

take some sort of action.

That's all I'm going to say for now.

THE PRESIDENT: Thank you.

--- Applause / Applaudissements

MR. RUITER: Shut it down!

AUDIENCE MEMBERS: Shut it down!

Shut it down! Shut it down!

THE PRESIDENT: Thank you.

Dr. McDill.

MEMBER McDILL: Thank you.

AUDIENCE MEMBERS: Shut it down!

Shut it down! Shut it down!

THE PRESIDENT: Dr. McDill.

DR. McDILL: Thank you.

In the written portion of your
submission you said:

"The CNSC has no power to change
the regulations or to fine or
charge any facility not meeting
the regulations."

I wonder if I could ask staff to
discuss the AMP process.

MR. KELLY: I stand corrected on
that. I did read the bulletin that came out from the
CNSC after I had written and I am aware of the AMP.

However, it is a non-criminal punitive type of fine.

MEMBER McDILL: Okay. I'll modify the question. Maybe for the sake of the audience you could discuss the monetary penalties process and also in the instances of some of the facilities to which orders have been given, how that is brought up from staff or from inspectors up to the Commission and dealt with. So it's sort of two-pronged.

MR. ELDER: Peter Elder for the record.

One is -- this is a relatively new power in terms of the ability to issue what are called -- I'll call them fines, they are for non-compliances, that we can fine a licensee if there are non-compliances. So that is a new power that we've just recently got and we're making the rules around it. So we do have the ability to fine someone who's in non-compliance with their licence.

That said, it's one of the enforcement tools. We also have other enforcement tools, one of which is an order, which is, again, if there's a health and safety concern we can have -- the inspector can require immediate action to deal with that health and safety concern. In any case, where this is an order, there is a requirement that we report

at a public meeting to the Commission about the fact that the order has been issued.

MS LESTER: Do we have those inspectors or is -- (off mic).

MEMBER McDILL: So if I could ask, almost on a daily basis there's a set of emails that go out saying that company X has been stopped, there's retraining, it goes forward, and maybe the community is not aware that that is happening constantly.

MR. ELDER: Peter Elder.

I think Ramzi Jammal will answer a bit more on how we do it on a general basis.

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

In addition to what Mr. Elder mentioned with respect to the administrative monetary penalty program, that the CNSC has the power to do so, it's one of the tools. And you're asking the question -- yes, we inform the public from the websites with respect to inspectors' findings.

Our inspectors act independently. So in other words, the inspector can shut down a facility or shut down an operation independently by issuing an order based on immediate health and safety risk or major non-compliance.

MR. RUITER: No public consultation.
Shut it down.

MR. JAMMAL: That operation or the opportunity to be heard through the process of the CNSC. Then a designated officer hears the case in order to confirm, amend or deny the order.

The cases are referred to the Secretariat and at times the designated officer at my level, or the senior level at the CNSC will issue an order, and then, at that point the Commission will have to hear that order in a public manner.

So the intervention for the opportunity to be heard is open and the announcement for the hearing itself of the DO is given first to the -- opportunity to the licensee or the person who received the order.

The order is issued at two levels, against the individual, the employee, and against the licensee themselves, because all of them have to be in compliance with the conditions, Regulations and the Act.

In addition to this, the Commission -- or under the AECEB, prosecution has taken place and the prosecution was successfully, prosecuted by the Commission (indiscernible)

And the prosecution is not only for safety, there have seen successful prosecutions with respect to security matters. Terrorism has been mentioned. There has been a successful prosecution of cases where dual use equipment were being shipped to another country or trying to be sold to another country.

So we've done all of the powers that the Commission has from request, a directive, all the way to an order, all the way to the prosecution.

MR. RUITER: Did you fine SSI?

THE PRESIDENT: Any questions?

Anybody else?

MR. KELLY: Who's taking credit for the implementation of AMP, by the way? Based on our written submission, it just seemed pretty coincidental that you came out after. I'm joking.

THE PRESIDENT: I have a question on your actual written submission on page 2.

I hear quite often about this international conspiracy between CNSC, Health Canada, the World Health Organization, the International Atomic Energy Agency and the International Commission on Radiological Protection completely ignore the scientific evidence regarding the effect of low-level

internal exposure to ionized radiation.

So let me ask staff first to comment on that and then maybe ask you for that explanation.

DR. THOMPSON: Patsy Thompson for the record.

There's a memorandum of understanding between the International Atomic Energy Agency and the World Health Organization that was written in the fifties in terms of collaboration on studies of mutual interest and it's that clause that people often reference to show that there's a conspiracy, that the IAEA prevents the World Health Organization from doing studies on radiation effects.

MR. RUITER: It's not a conspiracy, it's true.

DR. THOMPSON: The World Health Organization, after the Chernobyl accident, came out very quickly with IARC, so the International Agency on Research on Cancer -- came out very quickly with predictions of health impacts from the Chernobyl accident.

The World Health Organization was the first organization after the Fukushima Daiichi accident to come up with an assessment of consequences of the Fukushima accident on members of the public and

workers, both in Japan and outside of Japan.

And so the WHO, I think, would take strong exception to the statements being made. They are proactive. They have a number of research scientists who have done extremely competent and detailed work on all the accidents and have made that information available both in a public-friendly way but also in peer-reviewed journals.

UNSCEAR, the United Nations Scientific Committee on the Effects of Atomic Radiation, is another body of the UN whose sole purpose is to review all of the scientific literature on effects of radiation at all levels, not just epidemiological studies but they review studies done at the cell and subcellular levels on animal studies.

All of that data is available on the UNSCEAR website, and the CNSC and other countries have been very active members of UNSCEAR, contributing to that review.

The CNSC with Health Canada and other partners have also done work on members of the public around Canadian facilities, on nuclear energy workers in Canada, on uranium miners. All of that data is reported in peer-reviewed scientific literature and this part of the data that is being considered by

international organizations like UNSCEAR and WHO.

THE PRESIDENT: Okay, Mr. Kelly, over to you. Last words please.

MR. KELLY: Well, I do take great exception that you've been trying to label me as a conspiracy theorist. Is that what you're telling me, Binder?

THE PRESIDENT: No. I've heard about --

MR. KELLY: Well, that's what I heard, so, you know...

But that having been said, there's also a wealth of research and studies done that show conclusively that the models used by -- created by the ICRP, for example, which is what the CNSC uses for their risk assessments, are skewed. They're fine for external exposures but when it comes to internal exposures they're skewed, and that was even admitted to by one of the former scientific secretaries of the ICRP, Dr. Jack Ballantyne I believe his name was.

I've sourced some stuff on our written intervention and, you know, anyone that wants to go and look at it is free to do so. I'm a spokesperson for FARE. There are certainly people better qualified than I to have the debate with your

experts, and again, I would encourage some sort of parliamentary tribunal or standing committee to get involved in this so that these debates can take place so we can call out the science and, you know, see who are the conspiracy theorists and who are the conspiracy truthers, I suppose.

Thank you very much. I'm not entertaining any more questions from you.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

Okay, it's a good time to break for 10 minutes. So we'll reconvene at 4:25.

--- Upon recessing at 4:12 p.m. /

Suspension à 16 h 12

--- Upon resuming at 4:29 p.m. /

Reprise à 16 h 29

THE PRESIDENT: Can everybody please sit down? We're ready to proceed.

--- Pause

THE PRESIDENT: Can everybody please sit down?

We will now move to the next submissions, which is an oral presentation from Mr.

Andrew Cash, MP for Davenport, as outlined in CMD
13-M51.47.

Mr. Cash, the floor is yours.

13-M51.47

Oral presentation by Andrew Cash

MP Davenport

M. CASH : Merci. Je suis très content d'être ici cet après-midi. Les enjeux dont nous parlons sont très importants pour les gens qui habitent dans ma circonscription, les gens qui habitent près de cette facilité.

I would like to thank the Commission for its decision to hold this meeting in Toronto today. As you will know, I have been advocating for greater transparency and accountability and a real opportunity for those that I represent, the residents of Davenport, to express their concerns, ask questions and get meaningful answers ever since first becoming aware in October 2012 of the GE Hitachi Nuclear Energy Canada facility at 1025 Lansdowne in Toronto.

It's within the current ideological climate of deregulation and self-regulation promoted by the federal Conservative Government that the issues

before us today need to be discussed.

From pipeline leaks to tainted meat to the Lac Mégantic disaster, Canadians are no longer willing to accept carte blanche that everything is safe. Canadians are awakening to the reality that rules around transparency and public accountability are essential to its ability to assess risks and make decisions whether or not to accept them.

The federal government has placed the responsibility on agencies like the CNSC to ensure that corporations like GE Hitachi follow the rules of disclosure and transparency.

So for the people that I represent, which include the residents who live literally right next door and across the road from the GE facility, a robust public information program is essential. They want to know, they have a right to know and they have been very upset and concerned that for 50 years they did not know what the GE Hitachi facility manufactured.

I'll begin with this question. How important to the federal government, through the CNSC, is its requirement that GE have a robust public information and disclosure program? Is this a vital component not just of GE's legal licence to operate but its social licence as well or is the PIP condition a

soft condition, a nudge-nudge, wink-wink requirement, so to speak?

Section 2.5 of the GE Hitachi licence to operate its facilities in Toronto and Peterborough states that GE must have in place a public information program. The government's guidelines are clear and I'll just quote part of them right now.

"The public information program and its disclosure protocol shall be commensurate with the public's perception of risk and the level of public interest in the licensed activities, which may be influenced by the complexity of the nuclear facility's lifecycle and activities, and the risks to public health and safety and the environment perceived to be associated with the facility and activities."

Of course it would be hard to assess the public's perception of risk or the public's level of interest in the activities of the factory if the public didn't know what those activities were in the

first place.

So if the purpose of a PIP is to inform the public, how successful has GE's been? Do people who live around the plant know that it is there, that it manufactures uranium fuel pellets for Canadian and U.S. nuclear reactors and that weekly tons of unprocessed uranium is trucked in and fuel pellets are trucked out?

Well, the answer to that question has been -- at least up to now -- no. The company's PIP has been a failure for the better part of 50 years and successive governments have failed to enforce one of its most crucial licence requirements.

Herein lies the answer to the question often asked by people in the community. How is it that this factory could exist in such a heavily residential area and for no one to have known?

MR. CALFCHILD: (Off mic).

MR. CASH: The 2010 licence renewal gives us some clues as to just how little effort was put into the company's PIP and how little muscle was put into its enforcement by the federal Conservative Government.

At the hearing, when asked directly whether residents who live right across the road from

the plant knew what was being manufactured there, GE did not answer the question. When asked if the signage was clear, GE did not answer the question. When asked how often GE communicated with residents, the Commission was told that it was every two or three years or whenever there was something new to report. We know now that GE had not communicated at all with the public since 2007.

MR. CALFCHILD: Shame.

MR. CASH: In it we also discovered that GE had not even realized that a media analysis was a requirement of its PIP even though the requirement is clearly stated in section 5.2 of the Guide, the Guide that was used at that time.

It was also a requirement that the company inform the public, especially residents living close to the factory, of the 2010 licence renewal process. The majority of residents living on the surrounding streets, especially those that have lived in this community the longest, are working class Portuguese, Spanish and Italian speakers.

MR. CALFCHILD: Latino.

MR. CASH: There are dozens of local media outlets catering to these communities in their respective languages. However, GE placed a small ad in

Toronto's francophone newspaper, "L'Express" de Toronto, the Windspeaker's page of the Aboriginal Multi-Media Society website, and on page B3 of the Business Section of the "Toronto Star" for one day.

No doubt that Toronto, being Canada's largest city, there is a large francophone community, there is a large Aboriginal population and, of course, there is a business class, but if the purpose was to inform local residents, this communication strategy was a failure.

If the purpose was simply to fulfil the bare minimum requirement to keep things quiet, then the strategy worked wonders.

I make no assumption here what the intent was, but we do know what the result was because only one person from Toronto deputed at that 2010 renewal hearing.

All of this raises questions about how the federal government verifies the voracity of reports it gets from the facilities it regulates. Again, how important to the government is its requirement that facilities like the one in Toronto pursue a comprehensive information program, public information program?

For the people of Davenport, the

people I represent, this requirement is crucial. This requirement is crucial whether the constituent is pro-nuclear, anti-nuclear or somewhere in between.

So today what has changed? Well, it's important to note that there have been some improvements and I think that we in our community can take some measure of credit for that. Ontario's Ministry of the Environment conducted a soil sample test in the neighbourhood, workers in the plant have pursued further health and safety audits, CNSC updated its own regulations and, in turn, GE released a new and more extensive PIP.

These are all positive developments which, in large measure, were the result of pressure from this community. But, unfortunately, the main issue persists; too many people still don't know what this factory does. GE's new PIP is simply not adequate. While its target audience has increased to include many important community organizations, it only includes residents on one street, on Brandon. This factory is literally surrounded by residential streets, houses, low-rise townhomes, low-income high-rises and soon a huge development of new towers, townhouses and mixed use units which will house over 4,000 -- well over 4,000 new residents, none are named as target

audiences.

And, despite the increased public interest in this plant, there is still not adequate signage making it clear that this is a nuclear facility. And I do take issue to a testimony I heard earlier to the contrary; there is a small sign at an underpass on Lansdowne that denotes that this is a nuclear facility, but the main sign, the sign that's visible to the community, there's no such marking.

While as the Member of Parliament for the area I'm also listed as a primary target audience, other than one electronic flyer, I have had very little interaction with GE outside of initiatives our office has undertaken.

It's also concerning to note that in section 5.1 of the new PIP under the heading "Program Activities", it states that:

"GE will make requests for annual meetings with local municipal councillors to review the PIP." (As read)

What was the rationale to exclude in this consultation the MP and the MPP, especially given that this is a federally regulated facility?

Finally, the Commission asked GE

during its 2010 licence renewal if it had considered an option to relocate both plants to a location outside of residential areas. Representatives of GE responded that they had not considered relocating the plants, which have been already located within industrial areas for the last 120 years.

One is hard pressed to recognize this part of Toronto as industrial any longer; this is one of Toronto's fastest growing neighbourhoods with, as I've already mentioned, rapidly increasing density. Indeed, there is no other facility like this in any other urban area of the country.

It's no wonder people in Davenport, neighbours of the GE plant, ask if this facility should really be operating in the heart of the city.

If, for the last 50 years, GE has not been able to keep up with the demands of its public information program and the government has stood idly by, how will it succeed with thousands more people continuing to move in? Will the government have the capacity, the will or the regulatory muscle to enforce the terms of this licence? If it doesn't, how does it and the company expect to receive the social licence from the residents of this community going forward?

I know I've asked many questions this

afternoon, but after 50 years of silence our community deserves some answers.

It's up to the federal government through its agencies to ensure that the rules are followed and that people are safe.

Our community, neighbours of the GE facility, need to be fully aware of the risks so they can decide whether or not they want to accept them. After 50 years of silence, our community deserves nothing less.

Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Thank you. I'd like to open the floor for questions. Who wants to go first? Dr. McDill...? Mr. Tolgyesi...?

MEMBER TOLGYESI: Mr. Cash, how did you learn about Hitachi?

MR. CASH: Thanks for the question. I learned about the company the way everybody else did, from an initial article in the Toronto Star I believe in roughly October, 2012.

And I will add that I had been the Member of Parliament since May 2nd, 2011 and between May 2nd, 2011 and the articles that began to be published, I hadn't received any communication from GE

as a Member of Parliament as part of, as a member of their target audience and their PIP.

MEMBER TOLGYESI: Is there any other manufacturing or enterprise, whatever it's doing, in this area, in your -- because this is your constituency, so do you have other older industries in your constituency?

MR. CASH: In my riding, is that what you're asking me? Yes. I mean, it's too bad we don't have a map, but as you probably know, a riding, it can cover quite a large geographical area, whether the riding is an urban riding or a suburban riding or a rural riding and my riding goes from Eglinton to the north -- and I don't assume that you know Toronto, I don't want to be that Toronto centric -- but it goes from Eglinton to the north all the way to, just about to King Street, so it stretches quite far.

But to answer your question, yes, there are factories in the riding and I think it's important that there are factories in the riding, I think it's important that there are good jobs, good manufacturing jobs that are local jobs, I think that's very important.

But what you see in that particular location, okay, is that there are -- you know, as I've

already described, there's a lot of housing that surrounds the factory and the density is rapidly increasing; there's condos being built across the road from the factory as we speak.

And so it raises concerns that if -- and as I've said, that if a public information program is essential, and I think this is the essential question, is the public information program a real requirement or is it softball log? I think that's the issue here. And what we've seen up until now is that it's not been taken seriously.

If the company did not even know that there was a requirement to maintain a media analysis, it suggests that they didn't actually -- weren't even actually looking at the requirements that were in the guide.

MEMBER TOLGYESI: So your main concern, as I understand, is this public information program which is not reinforced, not applied?

MR. CASH: Well, you know, there's been a 50-year history of silence here. It's not as simple as just saying that the public information program needs to be updated, because we've seen that the public information program has been updated and it has been improved, but it's not nearly adequate for the

situation.

THE PRESIDENT: Anybody else? Dr. McEwan...?

MEMBER MCEWAN: So, Mr. Cash, and thank you for presenting. We heard earlier that about 15 years ago there were a series of attendances at the plant of concerned citizens who had known about this, so we've heard intermittently that people have known going back over those 50 years. Unless I'm not -- how would that group not, who were involved locally they said, not have made it more broadly known throughout the community?

MR. CASH: Well, you know, I find this particular tact interesting and perhaps slightly misleading because I don't know, I don't think anyone knows who this community organization was; I haven't met anybody that was in that group. Perhaps they moved away, perhaps -- who knows, who knows.

But I can tell you this and this is in my written submission, which I know you have, and the date that I sent that written submission in, I believe I said that six days prior I had spoken to neighbours who live just down the street who did not know what was going on at the factory. And I think that that suggests to me that we have a long, long way

to go.

But I urge the Commission not to be persuaded that if there was some kind of community organization that existed 15 years ago, okay, that that somehow is an example of a robust public information program. Do we know how often that group met? Do we know what the materials were that the group was -- that the company was using to communicate with that group?

There's been no -- I haven't seen anything on that and I would love to because that would be helpful. Have you?

MEMBER MCEWAN: Simply what I heard today and I'm certainly not persuaded that there was a robust information, it's just trying to piece together the little bits that we've heard.

So you've talked a lot about what's missing. What do you think is required to be compliant with regulation?

MR. CALFCHILD: A new hearing.

MR. CASH: Well, I'm not convinced that the regulations are tight enough, you know, across a large section of the Canadian economy and we have been fighting in the House of Commons for quite some time around the issues of lax regulations, lax federal regulations in transport and I think that I'm not

prepared to answer, you know, the minutia of the regulations.

But as far as this -- as far as the public information program goes, well, you can judge whether a public information program is successful or not by whether people know about the factory and people don't know about it.

And I can tell you that it takes a lot more than an updated website and, you know, some communication pieces which, as you know because you've had the presentations, haven't mentioned still, still -- this is still -- haven't mentioned that this is a nuclear facility.

THE PRESIDENT: Can I jump on this one? Okay, I think it's been accepted by the regulator and by GE that the PIP was less than stellar.

But what I am trying to understand is, at your behest there has been a new measurement, environmental measurement by MOE, as you mentioned, the Toronto Board of Health gave it a clean bill of health and so did CNSC staff.

So, from the safety perspective do you have any concern? And just, you know, what are you suggesting be done now moving forward?

MR. CASH: M'hmm. Well, you know, if

you put three scientists in this room and ask them if this thing is safe, you're going to get three different answers, right. So, you know as well as I do that the science is not conclusive on all of this.

I'm happy to hear and I support the -- I'm happy to see the support from Toronto Public Health on the results of the test, I think that's important and I think for the community it's very important.

I'm here to represent my community in this issue. What my community wants to see right now is a robust public information program that under -- that takes into account the fact that it's been -- that this company has been -- that this factory has been for 50 years flying under the radar.

So, what do we want to see? We want to know -- I'd like to know whether the Commission takes this requirement seriously and, if it does, where has it been for the last 50 years? If the government takes this requirement seriously, where has the government been over the last 50 years?

Now, sure, people are saying, well, you know, everything's safe there, but we know -- we know from tainted meat to Lac Megantic and others, that things are always safe until they're not safe and we

need to be safe, we need to be sure.

This is operating right in the heart of the City of Toronto in one of the most -- you know, one of the neighbourhoods that is developing the fastest and neighbours -- and, again, neighbours who are residents who are both pro-nuclear and anti-nuclear are very concerned about whether this should be there.

THE PRESIDENT: Okay. Thank you. Ms Velshi...?

MEMBER VELSHI: So I'll belabour this PIP some more because I think everyone in this room agrees that transparency is important, that you need to have a social licence as well to operate this.

So looking forward, what would you, based on what you've heard from your constituents, recommend that GE and CNSC do to make this PIP more robust?

MR. CASH: Well, I mean, there's a lot of things and I think that some of it's pretty obvious. The fact that there's no clear marking on this factory that it's a nuclear factory, even though that's been requested; I mean, I think that's unacceptable.

I think when you look at the licence renewal of 2010 and you read the submission, it's a

very, very disturbing read if you are someone living on Brandon or St. Clarens or Landsdowne, it's a failure, a failure of regulations, a failure of oversight that no one -- one person from Toronto deputed at a licence renewal for a nuclear fuel facility and there's barely a question as to why that is; meanwhile there's a parade from Peterborough that deputed at the Peterborough -- or from the Peterborough site.

So, it goes back to whether this is important. Is this important to the government or is it not? It's important to the community that the community knows what's going on and, notwithstanding the updated PIP, as I've said in my submissions today, in my view that PIP doesn't go far enough.

So, if you're asking me what should be done. Well, I think that PIP is still inadequate.

MEMBER VELSHI: Yes, but I'm trying to find out from you, other than maybe making signage better that there is this facility, what specifics?

And I think GE has kind of asked, what more can we do. You know, there was some great recommendations, make your emergency plans more public, you know, we understand.

So, as I said, have you heard from your constituents what else needs to be done? Maybe

I'll ask GE. You had an open house last month. Did more than -- I don't know, how many people showed up for that?

MR. CALFCHILD: Right here.

AUDIENCE MEMBER: Right here.

AUDIENCE MEMBER: Shut down early.

AUDIENCE MEMBER: They shut down an hour early.

AUDIENCE MEMBER: Because they didn't want to hear our --

MEMBER VELSHI: Can I please get a response from GE to the question?

MR. DESIRI: For the record, Paul Desiri. To answer your question, there was around 30 people there.

MR. CALFCHILD: Oh, that's how you count.

MR. DESIRI: But I want to first summarize some of the activities we've done because I think there's a misunderstanding about how extensive our public information program is. It's something that we take very seriously.

So in the past year we've been to or held a total of 14 public meetings and tours. This include tours with residents, meetings with elected

officials and tours including MP Cash. We've had three community liaison meetings. We've attended three external meetings on the subject of our facility. We've had two open houses. We had a facility tour for media and we had another tour specifically for residents.

As far as direct communications with local residents, we did a mail-out of a community postcard, we mailed two open house invitations which were submitted in five local languages, we mailed a Newsletter. We have a toll-free information line, we received 112 phone calls in the last year.

We have a general email inbox, we had 294 emails and we had a target of responding to each of those emails and phone calls within 24 hours and we were within 90 percent of that target.

As far as our website goes, we had over 14,000 website views in the past year and 5,000 of those were unique, and this includes 75 percent first time visitors. Average visit time, over two minutes.

So, you know, from where we sit as a company, we've done extensive public information in the past year.

I would like to correct a few things that I heard just recently. It was said that the

mail-outs only included Brandon; they did not, they included about a thousand residents.

MR. CASH: Are you referring to my submission?

MR. DESIRI: Yes.

MR. CASH: I didn't say that; I said that --

MR. DESIRI: Okay.

MR. CASH: -- the PIP, your new PIP lists as a target audience several community groups, but only one street of residents which is Brandon.

MR. DESIRI: Okay. Okay, sorry about that.

MR. CASH: And you know, if I may, you know, there's no question that from 2011 to 2012 the company has been out there in the public, but if you add up all those public meetings that they hosted themselves and divide that by 50 you're going to get -- well, I don't know what you're going to get, but you're certainly not going to get very far.

I think that we've got to be -- we've got to understand that this is not just about today, that the residents in my riding are not concerned just about today, they're concerned about what they feel has been deception for 50 years and you can't just wipe

that away in a public meeting, you just can't.

--- Applause / Applaudissements

MR. CASH: So, it has to be a very, very serious reset of the relationship and why the PIP -- why the PIP only includes Brandon, why the PIP excludes the MP and the MPP from an annual review of the PIP? Those are serious questions and those questions suggest to me and to my constituents that this company and the government still do not take the issue of the public information program seriously.

MR. DESIRI: Sorry, there was a couple of other things that I wanted to point out. It was said that the sign is under an overpass; it's not under an overpass, it's actually on the front door, so it's visible from the street.

MR. CASH: Could I challenge that? How many metres from the underpass is the front door?

MR. DESIRI: And, as I was starting to say in the beginning, we take public information seriously; we do want to hear how we can do this better. I think that's an important question to ask.

But I think from where the company sits, we certainly have tried to do that in the last year.

I know there were some persons

talking earlier today who live a certain distance away, four kilometres away. They wouldn't be reached by our public information program as it stands, in terms of mailouts. They may reach it through the website. If you google our company name, GE Hitachi Nuclear Energy Canada, it comes up first, so...

And by the way, going back in time, if that's the conversation you want to have right now, you know during the 2010 licensing we also notified elected officials at the time. That was before MP Cash was elected. But we did notify elected officials of the licensing hearing as well.

Our website was available at the time. It was a different website, of course. We recognize the need to improve our public information, of course. But I think I would just like to reiterate all the things we've done and an openness to hear what else you would like us to do.

THE PRESIDENT: Okay. We have to move on. I'd like to thank you for being here and sharing with us your intervention.

I'd like to also remind everybody that we're not going away. We hear about maybe a need to see some improvement. Annual reports are annual reports. So we will observe annual reports, and any

progress thereof.

So, again, thank you for your intervention.

--- Applause / Applaudissements

MR. LEBLANC: So the next presentation was to be a presentation by McMaster University; however, they are unable to attend. The intervention will be considered as a written submission.

Mr. President, if you want to move to the presentation by Mr. Tim Seitz.

--- Off microphone / Sans microphone

THE PRESIDENT: The next presentation on the agenda is from McMaster?

MR. LEBLANC: No, it's from Mr. Tim Seitz. Here it is.

THE PRESIDENT: Okay, sorry.

So we'll move to the next submission, which is an oral presentation by Mr. Tim Seitz.

MR. SEITZ: Yes. Thank you.

THE PRESIDENT: Please proceed.

13-M51.50

Oral presentation by Tim Seitz

MR. SEITZ: Thank you. Thank you for having me here.

I came all the way down from Kingston to be here.

Now I'm not in the immediate neighbourhood of the GE Hitachi plant, but I don't know, to me I see a community here. And having sat here all afternoon, it makes me grieve inside, because to me "community" means people, it means friendship, support, sustenance and love, and I see this corporate intrusion.

Now I don't have much respect for corporations. They're just simply masks that some other elite group of people wear. So it's really people who are not putting their faces up to explain why they did what they, they wear the mask of corporateness.

Now I would really like to be with my grandsons today. I was with them last night. I don't know why you chose this time of year, when people like to be together with their family and friends. But you did choose this time of year and I just felt I had to be here and tell you these things, but I'm really not happy with it.

I want to go back in history a bit to

the time when we had slavery, and through the course of the 1800s they decided to abolish slavery. Right now I feel like I'm a hostage, a hostage to the uranium industry.

I think if we're going to move in a positive direction and recover our sense of community, then I think we need to abolish all nuclear fissioning applications --

--- Applause / Applaudissements

MR. SEITZ: -- otherwise the future looks bleak.

Now all of these things are human artifacts. So we made them and we can deal with them when we put our mind to it. But right now it seems as though we're captivated by it and we're blind, we're oblivious to what this means.

I think the GE plant here is not using any foresight because every pellet they make here is destined to become high-level nuclear waste.

AUDIENCE MEMBER: Right.

--- Applause / Applaudissements

MR. SEITZ: Now once that's introduced into the environment, we have over 400 more unstable products in our environment that would not have occurred naturally. If you looked at the Periodic

Table that I looked at in high school maybe they could be counted in the teens, but they're here. To use a trivial phrase, we really don't now how to undo this doo-doo, particularly the doo-doo of a CANDU.

--- Laughter / Rires

MR. SEITZ: We have 48,000 tonnes of this high-level nuclear waste here in Ontario and we don't now how to undo it. So we're going to have to babysit it for a long, long time.

Now there can be a positive side to it. Maybe it'll stabilize society, make it remove some money from the defence budget. I don't know what boogeymen their fighting, but here's a real one: uranium, if you put it in 50 Petri jars, and you took every life form that you can think of and put them in those jars, they will all die.

It's antithetic to life, and it seems like we don't have the foresight to realize that, so why are we tinkering with it? All these people who did that during World War II were just mere tinkerers, handmaidens, mind you, of butchers. And now it's still under the shroud of secrecy, as though we've discovered something new.

In 1991, a group of scientists met in Austria and they said, they publicly said that this

stuff should be left in the ground. It's way beyond their kin. Physicists like Richard Feynman say we really do not understand quantum mechanics, particularly the quantum mechanics related to the nucleus. Here it is 70 years later. We are not one step ahead in understanding how to undo this.

We've had promises all the way down the line saying we'll burn it up. It's previews of coming attractions. Now we're talking about burying it.

Well, there's a lack of foresight in another direction, not the time direction, but underneath our feet. Over 90 percent of the biomass on this planet is under our feet.

I remember in the eighties, when they went up to Whiteshell, in Manitoba, and they were going to bury our nuclear waste there. Then, they discovered that that wasn't so good because everywhere in the Canadian Shield water pressure permeates it, so you're going to have hot water there.

I've heard about the DGR they're planning here. Then further away they want to bury this high-level nuclear waste. Put it underground, wait for 25,000 years to discover how to undo plutonium? I don't think the elevators last that long.

I prefer that we keep it above ground where we can watch it, on site, by the people who created it.

AUDIENCE MEMBER: Yes.

--- Applause / Applaudissements

MR. SEITZ: So we're just part of the chain here, you know, we're just -- this is the way high tech works: we segment everything and people know their jobs. We're like widgets. But a community -- and that's why we're here -- can develop foresight. We can talk to each other.

I wish they would have had this conversation 50 years ago, and then the planners would have heard from the plannees, the people in the community. The people are rightfully upset. I'm upset.

So that pretty much sums what I have to say.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

Monsieur Harvey.

MEMBER HARVEY: Monsieur le président, just one question to the staff.

I would like the staff to comment on the last sentence of Mr. Seitz's written

presentation/submission, Messieurs, "We are creating a legacy of incredible debt for generations to come."

Mr. Elder.

MR. ELDER: Peter Elder, for the record.

As mentioned earlier, for GE Hitachi there is a decommissioning fund. Also, all power reactors must have a fund not only to decommission the reactors, they're required by federal law to pay into a fund to pay for the management of the high-level waste as well. So in Ontario, Ontario Power Generation has a real money fund to pay for those liabilities, to manage those liabilities.

MEMBER HARVEY: And we are convinced that the amount put in place --

MR. ELDER: The amounts. Like, all the ones get reviewed every -- it must be mandated that it gets updated every five years. In this case, for high-level waste, it gets reviewed, at the federal level, not only by us, but also, in terms of Natural Resources, under the Nuclear Fuel Waste Act. Also, there is accounting and reviews done by the Ontario Ministry of Finance as well.

So that it's constantly reviewed, and they need to pay more into the fund. They're required

to make additional payments into that fund.

MEMBER HARVEY: Thank you.

MR. SEITZ: Can I ask a question?

When did they come up with this? Did they come up with this recently or did they have this fund developed at the moment they decided to fission uranium in Ontario?

THE PRESIDENT: Staff.

MR. ELDER: The basis for the federal financial guarantees comes with the power that was -- for the power reactors comes from the Nuclear Safety and Control Act, which was passed by Parliament in 1996.

And then for the new fuel waste, that segregated fund for the high-level fuel is a federal act from 2003.

MR. SEITZ: But they were fissioning uranium in 1970, so it kind of sounds like we're putting the cart in front of the horse.

THE PRESIDENT: Well, let me try.

My understanding is, though, that when they do the analysis of how much money is required, they go to the outside third party to estimate, looking at all the historical waste --

MR. SEITZ: Yes.

THE PRESIDENT: -- and then come up

with a number. That money is now in the bank, and keep on coming and updated every five years.

Did I get this right?

MR. ELDER: Yes. It's based, in the end -- because for Ontario, the Ontario government is essentially the owner of Ontario Power Generation, they also do their own independent assessment by the Ontario Minister of Finance, because it's a -- it would result in a provincial liability as well.

THE PRESIDENT: Okay.

Anybody else? Any other questions?

Thank you.

MR. SEITZ: Can I make one more comment?

THE PRESIDENT: Please.

MR. SEITZ: Money is just another human artifact, and it's, you know, been around for 5,000 years or so. So I really wonder if we're wise in trying to equate what to do with nuclear waste, in terms of money.

AUDIENCE MEMBER: Yes.

MR. SEITZ: See, money is just a paper promise between two people. People live and die, and we're all destined to die.

Thank you.

THE PRESIDENT: Okay, thank you.

Thank you very much

--- Applause / Applaudissements

THE PRESIDENT: I'd like to move to the next submission, which is an oral presentation by the Canadian Nuclear Association, as outlined in CMD 13-M51.27.

Welcome Dr. Barrett. I understand you're going to make the presentation.

MR. BARETT: Yes.

THE PRESIDENT: Over to you.

13-M51.27

Oral presentation by the Canadian Nuclear Association

MR. BARETT: Yeah, so good afternoon, President Binder.

Commission members and members of the public, my name is John Barrett. I'm the President of the Canadian Nuclear Association. Also with me today is Dr. Peter Poruks, Manager of Regulatory Affairs at the association.

We would like to speak to you today on behalf of the 60,000 Canadians who work directly or indirectly in the nuclear industry. These men and

women mine and mill uranium, they manufacture fuel and design reactors, generate electricity, and advance medicine through life-saving diagnostics and therapies. It's a wide-ranging community, with many years of operational experience and expertise.

Our members maintain a deep commitment to the safety of their workplace and their communities and to the protection of the environment, and that's why we would like to offer our analysis of the safety concerns that are addressed at this meeting.

In order to operate the GE Hitachi fuel manufacturing plant has faced a rigorous licensing process, as they should, and submitted substantial evidence as to the nature of its operations, the safety dimensions, and environmental impact with respect to emissions.

In short, with respect to procedure, the Commission's decision to extend in 2010 GE Hitachi's operating licence was arrived at appropriately and through an open process.

This plant has been operating in this location and respecting the terms of its public licence for more than 50 years. It has a long history of working safely and without incident, and the views of those who work at this plant, many of whom have spent

much of their careers at the plant, should also be listened to. After all, they have their safety and their health on the line as much as anyone.

A fuel factory that causes no harm to its workers and to its neighbours can easily blend into the background of buildings and infrastructure and we pass by it every day without giving it a second thought. We pass by hundreds of offices, warehouses and commercial operations every day without giving them a second thought.

While the public may not have paid much attention to GE Hitachi's operation, the same cannot be said about the Canadian Nuclear Safety Commission.

On the public's behalf, the Commission provides strict oversight of this licensed nuclear facility. The company must have programs in place, staffed by qualified people, to ensure ongoing safe operation. It must monitor its emissions in air and water and report to you every year. It must limit these emissions to regulated levels that were established to protect the public and the environment.

GE Hitachi does all of these things. If it failed to meet these regulatory limits, it must file a report with the Commission, submit to an

investigation, and comply with the Commission's remedial direction.

So just as we count on our fellow-citizens to respect our rules and laws, so, too, has GE Hitachi respected the rules and laws governing the safe operations of its plant, contributes to our society through employment, and it sustains family through this employment, and has done so for generations.

GE Hitachi's data offer proof that the company meets the expectations for environmental protection. These data measure the company's uranium emissions, so we should look at these more closely.

There are three key numbers. The regulatory limit is a maximum that applies to all licence holders. The discharge limit applies specifically to GE Hitachi and is set out in the company's licence, and the actual measurement is based on samples of the material in question.

First, emissions to the air.

Systematic measurements reveal an average concentration of about 0.008 micrograms of uranium per cubic metre. A microgram is 1-millionth of a gram, and so 0.008 micrograms is 8-billionths of a gram.

Over a full year of operation, this facility releases between 10 and 16 grams of uranium. The company's discharge limit is 760 grams per year. The regulatory limit is 15,200 grams per year. Therefore, the plant emits just 0.1 percent of the regulatory limit.

In other words, for every thousand units that the plant could emit and stay within the terms of its licence, it emits just one unit, one in a thousand.

This licensee operate well within the limits established by the Commission.

Next is the plant's uranium emissions to water.

Here the values are so low that it becomes difficult to convey their small nature. The water that reaches the sewer is used in tasks such as cleaning workers' clothing and washing floors and walls.

In an average year, the plant will discharge about 1 kilogram of natural uranium. The regulatory limit is 180,000 kilograms, a conservative and prudent limit that adequately protects the public and the environment. This limit is 180,000 kilograms. The actual annual release is 1 kilogram.

As a percentage of the limit, the actual discharge is just 0.0005 percent of that limit.

If we stepped outside for a walk, we would -- excuse me, I just skipped page.

THE PRESIDENT: M'hmm.

MR. BARETT: Recently, the Commission and the Ontario Environment Ministry tested soil both at the plant and adjacent properties. The results show uranium concentrations consistent with the level observed naturally in soil throughout Ontario.

The measurements range from 0.3 to 2.9 micrograms of uranium per gram of soil. The natural level observed across Ontario is 2.5 micrograms per gram of soil.

The uranium levels measured at the plant and adjacent properties fall well within the guidelines published by the Canadian Council of Ministers of the Environment for Residential Areas. That limit is 23 micrograms of uranium per gram of soil.

That guideline is also nine times higher than the highest uranium level found in any of the samples taken by the federal and provincial authorities. In other words, the actual measurements at and adjacent to the GE Hitachi plant are a full

order of magnitude below these recommendations.

So what does the amount of 0.3 to 2.9 micrograms of uranium actually mean to people living in the community?

To receive the same amount of radiation, you could have one dental x-ray. You could stand outside the GE Hitachi facility 24 hours a day for 10 full years or you could fly from Toronto to Vancouver. Either way, you would receive the same dose of radiation.

I use these examples to bring forward an important point. Yes, there is radiation involved in this plant's operation. But the quantities are so low that they do not represent a threat to public safety or the environment.

All of us are exposed to radiation constantly. Even now here in this room we are receiving radiation. It comes from the sun, from rocks in the ground, from our food. We had some radiation for breakfast this morning. If we stepped outside for a walk, we would receive background radiation that exceeds GE Hitachi's levels by a factor of 1,600.

There's another way to look at this.

It is generally accepted in the field of nuclear medicine that exposure to radiation in the

amount of 100 millisieverts could produce health effects. Below this amount the evidence shows that we cannot see radiation effects on human health.

The limit for nuclear workers in Canada is 50 millisieverts in one year. For members of the public that limit falls to 1 millisievert.

The effect from operations at the GE Hitachi plant would be 1 one-thousandth -- it's hard to pronounce -- 1 one-thousandth of that limit. In other words, one would need 100,000 times the exposure before health effects could theoretically begin to occur.

But what do we draw from these facts and measurements? That emissions are fractions of a percentage of regulatory limits.

And let me conclude by putting the plant's operations in a wider context.

The fuel that leaves this plant powers nuclear reactors that generate electricity, in the case of Ontario about 55 percent of the province's electrical supply. The electricity from nuclear energy provides a clean, green, environmentally friendly way of meeting the power needs of our citizens.

In contrast to fossil fuels, such as natural gas, nuclear power emits a very low level of climate changing greenhouse gases. When you measure

contributions to greenhouse gas production, nuclear stands comfortably beside wind turbines and solar panels as a source of emissions-free power.

Nuclear powers works tirelessly day and night. The sun sets, winds grow calm. As power from these sources drains away, nuclear reactors run steadily around the clock. Much of the fuel that feeds these workhorses comes from the plant that we are discussing today.

Thank you to the Commission for this opportunity to discuss this matter from the perspective of safety, regulations, and compliance.

Thank you.

THE PRESIDENT: Thank you.

Questions?

MEMBER McDILL: Here.

THE PRESIDENT: Dr. McDill.

MEMBER McDILL: Thank you.

Many of the members of the community here today feel that the limits are too high.

AUDIENCE MEMBER: Yes.

MEMBER McDILL: So perhaps you could talk around that for a bit.

MR. BARETT: I will ask my colleague, Dr. Poruks, who is more of an expert on radiation than

I, but what I set out to do in the presentation is to indicate that the Commission, which has established the regulatory limits, when you examine what the plant has done with respect to those limits, it is operating well, well below the safety limits.

Now, whether these can be raised downwards or upwards, I think the order of magnitude which I was trying to suggest is such that it would go beyond what is completely necessary in order to establish the appropriate safety limits that people can go about their lives without fear or concern as to the effects of any radiation on their personal safety.

DR. PORUKS: Internal exposure of alpha emitting radiations.

Good afternoon, ladies and gentlemen, my name is Dr. Peter Poruks, for the record. Thank you.

So my understanding of the question is to speak to the perhaps difference between the set regulatory limits and public perceptions of their validity.

Is that a fair characterization?

It's my understanding, when we speak to the limits here, for the regulatory limit we stick to the 1 mSv limit set out in the *Act* and the 100 mSv

threshold for deterministic health effects.

These are well-studied and analyzed numbers. They are determined through a long process, over many decades, from scientists throughout the world that have drawn on the most extensive dataset that they can, and these are, to my understanding, the international consensus of where a health limit is, and the limits are set -- perhaps to be a bit too philosophic, but where the threshold exists is where nature puts it, as an organism responding to radiation, nature defines what that threshold is, and what we have done as scientists is, through careful investigation and analysis, determined where that level is.

So we can then say, as a society, where do we place these limits, how far down do we go, and that is a discussion for all of us to have. But in terms of what is actually safe, that is a matter of the scientific process that we have arrived at and it's been a very long process involving collaboration with the United Nations and ICRP.

Many more knowledgeable people can speak much more eloquently to the history, but it's certainly a very well-vetted number.

MEMBER McDILL: Thank you.

I will ask staff to make a similar

comment.

DR. THOMPSON: Patsy Thompson, for the record

There has been some statements and comments made in terms of the limits only look at external exposures from gamma-emitting radionuclides, and I want to correct that information.

The limits and the dose assessments that staff does for members of the public and workers includes all radiation sources, external and internal. We take into consideration the alpha emitters, the beta emitters and the gamma emitters, so all of the sources of exposures are taken into account when assessing doses to both workers and members of the public.

The limits for protection of workers and members of the public were, at some point in the past, originally derived by looking at the epidemiological information from the survivors of the atomic bomb, survivors of -- Hiroshima, Nagasaki survivors, and in that case it was external exposures to -- high exposures to external radiation. But since that time a lot of other epidemiological studies have been taken into consideration to validate and refine the standards.

Those studies have included, for

example, women who were involved with -- the radium dial painters, for example, who were exposed internally to radium. There is a vast number of other studies that have been done, for example, in Europe, looking at the workers involved in many industries in the former Soviet Union where exposures were from alpha emitters. Those are recent scientific studies that were published in the last five years and all of that information is included and has validated the safety of the exposure limits for both workers and members of the public.

MEMBER McDILL: As a Commission, have we looked at lowering -- in terms of ALARA, for example -- these numbers?

DR. THOMPSON: Patsy Thompson, for the record.

Yes. As I mentioned this morning and on other occasions, we have done benchmarking with what is being done internationally and nationally, both for radionuclides and hazardous substances, and we have proposed a way of deriving licence limits, regulatory limits, that would move away from what we you have seen in CNSC licences.

We have issued a discussion paper, we are still doing public consultation on our proposals, and we should be in a position to come forward with

recommendations on changing the way we derive release limits within the next fiscal year.

MEMBER McDILL: Thank you.

THE PRESIDENT: Monsieur Tolgyesi...?

MEMBER TOLGYESI: We heard today several times about CCME Guidelines, that CCME Guidelines limiting uranium content in soil to 23 micrograms per gram in residential areas, 33 for commercial and 300 micrograms per gram for industrial sites.

On what basis were these limits established?

DR. THOMPSON: Patsy Thompson, for the record.

I will make a few statements and I will ask Dr. Hemendra Mulye to speak in more detail in terms of how the standard was actually derived, taking into consideration different age groups for the different use types.

There has been a lot of work done over actually many decades on the toxicity of uranium, and Health Canada, along with other agencies, did work as well in terms of determining what levels of uranium would cause or would be associated with kidney toxicity, and it's based on that work and work done by

similar organizations in other countries that the level of uranium that would not cause effects on kidneys was developed, and that's the basis for developing the soil uranium standards which Dr. Mulye will explain.

MR. MULYE: Hemendra Mulye,
Environmental Risk Assessment Specialist.

The CCME *Soil Quality Guidelines*, basically, are developed using what is known as a tolerable daily intake, or TDI, which is actually calculated by Health Canada using animal studies.

So what they have done is, they looked at a very extensive database of animal studies conducted using uranium, either fed as through food or through drinking water and have observed and measured effects on the whole animal as well as different organs.

What they have found is that uranium basically is a toxic substance that affects the kidneys. It accumulates in the kidney and it causes damage there. However, the effects have been shown to be reversible, meaning that if the exposure is discontinued, the kidney then reverts back to a healthier state.

Having said that, the way the *Soil Quality Guideline* was developed was, basically, using

this TDI and factoring in an exposure scenario where the assumptions were made -- and these were conservative assumptions -- the assumptions were made that a typical toddler, for example, would be consuming soil containing uranium for 100 percent of the time -- 24/7 exposure, basically -- meaning that a toddler would be consuming soil and nothing else. In other words, there was an exaggerated exposure scenario applied to see what level would reach the TDI.

So using a back calculation they were able to come up with a number of 23 micrograms per gram uranium in soil.

It also takes into account, I should say, scenarios where, for example, accumulation or absorption in the body is assumed to be 100 percent. However, studies have shown that only about 10 to 20 percent of the ingested uranium is actually absorbed in the body and a small percent of that actually will end up in the kidneys.

So, as I said, there's safety factors built into the assumptions as well as there are additional overexposure scenarios included to come up with a high margin of safety.

So based on that, the CCME derived that particular number.

MEMBER TOLGYESI: Are these or similar limits in other jurisdictions or is it specific to Canada?

MR. MULYE: The number is comparable to other jurisdictions as well. For example, WHO has numbers as well as on exposures.

The studies have basically been done internationally; it is not unique to Canada. There is a lot of research that has been done in this field.

There are also natural exposures, for example, in Norway, where, in some areas, well water was found to contain high levels of uranium and they actually went and measured levels in people and found that, in fact, in this instance, 20 exposure was actually not really causing any effects that they expected there would be.

The main reason is that there is also some evidence that the body actually adjusts to a certain level of intake of uranium.

THE PRESIDENT: Thank you.

Ms Velshi...?

MEMBER VELSHI: It's a question for both GE-Hitachi and the CNA.

In your public information program I don't see any mention made of public opinion surveys,

something that we see pretty much all other nuclear facilities do with some frequency.

I know the CNA does public opinion surveys on a regular basis so I will ask the CNA first.

In your surveys, have you looked at this neighbourhood at all and, if so, is there any result that you can share on their support or lack thereof of nuclear power or nuclear energy?

DR. BARETT: Thank you. John Barrett from the CNA.

Just to answer directly, no, we have not surveyed this particular facility. We have looked at public support in Ontario in the context of the long-term energy plan, we have looked at public opinion across Canada in support of nuclear industry, nuclear power vis-à-vis other types of power, et cetera, but we haven't gone to -- we have looked at the communities around the facilities in Port Hope, Darlington and Bruce, because of the size of those, but we haven't done this yet.

MEMBER VELSHI: Thank you.

And GE-Hitachi, are you planning on doing surveys?

MR. DESIRI: For the record, Paul Desiri.

So what we do presently is we analyze media and public opinion through what we see in the mainstream media, online, but we haven't done any formal public opinion surveys.

MEMBER VELSHI: And is this something you may be considering in the future?

I guess the question is how are you measuring the effectiveness of your public information program?

MR. DESIRI: For the record, Paul Desiri.

So I guess we measure it by the interest level and also through the Community Liaison Committee. They are kind of our regular contacts that we have on a quarterly basis and we discuss how are we doing and how could we do better.

MEMBER VELSHI: So is a public opinion survey something you are contemplating in the future or may be contemplating in the future?

MR. MASON: For the record, Peter Mason.

It's not something that we had contemplated to date. It is something that we could put down as an action item to consider.

MEMBER VELSHI: Thank you.

MR. MASON: Mr. Binder, if I may, just to add to the recent discussion on limits, I would just like to remind the Commission of our discussion 2 years ago at our performance review, where we ourselves questioned the magnitude of the limits. And working with the CNSC staff we reset the limits to 1/20th of the formal limits and even there, as you can see from our charts, both ours and the CNSC, we are really a very small amount compared to the new limits.

But just for everybody's information, by our own request, they were reset to 1/20th of the regular limits.

THE PRESIDENT: Okay. Thank you.
Anybody else?

I have just a quick question for the CNA.

On Appendix A -- maybe it's for the GE-Hitachi. It's the first paragraph:

"In addition to the CNSC the facility is subject to inspection from a variety of other authorities, including Toronto Fire Department, the Ontario Ministry of Environment, the City of Toronto and the

IEEA."

The fire department for example, and the IEEA, do they do formal inspection?

MR. DESIRI: For the record, Paul Desiri.

Yes, both agencies do formal inspections.

THE PRESIDENT: And so does the City of Toronto?

MR. DESIRI: For the record, Paul Desiri.

Yes.

THE PRESIDENT: Anybody else?

MR. DESIRI: HRSDC, which is Human Resources and Skills Development. I think they may have changed their name, but that's what they used to be called.

THE PRESIDENT: Okay. Any others?

So thank you. Thank you very much.

The next submission is an oral presentation from Mr. Brian Holmes. His outline is CMD 13-M51.25.

Mr. Holmes, the floor is yours.

--- Pause

MR. KHALSA: He is not there. He is

not here.

THE PRESIDENT: You are not Mr.

Holmes?

--- Laughter / Rires

MR. LEBLANC: Sat Kartar.

MR. KHALSA: I love an open mic.

THE PRESIDENT: Okay.

MR. LEBLANC: Mr. Khalsa was to be after Mr. Holmes, so sorry for the inconvenience and we will proceed with Mr. Khalsa, which is the next one after Mr. Holmes.

THE PRESIDENT: Okay.

MR. LEBLANC: I just wonder, is Mr. Holmes in the room?

No. So we will consider Mr. Holmes' presentation as a written submission and deal with it when we deal with written submissions.

Thank you.

THE PRESIDENT: Okay. So sorry for this.

Mr. Khalsa will make his presentation. His outline is CMD 13-M51.26.

Please proceed.

13-M51.26

Oral presentation by Mr. Sat Kartar Singh Khalsa

MR. KHALSA: So Sat Kartar Singh Khalsa, that's my name. I am, as far I know, at least an 11th generation Canadian, and every time I have ever voted, my vote has never counted, so at least I get to talk. It's sort of a symbolic thing because nobody every listens. Well, they listen and then they disagree.

As you might have guessed, I am not here to mince any words, I am here to denounce nuclear power. I do not believe in it at all. I do this from a position of being a member of the Canadian public who doesn't consider himself ignorant or stupid.

I have been to university for six years, taken upper level physics courses, biology courses, chemistry courses, and am somewhat literate, literate enough to know that I'm sort of bored by the scientific mindset that assumes that it knows and can control nature.

When they started on this nuclear enterprise 50 years ago they didn't know what the hell they were doing. My Godmother died at a young age because she was a radiologist. Oops, they needed to lower the limits. One of my professors said, "Oh, the

funny thing about radiation is every time they study it they need to lower the safety limits". Well, maybe now the radiation limits are finally right. Maybe. We are supposed to believe that, but we still have to assume that things are predictable, nature is controllable, and we overlook the human factor.

I studied in university. I got my degree in sociology and the thing that they taught us is that all knowledge, including scientific knowledge, comes through people. Einstein, one of the greatest scientists, says the questions you ask determines the answers you get. In other words, if you are getting a salary you are not unbiased. If your livelihood depends upon the industry, you are not unbiased. It's never what you believe, it's who you believe. That's what sociology says.

My fundamental objection to the whole nuclear thing, besides all the health, et cetera, it's undemocratic. It was imposed on us, it continues to be imposed upon us. There is no -- we are treated as though we are ignorant and so our objections don't matter, and if we only would understand then we would agree.

What if we didn't? I certainly don't.

And even if it's all true that it's completely safe, the whole nuclear fuel chain necessitates the kind of society that is not democratic, it necessitates a military and security state. It necessitates that.

And my big concern about the plant down at Lansdowne is I don't see the security state too much. I don't think it is protected. I don't understand how it could be safe to have a plant just sitting there within a stone's throw of a person walking by. I don't understand how that is safe.

I was told at a public hearing that, you know, after 9/11, the security measures were updated and now they are updated and you have been given them and they are in secret and we don't know what they are, but I can walk up to the chain link fence and see nobody there and there's a hydrogen fuel tank. I don't understand how that's safe.

--- Applause / Applaudissements

MR. KHALSA: I also know that the latest thing in technology is robots. Apparently, the American military has them and can send them out and blow people up. They could also blow things up. Now, anyone who thinks that that technology is not going to proliferate has another thing coming. So a robot can

just fly in anywhere and blow something up and, guess what, bad guys can do that.

So I don't see how it's safe to create a hazard.

Yeah, go ahead, you say that, but we know that the technology exists, the technology will proliferate. So you are creating a hazardous risk.

In the Compliance Report -- which I read incidentally, and read the whole thing -- they say the biggest impact there, the biggest danger, is inhalation of airborne uranium dioxide particles. Well, if it goes boom there is going to be a lot of uranium dioxide particles up in the air.

So I'm going to go back to my text and I'm going to come back to some of these points.

The uranium processing facility here, if it didn't exist and we were asked, "Should we approve it", why? Why would we put it where it is? Why wouldn't we put it somewhere else? Why would we transport it through a major metropolitan area? Like, we are treated with so much -- we are not world class citizens here in Canada, we are just dupes. We are just sitting here being pawns. No other self-respecting country would say, "Hey, largest urban centre, let's transport uranium through it".

Would Israel have a no security perimeter around a facility like this? Get serious.

--- Applause / Applaudissements

MR. KHALSA: We spend billions and billions and billions of dollars, we are told, for security in this country against terrorism, meanwhile we have a processing facility right there and I see no evidence of any security system. And if there was a security system, that would probably cost millions, so just relocate the darned thing.

On the subject of democracy, I was disappointed.

AUDIENCE MEMBER: Shut it down.

MR. KHALSA: Yes, shut it down.

I was disappointed by Andrew Cash -- and thank you for his work to get this hearing -- but what does the community want? They lied to your faces. They said they were informing the public and they weren't. And there is no consequence for their actions. That's wrong. As a minimum, natural consequence they should have to do the hearing again and listen to people like me even if they don't like it.

MR. RUITER: That's right. We want justice.

MR. KHALSA: As a minimum we want to have the licence suspended. You guys have enough pellets on hand. We should have a new licensing hearing and the community should have it's say. And I believe that we should say no, no to the whole thing. But immediately we need it closed down.

MR. RUITER: (Off microphone) Do the right thing! Immediately suspend its operations until you can have a proper licence hearing.

MR. KHALSA: Much as I don't believe that you guys are an autonomous agent of anyone other -- you know, that you're free to act, I nevertheless don't believe you guys would say, "Hey, let's put a new uranium facility in downtown Toronto". I do not believe you would even bother to look at that. I don't even think industry would make that proposal. It's just 'cause it's there. It's simply inertia that keeps the thing going.

So it's not what you believe. It's who you believe.

Why should we believe this organization? They are bought and paid for. Why should we believe when they have lied to us consistently?

Why should -- the evidence that

you're going to decide whether they are operating safely as provided essentially by them. Why should we believe that? I don't see any reason to believe that.

Oh, and they send some of their uranium to Wilmington. Some of the -- a small quantity of pellets is fabricated for our parent company. Didn't they make nuclear weapons, those people? And what are they doing? What are they doing with that uranium? It's not mentioned.

And why are we supposed to believe they're credible when they use words to you who are scientifically literate like "natural uranium"? Uranium dioxide is not natural. Since when is it natural? It's processed. It's not natural. You're just using it as a euphemism, as a propaganda.

You have to decide whether you're -- and then later on they say, "Oh, part of our community outreach program would be to educate -- have an education campaign on greenhouse gasses". I don't see how that is relevant to the safety of the processing facility in question. That's just propaganda for the nuclear industry at large.

I also noted they said -- they did a self-assessment, two recommendations for facility hazardous waste procedures. I wonder what those are.

I don't know. I noted 900 grams is released into the water and it took over a million litres of water. I wonder if all that water was purified to make it potable before it was wasted by putting uranium in it. And I wonder how much further dilution is necessary to meet drinking standards because it wasn't measured to see if it met drinking standards and I don't think it met drinking standards.

I also wonder in the 50 years it's been operating since the limits have gone down, down, down what's the cumulative amount of uranium that's been put in the water?

And can any one of us seriously believe that this is a good thing for our society? Let's just treat toxic waste. Let's just dump it in the water. I think by now we should be environmentally aware enough to realize that process cannot go on indefinitely.

At best, uranium is a stop-gap measure towards a better system of producing energy or a decrease in the use -- undoubtedly a decrease in the use of energy. It's not a permanent solution. It can't last 200 years but the uranium that we produce, the waste, it's going to last a long time. How do you get it out of the water? It's pretty easy to dig it

out of the ground and dump it in.

--- Applause / Applaudissements

MR. KHALSA: Here is another example of how a bias of how neutral they are. They say fact: Nuclear energy produces no greenhouse gasses. Really? The trucks bringing it in, no greenhouse gasses. The mining, no greenhouse gasses. There's no radon release of all the mining and all these things that are happening?

I think that that is propaganda. That's an opinion. It's not fact.

So they have to decide. Are they giving us science or are they giving us self-serving propaganda? They're not clear, a clear source of energy that can be relied upon. And that's not a scientific statement.

I believe that people measure what matters to them. The proof is in the pudding. The GE employees of the last 50 years, I'd like to see an epidemiological study that looks at what their rates of kidney disease and other cancers that can be related to the work that they've done and see if there is an increase or not. That would be proof, not saying, "Oh, it was within regulatory limits".

--- Applause / Applaudissements

MR. RUITER: (Off microphone) That's the bare minimum!

MR. KHALSA: Bare minimum.

MR. RUITER: (Off microphone) It's been a year and we don't have that information. Where are the unions and where is the Commission if you can't --

THE PRESIDENT: Can you please wind it up, please? Can you please finish your presentation?

MR. KHALSA: Other people have measured the precautionary principle. I think that you need to prove that it's safe. I think you need to do ongoing health studies. I also think you need to respect the people who don't want it there, the people who are living around it.

They were not consulted and not given consent. If you think we're too stupid to give informed consent, respect your democratic rights to say no.

--- Applause / Applaudissements

MR. KHALSA: People talked about risk assessments and, you know, credible risk assessments. I think that credible risks -- terrorism is a credible risk. Accident is a terrible risk -- a credible risk.

I think that the risk analysis of the industry is based upon mathematical things that assume things. For example, one of the assumptions of probability analysis is that events are infinitely repeatable or under identical conditions, something that never actually happens in real life and it never applies to individual events.

And when we're talking about nuclear reactions one of my professors said, "Oh, scientists believe that probably there are unique events happening inside every nuclear reactor in the world. So you can't predict them". And, yet, we're told everything is safe.

It's not what you believe. It's who you believe. And I think we could have a beautiful happy world without nuclear power. I don't think nuclear power and the whole thing that's gone along with it has made for more democracy. It's not made for -- it hasn't been with the democratic consent of the First Nations peoples of this country.

--- Applause / Applaudissements

THE PRESIDENT: Okay, thank you.

Thank you.

MR. KHALSA: I'm going to say one more thing.

THE PRESIDENT: You are way over time. Could you wind it up, please?

MR. KHALSA: Yes.

There are obvious risks associated with this plant being where it is and the transportation involved and there are obvious remedies even at a minimum. Even if you agree with nuclear power, put it somewhere else.

THE PRESIDENT: Thank you.

A question?

--- Applause / Applaudissements

THE PRESIDENT: Anybody, a question?

Dr. McEwan.

MEMBER MCEWAN: So could I just ask staff, have epidemiological studies been done in power workers, in nuclear energy workers?

DR. THOMPSON: Patsy Thompson, for the record.

The answer is yes. There were studies done of nuclear energy workers, Canadian nuclear energy workers.

I'm failing to recall the period of the study but it would be easier -- it was just posted on the CNSC website. We've just had the study of nuclear energy workers was accepted in the British

Journal of Cancer and it was just posted on our website.

There's also studies that have been done that are probably more relevant to the GE-Hitachi workers, workers of the El Dorado cohort which included processing workers from Port Hope. Those studies have been done and we have no indication of increased rates of disease, kidney disease.

MEMBER MCEWAN: So Mr. Khalsa, would it help to send you the references to those?

MR. KHALSA: Yeah, I would be interested to read those.

But the GE-Hitachi workers themselves haven't been studied and we were told at a community meeting that no health effects were -- there was no attempt to measure the possible health effects in the community because it was already presumed to be safe.

I think what we're talking about is a presumption that uranium is dangerous, not that it's safe. Somehow, I'm just a dumb guy. Somehow it's all safe. That just doesn't fly with me. I don't understand how it's perfectly safe.

DR. THOMPSON: I was at a public meeting last December where I clearly said that contrary to what MPP Cash and others had said, the

statements were being made that the CNSC had never conducted any health studies. I specifically pointed to the health studies and I actually mailed a box of studies to MP Cash to get him to read the work that had been done.

So all of that work is available on the CNSC website and we can certainly make it available to the intervenor.

THE PRESIDENT: Thank you. Anything else?

Thank you. Thank you very much.

I would like to move on to --

--- Applause / Applaudissements

THE PRESIDENT: I would like to move on to the next oral presentation by the Canadian Nuclear Workers' Council and Mr. Dave Swan, as outlined --

MR. SHIER: It's a joint presentation.

THE PRESIDENT: -- oh, it's a joint presentation from the Canadian Nuclear Workers' Council and, well, you tell me both of you guys.

13-M51.32 / 13-M51.33

Oral presentation by the

Canadian Nuclear Workers' Council
and by Dave Swan

MR. SHIER: Well, good evening, Members of the Commission and Intervenors.

My name is David Shier. I'm the President of the Canadian Nuclear Workers' Council and with me is Mr. David Swan which is a worker at the GE-Hitachi plant. He is a Union Steward with Unifor and he is also a health and safety representative. Unifor Local is part of our Nuclear Workers Council so we decided to speed things up to do a joint presentation.

So first of all, as I indicated, from the Nuclear Workers' Council. I guess, for the benefit of the intervenors, what we are, we are a council of unions that are involved in the nuclear industry across Canada everywhere from the uranium mines and fuel processing to the nuclear plants to research and so on and so forth. And our main goal is to ensure that the voice of unionized workers in the industry is heard in the debate.

Our comments today are going to be specifically to the GE-Hitachi plant which the Unifor Local is a member of our council.

First of all I should comment on what Unifor is. You probably never heard that. That's a new union. It's Canada's largest private sector union. It's a combination of an amalgamation of the Chemical Energy and Paper Workers Union and the Canadian Auto Workers Union, now known as Unifor.

And from that perspective Unifor and their predecessor union take health and safety and environment as a very high priority. They've represented the workers at this plant for many years and getting around the idea nobody, you know, that lack of communication and nobody knowing that, well, I would question that in some ways.

For example, it's well known in the labour movement. The new President of the Unifor Union, Jerry Dias actually was for several years a service rep at this plant and at the Peterborough plant. So they're well aware of it in that regime.

In Ontario, the Ontario Federation of Labour which is the labour body of unions in Ontario, their Director of Health, Safety and Environment actually worked at this particular plant, GE-Hitachi, for many years and still appears on their employee list as well.

So around the question of people not

knowing who is there, I'd also have one question for the intervenors that I'm curious about. If you lived across the street from a facility for many years wouldn't you inquire on what is happening there? It seems like a practical question.

The other issue I would comment that the small delegation from the Canadian Nuclear Workers' Council toured the facility a few weeks back and we found that it's an old building. It had actually been around a long time but in very good shape and from our observations a very good safety culture and a very good program for workers. Everybody seemed to be very happy and productive.

And I think overall the best thing for me to do is to pass it on to my colleague who works at the plant and is very involved. Hopefully some of his views will help some of the intervenors, their questions that they may have.

I would say to the intervenors that there is 50 people that work at that facility who disagree with them 100 percent about wanting it shut down and those workers, many of them live in the communities as well in the vicinity. So again I don't see how nobody knew it existed.

So with that I'm going to pass it

over to Mr. Swan.

MR. SWAN: Thank you, David.

Good afternoon, everyone. My name is David Swan.

I'm from Unifor Local 252. I am a certified health and safety rep. Like many of you I'm just a normal guy who works for a living. I just happen to work for GE-Hitachi.

I am a family man, married with two young children. I've been a frontline nuclear worker at GE for eight years. I want everyone at these proceedings to know that I wouldn't be working at GE if it wasn't safe.

I know recently there has been a lot of concern regarding our safety of the plant. In fact, I had those same reservations. Now, before I accepted my position at GE I did my own personal research in the processing of UO2 and found it to be safe to work with. Believe me, I wouldn't be working at this job if it would jeopardize my health or the health of my family.

I've been elected both as a union rep, formerly CAW, now Unifor, and a plant and health safety rep. I conduct workplace safety inspections and then sit down and discuss them in monthly joint and health safety meetings.

I, or we, the employees of GE-Hitachi here in Toronto, are on the front lines and work directly with UO2. We process uranium into pellets that you have probably heard about or even seen on our website. I will tell you firsthand that safety is the first and foremost thing in everything that we do.

All steps of our procedures are carefully thought out and always have safety in mind. This ensures that each task being done is safe for each operator and for the environment.

We, the nuclear workers are very, very closely monitored which is part of the licensing agreement that we work under.

Every worker is required to wear a badge which monitors our uranium dosage every single day and then is submitted on a monthly basis.

We also are required to provide weekly urine samples. We have quarterly extremity dose monitoring and, as well, we have annual general health check-ups.

Not only are the nuclear workers closely monitored, but our working environment is as well. Every day within the Toronto plant our environmental health and safety team collects daily air monitoring samples in all areas of the plant. They

also conduct monthly surface swipes on floors, equipment and other surfaces to ensure that our plant is maintained and is a clean and safe working environment. In addition, we have a department whose sole responsibility is to ensure a clean and safe workplace.

Concerning the outside environment, there are air monitoring stations located around the plant that we take weekly samples from to ensure our neighborhood is contaminate free.

In addition, each employee changes into work clothes which are laundered on site and are not permitted to be removed from the facility. At the end of each shift, all employees are required to shower and change back into their street clothes before heading home.

The union and GE-Hitachi have a good working relationship. While we are not always on the same page, we are both committed to the health and safety of every single employee and the environment.

Working at GE-Hitachi is good. What makes this true? They are an employer that will listen to our concerns and take actions to improve them. Many times I've sat down across from Paul Desiri and expressed my concerns. In turn, they are discussed, a

plan is implemented and changes are made when necessary. Not only does GE care about their employees but GE is also a well-paying job, provides good benefits and plays a vital role in energy production.

Nuclear energy accounts for more than half of Ontario's power. Our plant provides approximately half the province's nuclear fuel.

We are proud workers and we are proud to supply this energy to fellow Ontarians. We are also very proud of our excellent safety record with our employer.

GE-Hitachi is a good employer and they care about us and they care about the environment.

I understand your concerns and I want to leave you with this. Knowing what I know from my own research, my involvement with the health and safety committee and my involvement in the union, I wouldn't have any problem living in a neighbourhood alongside the Toronto facility. In fact, my own brother and his family live just in that neighbourhood.

I thank you for including me in today's proceedings and listening to what I've had to say.

THE PRESIDENT: Thank you.

AUDIENCE MEMBER: (Off microphone)

MR. SHIER: Thank you, David. For the record, Dave Shier.

In conclusion we have a saying in the labour movement: Safe workers means a safe facility and make sure to -- it means it's safe for the community because anything that affects the safety of the community would affect the safety of workers first. And we feel that the barriers are in place and the systems are in place to ensure that that workplace stays safe.

Now, as far as making it risk-free we had one intervenor say today you've got to have zero risk. Well, I think we all agree we'd like to see that but it's impossible. We all take risks even getting here today and when we travel home this evening. But from our perspective it is a safe facility and there is a great process in place to ensure that it is safe.

To the intervenors, what we say to people is take a look at it over here. There is open houses on issues like that. Go and take a look. Learn about the industry. Learn about the facts and make your decision on facts and not emotions.

We thank you for the opportunity for our presentation and we are naturally open to any questions you may have. Thank you.

THE PRESIDENT: Thank you.

Questions? Mr. Tolgyesi.

MEMBER TOLGYESI: Tell me -- this is to Mr. -- I'm sorry -- Swan. You are a union rep --

MR. SWAN: That's correct.

MEMBER TOLGYESI: -- and health and safety rep. So to what extent you are involved in radiation protection?

MR. SWAN: Well, I'm on a committee and we, well, review all radiation data from the TLD badges to swipes. We basically compare them to the limits and if any limits are exceeded, then an investigation is launched.

MEMBER TOLGYESI: What is the region of programs? You know, do you have propositions of how it's done when you have new programs on health and safety?

MR. SWAN: I can't really answer that question. I'm going to have to pass you over to GE-Hitachi for those answers.

MEMBER TOLGYESI: No, what I'm asking, do you know how -- in your perception, when you develop a new program how far you are involved in that.

MR. SWAN: Oh, there's a lot of employee involvement.

MEMBER TOLGYESI: Are you involved or, you know, the program is coming from Hitachi and they are saying this is what we will do and after, okay, you will discuss the results?

MR. SWAN: Well, no, we sit down as a committee. New programs are discussed and there is a lot of employee involvement. It's equal.

MEMBER TOLGYESI: My last is, when you're talking about environment and one is with health and safety and another is environment, to what extent you are involved in environmental issues? Are they discussed?

MR. SWAN: Inside the facility very involved, but outside the facility we're not involved.

THE PRESIDENT: Anybody else?

How many people -- to your knowledge there is 50 employees. How many of them live in the community, do you know?

MR. SWAN: The exact number I can't comment on. I don't know.

THE PRESIDENT: Roughly is it half?

MR. WARD: (Off microphone) How many --

THE PRESIDENT: Maybe GE-Hitachi can -- do you know how many live in the community?

MR. WARD: Yeah, Marc Ward, for the record.

There is approximately about five, I'd say, that are within walking distance and then the rest of them are probably within about a 35 to 40-minute drive.

THE PRESIDENT: So I assume they have family, they have kids. I'm trying to understand whether they talk about nuclear to their neighbours, you know? I'm trying to understand whether -- you know, they must have seen the kind of angst in the last two years.

MR. WARD: Yeah, for the record, Marc Ward.

Yes, they do, and some of them were actually at the open house a year ago that we had when we were revamping our program. And some of them were there and actually spoke. So I'm sure that they are talking within the neighbourhood.

As David said, he has a relative that lives close in the area and there's other generations there that have relatives within the area as well that of course would be aware of it and would be talking about it.

THE PRESIDENT: So your brother who

lives down the street, does he talk to his neighbours?

MR. SWAN: Yeah, he would. Yeah, he has.

THE PRESIDENT: Does he tell them about nuclear? I'm trying to figure out if --

MR. SWAN: Well, he speaks to me about it.

--- Laughter / Rires

THE PRESIDENT: Okay. Any other questions?

Okay, thank you. Thank you very much for this intervention.

MR. RUITER: (Off microphone)

THE PRESIDENT: The next presentation is an oral presentation from Dr. James Deutsch. It is outlined in CMD 13-M51.56.

Mr. Deutsch, the floor is yours.

13-M51.56

Oral presentation by James Deutsch

DR. DEUTSCH: Okay, thanks for their rescheduling me because I have to teach later this evening.

So I think most of us here are fully

in support of good union jobs and, also, I think there is a concern around how occupational health actually works on the ground.

So I teach at the Faculty of Medicine and prior to my medical training I worked with various radioisotopes as part of my Ph.D. and post-doctoral work in biochemistry which was in California.

In the various laboratories in which I worked, I experienced firsthand how even the most educated and trained individuals can make careless mistakes.

I live a fairly short bike ride downwind from the GE Hitachi plant, and one of my kids lives within several blocks.

I'm extremely concerned the more that I look at it of disasters waiting to happen in or around the plant.

A recent CNSC document on Safety Culture does not reassure me. I find the parallels between the nuclear field and my own, medicine, in terms of the potential for industry influences on standards, measures, guidelines and knowledge acquisition as well as knowledge dissemination and transfer.

Where does this culture of safety

come from? And what qualifies the people who decide on the standards of determining what is "safe and acceptable"?

Like the tobacco and pharmaceutical and fossil fuel industries, the nuclear industries have refined the art of obscuring reality.

The term "normal background radiation" obscures the fact that the newly created manmade radiation in reactors is in the form of new elements, many of which exert their toxic affect once they are incorporated into the tissues, organs and cells of the organism.

One nuclear reactor produces vastly more nuclear poison than was released by any of the nuclear bombs.

Biological organisms can vastly concentrate these elements and, hence, their potential damaging effects.

The race to produce fuel has left immense piles of uranium tailings which give new meaning to the singer Bob Dylan's "Blowing in the Wind."

But we humans evolve with most of the uranium in the ground safely away from our DNA. As people know, uranium emits alpha particles. It's

relatively harmless outside the body. The industry loves to tell this one-sided part of the story.

If inhaled or ingested it is another story. These particles, two protons and two neutrons, can do major damage up close to DNA molecules especially in women, children and fetuses.

There is still much to learn about the medical aspects of exposure to external and internal radiation. It's at an early stage.

I was just at a conference a couple of weeks ago on recent advances in genetics. The science continues to reveal how extraordinarily complex the genetic and other cell mechanisms are.

Recent discoveries regarding epigenetic and whole genome effects call for a fresh and urgent look. There is an increasing array of mechanisms short and long-term and transgenerational, meaning that the effects may not even be detected for one or more generations subsequent to the initial exposure.

So, you know, when you look at workers or neighbours or whatever, you're not seeing the whole story. And it's a cross-section in time only that you're looking at.

Increasingly, it's clear that not

only cancer can result, often, after years or decades, but also teratogenic effects, meaning birth defects, chromosome damage, inheritable diseases along with a general increase in disease susceptibility.

So this is another point, is that gradual weakening of the resistance of the general population to disease. So it's not a kind of you either have cancer or not.

It seems that there's been an extra effort to magically undo this nuclear horror. Witness the glowing promises of Atoms For Peace and Electricity For All, while minimizing the probabilities for things going wrong. It's like Russian roulette. There may be numerous barrels in the gun, but at least one of them does have a bullet in it.

Why is there not open data on the numerous releases, accidents and near catastrophes and health effects?

Medical standards require full disclosure and informed consent. Reputable medical journals are now reporting the sequellae of Chernobyl, the reactor accident, and Fallujah, Iraq, where actual depleted uranium, where uranium-238 was used in munitions.

The illness and death from Fukushima

won't be evident for years or decades, and yet people are saying that it's perfectly fine, nobody died.

Any death is tragic, but in the case of the nuclear industry what is being hidden is a potential for unimaginably massive catastrophes.

Rather than probabilities and predictions, let us shift our focus from what might happen to what has actually happened, at Sellafield, Hanford, Oak Ridge, Savannah River, Chalk River, Three Mile Island, Chernobyl, Fukushima and on and on.

The fact is that numerous trucks carry tonnes of uranium powder on the streets of Toronto to and from the plant. It sits right by the railroad tracks that carry the very same tank cars that exploded at Lac-Mégantic.

I had the privilege last week of meeting at City Hall, with my city councillor and also some members of Toronto Public Health. It really brings up for me the question to what degree our knowledge of basic science and physiological mechanisms can serve as a so-called red flag that would trigger an investigation or intervention by Toronto Public Health.

From the information that I gathered, it's not entirely clear how the uranium powder is even transferred. And this is within the knowledge-base of

Toronto Public Health. It may be in sacks. These sacks may be in barrels, or it may be in barrels.

There are very few details that I was hearing about the actual process, from the receiving of the uranium powder off the trucks through the various steps, ending up in the ceramic pellets.

I'm not sure if there has been a full accounting made available to anyone of this process. And I would really like to ask Toronto Public Health to let this meeting know exactly what their knowledge is about this process.

I know that there's a negative pressure room. I used to do chemical modifications of protein. One of them involved the old World War I nerve gas. And the stupid fume hood blew a fuse while I was doing it. Now, fortunately, I had my gas mask on and I had a syringe of atropine in case I needed it. But, you know, this was after much practice and, you know, well into my training that this happened, and the fume hood blew a fuse.

Now, we know about it around here that we're getting more and more floods, microbursts, you know, high wind and extreme weather events, power failures. This is going to become more of the norm than before.

I was also told by Public Health that there is an open invitation for the public to visit. But, you know, this is different from visiting -- Toronto Public Health visiting unannounced to see what's happening at any given time.

You know, you can obviously clean the place up if there's going to be a scheduled visit especially by members of the public.

I also heard that the residents are satisfied and that there have been no concerns raised. And we know for a fact that that's very, very untrue.

I heard that Toronto Public Health is comfortable with the results of the soil testing. I hear that there were five different stations that sample air around the plant. And I'm questioning, why not have a sampler that's right in the stack? Wouldn't that be more of a measure of what's actually going out, at least in the air?

So, I guess, the other point that I'm hearing is that the regulatory and monitoring agencies such as the CNSC, the Ministry of Environment of the province, Toronto Public Health, they are not entirely arm's length from the process. This is becoming more and more clear to me just walking in to community meetings. I'm seeing people have booths there.

They're ready to answer questions.

And I don't think it's in the line of answering questions from a concerned public, but rather it seems to be more directed towards reassuring the public just by their very presence even.

And I think that if we look at regulatory agencies and standards from the UN and the IAEA and WHO that have an arrangement to check in with each other before they come out with any concerns, on down right through all the various regulatory bodies, that they're not being questioned actively and aggressively by the protectors of public health of the citizens.

It's just too possible for someone to be asleep at the switch literally, as was the case with Lac-Mégantic.

So I'll finish with that in my recent viewing of public information releases from the CNSC, I think they've done grave harm to their own reputation as a regulator and guardian of public safety recently by endorsing and publicizing a biased opinion piece in the *New York Times*, a highly distorted documentary film, *Pandora's Promise*, and actually criticizing the *Toronto Star* for an article covering a truck accident in the States involving nuclear materials. And we know

that there have been more incidents since.

So if the CNSC isn't in fact a watchdog, why is it more and more appearing as so to speak a lapdog of the industry? It's transparently declared itself to be a clearly pro-industry organization.

Even their slogan, "Safety is in our DNA," is -- I mean, it's a parody, actually. It's kind of a slip, what we would call a Freudian slip there that in fact it is -- it's our DNA that is not safe, as we know that uranium binds directly and closely to the DNA.

--- Applause / Applaudissements

MR. DEUTSCH: So there are numerous jobs, innumerable jobs to be created in conservation such as retrofitting of buildings, public transit and badly needed infrastructure repairs. It's time to be not pro-nuclear, but pro-health.

And I'd just like to request, if I can, that Toronto Public Health clarify some of these questions around what is the exact process that goes on in the plant, step-by-step. And that's really to look at what can go wrong because, believe me, I worked in the labs for 10 years with radioactive material. I've seen just about everything go wrong that can.

And the other part has to do with other studies and surveys of nuclear workers, maybe not at this GE plant, but elsewhere in other jurisdictions, including Peterborough.

Thank you.

THE PRESIDENT: Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Question, Dr. McDill?

MEMBER McDILL: Not so much a question as a comment. And this is to GE.

In your public information program, do you have a flow chart which shows, from the arrival at your door to the exit, the kinds of steps that the uranium goes through?

MR. DESIRI: For the record, Paul Desiri. So on our Web site there's a video of how pellets are made.

MEMBER McDILL: Does it go from the beginning to the end?

MR. DESIRI: Paul Desiri, for the record. It summarizes the overall process.

MR. DEUTSCH: If that's the one I've seen it doesn't show it at all.

THE PRESIDENT: I think you can go and visit. I think they were doing public tours, and

you can go and actually see the stuff. I went right through this.

MR. DEUTSCH: Not everybody has the luxury of time to do that. And also, I'm not sure I want to --

THE PRESIDENT: Well, if you want to know, you'll have to invest the time to go and look at it.

MR. DEUTSCH: No, that's the job -- that's the job of this company. They have a responsibility to the public. They're a corporation. They're one of the major global manufacturers of weaponry, including components of nuclear weapons, of -- you know, they're involved in the nuclear power industry. It's their responsibility to show transparently what goes on.

I mean, this is nothing new. This is not -- this is just one example. It's been very untransparent, very obscured. And I think that after a while people get tired of it. You know, it takes so much effort.

So that's, I think, what we've seen, that people are waking up.

THE PRESIDENT: Okay. Thank you.

Dr. McDill, finished?

MEMBER McDILL: I'll ask the intervener a question then.

Would a scientific type, but in regular language, flow chart be of assistance to you, if the video was not -- I haven't seen the video, to be honest.

MR. DEUTSCH: Yeah, one of my daughters just ordered a cookbook. It's for professional chefs. That's what I'd like to see for the GE plant. It tells you step-by-step what to do and how. What are the ingredients? What do you do with them? What not to do. What to watch out for. All of that. It's not so hard.

THE PRESIDENT: Thank you.

Anybody? Monsieur Harvey?

MEMBER HARVEY: Maybe we could ask the staff to elaborate on the role of CNSC because, in his presentation, Mr. Deutsch mentioned about the pro-industry organization, talking about CNSC. So because of some reaction of CNSC in the papers or elsewhere.

So could you explain what is the role and responsibilities?

THE PRESIDENT: I will also invite, in the meantime, if the Toronto Public Health agency

wants to come in and address some of the issues, feel free. Now is the time.

Staff?

MR. JAMMAL: Ramzi Jammal, for the record. The CNSC is an independent regulatory body. The allegations being made with respect to (1) we're trying to disseminate information. It's a requirement under the *Act* in order to disseminate information.

In disseminating the information, some of the public's going to accept it as a dissemination of information, inviting the public to look at elements of what we publish, or let it be a movie or an information session.

But under the *Act* itself we must disseminate scientific information and inform the public on the activity of the CNSC. So that's why on our Web site we've got a variety of publications from fact sheets, scientific papers, epidemiological studies. We heard about nuclear energy worker studies, uranium mine studies, radon progeny studies. So all these, the publication does exist.

And the CNSC is the only independent regulatory body in the world that has the transparency that we are living today; the transparency that we lived in the DGR, where the public appears in front of the

Commission and provides their opinion and intervention. We are the only regulator in the world that has such practices.

We are one of the regulators in the world that disseminates information by the *Act* and by the law. So the actions by the CNSC staff are independent. Our inspectors, my inspectors can issue the order independently of myself or anybody. They have their own powers to do so. And the same thing is the final decision lies with the Commission as an independent regulatory body.

THE PRESIDENT: Public Health?

DR. YOUNG-HOON: Dr. Young-Hoon, Toronto Public Health. I'm glad that Dr. Deutsch brought up this question because I think it's important to point out that we are not the primary regulatory body for this site or for -- for this site and the regulatory body for nuclear facilities.

And so under our legislation, which is the *Health Protection and Promotion Act*, under, I believe it's either Section 11 or Section 12, we are expected to work with the primary regulatory bodies, so that would be CNSC, MOE, in ensuring there is no public health impact. And so that is what we have done.

And we've reviewed the data that's

been provided by CNSC and MOE, and there's no indication that there is currently a health hazard to Toronto public health from this sites. And that is what we are expected to do.

THE PRESIDENT: Thank you.

Anybody else --

MR. DEUTSCH: So can I reply to that briefly?

So, I mean, my questions are really -- to my distinguished colleagues -- are really to -- what is the process? Where are the points where it can be spilled on the floor? Where it can enter into the air? I understand that the workers, at least from the video I've seen, they're not wearing -- they're not wearing respirators or a face mask. I mean, that's really a basic level of precaution.

So the other thing, though, is around if you look at the history of occupational health, I mean, who is occupational health for GE Hitachi workers? I'd like to know that. Who do they work for? Who pays them?

And I think in terms of Toronto Public Health as -- you know, as I raised in the meeting last week, who makes these standards? Where do they come from? I mean, we have a vacuum in terms of

leadership at the top these days, whether it's locally or internationally, in terms of conscientiousness and concern for individual people and their health.

THE PRESIDENT: Have you read all the documents that were presented by staff and by Hitachi, the actual Commission documents? Have you read them?

MR. DEUTSCH: I haven't read all of them.

THE PRESIDENT: Well, most of the --

MR. DEUTSCH: But I've read your emails, and, you know, you're sending --

THE PRESIDENT: No, no, no.

MR. DEUTSCH: -- you're promoting things.

THE PRESIDENT: You mean, you didn't read the actual documents that were presented by staff and Hitachi in terms of -- and the Ministry of Environment and the measurements and all the data?

MR. DEUTSCH: I've read a lot of them. Now, whether I've read 100 percent, no, I haven't. But I've skimmed a lot of them, too, and I'm really looking very carefully -- when I read a scientific publication in my field, I'm looking for evidence of bias; who funds it; what's the methodology, like I'll go right to the methodology. I'm not

reassured by this.

And, you know, frankly, promoting that documentary *Pandora's Promise* that is not within your purview of disseminating information.

THE PRESIDENT: We did not promote it. We just made it available to anybody who was interested.

MR. DEUTSCH: What's the difference?

THE PRESIDENT: It was actually put on CNN, and we pushed it on our mailing list. That's all.

MR. DEUTSCH: Did you push other anti-nuclear --

THE PRESIDENT: Absolutely. All the document -- all the interventions are now on the records. All our records are in all proceedings, including yours.

MR. DEUTSCH: What about the --

THE PRESIDENT: Yours will be in the proceedings and online. Anybody can go and download it.

MR. DEUTSCH: What about the *Yellowcake Trail*?

THE PRESIDENT: Excuse me, can we proceed with Commissioners asking questions? Anybody

has any more questions?

I got a question for you. What about nuclear medicine; do you believe in nuclear medicine? You are an MD in University of Toronto. What about nuclear medicine and all the isotopes deployed thereof?

MR. DEUTSCH: Oh, of course.

THE PRESIDENT: Of course what?

MR. DEUTSCH: Of course I believe in nuclear medicine.

THE PRESIDENT: But, I mean, are all the issues about every one of single DNA created by any one of those? Every time we take CT-scan using all of those things, aren't we faced with the same kind of risk?

MR. DEUTSCH: Yes, and that's why I think there's a significant overuse of CT-scans. It has to be respected greatly in terms of the radiation to the body.

I haven't had a dental x-ray in quite some time. I may regret it later on, but I know what it does. So it's at an absolute minimum. If it's a life saver, if it's necessary for a life-saving diagnosis, sure, but that's very different from workers being exposed every day and neighbours being exposed, and all the poisons that you create with your industry.

THE PRESIDENT: Thank you. Any final words?

MR. DEUTSCH: Well, the other thing is that there's no made in Canada on any of this uranium. It's mined on Indigenous land. You're trying to get it buried on Indigenous land. And it can go anywhere in the world. There's no label on there. There's no little barcode that tracks, you know, the uranium to see where it ends up in the world. That's pretty scary to me.

THE PRESIDENT: I don't know what you mean, but there are always -- every exporting from Canada has to go through a very precise accounting for every atom of uranium.

MR. RUITER: Which they used in India --

THE PRESIDENT: You are wrong about that. That was way, way before all of us even existed.

MR. DEUTSCH: It's part of history.

THE PRESIDENT: Whose history?
History that you want to believe.

Okay.

MR. DEUTSCH: It's your history.

THE PRESIDENT: I think we've had enough of that. Thank you for your intervention.

--- Applause / Applaudissements

MR. LEBLANC: So we will take a one-hour dinner break. We'll resume at 7:30.

I'd just like to know if a Mr. Fiori is in the room as our next presenter? If you are, please identify yourself at the reception desk. Thank you.

--- Upon recessing at 6:33 p.m. /

Suspension à 18 h 33

--- Upon resuming at 7:31 p.m. /

Reprise à 19 h 31

THE PRESIDENT: Okay, we're ready to continue, to resume.

I would like to move to the next submission, which is an oral presentation from Mr. Jonah Schein, MPP Davenport, as outlined in CMD 13-M51.33.

Please proceed, sir.

13-M51.33

Oral presentation by Jonah Schein

MPP Davenport

MR. SCHEIN: Thank you.

I want to start by thanking you all for the opportunity to present here today. My name is Jonah Schein and I represent the provincial riding of Davenport in the Ontario Legislature.

I want to especially thank the CNSC for coming here today and for obliging the request that we made to move the meeting from Ottawa to Toronto so that people in our community could have a chance to speak and hear from you directly.

I recognize, to begin with, that the facility is mostly regulated by the federal government but I think it's important that I'm here to represent my community.

I was elected at Queen's Park in October of 2011 but it was just over a year ago that I first learned that GE Hitachi operates a uranium processing facility in my riding at 1025 Lansdowne Avenue.

I grew up on St. Clair Avenue West and have lived and worked in the Davenport West community for many years but in all that time I never heard of this facility until I read a story about it in the newspaper, and this was the same case for many people in our community, including many people who were

longtime residents.

So when news of this facility broke out in the newspaper, many residents were really concerned. They were concerned about the safety of the facility, they were concerned about their health and the health of their families, and they were upset that they had not known about a uranium facility that was operating in their own neighbourhood until they read about it in the newspaper.

In the year since we first learned about this issue, I've partnered with our local Member of Parliament Andrew Cash, who I believe was here earlier today, and I partnered with Mr. Cash and local residents to get information for our community to bring accountability to this facility and to ensure that constituents are safe.

On December 8, 2012, MP Cash and I hosted a community meeting where residents came together to express their concerns, to learn more information and to ask questions about the plant and about the CNSC's role in oversight of this facility. That meeting allowed local residents to start to get some of the answers that they are looking for from the CNSC.

CNSC employees Patsy Thompson and

Peter Elder, who is here tonight, attended that meeting and I hope that they have described it to you.

At that meeting we heard from families who live close to the facility who were concerned about the safety of eating the food that they grew in their own gardens, we heard from families who were worried about the safety of their children playing in local playgrounds and schools and parks, and we heard from residents who questioned whether the operations of the GE Hitachi facility had contributed to their specific health problems. This is why I requested that the Ministry of the Environment conduct soil testing earlier this year.

But there remain unanswered questions about the GE Hitachi facility on Lansdowne and the CNSC's commitment to oversight. Residents still want to know why they were not informed that for years this plant has processed nuclear fuel pellets within blocks of their homes and residents remain concerned that the facility has not been open or transparent with our community. This lack of transparency reflects badly on the company and on the CNSC, whose duty is it to enforce Regulations and provide oversight for this facility.

Principles of accountability and

transparency are not only important to our community, they are in fact outlined as part of the conditions placed upon licensees and applicants in the CNSC Staff Report on the Performance of Uranium Fuel Cycle and Processing Facilities for 2012.

In item 1.4 titled "Public Information and Disclosure Program," the CNSC Report states that:

"Licensees have an important role to inform the public about their nuclear facility and activities."

It also lists requirements for a public information and disclosure program which include the following:

"...development of strategies for open and transparent communication of information, establishment and implementation of rules for public disclosure of information, review and evaluation of the public information and disclosure program for effectiveness and the identification of

improvements and documentation of records to demonstrate that public information and disclosure requirements are met."

According to the CNSC's website, these new regulatory requirements were published back in March 2012 as RD/GD-99.3 Public Information and Disclosure, and that is months before the news broke of the facility.

And yet, people in our community can tell you that communication from CNSC and from the facility in question only improved after our community united and mobilized to get this information. Our community only became aware of this facility months after these Regulations came into effect and not because the facility took steps to outreach and inform the community but because a reporter broke the story in the newspaper. This behaviour from the facility and from the CNSC does not inspire confidence in our community.

I also want to make sure it's understood that before these new Regulations were published in March of 2012 there was still a requirement for the facility to have a public

information program. This was mandated under Regulatory Guide G-217, Licensee Public Information Programs, a document that was originally published by the CNSC back in 2004.

So to be clear, the requirement for a public information program existed long before news broke of the facility and long before the facility was approved for a 10-year licence renewal back in 2010. Not only was the facility not doing its job in maintaining a proper public information program since at least 2004 but it seems that the CNSC failed to do its job to ensure that the licensee was in compliance.

So it's important once again to ask the CNSC why they granted a 10-year licence renewal in 2010 with little to no public awareness? Why did they renew the licence for 10 years when the facility clearly did not meet the requirements of the public information and disclosure program?

Now, I know the letter that was signed by Commission Secretary Mr. Marc Leblanc to our office stated that the purpose of today's public meeting is not to reopen the licensing process or to discuss reasons for renewing the plant's licence in 2010, that the purpose of today is to update the Commission with the information on the safety and

compliance of the facility's current operations, but I have to say that in order to discuss compliance of the facility's current operations there needs to be some recognition of the facility's history of compliance.

People in our community wonder if we would have ever learned about the uranium processing operation from GE Hitachi or from the CNSC if the story had not been published in the newspaper. Would we even know of its existence the next time it came up for another 10-year licence renewal or would we have had to find out the hard way, at the time of an emergency or a potential accident? I think that's a frightening thought.

It seems clear that the CNSC did not take the requirement for a public information and disclosure program seriously leading up to, during or following the licence renewal, and it's clear that the improvement in communication has been reactive and the result of pressure that our community has put on the Commission and the facility.

When you have facilities located in neighbourhoods where people live and work and go to school, you owe it to that community to be transparent, to be accountable and to build a working relationship with them. You have to do this work to earn your

social licence to operate in the community and failing to do so damages that trust before it can even be developed.

I'm going to return to comments that local resident Dawn Withers said at that community meeting back in December 2012. Referring to Commission transcripts, Ms Withers wondered:

"If one of [GE-Hitachi's] terms of commission ... was to inform the community and if that could not be verified [by the CNSC] - and that would have been easily verified - then how can we be reassured that the other things that they were supposed to adhere to in terms of danger to the community were adhered to...?"

Given the facility's history in Davenport, it's not surprising that some community members do not trust GE Hitachi to fulfil the other conditions of their licence, including those relating to health and safety, when it failed to fulfil the public information and disclosure program conditions.

And it is also not surprising that

the community members question whether the CNSC can be trusted to protect their health and safety when they could not be trusted to ensure this basic level of accountability and transparency from the facility.

Davenport residents need to be reassured that GE Hitachi is adequately informing both the CNSC and the community about their activities and that the CNSC is doing their due diligence to ensure that this is occurring.

Going forward, the CNSC needs to provide better oversight of GE Hitachi's activities in the community to ensure that community members' interests are protected.

Certainly, facilities that are not meeting public information and disclosure program conditions should not be given new 10-year licences, and if the facility has nothing to hide, then they should have no concerns about being transparent with the public and opening up their licence for review.

It is incumbent on the company to earn its social licence and to earn the trust of the community and it's incumbent on the federal regulator to regain the public trust in their commitment to oversight and accountability of the industry because it is clear that the facility did not meet the conditions

required and that's why I ask the CNSC to reopen the licence to ensure that the public is properly informed.

I want to thank you for taking the time to come to Toronto today and for listening to our communities and I appreciate the time here to speak tonight.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

Monsieur Harvey.

MEMBRE HARVEY : Merci, Monsieur le Président.

My question is addressed to the staff.

At the end of his written presentation there is a sentence there:

"Community members worry that if GE Hitachi was not fulfilling the PIP conditions set out in its license, how can they be sure that other conditions relating to their health and safety are being met?"

My question is: To what extent was GE Hitachi not in compliance with the licence, and if so, what was done by the staff to ameliorate or to

bring Hitachi in compliance with the licence?

MR. ELDER: Peter Elder. I'll start.

Two things I'd like to state on this one is at the licence renewal in 2010 staff did require GE to improve its public information program. This was during the licensing process. So in between that time there were two hearing days. We made comments about their program on the first hearing day and said it was not currently acceptable and had them revise it before the final decision was made by the Commission.

Since then, we have noted that there has been a new document that was released in March 2012. This is not a regulation. This is a regulatory document in terms of it's not immediately effective in all the licences but we did contact the licensees and said, you must have a transition plan to go to this new requirement.

And I'll ask Mike Rinker to say how we approached those.

THE PRESIDENT: Before you do that, just for clarity, remind me again, in 2010 in the hearing, if memory serves, you already found -- this is before it became real public knowledge -- you already found that GE Hitachi did not have a proper public information program?

MR. ELDER: We had concerns about their public information program, so we had them revise it before the licence was issued.

And we also, for the first time in 2010, introduced the condition of licence that they actually maintain that program throughout the licence period and not just do activities around licence renewal.

THE PRESIDENT: Okay.

MR. ELDER: So in terms of status, I'll ask Aimee Rupert to give you a status of our reviews of the public information program.

MS RUPERT: So currently, the public information program by GE Hitachi does meet the requirements of 99.3 Public Information and Disclosure Programs. The purpose and objectives of their new program is to continuously foster public awareness through a variety of new initiatives.

It is also a requirement of 99.3 that licensees' programs and implementation be actively managed and adapted to reflect the public's perception of risk and level of public interest in their activities.

It's also very important to note that the CNSC will continue to enforce those requirements

under 99.3 and monitor and evaluate the implementation of their program and their engagement activities and public awareness in the community.

THE PRESIDENT: So, we now have annual reports. So what would you expect to see next year?

MS RUPERT: Well, obviously, taking into account everything that's been discussed here today, public views should be analyzed and we would like to see any improvements/changes to their public program. That should be documented as well. And also, the suggestions brought forward through their Community Liaison Committee, we would like to see any of those recommendations activated as well.

THE PRESIDENT: Monsieur Harvey.

MEMBER HARVEY: Well, it's a little bit vague. You have very precise points that have to be met by GE Hitachi in that program if we compare it with other facilities.

MR. ELDER: Peter Elder for the record.

What we want to say is that, as it's been pointed out, the program has to reflect the needs of the community. So it does have to be evolving to meet the evolving needs of the community. So, you

know, it's not static and saying on paper you have a good program. You also then need to implement it and get the feedback from what the community is saying to continuously improve that program.

And where we are now, as Ms Rupert said, is on paper they have a program that is compliant with the standard. We've also asked them to give us quarterly reports on the implementation so that we can closely monitor that they're actually doing the activities that they said they were going to do. So we have looked at and we are closely monitoring the compliance of that and that they are doing those programs. And similarly, we closely monitor that they do have those built-in feedback mechanisms that take the results of the public interests and build them into improvements into the program.

MEMBER HARVEY: And just for an example, we were talking of surveys. Is there any obligation or any citation requirements about the survey, because this is way to well understand the needs and the wills of a population around the facilities?

MR. ELDER: I'll ask Ms. Rupert to give a precise, but it does not require a survey. It requires some means to identify the public attitude.

There has been a lot of discussions, actually, in other hearing around: are the surveys the best mechanisms? They are certainly one type of mechanism that can be used.

I'll ask Ms. Rupert to respond to this as well.

THE PRESIDENT: Mr. Schein, you are obviously a member of the community here. Many times that we've been skating about what needs to be done. Maybe you can suggest area where the public information can be improved.

I don't know if you actively engage with GE Hitachi and try to help them actually come up with a good program.

MR. SCHEIN: Sure,

So I mean I think -- you know, I didn't say this in my comments earlier, but I was not -- as I said, I wasn't aware of the facility until I heard about it in the newspaper. I wasn't engaged by the facility until after that, at which time I got a tour of the facility.

You know, even though nuclear mostly falls under the jurisdiction of the federal government, I expected, as a local representative at any level, that I would have been invited in and made contact

with, you know, far earlier than I had. I wonder if that is part of the record that has happened here in the past: Do local politicians? Have they been informed of what goes on here?

I mean I know, clearly. What concerns me is that it's clear that people have no idea about the facility. The vast majority of people had no idea about it. And it concerns me that the CNSC would identify that there was a problem, and then give the facility within 24 hours, it seems like, to address that problem, and then give it a 10-year renewal.

I'm not sure. Correct me if I'm wrong, but don't know that we always had 10-year licence renewals. I have no idea why a 10-year licence renewal, a renewal that long would be granted so soon after hearing that --

--- Applause / Applaudissements

MR. SCHEIN: -- it was so clearly not in compliance with this basic part.

THE PRESIDENT: Staff.

MR. JAMMAL: Ramzi Jammal for the record here.

As the Chief Regulatory Operations Officer, I really have to set the record straight here with respect to oversight of the CNSC.

We reviewed the application of the applicant, we looked at the safety case with respect to safe operation, and the recommendation that was given the Commission was based on facts with respect to the safety of the facility.

Yes, we identified deficiencies in the program, and in specific for the Public Information Program. The issue here is, we put in place requirements to enhance that program. Looking at the risk assessment for the facility, we have taken the oversight to improve that Public Information Program. That's where we are today. So the updates to the Commission will be done on a yearly basis.

The outcome of this meeting, and actions arising from this meeting, will be directed to be implemented by staff in order to have continuous enhancement.

So the 10-year is not new to the CNSC. The 10-year licence has been granted by the CNSC. As a matter of fact, the CNSC had "indeterminate" licence. The licensing term has no issue with respect to regulatory oversight. We evaluate the risk assessment. We evaluate the performance of the licensee. Based on the risk to the health and the public, we will take action.

In this case several things occurred. As the application was presented, improvement to the program by the applicant was presented. In the meantime, the CNSC came up with a much more expanded upon regulatory document as a guidance, and we are right now in that implementation phase.

We were satisfied with the program as a take-off point, and right now we are working on the implementation -- we, from regulatory oversight -- by telling the licensee to meet that regulatory requirement.

THE PRESIDENT: Okay.

Dr. McDill.

MEMBER McDILL: Thank you.

Just in terms of the PIP, Public Information Program, when the renewal occurred, we heard several intervenors say it was non-compliant.

So could I ask you, was it, using the grading that we typically use, fully satisfactory, satisfactory, below expectations or unacceptable? Where did it sit?

--- Pause

MR. ELDER: Peter Elder, for the record.

We had not typically, and don't

typically, use the same rating terminology for Public Information Programs.

When I said it was a two-day hearing, just to explain to the Commission, that means the two-day hearing days to the public, I said, were 60 days apart. So on the first day we noted deficiencies and said it was actually not acceptable. GE Hitachi, in that two-month period, did do a major revision and resubmitted their Public Information Program.

Then we reported back on the second day that there was an acceptable program that met the guidance in place at that time.

MEMBER McDILL: Were they at the time of the first day of the two-day hearing compliant or uncompliant?

MR. ELDER: We -- okay, I would say is, in terms of the public -- our review was that the Public Information Program that was in their licence application, initial licence application, was not compliant with the guidance that was available. They were told that they would have to resubmit that program, and submit one that was compliant with the guidance.

They did that before the Commission made the decision.

MEMBER McDILL: So 60 days -- well, presumably, this decision or this assessment of yours was before the first day as well.

MR. ELDER: So we had passed that information on to GE Hitachi in advance of that first day, yes, because their documents would have been available 30 days in advance of that first day.

So they didn't turn around that quickly. They probably had, you know, six-weeks' notice before the first day that we had problems with their program.

MEMBER McDILL: But before the Commission made its decision, which would be after the second day.

MR. ELDER: So there was a new program submitted between the first day. In that 60-day period there was a new program that was submitted, that was reviewed, and it was actually extensively discussed at the hearings before the licence was issued.

MEMBER McDILL: But it's your position that the non-compliance should have prevented the relicensing?

MR. SCHEIN: Well, I mean I think you should tell me. To me, the way I understand it, is

that was a component of the licence agreement. I think what we've heard is that they weren't compliant at day one of the 60-day renewal, and they didn't have time to be compliant, for whatever reason, by the end of the 60-day renewal period --

MEMBER McDILL: And they were.

MR. SCHEIN: -- and then the licence was renewed.

In fact, they -- our community still did not hear about it for a year after.

Also, I have to understand something.

So the CNSC says their job is not enforcement, it oversight, is that what I understood?, but to me -- and that 10-year licence renewals are commonplace. It's my understanding this facility never had a 10-year licence until now.

It's my understanding as well that a shorter licensing period, especially when a licence is not compliant, provides enforcement and extra oversight and accountability.

So I have real questions about why it's been extended for 10 years.

MEMBER McDILL: I'm going to go back to Mr. Jammal, but could you add to it, the recent -- the 10-year licensing period when it came into effect?

MR. JAMMAL: Yes. Thank you.

There are a couple things, though. We're focusing on one element with respect to day one and day two. As we get into the facility, the process of the facility, the reapplication submitted by the applicant, staff review the requirements and quite a bit of the application.

The reason for day two is we assess day one, we come before the Commission, provide them with the information, and we clearly stated at the time there are deficiencies in that program. Then on day two, as we always have the options to do, either put a hold point or the licensee establish the program.

Between day one and day two, the licensee established a program that is adequate for us to recommend licence renewal. Hence, the staff report and recommended for the Commission for the 10-year licence on the basis that the licensee will implement the updated program. Then the story goes on to become RD-99, so then the continuous enhancement has taken place.

On the 10-year licence, one of the elements of the licence renewal for the 10-year period is exactly what we're doing today. On a yearly basis there will be public meeting addressing the annual

reports in the community on a rotational basis. The public will have opportunity to intervene. This is the first of an annual report where the public intervention is being put in place in support of a 10-year licence.

So the transparency is maintained, the engagement of the public with respect to the regulatory oversight, which encompasses enforcement, if we need to do enforcement, and then we will continue with the oversight to ensure that the Public Information Program will meet the requirements of the CNSC.

MEMBER McDILL: Thank you.

I think I should go back to GE Hitachi to comment on this.

MR. DESIRI: For the record, Paul Desiri.

I just want to say that, as a company, we take public information seriously, and that, if we look back to the licensing of the facility in 2010, it's important to distinguish between compliance and program improvement.

At the time, we were meeting the requirements of our procedure. We had a certain amount of tasks we had to do, activities that are defined in the program, and we fulfilled all of those.

In the hearing it was discussed about certain improvements we needed to make, and we made the improvements. We stand here today -- and we've already talked all the things we've done in the past year. We want to do a good job of public information. I mean we want to hear from people like the MP on how we can do a better job, because that's -- you know, that's what we see as the main purpose of this meeting.

I just want to say that some of the things we do as far as making the program as good as it needs to be, it's not just a matter of looking at the guidelines, but we also compared our program to other industries within the nuclear industry to try and identify best practices and measures that we could use to improve our program.

I just want to highlight one of the sections in there that deals with communications with elected officials.

So the program at the time of a relicensing called for notification to elected officials to be made, and those were done.

Currently, our program calls to do more frequent communications, and we have done those.

So MP Schein mentioned the tour. He didn't mention that all of the public notifications

that we've posted to our website and our open-house notifications we've also sent to him. And we do thank him for sending representatives to our open house.

So there is, I'd say, more exchange going on. We're more than happy to sit down at any time with them and discuss how we could improve our program going forward.

THE PRESIDENT: Thank you. We've got to move on.

Ms. Velshi.

MEMBER VELSHI: Mr. Schein, you were one of the drivers behind the soil testing that was done. You've gone into the facility and you've seen their performance.

So putting aside the Public Information Program -- and we can debate on that -- but looking at the safety of this facility, as a resident of that community are you satisfied that this is a safe facility?

MR. SCHEIN: You know, I'm not a nuclear scientist and I, you know, trust health experts; however, I also believe that people have a right to know where they live. If you live in Darlington or Pickering, you know that you're living next to a nuclear facility.

I think people deserve the right to know what's operating and my concern remains that they haven't been given that right.

Having a one-year review, that would have happened in Ottawa if we'd not asked you to come here, is not acceptable. In fact, people feel like they don't have a say because this licence was renewed for 10 years in 2010.

I believe people do have a right to know what's in their community, to be informed. It's up to them to decide -- well, it's up to the regulator to ensure that the facility is safe, and our health authorities, and I trust that you will do that job; however, as I've said, that trust waivers when the basic parts of a licensing agreement are not met.

That is concerning, and I hope that will be addressed.

--- Applause / Applaudissements

MEMBER VELSHI: But my question to you was specifically as a resident of the community, where you have had access to all this information, are you comfortable, are you confident that this is a safe operation?

MR. SCHEIN: I think I've been quite clear. I could have a tour of my dentist's office or,

you know, any facility in this city, and not being an expert in that field I can't tell you whether it's safe or not.

My concern is that I'm here before you today and that it's been quite clear that the company didn't meet its agreement, and yet they're -- I'm hoping that you'll come to the conclusion that the community should have a say and that the decision should be made by going through the proper means.

Now if you're telling me that the Public Information Program is not part of the compliance, then that's a different story. But as far as I understand, it was part of the compliance part of the agreement that should have been met. Until that's met properly, then I don't think that there should be a 10-year licence in place. And I don't think that there was a 10-year licence in place at this facility ever before.

THE PRESIDENT: Okay. Thank you.

Anybody else?

Okay, thank you. Any final word?

MR. SCHEIN: No.

Again, I appreciate all of you. I know it's been a long day for a lot of folks, and, you know, I trust that all players will want to do the

right thing, and I hope that you'll give the community a chance by opening that licence.

Thank you very much.

THE PRESIDENT: Thank you.

--- Applause / Applaudissements

MR. LEBLANC: I just want to verify one last time whether Mr. Fiori is in the room.

No, he isn't, so we can proceed with the next submission, Mr. President.

THE PRESIDENT: The next submission is an oral presentation from Ms. Judith Deutsch, as outlined in CMD 13-M51.55 and M55.8.

Ms Deutsch, the floor is yours.

13-M51.55

Oral presentation by Judith Deutsch

MS DEUTSCH: Thank you.

My comments will complement what Jonah Schein has spoken about, but I will talk in a broader context about the historical context of the nuclear industry itself to some extent, because I think that it's really helpful and necessary, actually, for the public to have that perspective.

In my submission, I will speak about

the importance of disseminating information about this plant.

In the larger picture, information based on full disclosure and discussion is bedrock to democratic functioning. In the large picture right now are the two greatest threats to human existence: nuclear irradiation and climate change.

So how is it that the nuclear industry from its inception is shrouded in secrecy and deception and climate change science is muzzled by the highest Canadian government authority?

Previous and current submissions include much material on the health effects of radiation. I am not a scientist, but I am aware of the disputes around the dangers of exposure to radiation. Among the proponents of Atoms for Peace and Atoms for War is a split in thinking about safety, a knowing and not knowing about the effects of radiation, and that concept about not knowing and knowing at the same time really comes from many of the historical studies for instance on the Holocaust.

While nuclear industry proponents go so far as to state that there is no danger beyond the background radiation already in the atmosphere, in every-day life there is a fairly universal

acknowledgement of the severe threats, as people who administer x-rays wear leaded aprons or hide behind screens and x-rays are not administered to pregnant women.

Likely a substantial proportion of the population knows about some of the reactor accidents even though the full effects are not accessible to the public: Chalk River, Three Mile Island, Chernobyl, Fukushima, Sellafield.

Less known, of course, are innumerable accidents. I mentioned, for example, the earthen dams and dikes crushed in 1984 when the Key Lake tailings dam burst and 100 million litres of toxic and radioactive water escaped only one year after the mine opened.

It should be fairly well-known to the various stakeholders that the BIER VII report states that there is no safe level of radiation.

Several years ago a lengthy article in the U.K. Guardian Weekly reported that in 1959 the World Health Organization voted into force an obscure but important agreement with the International Atomic Energy Agency, the United Nations Atoms for Peace organization founded just two years before, in 1957, quoting:

"The effect of this agreement has been to give the IAEA an effective veto on any actions by the WHO that relate in any way to nuclear power -- and so prevent the WHO from playing its proper role in investigating and warning of the dangers of nuclear radiation on human health."

End of quote.

The author goes on to state:

"... the 2005 report of the IAEA-dominated Chernobyl Forum, which estimates a total death toll from the accident of only several thousand, is widely regarded as a whitewash as it ignores a host of peer-reviewed epidemiological studies indicating far higher mortality and widespread genomic damage."

Further, the authors says:

"Delegates heard that the standard risk models for

radiation risk published by the International Committee on Radiological Protection, and accepted by the World Health Organization, underestimate the health impact of low level of internal radiation by between 100 and 1,000 times...."

Again, just thinking about the recent, you know, events at Fukushima, there was much variation in terms of what was considered to be a healthy exposure.

There has been a complete absence of information about the GE Hitachi plant in Toronto until recent exposure of the plant's activities and challenges by its ordinary citizens. This is not new in Ontario. In July 1997, Ontario Hydro revealed that it had failed to report tritium contamination of groundwater on the Pickering site for the past 20 years.

In another instance, quote:

"The integration of the U.S. military's nuclear program with Canada's nuclear power efforts was so complete that Canadian

scientists were not allowed to read the edited versions of their own research when it was finally published." (As read)

The nuclear accidents at Chalk River in 1950 and in 1958 were shrouded in secrecy in the United States, Canada and Great Britain, quote, "for the sake of national security." The policy of secrecy so as not to panic the public became an accepted way to manage popular opinion in the nuclear age.

What's more, the Canadian government failed to do a follow-up study on the men who were overexposed to radiation -- I think it was about 600 people -- and the AECL reports implied that there would be no adverse health effects from the radiation doses received.

Silence is endemic. In Saskatchewan, Dale Smith, of Pinehouse Reservation, was the first in his community to stand up against Arriva and Cameco Corporations and the provincial and federal governments against a plan to bury radioactive waste on aboriginal land.

Initially, he was the only person in his community disturbed by the secrecy agreement between the companies and a few band members. I quote

from an interview with him:

"They signed a confidentiality agreement right at the beginning preventing them to discuss details of the agreement. On November 13th, we saw the summary of the agreement. We had only 10 to 15 minutes to deal with this. I looked at the wording. One of the words jumped out. The meeting exploded. The negotiation would rob us of speaking out against the municipality to the community, to the leaders." (As read)

End of quote.

Public participation is difficult because of contradictory information and secrecy. Gordon Edwards points out that the president of the CNSC says there is no evidence of any increased incidents of cancer from radiation exposure.

Edwards continues, quote:

"This represents the findings of a 15-nations study of atomic

workers by the International Agency for Research on Cancer."

UN Special Rapporteur, Richard Falk, who's also an expert in international law as well as in nuclear weapons states, quote:

"The people who are most attached to nuclearism are not amenable to rational argument or to being openly challenged. Partly this unresponsiveness arises because the guardians of nuclearism are hidden in the dark recesses of the state bureaucracy; what cannot be seen is impossible to engage in controversy." (As read)

End of quote. Jim Harding's book about the uranium industry is called "Canada's Deadly Secret Saskatchewan Uranium and the Global Nuclear System". He details the secretive collusion of many political leaders, including Tommy Douglas.

Paul McKay's book is "Atomic Accomplice How Canada Deals in deadly deceit".

Canada's involvement is characteristically duplicitous, such as the secretive

working plant to ship large amounts of weapons grade uranium from Chalk River through the Ottawa Valley to the United States. The end uses are not specified. We know that federal and provincial authorities secretly provided uranium for the Manhattan Project and for post-World War II weapons.

The AECL and Cameco Corporation were instrumental in the development of nuclear weapons in India and Pakistan.

The tragic effects of secrecy are recorded in the words of Serpent River First Nations people who worked in the mines at Elliot Lake. These people were not told of the dangers of exposure and were not given proper protection. There were many cancer deaths and permanent environmental destruction. One man from the community described it as a return to the pre-Cambrian era.

I studied disclosure and consent under a professor at Yale Law School who was one of the original authors and researchers around informed consent. The finding was that people can understand the law in being informed, which means full disclosure. This is before it was formulated into the UN Convention on the Rights of Indigenous People which puts in place the right to be fully informed and the consent -- right

of consent.

Regarding the GE Hitachi plant, this would include understanding and researching the externalities, particularly the effects on people and on the environment. A full life cycle analysis, then, would entail information about the entire process from mining, transportation, processing, end uses in Canada and abroad and eventual disposal.

Health and safety standards within Canada need to be explored and looked at and applied to the uses of the uranium pellets and fuel rods in other countries, as Canada notoriously acts with double standards; for instance, around asbestos, the extraction industry and supply material for nuclear weapons.

It should also include information specifically about General Electric. Regarding the plant, it would need to include effects on freshwater and on the sanitation system with full information about all the emissions.

It would need to include the information that the plant is licensed to produce up to 1,800 tonnes of uranium dioxide pellets per year derived from depleted uranium dioxide powder.

And it would also need to include why

this information -- again, touching on the last presentation -- why this information has been kept from the public for 50 years.

GE itself is one of the major U.S. arms dealers that accompanied President Obama to India recently to lobby for enormous arms sales to India.

GE is centrally involved with exporting nuclear technology to India, a non-signatory to the Non-Proliferation Treaty. Harper has opened the Indian market to nuclear technology and uranium sales for the first time since 1974.

It can also be known that the U.S. Securities and Exchange Commission allege that GE agents bribed officials in Iraq.

The lack of information about GE Hitachi's Toronto plant is extremely disturbing. The CNSC, GE Hitachi, Toronto Public Health need to provide full information to the public, a just and rationale handling of this public health threat; namely, the precautionary principle would dictate closing the plant altogether unless the entire uranium process is proven to be safe concerning either health effects of the uranium processing plant itself and also the renegeing of responsibility by the three agencies, so...

THE PRESIDENT: Thank you. Comments?

Questions?

--- Applause / Applaudissements

THE PRESIDENT: Anybody? Any questions? Any questions? Dr. McEwan...?

MEMBER MCEWAN: Thank you for the submission. We've heard a lot of data at this meeting around the plant, whether it's been from emissions or water discharge or the soil sampling that was conducted earlier. Each of those data sets has come back with no evidence of meaningful contamination.

How do you expect more information to be provided around measurable safety parameters?

MS DEUTSCH: Well, as I said, I think it's necessary to look at the entire process, you know, from mining all the way through waste disposal and to look at how the fuel rods are used, what happens to them, where they're disposed of and so on.

I haven't heard all the submissions, but I would also wonder a lot about the water. There has been some water -- you know, they talk about washing people, you know, taking showers and so on and so forth. That water must go into Lake Ontario and, you know, I mean, it seems to me that there's so many aspects of this that really do need to be researched.

MEMBER MCEWAN: So within the

constraints of what we're trying to understand today --

MS DEUTSCH: M'hmm.

MEMBER MCEWAN: -- and that's the relationship of the plant to the community and the community's view, that sort of excludes, certainly in my mind, too detailed an understanding of the pre and the post. So within the constraints of what we're discussing and the plant itself, what other data sets would give you confidence that, and how would they be presented to you, that this was a safe or an unsafe operation?

MS DEUTSCH: Well, what I'm saying is I don't think that this framing is adequate. I don't think that it's adequate to just look at this one plant and the nearby community.

And, you know, it seems to me that all the nuclear accidents, you know, really give evidence of that. You really have to look at the big picture. You know, the framing is -- you know, really excludes essential information.

THE PRESIDENT: I guess I need a quick comment from staff about the IARC Study again, misrepresent a finding of 15...

The IARC -- okay, again there on page 2 the intervener makes some, I don't know, reading of

the IARC. I thought the IARC conclusion was quite different than the way it's depicted here.

Please clarify.

DR. THOMPSON: Patsy Thompson, for the record. So when the IARC 15-country study was done it included a portion of Canadian workers and when the Canadian -- so the Canadian cohort that was sent to IARC included workers from New Brunswick, Hydro-Québec and Ontario Hydro at the time, so the three Ontario nuclear facilities as well as AECL.

When IARC did their multi-country study they excluded all of Ontario Hydro workers because of missing socioeconomic information, and so the Canadian cohort in that 15-country study was heavily weighed with AECL workers.

And so the IARC at the time concluded that the risk of radiation was higher than what would have been predicted from the information on the atomic bomb survivors. When they excluded the Canadian cohort, then the risks were reduced to something that was more in line with what was expected.

And so following that, the CNSC looked at that information and wanted to know whether workers were at greater risk and whether we needed to have additional operational controls on facilities to

make sure our workers were safe.

And so we undertook a review of the entire cohort of the more than 42,000 workers work with Ontario Hydro, OPG, to obtain information on socioeconomic status, the workers that were excluded by IARC, and from that analysis -- it was done by a contractor, Dr. Lydia Zablotska at the University of California in San Francisco -- and from that work, it's the study that was just published in the British Journal of Cancer and has been posted on our website about two weeks ago.

The study shows that of all the Canadian workers, the 42,000 some workers at nuclear power plants -- so NB Power, Hydro-Québec and OPG and Bruce Power -- are not having any health risk from radiation exposure when we look at gamma exposure and when we look at tritium.

And so all NPP workers are not having any health effects due to radiation exposure, but we found that -- and AECL workers, but we found that 3,000 workers from AECL pre-1965 had higher risks related to radiation exposure than what would be expected.

And so our next phase of work is to look at why we're seeing this in those 3,000 workers. The information we have to date is that the dose

information from those 3,000 workers was reconstructed because the records were lost in a fire and there's some dosimetry -- dose information that is missing.

But we need to deal with that 3,000 workers, but the findings are that for 42,000 Canadian workers there is no health effects due to radiation exposure.

THE PRESIDENT: Okay. Thank you.

Anybody else?

Okay, Ms Deutsch, you have the final word.

MS DEUTSCH: I guess, just in terms of public knowledge, you know, when you talk about risk to the workers, I think that it's, again, fairly commonly known that one has to really look, you know, at several generations.

So, again, you know, coming back to the very part too, that there's no safe level of radiation exposure, you know, it's... Again, I wonder about the, you know, the narrowness of the questions that are being asked and being researched.

THE PRESIDENT: Okay. Thank you.

Thank you for your intervention.

The next submission is an oral presentation by the Ontario Clean Air Alliance, as

outlined in CMD 12-M51.36, and I understand that Ms Angela Bischoff will make the presentation.

Please proceed.

13-M51.36

Oral presentation by Ontario Clean Air Alliance

MS BISCHOFF: Thank you panel members and members of the public.

I would like to recognize that I'm on traditional Iroquois Territory.

--- Applause / Applaudissements

MS BISCHOFF: I represent the Ontario Clean Air Alliance an NGO committed to moving Ontario on to a renewable energy future. I am also a resident of Toronto, living just a short bike ride from the GE Hitachi plant.

I will be focusing my presentation today on the emissions coming from this plant endangering the neighbourhood.

The GE Hitachi plant which manufactures uranium pellets for more than 50% of Canada's nuclear power generation sits in the middle of a dense residential neighbourhood. The plant receives 1800 tonnes of uranium powder each year. This form of

uranium is radiologically hazardous and can effect the surrounding neighbourhood through the release of airborne emissions during transportation through accidents or spills, and through the emissions of the plants internal processes.

Would this plant get a license to build in this location if it applied for one today? I doubt it. It began processing uranium in >55 in a large industrial zone which has since been turned into a bustling residential community. Given what we know today about the health dangers of uranium, it's beyond understanding how this plant has continued to operate in the midst of a densely populated neighbourhood.

Are there siting regulations that prohibit nuclear facilities from being built in the middle of a dense residential neighbourhood? Was this plant grand fathered when siting came to be? And, if there are no siting regulations for Class 1-B facilities such as this, why aren't there?

I request answers to these questions.

The CNSC acknowledges many samples of the soil surrounding the GE Hitachi plant are contaminated. The highest level of contamination recorded was 21.2 parts per million which is considerably close to the 23 parts per million

residential soil limit and highly elevated in comparison to the background level of uranium in soil at 2.5 parts per million.

Then, again, industrial limits are 300 parts per million. So, why is the guideline for industrial sites so much higher? And if soil on the site was found to be 295 parts per million, let's say, would that be acceptable? Because, this really isn't an industrial zone, it's a residential neighbourhood.

Into this community in the last five years alone the GE plant released 25.9 grams of uranium emissions. And, here's why this should be of concern to us, I think: Uranium dust released from the plant into the surrounding atmosphere does not recognize the fence line. It is easily inhaled and readily transported to vulnerable tissues of the body, including the brain and lungs, but can also cause damage to internal organs, notably the kidneys. It may also affect reproduction and the development of the fetus, and increase the risk of leukemia and soft tissue cancers. It contaminates the soil in which people grow food and children play.

Uranium dust has a long half-life which assures its presence in air, land and soil for a very long time. This uranium dust deposited onto soil

and surface water can leach into ground water. It can migrate long distances and can be deposited onto vegetation and absorbed through foliage or taken up by plants roots systems. Because uranium bio-accumulates in plants and animals it can gain entry into the human food chain.

The Lansdowne and Dupont plant also releases uranium discharge into our sewage systems. Since 2007 the Hitachi plant has released almost eight kilograms. And in 2009 alone it released 2.2 kilograms of uranium into our local sewage system.

2.3 kilograms of uranium is capable of contaminating one hundred million liters of water to over the drinking water standard.

Does this uranium make its way into our drinking water, or is it filtered out? If so, how? If not, it can be absorbed by our bloodstream and taken into the kidney which can then cause serious damage due to its heavy metal characteristics.

The sad fact that the license limit is 9000 kilograms per year shows just how of touch the CNSC regulations are. How can the CNSC possibly defend such a limit? And, is this indicative of other CNSC regulations? Is this how the CNSC fulfils its mission of protecting the health of workers, the public and the

environment?

This proves to me that just because emissions of radionuclides from its facility lie within or below current limits does not mean the do no harm. I'd like to know why Toronto Public Health is not monitoring water releases into the sewage system?

The key findings of the CNSC soil sample report that, Uranium levels pose no health risk, cannot be substantiated for this, we know no level of radiation is safe. For years the nuclear industry and government agencies claimed that only acute exposure to radiation was harmful. However, new research confirms that chronic low-level radiation can cause a multitude of health problems. The BEIR VII Committee's study confirms there is a linear no threshold risk model associated with radiation exposure, that is the smallest dose of low-level ionizing radiation has a potential to cause a small increase in health risk to humans. Human made radiation at low chronic levels is associated with increased risk of cancers, genetic damage, birth defects and mental retardation due to in utero exposure.

As the overall lifetime exposure increases, so does the risk. Also, you only need a

single mutation in a single cell in a single gene to cause serious health effects.

Releasing uranium into the air and water anywhere, let alone within a densely populated city is a health hazard. There is no safe level of exposure to ionizing radiation. Internal exposure can be far worse than external as it is localized and, therefore, more likely to impact the DNA directly causing mutations.

Ionizing radiation causes harmful effects because it is genotoxic. It damages DNA at the cellular level. Low doses can have significant long-term genetic consequences causing genetic instability resulting in an increased risk of cancer, lymphoma and leukemia for the individual exposed, and heritable damage, as well.

The good news is that there are viable low-cost alternatives to meeting all our electricity needs without the use of nuclear reactors. Water power from Quebec, conservation, and made in Ontario green energy all have a lower carbon footprint, lower financial costs, no long-lived radioactive waste, no proliferation risks, are safer and create more jobs.

It's only a matter of time before this plant is shut down along with the entire nuclear

fuel chain and replaced with renewable, clean, safe and lower-cost electricity that doesn't endanger life or create long-lived radioactive waste that needs to be isolated from the environment for one million years.

--- Applause / Applaudissements

MS BISCHOFF: So, to conclude, we are asking for the phase-out of all nuclear power stations when they come to the end of their lives. For Pickering, that means 2014. And for Darlington, that means 2020. And until that time we're asking for independent third-party monitoring and stricter emissions limits of this plant.

Uranium air and water emissions must be ratcheted down year by year below existing releases. The goal being to reduce the emission limits to zero, because no emissions are safe.

Detailed decommissioning plants must then be developed with full community involvement.

Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

Questions?

Dr. McDill?

MEMBER McDILL: Thank you.

Were you here this morning when

Nordion was presenting?

MS BISCHOFF: No.

MEMBER McDILL: Okay. So, I'll just repeat the question then, that I asked this morning.

Could I ask staff to repeat the analysis of emissions to sewage -- sewage treatment? How it's decided that it's appropriate? You could repeat Nordion, as well, just because it's a -- it's quite comparative.

DR. THOMPSON: Sorry. Patsy Thompson, for the record.

So this morning we talked about the sewer use bylaws that are in place in most municipalities. Normally those sewer bylaws specified that radionuclides from CNSC licensed facilities can be released to the sewer under certain conditions set by the CNSC. And so the calculations are done on the basis of a derived release limit based on one millisievert per year, taking into consideration the amount of water in the sewer systems, and looking at exposures, for example, to plant -- to sewer plant -- plant workers, and eventual discharge to Lake Ontario, in this case, for example, and concentrations that would be expected at the point of discharge.

There is also an expectation from the

licensees to put in place control programs to minimize those releases and that's what essentially the performance from GE shows, that the actual discharges to the sewers are much, much lower than their release limit. But it is essentially done through sewer use bylaws and calculations based on the public dose limit.

MEMBER McDILL: I think I asked this morning if it was possible to convert a gigabecquerel to a gram. Is that something we can try and do maybe tonight or another -- tomorrow?

DR. THOMPSON: Patsy Thompson, for the record.

We can come back tomorrow with the information.

THE PRESIDENT: Dr. McDill, anything else?

Anybody else?

Okay, thank you. Do you have any final words?

MS BISCHOFF: Well, I had -- I feel like I had, you know, half a dozen questions in my presentation, none of which were addressed. That one partly was addressed that it falls within municipal bylaw guidelines. But what about all the other questions? How do I -- how do I -- how will they be --

will they ever be answered? Should I follow up with an email or --

THE PRESIDENT: Most of your questions are being dealt with in order, and will continue to be dealt with tomorrow. So thank you for the intervention.

MS BISCHOFF: So I don't get to hear the answers?

THE PRESIDENT: You can listen. It's webcast. And then you can read the proceedings when they are published. Thank you.

MS BISCHOFF: Thank you.

THE PRESIDENT: I'd like to move on to the next oral presentation from Mr. Reg McQuaid as outlined in CMD 13-M51.39.

Mr. McQuaid, the floor is yours.

13-M51.39

Oral presentation by Reg McQuaid

MR. McQUAID: Thank you. I have lived in the neighbourhood of the GE Hitachi plant since 1981. Firstly, at Primrose Housing Coop, which is about two blocks from the plant. And currently on McFarland Avenue, west of Dufferin, north of Davenport,

which is about four blocks from the plant.

When I moved to that area in 1981 the whole area around Lansdowne and Davenport was a large General Electric plant which was in the process of closing down. I noted the nuclear fuel processing plant because it had a trefoil outside. I didn't actually know what went on in there, it wasn't a very big building, so I imagined it must have had something to do with maybe the fuel processing. But I had confidence in GE and I didn't really worry about it.

However, over the years I noticed that the trefoil disappeared from the site and I assumed, therefore, that they were no longer processing nuclear fuel there. So, one of the questions which I hope to have answered at the end of my presentation is why that trefoil disappeared.

And then around 1997 the sign of GE Hitachi appeared outside the building. And my only personal acquaintance with Hitachi before that was with spark plugs, so I thought maybe it is some small-scale electronics. So I was indeed as surprised as other people in the neighbourhood last fall when it was published in the paper that it was a nuclear fuel processing facility.

And the fact that there were two

large public meetings -- I think one drew about 125 people and another about 200 people -- that is indicative of the fact that people didn't really know about it and they wanted to come and hear. And this is also, I think, two years after GE Hitachi got its marching orders, so-to-speak from the Nuclear Safety Commission to improve its outreach to the public. So, they were not moving very quickly on that point.

Now, the neighbourhood in which we live at the time that GE came there in 1907 to build its first plant, was on the edge of the City of Toronto. Toronto had a population of 200,000 at that time, and rail transport was the only way that industries could get their raw materials and ship out their product.

Now, the situation has changed fundamentally. At the time that the nuclear processing began around 1960, Toronto had a population of over one million. But, road transport had become -- largely replaced rail in a lot of industrial shipping and receiving. So, the -- the case that -- or the question that comes to my mind is, why, after fifty or sixty years of production in that plant and with the fundamental change in the neighbourhood, GE does not decide, as it did back in 1981, to move its production

elsewhere because the land had become more valuable for housing?

Why they cannot take a decision to relocate the nuclear plant? Because, if nothing else -- I'm not a scientist, I'm not qualified to judge on what is right and what is wrong about emissions and things like that, but the fact that it has become very controversial is not adding to GE's stature in the community or in the public. It's like a public relations disaster so-to-speak. So, I can't understand why they are digging in their heels on this issue.

--- Applause / Applaudissements

MR. McQUAID: Now, concerning the housing, the residential density, back in 1981 when I -- let us put it back further to the 1960s. Since that time the residential density in our ward has increased by one-third, and if -- I don't know a -- I pass by the plant several times a week so I am quite conscious of how many houses have been built and the changes that have taken place in the neighbourhood. And there must be some blinkers on GE that they can't see that and that it is time to move on.

I think the union man who was here earlier today, he noted that it was an old plant. And I think that the investors would have by now have

received their return on investment, and they could well relocate it out of that area.

And last fall our city counselor introduced a motion in City Council of the City of Toronto precisely to that effect, recommending that GE Hitachi discontinue the production of uranium pellets at 1025 Lansdowne in order to find another manufacturing use that is compatible with the surrounding community.

--- Applause / Applaudissements

MR. McQUAID: And, another change that has taken place over the past few years is the fracking of oil, getting oil from this new way, especially in North Dakota. And that oil gets shipped by rail and passes, as was already noted earlier today, past the GE plant, probably within fifty or sixty feet. And we know that human error and mechanical defect, mechanical failure are always a possibility. We always do our best to get it right and to build the transportation correctly, but the already referred to case of Lac-Megantic shows that that substance that is passing that plant is highly volatile if there should be a derailment and that should effect the GE facility, there could be widespread radiation in the neighbourhood.

So, in short, if it is so problematic and if the possibility of accident is there, the very fact that the Canadian Nuclear Safety Commission is regulating the risk at the plant, indicates there is some risk. So why have it in a densely populated urban neighbourhood? Frankly, I can't understand it and that's probably the main reason why I came to this hearing. And if somebody, either the people on the Commission or the staff or GE can explain that to me, I will go away satisfied.

So, thank you.

THE PRESIDENT: Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Questions?

Ms Velshi?

MEMBER VELSHI: A question for GE.

The intervener states that there was a trefoil symbol before that had been removed. Can you comment on that, please?

MR. DESIRI: For the record, Paul Desiri.

I wonder if the intervener remembers the year that was done?

MR. McQUAID: I would guess somewhere in the late '80s, around 1990, or something.

MR. DESIRI: I'm not sure any of us were here at that time. That's a question we would have to take back with us and investigate a little more but, as said earlier, trefoils have a very specific meaning in the regulations and it's actually, in my opinion -- or I have heard elsewhere -- that it is a contravention of the regulations to have a trefoil where not required. So if you have a trefoil to indicate a dose rate above 25 μ Sv per hour and there is no such dose rate, you shouldn't have a trefoil there.

THE PRESIDENT: In Port Hope on some of those areas that are fenced, isn't there a trefoil there?

MR. ELDER: Peter Elder, for the record.

Yes, it would be because, again, it meets the criteria that there could be a dose rate if you were standing at the fence that would be in indication of the hazard being there.

So again, the signing in the regulations is based on the presence of a hazard.

THE PRESIDENT: Those are the regulations that are being reviewed right now?

MR. ELDER: Yes, that's right.

THE PRESIDENT: Okay. Thank you.

Ms Velshi, any? Dr. McDill...?

MEMBER McDILL: What is the current municipal -- I think I asked this question earlier today, but I'm not sure. What's the municipal zoning for this facility?

I will ask GE-Hitachi.

MR. MASON: For the record, Peter Mason.

It's an industrial zoning.

MEMBER McDILL: And 50 metres away, where the condo is?

MR. MASON: Peter Mason, for the record.

If you recall the chart presented by the CNSC, we had three zonings. The zoning of the plant was industrial, the zoning of the railway was commercial and all areas around it are now zoned residential.

MEMBER McDILL: Thank you.

THE PRESIDENT: Anybody else? Okay. Thank you. Anything else you want to add?

MR. McQUAID: I have a question.

Is there something peculiar about the process that requires it to be trucked into Toronto and

then trucked somewhere else? Is there something peculiar about the process that requires that it be processed where it is being processed?

THE PRESIDENT: GE-Hitachi...?

MR. MASON: For the record, Peter Mason.

There is nothing peculiar about it that would require it to be processed in the Toronto plant, other than the fact that is where the pellet plant is.

MR. McQUAID: I guess my final comment would be to GE-Hitachi, and I would ask the people representing here to carry back a message to their CEO or whoever to consider the advisability of relocating a 60 or 65-year-old plant.

So thank you.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

The next submission is an oral presentation by the Canadian Voice of Women for Peace as outlined in CMD 13-M51.42. I understand that Ms Lyn Adamson will make this presentation.

MS ADAMSON: Thank you.

THE PRESIDENT: Please proceed.

13-M51.42

**Oral presentation by
Canadian Voice of Women for Peace**

MS ADAMSON: Thank you.

I'm here representing Canadian Voice of Women for Peace, I am the National Co-Chair and I am appreciative of the opportunity to speak to you tonight.

I do want to start by acknowledging as well that we are on traditional indigenous land. We are a big urban city, but we are located on land that for thousands of years has been cared for by indigenous communities prior to our arrival and building this large city.

I also live a short distance from the GE-Hitachi plant, I am at Oakwood and Vaughan Road.

In representing Voice of Women for Peace, I want to point out that we have had a longstanding concern on nuclear issues, starting with the threat of contamination from nuclear weapons testing in the 1960s. Voice of Women was founded in 1960. We collected baby teeth for testing for strontium 90 and we worked hard with other parts of civil society to help bring about the partial test ban

treaty, and we are continuing to work toward the complete abolition of nuclear weapons.

So our concern with nuclear power began with the issue of proliferation of nuclear weapons via the spread of the CANDU nuclear technology to India and then Pakistan.

We have also had a longstanding concern regarding the pollution of water and land caused by uranium mining, and much of this impact has fallen on indigenous communities, as we have heard outlined earlier so well in some of the other presentations.

At that point I would like to also draw attention to indigenous wisdom. As I said, indigenous communities lived on this land for thousands of years in a sustainable way and I think it behooves us to ask ourselves how sustainable is our way of living on this land and to think about our children and our grandchildren. I know in indigenous wisdom you think ahead 7 generations, so we are looking ahead a couple of hundred years, or in this case we have to look ahead thousands and thousands of years because of the long-lasting nature of the pollution that comes from the nuclear plant, the wastes, which so far do not have any kind of solution in terms of their burial and

decontamination.

So I note that we look at this as something that is necessary to provide energy for a large population, however the research that I have been doing on this -- and we have been doing within Voice of Women -- shows that there are renewable alternatives.

Nuclear power is not required in the long term to meet Ontario's energy needs, and that is why we are asking you to reconsider the whole question of the production of the uranium pellets for the nuclear industry, because if we are looking at phasing out of nuclear power, then we could be looking at phasing out of the production of these uranium pellets.

I have to say, like many of the other deputants beforehand, that I was shocked to learn that these uranium pellets are being manufactured here in the core of the city and, like others have said, why not move it? If this plant has to be continued -- which I would prefer it was just down -- that it could at least be moved, and the plan could be made to move it out of the residential neighbourhood in which it now is.

So I would kind of ask the Commission to say would this now be permitted to be in this neighbourhood and, if not, then why not, at this point

make that plan to move it.

I understand that at the last hearing, at the relicensing hearing at which it was extended for 10 years, the licence, there was just one deputation in terms of public presentations because people were unaware of that hearing, and so I would encourage you to view this process as -- like, really, we should be looking at that question again, the relicensing, because all of the submissions that you are hearing now are relevant to whether that licence should have been granted for this -- up to 2020, I understand.

So I want to mention briefly about uranium dust and the implications of this for our health.

To my mind, it is not acceptable to expose the City of Toronto residents to this uranium dust in the air and the water. Because of its long half-life and the fact that there is no safe dose, that any dose of the uranium can cause cancer. We can never prove that cancer has arisen from a particular exposure, but we know that the risk is cumulative.

So I mentioned that there are alternatives to nuclear, and I would mention in particular the work of Dr. Mark Jacobson of Stanford

University. He has shown how 100 percent of the world's energy needs can be met by renewable energy. Over the next 30 years the transition can happen, because we don't want to rely on fossil fuels either. We know that it's not a solution to have more fossil fuel production because of the global warming.

So we really need to be looking as a society as to how we move forward to this renewable energy solution.

The importance is to put a lot of our energy and resources to work on that right now, and I would hope that industry would play a role in that as well, in that transition, industry and public policy. And public policy is where you come in because it's very important that we create the political will for that transition to happen.

So I'm here because I'm part of a civil society group, and we would invite you all to think as citizens as well as Members of this Commission because it's our future, it's our children's future, and our grandchildren's future that we are considering here, and if you keep that in mind as you consider what recommendations you will come out of this process with, I hope that you will do that because it's the health and safety of our future that need to be kept in mind.

No level of radiation is safe and we appreciate the opportunity to come here and present our concerns and to ask you to reconsider the siting of that plant and the possible question of its removal.

--- Applause / Applaudissements

THE PRESIDENT: Thank you. Thank you for the submission.

MS ADAMSON: Thank you.

THE PRESIDENT: Questions? Dr. McEwan...?

MEMBER MCEWAN: Thank you for the submission.

Could I just ask a question about renewables, please, because it's not an area that I am particularly familiar with and we have heard it a lot today and I think you have made one of the better contributions with the Jacobson paper, which I shall go back and read.

MS ADAMSON: Thank you.

MEMBER MCEWAN: However, I'm struggling a little bit. As I flew out here I was reading one of the current Economists which said that Germany have had to embark upon a massive coal fire power generation plant because of the unreliability of renewables.

How does Jacobson resolve that issue?

AUDIENCE MEMBER: It's not true.

MS ADAMSON: I think it's actually not the unreliability of renewables. I think that renewables can be quite reliable, the thing is that they have closed the nuclear plants, like it's a shift happening.

But the coal is not a long-term thing, that's my understanding, they are making fabulous progress on developing 100 percent renewable future.

That's my understanding and I can certainly get some links for you to send you that information.

MEMBER MCEWAN: That would be very helpful.

MS ADAMSON: I can even do that tomorrow.

MEMBER MCEWAN: Thank you very much.

MS ADAMSON: I would be happy to.

MEMBER MCEWAN: Thank you.

MS ADAMSON: Thank you.

THE PRESIDENT: Anybody else?

Okay, thank you. Thank you very much.

MS ADAMSON: Thank you very much for your interest, especially about the renewables. I'm very excited by that. Thank you for listening and taking this issue really seriously.

THE PRESIDENT: Thank you.

MR. LEBLANC: Just for the record, the next presentation was to be given by Mr. Mirshahi. He had informed us well in advance of his unavailability, but asked that he be scheduled tomorrow.

Also, Mr. Peter Harris is not able to attend, so his intervention will be dealt with in writing.

So, Mr. President, we have completed today's planned oral presentations, and in that context you may want to proceed with written submissions.

THE PRESIDENT: Oh, absolutely.

Why don't we, if Commissioners agree, do some written submissions. Okay.

Marc, are you going to take us through them?

MR. LEBLANC: Yes.

THE PRESIDENT: Starting with -- and you will let us find it, right.

MR. LEBLANC: That will be a

challenge, yes.

--- Laughter / Rires

MR. LEBLANC: So the way it's going to proceed, I'm going to go through each of the written submissions and ask if the Members have any questions on that particular submission. Many of the submissions deal with issues that were addressed today, but there may be a few submissions where new issues are raised and you may wish to ask questions from GE-Hitachi or CNSC staff representatives.

MR. LEBLANC: So the first submission is the Written submission from Mr. James Applegath at CMD M51.5.

13-M51.5

Written submission from James Applegath

THE PRESIDENT: M51.5.

--- Pause

MR. LEBLANC: So do the Members have any questions on this submission?

THE PRESIDENT: Yes. I think in some submission they talked about this massive tank of gas located 50 feet from a railway line.

We haven't discussed this. Can

somebody tell us what is the risk of this tank, the gas tank?

MR. MASON: For the record, Peter Mason.

This tank, I think I mentioned earlier about the need for hydrogen in the process, and it was changed from high pressure gas cylinders to a low pressure liquid hydrogen tank, well, it must have been --

MR. DESIRI: Two thousand.

MR. MASON: -- round about the year 2000. It's a type of installation which is used in many industrial processes and it has security around the tank. The tank itself is double-walled and it's a safe installation.

Paul, I don't know if you want to add to that at all?

MR. DESIRI: For the record, Paul Desiri.

If that has adequately answered the question I will stop there.

If you wanted to discuss the rail issue as well, we could answer that as well.

THE PRESIDENT: I think that's what the concern is.

MR. DESIRI: Okay. So I mentioned earlier in the day that we did a full update of our safety analysis report, towards the end of 2012 it was completed, and the safety analysis report, which was prepared primarily by a third-party expert, looked at various scenarios, credible scenarios, and analyzed each one in detail. One of the ones they looked at was the rail scenario.

This is one that is ranked as a low risk for a number of reasons.

First of all, the actual probability of an accident or a derailment in that area of a train carrying hazardous materials is relatively low for a number of reasons. The rail line within the city is subject to a speed limit, and when rail cars are carrying hazardous materials they are further restricted to an even more restrictive speed limit -- and I see the trains every day; they move very slow across that bridge. It's flat terrain.

But furthermore is there are multiple barriers in between a train -- in the unlikely event that one would derail, there are multiple barriers between the actual train tracks and the more sensitive areas of the plant.

THE PRESIDENT: Thank you.

MR. LEBLANC: The next submission from Neil Clifford, CMD 13-M51.6.

13-M51.6

Written submission from Neil Clifford

MR. LEBLANC: Any comments or questions? No?

So I will proceed to the next submission, which is from Birthe Jorgensen, M51.7.

13-M51.7

Written submission from Birthe Jorgensen

MR. LEBLANC: The next submission is from Martin Smith, M51.8.

13-M51.8

Written submission from Martin Smith

Mr. Tolgyesi...?

MEMBER TOLGYESI: I'm sorry. I just want to make sure, staff, does CNSC post notes and orders given to licensees? So could somebody who was looking for Hitachi, if there are orders or is it

posted?

MR. ELDER: Peter Elder, for the record.

As mentioned earlier today, all orders are posted on our website, and also, if we do any enhanced enforcement action -- so what we could consider a very formal directive, we call it under section 12.2 of the Act -- we have also been posting those on our website as well.

THE PRESIDENT: On page 2, the bottom paragraph is:

"One requirement of the license is that GE Hitachi Nuclear Energy verify that none of the product ends up in a reactor that produces a nuclear weapon."

Can somebody give this assurance?

MR. ELDER: Peter Elder for the record.

What the requirement of GE-Hitachi's licence is to co-operate with the regime that is in place in Canada and the International Atomic Energy Agency to provide information so that there can be independent verification of that. And there is independent verification by the Atomic Energy Agency

about all end use of Canadian nuclear material.

THE PRESIDENT: I will repeat what you just said: There will be no nuclear weapon.

MR. ELDER: The requirements for export from Canada is that the country importing must have a declaration that the material would not be used for nuclear weapons, and there must be also a mechanism to allow that to be independently verified by the International Atomic Energy Agency.

THE PRESIDENT: Okay. Thank you.

MR. LEBLANC: The next submission is from Elizabeth Cinello, M51.9.

13-M51.9

Written submission from Elizabeth Cinello

MR. LEBLANC: Any questions or comments?

MR. LEBLANC: The next submission is from Ana Alsheuskaya, M51.13.

13-M51.13

Written submission from Ana Alsheuskaya

THE PRESIDENT: Sorry. In paragraph

5:

"Research proved that low doses of low energy particles actually are more dangerous than higher energy ones..."

Can somebody verify this statement?

DR. THOMPSON: Patsy Thompson, for the record.

The answer is this statement is accurate, and so the assessment of doses takes into consideration the energy of the radionuclide and takes that fact into consideration.

What I would not agree with in that statement is that it de facto causes DNA damage and therefore causes cancer, because when there is DNA damage, most of the DNA damage is repaired and would not lead to effects such as cancer.

THE PRESIDENT: But let me understand what you are just saying, that low doses of low energy are more dangerous? That's what it says.

DR. THOMPSON: Okay. So let me start again.

So the low energy emitters are more effective than high energy emitters in causing damage, but low doses of radiation do not cause more damage

than high doses.

So they have combined two concepts into one.

THE PRESIDENT: Thank you.

MR. LEBLANC: Monsieur Harvey...?

THE PRESIDENT: Monsieur Harvey...?

MEMBER HARVEY: On the other paragraph here -- on the same page, the paragraph just below the other one:

"We've asked for 3rd party verification of emissions and these are secret, not available to members of the public."

Maybe I'm not speaking for that one but, generally speaking here, there is third party verification. As such, is the report available to the public or not in such a case? I don't know that case if there was a third party.

It's a general question.

MR. ELDER: Peter Elder, for the record.

There isn't any -- from our point of view, any restriction about release of third party information, but we would have to -- we have a legal obligation to actually check with the owner of the

information before it would be released.

MEMBER HARVEY: Okay, thank you.

THE PRESIDENT: Dr. McEwan.

MEMBER MCEWAN: Can I go back to the low doses of low energy radiation because this is something that has come up time and again from intervenors from today and I'd like to know where it's coming from.

There was a reference back to Carmel Mothershill in one of the submissions but, clearly, something in the literature or on the web has sparked this contention. Do we have any idea where that is coming from?

DR. THOMPSON: Dr. McEwan, if you would allow us, we could come back tomorrow morning with something that probably will do it more justice than what I can find on a sheet of paper quickly.

THE PRESIDENT: Okay, thank you.

But we still haven't resolved the third-party data. Let me understand. Right now anything, any emission that is submitted to the CNSC, as far as I'm concerned is public.

Somebody correct me if I'm wrong. I mean, you cannot not be able to release it.

MR. ELDER: Peter Elder, for the

record.

We do have an obligation before we release it to make sure that there is no commercially proprietary information in --

THE PRESIDENT: I'm talking about emission data.

MR. ELDER: Emission data, there would be no issue with releasing that data if they would ask for it.

THE PRESIDENT: And not only not issue it. We will release it or the licensee will release it.

MR. ELDER: Yes.

THE PRESIDENT: Okay, good. I just wanted to make this clear. Thank you.

MR. LEBLANC: The next submission is from Inga Breede, M51.14.

13-M51.14

Written submission from Inga Breede

MR. LEBLANC: The next submission is from Peggy Lampotang, M51.24.

13-M51.24

Written submission from Peggy Lampotang

MR. LEBLANC: The next submission is from Melissa Lee, M51.28.

13-M51.28

Written submission from Melissa Lee

MR. LEBLANC: The next submission is from Sarah Newton, M51.29.

13-M51.29

Written submission from Sarah Newton

MR. LEBLANC: The next submission is from Mark Taha, M51.30.

13-M51.30

Written submission from Mark Taha

MR. LEBLANC: The next submission is from Kate Chung, M51.31.

13-M51.31

Written submission from Kate Chung

MR. LEBLANC: The next submission is from Roy Brady, M51.35.

13-M51.35

Written submission from Roy Brady

THE PRESIDENT: Ms Velshi.

MEMBER VELSHI: For GE so this is, I guess, the first time a concern is coming for the Peterborough facilities.

So is the public information program for your Peterborough facility similar to the Toronto one?

MR. MASON: For the record, Peter Mason.

Yes, it is.

MEMBER VELSHI: And on the last paragraph on page 2, it makes reference to:

"A neighbouring delegation had arranged to tour the Peterborough factory, but that was abruptly cancelled by GE."

Do you want to comment on that?

MR. MASON: Peter Mason, for the record.

That is incorrect. We have organized tours through the PTA of the local school, the Prince of Wales School and they visited the plant. We gave them a tour and it was very well received by everybody.

MEMBER VELSHI: Thank you.

MR. MASON: In fact, we have the date, September 12th of 2012.

And I'd also like to point out that Peter Harris attended that tour. He was one of the intervenors that said it didn't exist.

MR. LEBLANC: The next submission is from Elizabeth Minto Marcilio, M51.37.

13-M51.37

Written submission from Elizabeth Minto Marcilio

MR. LEBLANC: The next submission is from Carrienne Leung, M51.38.

13-M51.38

Written submission from Carrienne Leung

MEMBER VELSHI: A question for staff. You know we talk about health impacts of radiation but, you know, and I think most studies

have shown the bigger concern is people worrying about nuclear. And so when I read this particular intervention which is very typical of others and so worried about what's in my neighbourhood, are there studies for low-levels of radiation on what the impact of worrying about it is, not the biological impact?

Can you comment on that?

DR. THOMPSON: Patsy Thompson, for the record.

Ms Velshi, do you mean sort of the psycho-social impacts related to the perception of risk or the fear of radiation?

MEMBER VELSHI: Yes, exactly that.

DR. THOMPSON: The only studies that I'm aware of are those that have been done, for example, following Chernobyl or Fukushima in relation to people's concerns with -- especially in Chernobyl, for example, there has been a lot of studies that have shown that people who remained in the areas and were taught how to protect themselves are doing better than people who are evacuated and were in consideration of going back because of the concerns with a lack of understanding of radiation.

But I think in the areas where there hasn't been an accident those studies have not been

done. I'm aware of a few studies around contaminated sites for example where those types of psychological or social impacts have occurred, but I'm not aware of any in relation to a uranium processing facility or example.

MEMBER VELSHI: Because, you know, I think opinion makers, politicians, everyone has a duty to make sure that we try to allay these unfounded concerns, if they are unfounded, because there is probably a higher risk than anything else that's out there.

DR. THOMPSON: Patsy Thompson, for the record.

You'll note that over the last five, six or seven years we've tried to put a lot more information on our website. We've done public information sessions in different communities that have expressed concerns about uranium, tritium and other, and that's the reason. There is a lot of either misinformation or lack of information and people essentially have become concerned either for themselves or for their children.

And we've seen, for example, around Pembroke where there was so much talk about tritium and the environment and so many talk about, you know, the

vegetables contaminated that people who had been gardening for years who were giving their children and grandchildren their vegetables, their children and grandchildren didn't want anything to do with those gardens anymore.

And so in many cases it's changing people's lifestyles. That to me is not appropriate and it's definitely wrong to leave impressions of bad science essentially that's being used.

THE PRESIDENT: But isn't it true that in communities where there are nuclear facilities that actually the population is quite supportive of the activity so in Pickering -- in Kincardine they have a high acceptance. Is that not true?

DR. THOMPSON: Patsy Thompson, for the record.

I would say yes and no. In communities where the operators have been very proactive in terms of public engagement, public information, community liaison groups, communicating with their elected officials, those communities are very comfortable with the operations. You also see in communities where operators have not been so proactive that the information members of the public get are from people who don't necessarily have the interests of the

community and the operator.

THE PRESIDENT: Thank you.

MR. LEBLANC: The next submission is from Carolyn Armstrong, M51.40.

13-M51.40

Written submission from Carolyn Armstrong

MR. LEBLANC: The next submission is from Carlo Marcoccia, M51.41.

13-M51.41

Written submission from Carlo Marcoccia

MR. LEBLANC: The next submission is from Peter Harris, M51.43. Yes, this submission was initially to be an oral presentation.

13-M51.43

Written submission from
Peter Harris

THE PRESIDENT: Dr. McDill.

MEMBER McDILL: Thank you. There is one comment here in the third paragraph, "I had no idea

about GE's LEU..." which would be low enriched uranium "...intentions".

Could you talk about this?

And then the comment on the Parent Teachers Association, is it possible that you meant Parent Council? So, two questions.

MR. MASON: Peter Mason, for the record. I'll address the LEU one and my colleague, Paul Desiri, will address the PTA versus PTC actually.

When AECL was developing their new reactor, the ACR --

MEMBER McDILL: M'hmm.

MR. MASON: -- ACR-1000, we were asked to produce some -- the prototype fuel. We couldn't produce the slightly enriched fuel because we weren't licensed, but we produced the bundle, the bundle components were sent to Chalk River and then they finished off the fuel.

For the long term we looked into applying for licensing to enable us to build slightly enriched fuel, but by the time we came around to our licensing it wasn't necessary because AECL had dropped the ACR-1000 product and, therefore, there was absolutely no requirement for low enriched uranium fuel.

And, so I think that's what Mr. Harris is referring to as when we were investigating doing that. But in 2010 we were actually applying for our licence, we had dropped that requirement.

MR. DESIRI: For the record, Paul Desiri. Over the last three years we've had three separate meetings in Peterborough associated with the Prince of Wales School.

One of them was in 2010, that was a meeting that the school arranged and invited guests to the meeting, so it was a mix of parents, teachers, residents.

In May 2nd, 2011, it was just the Parent Teachers Association by itself and then, as Peter mentioned earlier, on September 12th, 2012, it was, the PTA was invited to our plant for a tour and meeting and that included not only the PTA but guests outside of the PTA as well.

MEMBER McDILL: But in Ontario the PTA has been sort of recast as the Parent Council; has it not? I'm wondering if this is where his statement is coming from.

MR. DESIRI: Sorry, for the record, Paul Desiri. I don't know if I'm calling the organization by the correct title. That's what I see

them as, it was a specific organization representing the school, parents and teachers. They might be going by another name.

MR. WARD: And Mark Ward, for the record. At that meeting on September, the principal and vice principal were also in attendance.

MEMBER McDILL: Thank you. I was just trying to bring together the statement by the intervener that there hasn't been a Parent Teachers Association with the -- I guess it was the Harris government that brought in the Parent Councils replacing the PTAs, so...

I'm wondering if that's where -- 'it doesn't exist anymore', in the intervention.

MR. DESIRI: For the record, Paul Desiri. And maybe that's Peter Harris' argument, I'm not sure. When I read his submission, we took it to mean that there hasn't been any engagement with Parent Teachers group, whatever they're called, and that's not the case; there has been engagement.

THE PRESIDENT: Anything else on this?

On the second page from Mr. Harris, on the third paragraph from below:

"In Toronto and Peterborough we

have a company that claims to be a world leader in engineering but has its plants sitting on a field of toxins. We have a company that claims to provide engineering solutions for the nuclear industry and yet their engineering solution for their most dangerous emission is to locate beryllium exhaust emissions on top of the playground of our school."

Somebody explain to me this paragraph?

MR. MASON: For the record, Peter Mason. I think the first thing that Mr. Harris is referring to is legacy PBCs which are known to be under certain car parks that are on GE property. That's not something that I have the expertise to talk about, I just know that that was one of his concerns.

The second item which is beryllium emissions. We, in the assembly operations in Peterborough, we use beryllium for assisting in the brazing of appendages to our tubes. The process is very well monitored, stack releases are measured and

monitored and, in fact, we spent a great deal of time explaining that to the people there and our emissions are certainly well within any limits.

In fact, Paul, you may have something else?

THE PRESIDENT: But just to be -- is he being sarcastic or is it on top of a playground on a school?

MR. MASON: Peter Mason, for the record. I would say he's being a little sarcastic in that, although there is a school in the area, it is not impacted by beryllium and there are no measured results to indicate that there is any validity to that.

AUDIENCE MEMBER: (off mic)

MR. LEBLANC: So, the next submission is another one that was scheduled to be presented as an oral but is now a written submission, it's from the McMaster University and it's M51.44.

Any questions?

13-M51.44

Written submission from McMaster University

MEMBER McDILL: It doesn't give very much information. I'm not sure what it was intending

to give, but -- perhaps it's answering questions that were posed by somebody, but there's not much there for me to understand what their intention has been.

MR. LEBLANC: The next submission is from Brian DeMatos, M51.51.

13-M51.51

Written submission from Brian DeMatos

MR. LEBLANC: The next submission is from William Sotnikow, M51.60.

13-M51.60

Written submission from William Sotnikow

MR. LEBLANC: Please proceed.

MEMBER McDILL: Question for GE. The third paragraph talks about:

"It seems to me that run-off areas that would surely be hotspots for pollutants were not included in the testing."

Do you see that one? I guess this is for the soil testing. Comment on that?

MR. DESIRI: For the record, Paul

Desiri. We've been sampling soil for over 30 years. We sample, it varies between 49, 54 locations; there's a number of locations in that area that we sample.

The area that's been talked about quite a few times, the maximum concentration that we measured over the last "x" number of years is actually in a very well defined area right at the fence line, but all the other areas around in that same area had been sampled and are at background.

MEMBER McDILL: Staff, any comment on that?

MR. RINKER: Mike Rinker, for the record. I guess you were asking about the adequacy of the sampling planned.

We did an inspection of this environmental monitoring program last year. There are challenges with it in that most of the area is concrete and, so, they were sampling where they can find soil in certain areas.

And so, you know, if it was all soil we might have a tighter monitoring program, but when it's mostly sidewalk and roadways and concrete, you have to sample where you can.

AUDIENCE MEMBER: (off mic)

MEMBER McDILL: Thank you.

THE PRESIDENT: Dr. McEwan.

MEMBER MCEWAN: Thank you, Mr.

President.

This again is for GE. If you look at the last paragraph above the video section, it seems to me that he's offering you an opportunity for community outreach.

And it may be worthwhile considering, given your explanation on the multiple barriers you have for the train, taking him up on the opportunity.

MR. DESIRI: For the record, Paul Desiri. We will do that.

MR. LEBLANC: The next submission is from Nancy White, M51.61.

13-M51.61

Written submission from Nancy White

MR. LEBLANC: The next submission is from Sakura Saunders, M51.62.

13-M51.62

Written submission from Sakura Saunders

MR. LEBLANC: The next submission is

from Jodi Weber, M51.64.

13-M51.64

Written submission from Jodi Weber

MR. LEBLANC: The next submission is
from Alvaro Gonzalez, M51.68.

13-M51.68

Written submission from Alvaro Gonzalez

MR. LEBLANC: The next submission is
from Jessica Rowland, M51.69.

13-M51.69

Written submission from Jessica Rowland

MR. LEBLANC: The next submission is
from Janet Csontos, M51.70.

13-M51.70

Written submission from Janet Csontos

MR. LEBLANC: The next submission is
from Linda Genova, M51.71.

13-M51.71

Written submission from Linda Genova

MR. LEBLANC: The next submission is from Carmen Dobie, M51.72.

13-M51.72

Written submission from Carmen Dobie

MR. LEBLANC: The next submission is from Farzana Doctor, M51.73.

13-M51.73

Written submission from Farzana Doctor

MR. LEBLANC: The next submission is from Xavier Ramirez, M51.74.

13-M51.74

Written submission from Xavier Ramirez

MR. LEBLANC: The next submission is from Alex Greenwood, M51.75.

13-M51.75

Written submission from Alex Greenwood

MR. LEBLANC: The next submission is from Ron Schroeder, M51.76.

13-M51.76

Written submission from Ron Schroeder

MEMBER TOLGYESI: And one, two, three, it's in the middle: "What kind of random or regulatory safety checks and samples are taken in regards to the vehicles that transport uranium?"

What's the procedure? You are taking a sample before the vehicle is leaving the departure point. Do you check when he's coming to your facility? When it's leaving, it's washed, decontaminated, or what do you do?

MR. DESIRI: For the record, Paul Desiri.

That is correct.

So prior to shipping, there's certain checks that the shipper has to make. Again, I would like to say that their trained and qualified according to *TDG Regulations*.

So they have to follow that checklist and make sure each one of those points is verified before the package can leave or the shipment can leave.

Upon receipt at the receiving facility, there's also an obligation to do checks that there's been no damage and other checks on the shipment.

MEMBER TOLGYESI: Should the vehicles be decontaminated when they are leaving, once the shipment is unloaded?

MR. DESIRI: For the record, Paul Desiri.

The contamination measurements that we take show levels below free-release levels, so there's no need to decontaminate.

MR. LEBLANC: The next submission is from Tiffany Encina, M51.77.

13-M51.77

Written submission from Tiffany Encina

MR. LEBLANC: The next submission is from Catherine Araujo, M51.78.

13-M51.78

Written submission from Catherine Araujo

MR. LEBLANC: The next submission is from Curtis Nixon, M51.79.

13-M51.79

Written submission from Curtis Nixon

MR. LEBLANC: The next submission is from Steve Hon-Cheung Kam, M51.80.

13-M51.80

Written submission from Steve Hon-Cheung Kam

MR. LEBLANC: The next submission is from John Quarterly --

MEMBER McDILL: Okay, can we go back? I've just...

MR. LEBLANC: Sorry, I'm going to fast.

--- Laughter / Rires

MEMBER McDILL: I just wanted to draw attention to the intervenor, I think it's nine lines from the bottom:

"The GE Hitachi facility does

not show the required and necessary radioactive symbol on the outside of the facility and the CNSC apparently also overlooked this obvious infraction." (As read)

This is not an infraction, that is correct.

MR. ELDER: Yeah, it is not -- Peter Elder, for the record -- is not an infraction. As I said, what is currently in the Radiation Protection Guidelines is you must post if it's more than 25 microsieverts per hour. That is not the case at this facility.

MEMBER McDILL: Thank you.

MEMBER MCEWAN: So, again -- I guess this is for staff -- about a third of the way down there's a sentence, "Furthermore, although GE Hitachi claims its facility is safe", then there's the emissions between 2007 and 2011, and the two kilograms, then a statement, "These blatant blunders", I mean my understanding is that this would, again, be within regulatory limits.

MR. ELDER: Peter Elder, for the record.

That is correct. It's well within the limits, and then well within the safety analysis associated with those limits.

MEMBER MCEWAN: Okay, thank you.

MR. LEBLANC: So I'm back to the submission from John Quarterly, M51.83.

13-M51.83

Written submission from John Quarterly

MR. LEBLANC: The next submission is from Shu Cheng, M51.84.

13-M51.84

Written submission from Shu Cheng

MR. LEBLANC: The next submission is from Anthony Rovito, M51.85.

13-M51.85

Written submission from Anthony Rovito

MR. LEBLANC: The next submission is from Matt Everson, M51.86.

13-M51.86

Written submission from Matt Everson

MEMBER MCEWAN: May I?

THE PRESIDENT: Go ahead.

MEMBER MCEWAN: So the last couple have said that they were going to make an oral presentation. Does this mean that they didn't get back to us?

MR. LEBLANC: That is correct.

--- Pause

MR. LEBLANC: The next submission is from Nicky Young, M51.87.

13-M51.87

Written submission from Nicky Young

MR. LEBLANC: The next submission is from Nancy Greyeyes, M51.88.

13-M51.88

Written submission from Nancy Greyeyes

MR. LEBLANC: The next submission is a joint submission from Dianne Knight and Curtis

Bennett, M51.89.

13-M51.89

Written submission from

Dianne Knight and Curtis Bennett

MR. LEBLANC: There are three remaining submissions, and those are going to be really challenging, where there were to be some oral presentations and were rescheduled as written earlier today.

The first one would have been your third presentation today, as part of the orals, from Mr. James Ker.

13-M51.10

Oral presentation by James Ker

THE PRESIDENT: What's the number?

MR. LEBLANC: M51.10.

That would have been after Mrs. Muir and Mrs. Adler, so the....

--- Pause

MR. LEBLANC: Any comments from the members?

UNIDENTIFIED SPEAKER: No.

MR. LEBLANC: The next submission is from Brian Holmes, which is 13-M51.25

THE PRESIDENT: M51.25.

13-M51.25

Oral presentation by Brian Holmes

MR. LEBLANC: And the last submission was from Mr. Andrew Fiori. That is M51.35. That will be towards the end of the oral presentations today.

13-M51.34

Oral presentation by Andrew Fiori

MR. LEBLANC: M34.

--- Off microphone / Sans microphone

THE PRESIDENT: Do you have a question, Mr. Tolgyesi?

--- Pause

THE PRESIDENT: If you look at the second page, the intervenor talks about, in the second paragraph, the impact on groundwater and underground contamination.

Staff, can you talk a little bit

about this?

MR. RINKER: Mike Rinker, for the record.

In general, when we monitor releases for a facility, we look at what could be released, so measurements inside the facility, and then what goes up the stack, there's measurements at the stack of the facility. If warranted, for most of the facilities -- and Peterborough is an exception -- we would then monitor -- at the next step would be uranium in air.

At the perimeter facility, if there's something observable there, we go to the next step, and that would be uranium in soil. In the cases such as the GE Hitachi facility in Toronto, where uranium in the soil is at background, with the exception of the small area along the railway line, the risk associated with groundwater contamination is so exceedingly low, it doesn't warrant the type of intrusive monitoring that would be required.

So there is not monitoring for groundwater around this facility.

THE PRESIDENT: So when you read the recommendation, if you like, or the conclusion that you should do a little bit more sampling at different depths to see if there's a plume running somewhere in

there, is that a good idea or not?

MR. RINKER: Mike Rinker for the record.

So during the MOE campaign, there were some depth -- I'd say shallow core samples or shallow depth profiles. You can see that there is some contamination with depth. That would be more indicative of contamination that occurred historically.

THE PRESIDENT: M'hmm.

MR. RINKER: These values are still very low, and they're not the type of values that you would expect to see that would end up causing a signature in groundwater, which would be, you know, more in the order of metres below the ground surface.

THE PRESIDENT: Okay. Thank you.

Mr. Tolgyesi.

MEMBER TOLGYESI: Oh, yeah, there was a question if the 0 to 20 centimetres or refusal is deep enough. But there was mention that refusal to gravel. When the gravel refusing going deeper, what's the potential of leaching migration to deeper depths?

MR. RINKER: It's Mike Rinker, for the record.

I guess the issue is they're just isn't an inventory of uranium in the shallow depths

that would leach to the deeper depths. So if the concentration of uranium was, for example, extremely high, then you could get a loading to the deeper depths. But we're at Ontario-typical ranges at the shallow, in the top 20 centimetres, and so when you're at background you would expect it to be background with depth as well, and not a loading with depth.

MEMBER TOLGYESI: The groundwater movement, did it influence the pattern of sampling?

MR. RINKER: Mike Rinker, for the record.

The influence for the pattern of sampling for compliance purposes is the prevailing wind direction. We make sure that we're downstream. There's monitoring in the downwind direction, not only, also, in the up direction because winds are not always in the same direction.

Groundwater movement is not a pathway for uranium in this case, so it is not a driver for contamination.

THE PRESIDENT: So thank you, Marc.

This concludes the public meeting for today. We will be back here tomorrow at 8:30.

So thank you all for your attendance, participation and patience.

Thank you.

--- Whereupon the hearing adjourned at 9:50 p.m., to
resume on Wednesday, December 11, 2013
at 8:30 a.m. / L'audience est ajournée
à 21 h 50 pour reprendre le mercredi
11 décembre 2013 à 8 h 30