

**Canadian Nuclear
Safety Commission**

**Commission canadienne de
sûreté nucléaire**

Public hearing

Audience publique

January 17th, 2012

Le 17 janvier 2012

Town Park Recreation Centre
62 McCaul Street,
Port Hope, Ontario

Centre récréatif Town Park
62, rue McCaul
Port Hope (Ontario)

Commission Members present

Commissaires présents

Dr. Michael Binder
Dr. Moyra McDill
Mr. Dan Tolgyesi
Dr. Ronald Barriault
Mr. André Harvey

M. Michael Binder
Mme Moyra McDill
M. Dan Tolgyesi
M. Ronald Barriault
M. André Harvey

Secretary:

Secrétaire:

Mr. Marc Leblanc

M. Marc Leblanc

General Counsel :

Conseillère générale:

Ms. Lisa Thiele

Mme Lisa Thiele

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Port Hope, Ontario

1
2
3 --- Upon commencing on Tuesday, 17 January 2012
4 at 2:02 p.m.
5

6 **Opening Remarks**

7 **M. LEBLANC:** Bonjour, Mesdames et
8 Messieurs. Bienvenue aux audiences publiques de la
9 Commission canadienne de sûreté nucléaire.

10 The Canadian Nuclear Safety Commission is
11 about to start a series of three public hearings on
12 applications by Cameco Corporation for the renewal of the
13 licences for the Port Hope Conversion Facility and the
14 Cameco Fuel Manufacturing Facility here in Port Hope and
15 the Blind River Refinery in Blind River.

16 During today's business, we have
17 simultaneous translation.

18 Des appareils de traduction sont
19 disponibles à la réception. La version française est au
20 poste 2 and the English version is on Channel 1.

21 We would ask you to please keep the pace of
22 speech relatively slow so that the translators have a
23 chance to keep up.

24 Les audiences sont enregistrées et
25 transcrites textuellement.

1 I'd also like to note that this proceeding
2 is being video-webcasted live and that the proceedings are
3 also archived on our website for a three-month period
4 after the closure of the hearing.

5 The transcript will be available on the
6 website of the CNSC probably next week or the week after.

7 To make the transcripts as meaningful as
8 possible, we would ask everyone to identify themselves
9 before speaking. As a courtesy to others in the room,
10 please silence your cell phones and other electronic
11 devices.

12 Monsieur Binder, président et premier
13 dirigeant de la CCSN, présidera l'audience publique
14 d'aujourd'hui.

15 Mr. President?

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

17 Good afternoon and welcome to the public
18 hearing of the Canadian Nuclear Safety Commission.

19 Mon nom est Michael Binder, je suis le
20 président de la Commission canadienne de sûreté nucléaire.

21 Je souhaite la bienvenue aux gens ici
22 présents. And for all of you who are joining us through
23 our webcast, welcome.

24 First of all, let me tell you how happy we
25 are to actually make it to Port Hope today in spite of the

1 weather. And we're very happy to look forward for three
2 days of hearing from citizens and others about some of
3 those files.

4 I'd like to begin by introducing the
5 members of the Commission that are here with us today. On
6 my right are Dr. Moyra McDill and monsieur Dan Tolgyesi,
7 my left Dr. Ronald Barriault and monsieur André Harvey.

8 We've already heard from Marc Leblanc, the
9 Secretary of the Commission. We also have with us Ms.
10 Lisa Thiele, General Counsel to the Commission.

11 I'd like to start by calling for the
12 adoption of the agenda by the Commission Members as
13 outlined in Commission Member Document 12-H1.A.

14
15 **12-H1.A**

16 **Adoption of Agenda**

17
18 **THE CHAIRMAN:** Do we have concurrence?
19 Okay, for the record, the agenda is
20 adopted.

21 We are now conducting three separate
22 hearings this week on different fuel facilities located in
23 Port Hope and Blind River. All three are operated by
24 Cameco Corporation.

25 Therefore, to reduce repetition and to

1 ensure there is a complete record for each hearing, the
2 Commission will consider any relevant information
3 regarding common elements that may be presented during the
4 course of the three hearings.

5 Marc?

6
7 **Cameco Corporation:**

8 **Application by Cameco Corporation**
9 **for the Renewal of Class 1B Nuclear**
10 **Fuel Facility Operating Licence for**
11 **Port Hope Conversion Facility in Ontario**

12
13 **MR. LEBLANC:** Yes, so this is Day Two of
14 the public hearing. The first day of public hearing or
15 Day One on this Application was held on November 3rd, 2011
16 in Ottawa. The notice of Public Hearing 2011-H-08 was
17 published on August 24th, 2011.

18 Presentations were made on Day One by the
19 Applicant, Cameco, under Commission Member Documents, or
20 we will call CMDs, 11-H16.1 and 16.1A and by Commission
21 staff under CMD 11-H16.

22 The public was invited to participate
23 either by oral presentation or written submission.
24 December 19th was the deadline set for filing by
25 intervenors. The Commission received 97 requests for

1 intervention. Two requests were received significantly
2 after the deadline and were denied.

3 January 11th, 2012 was the deadline for
4 filing of supplementary information. I note that
5 supplementary information has been filed by CNSC staff,
6 Cameco, as well as several intervenors.

7 Participant funding was available to
8 intervenors to prepare for and participate in Hearing Day
9 Two. The Commission received two such requests for
10 funding. The Funding Review Committee, which is
11 independent of the Commission, reviewed the applications.
12 Funding was provided to the two applicants as per a
13 decision issued on December 14th, 2011.

14 All the documents presented today are
15 available at the reception either on CDs or in paper
16 format as well as the Commission Members' biographies.

17 To begin, just to give you a sense of how
18 the days will unfold, we will first hear the presentations
19 by Cameco and CNSC staff and go through a first round of
20 questions from Commission Members.

21 We have in attendance today, available for
22 questions from the Commission, representatives from Labour
23 Canada and Emergency Management Ontario. Representatives
24 from the Ministry of the Environment will be available for
25 questions tomorrow afternoon.

1 After the first round of questions, we're
2 going to hear from intervenors who have requested to
3 speak. Commission Members will then have the opportunity
4 to ask questions after each presentation.

5 Several intervenors have filed similar
6 submissions for two or three of the hearings. As
7 indicated by the President and as informed by an email,
8 oral interventions and written submissions filed for
9 several hearings will be substantively addressed in only
10 one of the hearings but will be part of the record for all
11 identified hearings.

12 Furthermore, this hearing is with respect
13 to the renewal of the operating licence of the Port Hope
14 Conversion Facility and is not about the Port Hope area
15 initiative or the Vision 2010 Rehabilitation Project.
16 Separate Commission proceedings will be held to deal with
17 these two initiatives in the foreseeable future.

18 There will be a break for dinner between
19 6:00 and 7:00 p.m. tonight. There will be a short break
20 later this afternoon. We anticipate ending today around
21 9:00 p.m.

22 Tomorrow we will resume at 8:30 with oral
23 presentations and written submissions from intervenors and
24 a second round of questions from Commission Members.

25 Mr. President?

1 **UNIDENTIFIED SPEAKER:** (Speaking off-
2 microphone) It would be very useful to all of us to know
3 these organizations to which Cameco Corporation has
4 donated money.

5 **THE CHAIRMAN:** This could be a point that
6 you can raise in your intervention. We're going to go now
7 through the agenda. There's no specific time for this
8 particular issue to be raised right now.

9 So I would like to start the hearing itself
10 by calling on the presentation from Cameco Corporation as
11 outlined in Commission Member Document H-16.1B and H-
12 16.1C.

13 I understand that you're going to make a
14 short presentation regarding the common elements of the
15 three installations before moving onto the presentation
16 for Port Hope Conversion Facility. And I understand that
17 Mr. Thorne will make the presentation.

18 Go ahead, please.

19

20 **11-H16.1B / 11-H16.1C**

21 **Oral presentation by**

22 **Cameco Corporation**

23

24 **MR. THORNE:** Yes, thank you, President
25 Binder.

1 For the record, my name is Andy Thorne and
2 I'm the Vice-President of Cameco's Fuel Services Division.

3 I would like to welcome you and your fellow
4 Commissioners to Port Hope and Northumberland County. We
5 not only work here but most of us live here, play here and
6 are raising our families here. We believe in this
7 community and the surrounding area and are proud to do
8 whatever we can to support the quality of life here.

9 Our job here is an important one to provide
10 safe, clean and reliable operations to protect our
11 employees, our neighbours and our environment while
12 producing nuclear fuel to power the energy needs of
13 Ontario and the world.

14 Over the next three days, I will have the
15 pleasure of introducing to you my senior operations team
16 and some of their key staff. Collectively, the people who
17 will sit in the table in front of you have more than 150
18 years of experience in various industrial settings with
19 some dedicating their entire careers to the nuclear
20 industry.

21 Others bring many years of additional
22 experience in managing large complex industrial processes
23 both here in Canada and around the globe. These
24 individuals and their experience are important assets to
25 ensure Cameco continues to operate safe, clean and

1 reliable operations and I'm very proud to have them as
2 part of my team.

3 During the Day 1 hearings, we have the
4 opportunity to share many successes we've had at all of
5 our sites during the current licensing period. With
6 safety being our guiding priority, we have operated our
7 facilities at a fraction of all regulatory release limits.

8 We have improved our radiation protection
9 programs and enhanced security and emergency response
10 programs at all of our sites. We have an industrial
11 leading liquid management program at the Port Hope
12 conversion facility and an extensive pump and treat
13 system.

14 Lessons learned from the liquid management
15 changes and groundwater programs at the conversion
16 facility have been applied at Blind River and Cameco fuel
17 manufacturing.

18 Additionally, through self-driven
19 innovation, Blind River eliminated ammonia from its
20 process circuit, removing the site's highest chemical
21 risk. And most recently, Cameo Fuel Manufacturing's
22 environmental management systems have been registered to
23 the ISO 14001 standard.

24 We've made significant improvements to our
25 waste management programs as evidenced by our ability to

1 recycle empty drums at Blind River and the decontamination
2 and removal of scrap metal at all three facilities.

3 Employees have also worked to remove
4 contaminated soil and concrete from the conversion
5 facility. At each site, we've introduced a corrective
6 action process supported by Cameco's Incident Reporting
7 System or CIRS.

8 This has allowed us to improve incident
9 reporting and tracking while also giving employees the
10 ability to enter events into CIRS and follow up on the
11 progress of investigations and corrective actions.

12 A major focus on manufacturing excellence
13 and operational reliability has seen a huge cultural shift
14 at Cameco Fuel Manufacturing and the conversion facility.

15 We've also continued investing in our
16 employees. Through the implementation of a systematic
17 approach to training and a continued focus on leadership
18 training, we are developing employees for the future.
19 Focusing on building transparent and consistent
20 communication channels, we've created more opportunities
21 for two-way discussion, dialogue and feedback which we
22 know is needed to improve the questioning attitude of our
23 employees and, ultimately, the safety culture and employee
24 experience.

25 Blind River employees marked a safety

1 milestone of five years without a loss-time injury and
2 both Cameco Fuel Manufacturing and the conversion facility
3 celebrated safety achievements during the licensing
4 period.

5 Cameco Fuel Manufacturing achieved one year
6 loss-time injury-free and the conversion facility logged
7 one million person hours without a loss time injury. With
8 the help of our employees, we have engaged our communities
9 and polls validate that the majority of Port Hope and
10 Blind Residents support our operations.

11 In both Port Hope and Blind River, we have
12 robust public information programs focused on engaging
13 local residents to help them fully understand their
14 operations and our performance.

15 Components of these programs feature
16 regular public forums, open houses, meetings with
17 neighbours and interested parties, community newsletters,
18 reports to town councils and robust site-specific
19 websites.

20 In addition, hundreds of our employees
21 volunteer their time to support local causes and
22 organizations throughout the year giving of themselves to
23 make our communities a better place to live.

24 Our commitment has been to not only meet
25 CNSC requirements but to go above and beyond simply what

1 is required of us. I'm proud of our accomplishments but,
2 most importantly, I'm proud of the 900 Cameco employees in
3 the division who commit every day to providing safe, clean
4 and reliable operations.

5 It's now my pleasure to introduce Dale
6 Clark and Rebecca Peters. Dale joined Cameco in 2008 and
7 serves as General Manager of the Port Hope conversion
8 facility.

9 He is responsible for the plant's
10 operations in the production of uranium dioxide and
11 uranium hexafluoride. Dale previously held various
12 management positions with an international chemical
13 company, headquartered in the U.S.

14 His 15 years of experience include work
15 assignments in the USA, the UK and Estonia. Rebecca is
16 our Superintendent of Compliance and Licensing for the
17 conversion facility and is responsible for implementation
18 of the site's environmental monitoring program, regulatory
19 compliance and site interaction with the CNSC staff.

20 Prior to joining Cameco in 2005, Rebecca
21 held a teaching position at the University of Ontario
22 Institute of Technology. I will now turn the presentation
23 over to Dale.

24 **MR. CLARK:** Thank you, Andy.

25 For the record, my name is Dale Clark, the

1 General Manager of Cameco's Port Hope conversion facility.

2 I'm happy that the Commission has once
3 again come to Port Hope to provide local residents and
4 other interested parties with the opportunity to
5 participate in this re-licensing process.

6 The Port Hope conversion facility currently
7 has a five-year operating license from the CNSC which
8 expires at the end of February of this year. Our license
9 application submitted in 2011 indicated that we are not
10 requesting any changes be made to our current operating
11 license and that a new five-year license be granted.

12 At the first day of these hearings in
13 November, I provided detailed information on Cameco's
14 operations under each of the 14 safety and control areas
15 and identified highlights from the current license period.

16 I will not be repeating those details here
17 but I am pleased to provide supplementary information to
18 answer outstanding issues raised at the Day 1 hearing in
19 Ottawa.

20 At Cameco, we are committed to safe, clean
21 and reliable operations. We maintain programs, plans and
22 procedures to continually improve our environmental
23 performance and ensure the safety of both our employees
24 and our neighbours.

25 Our operating performance demonstrates the

1 strength of this commitment. The radiation exposures
2 within our operations fall well below dose limits for
3 nuclear energy workers.

4 Our environmental emissions are only a
5 fraction of the regulatory limits and public radiation
6 exposures are well below established limits. These key
7 metrics demonstrate that we are qualified to carry out
8 future activities.

9 The application we've submitted as well as
10 the detailed information provided at the Day 1 hearing
11 reaffirms Cameco's commitment to the safe, clean and
12 reliable operation of the Port Hope conversion facility.

13 In response to some of the specific
14 questions or requests for information that emerged at the
15 Day 1 hearing, I can confirm that all actions from the
16 February, 2011 CNSC inspection have been completed.

17 I reported in November that the dose
18 calculation resulting from a finger laceration injury that
19 occurred in February, 2011 was not yet complete. Cameco
20 continued to work closely with Health Canada to estimate
21 the uranium intake and retention and to validate the skin
22 dose from this injury.

23 I can now confirm that the affective and
24 equivalent doses have been reported to CNSC staff and are
25 both calculated to be well below the safe annual limits.

1 The Commission also requested information
2 regarding an action from the May, 2011 CNSC staff
3 inspection pertaining to the drum storage inspection and
4 maintenance program at the Dorset Street warehouse
5 location.

6 We completed the assessment of all drums in
7 one warehouse in 2011 and all drums showing signs of wear
8 and tear were repackaged to ensure their future integrity.

9 This process will be repeated in the second
10 warehouse building, beginning in March and be completed by
11 the end of the year. Cameco is confident that there is no
12 risk to the public or the environment from the drums that
13 have not yet been inspected under this program.

14 These buildings are routinely inspected and
15 air quality has been found to be acceptable. Extensive
16 work was completed in recent years on the building
17 structures to ensure that the warehouses remain dry and
18 clean.

19 At the Day One Hearing, the Commission
20 requested graphical representation of the soil monitoring
21 data from the Port Hope Waterworks which is provided on
22 the next slide. Cameco collects this data as part of a
23 monitoring program established in 2005 to sample and
24 analyze soil on an annual basis at locations beyond the
25 fence line. The purpose of the program is to determine if

1 air emissions from the facility are contributing to
2 further accumulation of contaminants of potential concern,
3 such as uranium, at various depths in the soils beyond the
4 fence line.

5 The results of the sampling data and a
6 modelling program used to factor in air emissions from the
7 facility over time conclude that the level of uranium in
8 the soil surrounding the facility is constant or even
9 slightly decreasing. The soil monitoring program will
10 continue through the next licensing period.

11 The results for the sampling location at
12 the Port Hope Waterworks site is shown here. This site is
13 of particular interest since it was remediated with clean
14 soil as part of the construction of the new water
15 treatment plant which opened in 2005, and is in very close
16 proximity to the Port Hope Conversion Facility.

17 This graph shows the monitoring results of
18 the uranium found in the soil at the waterworks site
19 measured in micrograms per gram. As you can see, the
20 monitoring results are well below, in fact, less than 10
21 percent of the Canadian Council of Ministers of the
22 Environment, or CCME guideline for uranium in soil for
23 parkland and residential use, which is 23 micrograms per
24 gram. Actual results from 2011 sampling are all less than
25 2 micrograms per gram which is also the typical level used

1 for naturally occurring concentration of uranium in soil
2 in Ontario.

3 At the Day One Hearing, the Commission
4 requested additional information regarding the status of
5 groundwater contamination at the facility. This will be
6 provided in the next few slides. Cameco remains fully
7 committed to the ongoing monitoring of the groundwater
8 quality around the facility.

9 In recent years, we have recruited and
10 trained additional hydro-geological expertise to enhance
11 our in-house capabilities and knowledge of the groundwater
12 conditions and monitoring program. Significant
13 enhancements to the groundwater monitoring program have
14 taken place during the current licence period.

15 The site-wide environmental investigation
16 completed in 2008 has led to a comprehensive understanding
17 of the extent of contamination in the groundwater, as well
18 as the actual groundwater flow and paths through the soil.
19 The groundwater monitoring program was significantly
20 expanded from the original refinery well network
21 surrounding the UF6 plant to the comprehensive site
22 coverage that is now in place. There are 167 monitoring
23 wells across all areas of the site, as well as 13 pump and
24 treat wells as part of the site-wide environmental
25 management plan.

1 The primary purpose of the pump and treat
2 system is to ensure that the subsurface contamination
3 beneath the UF6 plant remains in place by maintaining a
4 zone of groundwater capture around the building. The
5 second purpose of the system is to reduce the overall
6 contaminant loadings to the harbour by reducing the total
7 volume of groundwater that reaches the harbour. The
8 monitoring program is used to ensure that the pump and
9 treat system meets these objectives and is reviewed on an
10 annual basis.

11 A comprehensive risk assessment has also
12 been conducted on the impact of the groundwater
13 contamination on public health and the environment. This
14 risk assessment, accepted by key regulatory authorities,
15 has concluded that there is no significant impact on
16 public health, workers, or the environment.

17 This slide shows the locations of the wells
18 that are included in the groundwater monitoring program
19 which has been accepted by the CNSC and the Ontario
20 Ministry of the Environment. This illustrates the many
21 monitoring wells located all across the facility to ensure
22 a comprehensive understanding of the groundwater quality
23 and flow. You will note that groundwater on the property
24 generally moves in a south-easterly direction towards the
25 Port Hope Harbour.

1 Based upon the most recent monitoring data
2 obtained in the first three quarters of 2011, Cameco has
3 updated the groundwater concentration contour drawing for
4 uranium to illustrate the current status of the
5 groundwater contamination. Results are shown on this
6 slide. The contours shown here demonstrate the depth of
7 our understanding of the current groundwater conditions
8 and are used in identifying the best locations for the
9 treatment wells that comprise a significant part of our
10 site-wide environmental management plan.

11 As stated earlier, the groundwater
12 treatment program now contains a total of 13 collection
13 wells in the pump and treat system. These wells are
14 achieving the objectives of the site-wide environmental
15 management plan. This slide shows that the wells are
16 maintaining a zone of capture around the UF6 plant.

17 Based on actual pumping rates of the nine
18 wells that have been in operation for several years, and
19 the design pumping rates of the four wells recently
20 brought online, the pump and treat system is reducing the
21 total flow of groundwater to the harbour by approximately
22 40 percent.

23 Based on design, these wells will reduce
24 the total loading of uranium to the harbour by
25 approximately 70 percent from pre-pumping conditions.

1 These results give us confidence that the groundwater pump
2 and treat system is achieving the objectives of our site-
3 wide environmental management plan.

4 Cameco has conducted a comprehensive risk
5 assessment of the impact of this groundwater contamination
6 which concluded that there is no significant impact on
7 public health, workers, or the environment.

8 Another area on which the Commission
9 requested additional information was related to the
10 specific concerns local residents identified through
11 Cameco's public opinion polling. As a brief background,
12 Cameco conducted a telephone survey in Port Hope during
13 the second quarter of 2011, after the events of Fukushima.

14 The results of this public opinion research
15 showed 87 percent of Port Hope residents are supportive of
16 Cameco's continued operations in the community. This is a
17 three percent increase over the previous survey in 2010.
18 Sixty-five (65) percent indicated that they had no
19 specific concerns with the presence of Cameco's operations
20 in Port Hope. Of the 35 percent who did express concern,
21 their comments centred on environmental concerns, health
22 and safety issues, the location of the facilities and its
23 impact on waterfront development, and waste management
24 concerns related to disposal and safeguards.

25 Cameco recognizes the importance of public

1 support in the communities in which it operates. In order
2 to engage with the public, we maintain a comprehensive
3 website, provide quarterly environmental updates to the
4 municipal council, hold community forums on issues of
5 interest to the public, establish a visible presence at
6 the Port Hope fall fair, and engage with key stakeholders
7 to provide information on our environmental performance
8 and safe operation.

9 We will continue our effort to alleviate
10 some of the concerns identified and keep the public and
11 key stakeholders informed about activities at our
12 facility.

13 During the presentation at the Day One
14 Hearing, Cameco requested that the draft license retain
15 the flexibility to discharge a treated liquid process
16 affluent. The Commission requested further clarification
17 on this matter for Day Two. The current license provides
18 for the discharge of a treated liquid process affluent
19 stream with associated release limits.

20 In early 2007, Cameco ceased discharging
21 treated liquid process affluent from the facility as a
22 result of process changes in the wastewater treatment
23 circuit. Since that time, Cameco has commissioned a
24 series of groundwater treatment wells as part of our
25 commitment to environmental protection.

1 The additional treatment wells brought
2 online in 2011 have increased the demand on the water
3 treatment circuit and we recognize that it is nearing its
4 capacity. To address this increased demand, Cameco is
5 evaluating additional treatment processes and technologies
6 such as reverse osmosis, which may require the
7 reestablishment of a treated process liquid affluent
8 discharge.

9 We have proposed that the existing licence
10 release limits for uranium related to the treated process
11 liquid affluent be listed in the proposed licence. These
12 release limits have been in effect at the site for many
13 years and have provided sufficient controls on key
14 parameters related to the safe operation of the facility.

15 Prior to re-establishing this treated
16 process liquid affluent, we will submit information
17 regarding the new treatment process and propose action
18 levels for CNSC staff acceptance. We have agreed to an
19 additional condition in the proposed licence condition
20 handbook that there will be no liquid effluent discharges
21 at the conversion facility until these commitments have
22 been reviewed and accepted by CNSC staff.

23 We believe that this change in the proposed
24 licence will provide the required flexibility to enable
25 the continued effective management of wastewater and

1 groundwater at the facility and protection of the
2 environment.

3 The Commission has requested clarification
4 on Vision 2010 and how licensing related to the project
5 intersects with this licensing process for current
6 operations. The Vision 2010 project involves the
7 remediation of legacy contamination on the site, removal
8 of old buildings and the construction of several new,
9 updated facilities, including a new research centre.

10 At the completion of the project, the Port
11 Hope Conversion Facility will have made a significant
12 investment into environmental improvements, will be more
13 visually appealing and have improved public spaces around
14 the facility. This project is currently undergoing an
15 environmental assessment.

16 Cameco provided the environmental impact
17 statement and responded to all regulatory requests for
18 additional information. Once the comprehensive study
19 report has been finalized and a decision whether to accept
20 the report has been made by the Federal Minister of the
21 Environment, Cameco will proceed with the selection of the
22 final site configuration and embark on detailed design for
23 the project.

24 Cameco will initiate a separate licensing
25 process for the Vision 2010 project once that work has

1 been completed, and all of the required information has
2 been provided to CNSC staff. We anticipate that this will
3 begin in late 2012 or early 2013.

4 In summary, Cameco is applying for a new
5 five-year operating licence for the Port Hope Conversion
6 Facility with no requested modifications to the current
7 licence conditions.

8 We are proud of what we have accomplished
9 in recent years to ensure the safe, clean and reliable
10 operation of our site today and into the future.

11 With the outline provided at the Day 1
12 hearing in November and additional information provided
13 here today, I believe we have clearly demonstrated that we
14 are qualified to receive a new five-year operating licence
15 with no changes from the current licence conditions, as we
16 are requesting.

17 In conclusion, I would also like to point
18 out for the Commissioners that Cameco's occupational
19 health physician is here at this time and available to
20 answer any questions you may have of him as well.

21 Dr. Bob Neville has been with Cameco for
22 more than 12 years and has provided occupational medicine
23 in Ontario and around Canada for nearly 25 years.

24 That concludes my presentation and we will
25 be happy to answer your questions.

1 **THE CHAIRMAN:** I would like to now move to
2 the presentation from CNSC as outlined in CMD H16.B. And
3 I understand, Mr. Elder, you will make the presentation.
4 Please go ahead.

5
6 **11-H16.B**

7 **Oral presentation by**

8 **CNSC Staff:**

9
10 **MR. ELDER:** Thank you.

11 Good afternoon, Mr. President, Members of
12 the Commission. My name is Peter Elder. I'm the Director
13 General of the Directorate of Nuclear Cycle and Facilities
14 Regulation.

15 The presentation today will be done by me
16 and Mr. B.R. Ravishankar, Director of the Nuclear
17 Processing and Research Facilities Division. We also have
18 members of the CNSC staff licensing and compliance team
19 for this facility here, and other staff are available by
20 videoconference in Ottawa.

21 As we mentioned, we will be presenting the
22 CNSC staff review regarding the licence renewal for
23 Cameco's Port Hope conversion facilities, a detailed
24 information or assessment is provided in CMD 11-H16 with
25 supplemental information in 11-H16.B.

1 In this presentation we will first review
2 the key information from our presentation to the
3 Commission on Day 1 for the benefit of the audience here
4 today.

5 This includes a brief introduction to the
6 Port Hope Conversion Facility and the licensee's
7 compliance in key safety and control areas: radiation
8 protection, environmental protection and conventional
9 health and safety.

10 Our presentation will also cover the
11 supplemental information in CMD 11-H16.B. This
12 information was requested by the Commission at the Day 1
13 hearing in November.

14 Finally, we will be presenting CNSC staff
15 recommendations to the Commission regarding the
16 application for licence renewal.

17 Mr. Ravishankar will continue with the next
18 portion of the presentation.

19 **MR. RAVISHANKAR:** Good afternoon, Mr.
20 President and Members of the Commission.

21 For the record, my name is B.R.
22 Ravishankar, Director of the Nuclear Processing Facilities
23 Division.

24 Cameco Corporation owns and operates the
25 Class 1B nuclear fuel conversion facility here in Port

1 Hope under a CNSC operating licence that expires in
2 February 2012.

3 The conversion facility is located on the
4 north shore of Lake Ontario and has been in operation
5 since the 1950s.

6 Cameco employs approximately 400 workers at
7 the Port Hope Conversion Facility. The facility's two
8 primary operations involve conversion of uranium trioxide
9 from Blind River to ceramic grid uranium dioxide and
10 conversion of uranium trioxide to uranium hexafluoride.

11 The plant also deals with speciality
12 metals, research and some storage. Cameco's current
13 operating licence expires in February 2012. In its
14 licence renewal application, Cameco has not requested any
15 changes to its current operations and has asked for a
16 licence term of five years.

17 During the current licence period, the Port
18 Hope Conversion Facility was shut down for an extended
19 period following the discovery of soil and groundwater
20 contamination beneath the uranium hexafluoride plant in
21 July 2007. CNSC staff increased the regulatory oversight
22 of the facility during that time.

23 Upon CNSC staff's request, Cameco undertook
24 extensive environmental investigations, cleanup and
25 significant improvements to its plant infrastructure

1 equipment and processes to address the situation.

2 These and other improvements by Cameco
3 during this licence period include: improvements to
4 subsurface civil structures and liquid effluent collection
5 systems at both the uranium hexafluoride and uranium
6 dioxide plants; replacement of the main uranium
7 hexafluoride stack; design changes to allow for unloading
8 of new shipping containers of anhydrous hydrogen fluoride;
9 installation of high efficiency particulate air filters at
10 both uranium dioxide and uranium hexafluoride plants;
11 installation of additional monitors for hazardous
12 substances; fire and radiation protection; a major
13 revision to Port Hope conversion facility's quality
14 management program, including improvements to their design
15 and change control procedure.

16 As part of licence renewal, during the Day
17 1 public hearing, CNSC staff presented details on Cameco's
18 licence renewal application and staff assessment of
19 licensee's overall compliance performance.

20 This assessment was based on CNSC's staff's
21 compliance verification plan for this facility, which
22 included 33 onsite inspections during the current licence
23 period, many desktop reviews of the Port Hope conversion
24 facility's programs, follow-up discussions, as well as
25 review of corrective actions for reported events.

1 Based on these, CNSC find that Cameco's
2 Port Hope Conversion Facility continues to maintain
3 comprehensive and mature programs for their safety and
4 control areas. There are no safety significant items
5 outstanding during the current licence period.

6 Cameco's Port Hope Conversion Facility has
7 been operated in compliance with CNSC regulatory
8 requirements. Cameco has put in place improvements where
9 required, specifically management systems and quality
10 assurance due to increased focus and oversight by CNSC
11 staff for these safety and control areas.

12 In addition, CNSC staff continue to see
13 improvements in Cameco's implementation of its incident
14 reporting system.

15 CNSC staff consider Cameco's overall
16 performance in all 14 safety and control areas as
17 satisfactory.

18 In the next few slides, CNSC staff will
19 present the Port Hope Conversion Facility's performance in
20 key safety and control areas of radiation protection,
21 environmental protection and conventional health and
22 safety.

23 This slide is a graphical representation of
24 the maximum effective dose to a member of the public
25 around Cameco's Port Hope Conversion Facility during the

1 current licence period. The maximum value was 0.064
2 millisieverts recorded for the year 2007.

3 From the review of data presented, CNSC
4 staff conclude that the maximum effective dose to a member
5 of the public from Port Hope Conversion Facilities
6 Radiological Emission remains a very small fraction of the
7 regulatory limit of one millisievert per year and the
8 licence limit of 0.3 millisieverts per year.

9 Slide 7 presents radiation exposure data
10 for the nuclear energy workers at Port Hope Conversion
11 Facility and is taken from Cameco's Annual Compliance
12 Reports for the years 2006 through 2010.

13 Cameco also has monthly and quarterly
14 action levels for internal and external dose to workers.

15 The average annual effective dose to
16 workers at the Port Hope Conversion Facility during the
17 current licence period is approximately 1.7 millisieverts
18 per year or 3.4 percent of the annual regulatory dose
19 limit of 50 millisieverts per year.

20 The maximum annual individual whole body
21 dose to a worker at the Port Hope Conversion Facility is
22 26 millisieverts for the five-year dosimeter period that is
23 2006 through 2010 which represents 26 percent of the
24 regulatory limit of 100 millisievert over five years.

25 Dosage to skin are also monitored and

1 reported by Cameco. However, that data is not presented
2 here as it is a negligible contributor to the effective
3 dose.

4 Based on the monitoring data CNSC staff
5 note that radiation doses to workers at Port Hope
6 Conversion Facility are well below the regulatory limit.

7 We now present information on environmental
8 protection in two parts.

9 First, we present discharges to the
10 environment from Port Hope Conversion Facility activities.

11 And then we present a review of the level
12 of impact found in the surrounding environment.

13 Cameco monitors and reports several
14 parameters regularly as explained and presented in CNSC
15 staff's Day One CMD.

16 In this presentation, however, CNSC staff
17 are providing an overview of uranium monitoring results as
18 that is the most significant parameter of interest here.

19 In this slide, we provide data on uranium
20 and air emissions from the uranium hexafluoride plant.

21 Air emission from the uranium hexafluoride
22 plant have licence limits as well as action levels.

23 The existing license limit for uranium
24 discharges is 20 times lower than the derived release
25 limit and is determined based on a 50 microsievert dose to

1 public.

2 CNSC also requires licensees to establish
3 action levels in order to achieve releases as low as
4 reasonably achievable.

5 The action levels are significantly below
6 the licence limits; are based on past performance and also
7 strives for continuous improvement.

8 Action levels give early indication to the
9 licensee and the regulator on process upsets or poor
10 performance of emission control systems.

11 CNSC staff asks licensees to review action
12 levels on a periodic basis and further lower them as part
13 of the continuous improvement.

14 These are evaluated and accepted by CNSC
15 staff before the licensee employs these revisions.

16 This slide represents the annual average
17 air emissions from the uranium hexafluoride plant over the
18 licence period.

19 Lower than expected emissions occurred in
20 2008 due to extended outage of the uranium hexafluoride
21 plant.

22 Overall, there were no action levels or
23 release limits exceedances from the uranium hexafluoride
24 plant over the licence period.

25 This graph presents data on uranium and air

1 emissions from the uranium dioxide plant reported by
2 Cameco in their Annual Compliance Reports.

3 For 2011, data reported is as of June 30th
4 of that year. The licence limit for uranium emissions
5 from the uranium dioxide plant are also based on 50
6 microsieverts dose to public and is 20 times lower than
7 the derived released limits. As can be seen, the uranium
8 emissions from uranium dioxide plant were well below the
9 licence limits.

10 As stated earlier the main purpose of
11 action levels is to give early warnings to the licensee
12 and the regulator on process upsets or poor performance of
13 emission control systems and allow for corrective actions
14 to ensure emissions from the plant remain as low as
15 possible.

16 As reported in CNSC staffs CMD's, there
17 were action level exceedances for uranium emissions from
18 the uranium belts plant and Cameco's response to these
19 incidents and corrective actions have been in line with
20 CNSC staff's expectation.

21 There were no licence limit exceedances
22 during the licence period.

23 Cameco's Port Hope Conversion Facility has
24 currently no liquid effluent releases into the environment
25 from its processes. The contaminated groundwater at the

1 facility is currently being captured through a network of
2 groundwater wells.

3 A pump and treat system which has been in
4 operation since 2008 addresses process influence and
5 groundwater from the facility. There are no liquid
6 effluent releases from the pump and treat system.

7 We now present monitoring data on the
8 receiving environment starting with the uranium
9 concentrations in ambient air around Port Hope Conversion
10 Facility.

11 The graph shows results from four high
12 volume samplers located at the facility; regularly
13 monitored by Cameco in comparison to Ontario Ministry of
14 Environment's new air quality standard for uranium which
15 is 0.03 microgram per cubic metre.

16 As can be seen, the uranium concentrations
17 measured in ambient air around the Port Hope Conversion
18 Facility are well below Ontario's New Air Quality
19 Standard.

20 Slide 12 presents the average uranium
21 concentration in soil near the Port Hope Conversion
22 Facility during the current licence period. These were
23 measured at the soil monitoring location in the Waterworks
24 parking lot and reported in Cameco's Annual Compliance
25 Report.

1 This area had been remediated with clean
2 soil in 2005 as part of the soil monitoring program by
3 Cameco in cooperation with the Ontario Ministry of the
4 Environment.

5 Therefore, these results represent
6 accumulation of any uranium deposits in soils from current
7 operations at the Port Hope Conversion Facility.

8 This graph shows that the uranium
9 concentration in soil as monitored at the Waterworks
10 station are below Ontario MOA's guideline for uranium in
11 soils for residential land which is 23 micrograms per
12 cubic metre and that the uranium soil concentrations do
13 not appear to increase in soil horizon at the Waterworks
14 parking lot monitoring location. This indicates no
15 measurable impact on soil due to current uranium emissions
16 from the facility in Port Hope.

17 Another key component of the receiving
18 environment is groundwater quality. During Day One Public
19 Hearing, the Commission requested data on groundwater flow
20 direction as well as historical contamination data.

21 Today, Cameco has presented several slides
22 on groundwater monitoring and details have been submitted
23 in their Day Two CMD 11-H16.1B.

24 CNSC confirm that the groundwater
25 monitoring information is submitted by Cameco on an annual

1 basis to us for our review and acceptance.

2 CNSC staff will continue to follow and
3 review Cameco's groundwater monitoring and treatment
4 programs as part of our compliance verification
5 activities.

6 We will now present information on the
7 conventional health and safety at the Port Hope Conversion
8 Facility.

9 The table in Slide 14 illustrates the
10 number of recordable lost time injuries reported by Cameco
11 in their Annual Compliance Reports over the licence
12 period. The data from 2011 is as of June 30th of that
13 year.

14 A recordable lost time injury is defined as
15 a work related injury requiring professional medical
16 assessment and treatment where the employee is not able to
17 return to work for their next scheduled shift.

18 Overall, CNSC staff are satisfied with
19 Cameco's event detection, reporting and investigation
20 processes and timely implementation of corrective and
21 preventive actions.

22 During Day One Public Hearing on November
23 3rd, 2011, the Commission requested additional information
24 on the outstanding action items from CNSC staff compliance
25 inspections related to management systems and radiation

1 protection as well as the groundwater well locations and
2 historical contamination data at this facility.

3 As we mentioned earlier, Cameco has
4 submitted information on groundwater well locations as
5 well as historical contamination on the property as part
6 of CMD 11-H16.1B. The Commission had also asked CNSC
7 staff to review Cameco's request regarding liquid effluent
8 release limits. Since Day 1, Cameco has clarified that
9 the current effluent release limits for uranium and other
10 parameters be included in the renewed licence.

11 CNSC staff consider that keeping the
12 current limits could be acceptable provided that
13 additional wording is included in the licence conditions
14 handbook requiring Cameco to seek concurrence from CNSC
15 staff on any changes to release practices and allow CNSC
16 staff adequate time to review proposed changes to ensure
17 proper action levels are in place.

18 Cameco would also need to obtain the
19 appropriate authorizations from the Ontario Ministry of
20 the Environment including a Certificate of Approval. Mr.
21 Elder will now wrap up CNSC staff presentation with our
22 conclusions and recommendations.

23 **MR. ELDER:** Thank you. The past few slides
24 have presented CNSC staff review of the information
25 already presented in Day 1 as well as additional

1 information that led it up to -- since Day 2 -- sorry
2 since Day 1 on Port Hope conversion facilities licence
3 renewal application and the performance during the current
4 licence period.

5 I would like to make clear that the
6 additional information presented does not affect CNSC
7 staff's early conclusions on the Port Hope conversion
8 facility's licence renewal.

9 To summarize, CNSC staff conclude that
10 Cameco's application for licence renewal of its conversion
11 facility meets the requirements of the *Nuclear Safety and*
12 *Control Act* and its regulations.

13 The Port Hope conversion facility has been
14 operated in compliance with CNSC's regulatory
15 requirements. Cameco is qualified to carry on the
16 activities the proposed licence will authorize for the
17 five-year term.

18 CNSC staff recommend that the Commission
19 accept the conclusions in CMD 11-H16 and renew Cameco's
20 fuel -- nuclear fuel facility operating licence for a
21 five-year period. We also note that, as we noted during
22 Day 1, Cameco was required to submit a revised preliminary
23 de-commissioning plan as part of the licence application.

24 CNSC staff have found the revised plan
25 meets regulatory requirements and recommend the Commission

1 increase the required financial guarantee from 95.6
2 million dollars to a 101.7 million dollars. This
3 concludes CNSC staff presentations.

4 We are now available to answer any
5 questions. Thank you.

6 **THE CHAIRMAN:** Thank you. I'd like now to
7 move to a very quick round of Commission -- Day 2 is
8 designed to hear from Intervenors. So what I would like
9 to do is to go through some quick round and then open it
10 up for the Intervenors where we're going to have ample
11 opportunity to raise other questions.

12 So let me start with Dr. Barriault, please.

13 **MEMBER BARRIAULT:** Merci, Monsieur le
14 président. Thank you, Mr. Chairman.

15 I guess my question is an editorial one on
16 the Cameco slide 27. I notice the sailboats don't have
17 any masts on them. Is there any technical reason for
18 this? Is it associated with Cameco or whatever?

19 **MR. CLARK:** Dale Clark for the record. No,
20 no technical reason that I'm aware of. I would suspect
21 that's probably the time of year that the picture was
22 taken. I'm not exactly sure the date of that picture but
23 I imagine that's not exactly sailing season.

24 **MEMBER BARRIAULT:** Okay, so nothing to do
25 with the process of the plant?

1 **MR. CLARK:** No.

2 **MEMBER BARRIAULT:** Just that time of the
3 year.

4 **MR. CLARK:** Yes.

5 **MEMBER BARRIAULT:** Taking the masts down,
6 getting them in for the winter? Thanks.

7 **MR. CLARK:** That's right.

8 **MEMBER BARRIAULT:** Yes.

9 Next question really is you requested a
10 change to your effluent discharge. I notice that at this
11 time you have no liquid effluent being discharged and
12 you're requesting to go back to allow for effluent
13 discharge.

14 I guess it begs the question why?

15 **MR. CLARK:** Dale Clark for the record. We
16 are requesting that we retain the current conditions in
17 the licence that include the flexibility to discharge a
18 treated liquid process effluent. That's mainly driven by
19 changes and during the current licence period, where we
20 have installed a number of additional groundwater wells,
21 and we have significantly increased the demand on a waste
22 water treatment system.

23 And in order to be prepared and ensure that
24 we can meet the continued protection of the environment
25 through that groundwater management program, we're

1 assessing a number of different options to ensure that we
2 can meet that future demand.

3 Different options including reverse osmosis
4 unit and some of these options may -- will likely require
5 the return of a treated liquid effluent discharge --
6 process discharge.

7 And I would emphasize that is a treated
8 discharge of process effluent, as we have in the licence
9 today, and so we're proposing to and requesting to leave
10 those conditions in, that exist today that have -- and
11 have existing safe limits associated with those. And we
12 would continue to meet our environmental protection
13 commitment there.

14 **MEMBER BARRIAULT:** Thank you. To CNSC just
15 briefly on the same issue. I guess applying the ALARA
16 principle, there was no discharge at this time and now
17 we're going to have some discharge. Perhaps you could
18 give us just a quick overview.

19 **MR. ELDER:** Peter Elder for the record.
20 You'll look at when we did our original proposed licence
21 we had not included that condition about liquid discharges
22 -- because there weren't any.

23 Cameco has come back and made the request
24 to look at this one, and we need to look at it and the
25 Commission is aware of this. But from the community point

1 of view is that we look at discharges from two levels.

2 There's the limit, which is supposed to be
3 protective on environment in all cases; and under this, we
4 normally apply action levels that are where we apply
5 ALARA.

6 So in this case, we can say that limit that
7 we've had in place for the last five years plus is still
8 protective on the environment for those facilities, but
9 we've asked -- that we need more information about the
10 action levels.

11 And these are ones that we are now
12 controlling through the licence condition handbook.
13 That's what we said; if you do this one, we need a lot of
14 control in the licence condition handbook. We said,
15 "before you start, make sure that you're using the
16 appropriate technology."

17 And ALARA again, action levels is where you
18 start addressing best available technology. Are they
19 using the best technology in this case or they have the
20 appropriate controls in place?

21 So we can say that using the same limit is
22 still protective. It was protected before. It still is,
23 but there is a lot of missing information on the details
24 of how you can do that control, which is something that
25 we've always done in the licence conditioning handbook.

1 président.

2 My question is addressed to Mr. Thorne. In
3 your presentation you highlighted the amount of experience
4 of the operation team.

5 You highlighted the experience of the
6 operational team and the staff. You mentioned all the
7 successes in different area. You underlined your
8 commitment above and beyond expectation.

9 And those facilities -- I'm just talking of
10 the three facilities that have been there for years, doing
11 almost the same thing.

12 And my question is, are you satisfied that
13 -- to be given satisfying overall performance?

14 I mean there is no place -- I haven't seen
15 any word from the three facilities, any fully satisfactory
16 or just satisfactory, in the global performance is
17 satisfactory. So are you satisfied and how come it's
18 that? What's the problem?

19 I'll go back to the staff after, but I
20 would like to have your -- if you are satisfied or not
21 that.

22 **MR. THORNE:** Andy Thorne, for the record.

23 I think you really made two points, one was
24 in relation to the experience and the second was in
25 relation to the satisfied.

1 As Cameco and personally as the Vice-
2 President of Fuel Services, I'm very satisfied with our
3 performance. I'm very proud of our performance. We have
4 some very skilled and talented employees, some new, so
5 some fresh eyes, and also some very seasoned employees,
6 both Cameco and the predecessor operators Eldorado.

7 In relation to, you know, the areas of --
8 important areas for us, you know, safety, health
9 environment are guiding principles for our company. We
10 take those things very seriously. We hold ourselves
11 accountable for those things and we're extremely focused
12 on continuous improvement.

13 So I think it's fair to say myself, my
14 management team and the people that work for them are
15 always striving to improve the performance of our
16 operations.

17 **MEMBER HARVEY:** The fact that it's not
18 reflected in the staff appreciation; so it doesn't bother
19 you that -- I mean, it's ---

20 **MR. THORNE:** Andy Thorne, for the record.

21 I believe this was actually discussed
22 briefly in the Day One Hearings. It's very difficult for
23 me to comment on the ratings that staff give our
24 facilities.

25 But when you look at the suite of

1 performance metrics that we view our operation under, I'm
2 extremely proud of the levels of environmental protection
3 that our sites provide. I think that if you look at some
4 of the -- our environmental releases are magnitudes less
5 than the regulations call for.

6 And so the question in relation to the
7 ranking should probably be asked of staff but myself and
8 our team are very proud of our performance.

9 **MEMBER HARVEY:** Any comment?

10 **MR. ELDER:** Peter Elder, for the record.

11 We did comment on this on Day One. We are
12 very hard markers on this one.

13 Certainly for this facility that we're
14 talking now, there was a major event. We did highlight
15 improvements and those were coming after events. And
16 frankly, we don't give you much credit if you had an event
17 before you do a lot of improvements.

18 We've seen Cameco has taken these lessons
19 truly to heart, we do see that one, and applying them to
20 other facilities.

21 But, you know, for now we're looking at
22 this one in a case-by-case as what we see, these events.
23 On some of the areas, we were at below expectations at
24 some point during the licence period. We're now saying
25 we're all back to satisfactory. So there is improvement

1 trends in these ones.

2 But it is -- you know, one of the things is
3 looking at how you compare facilities, and this is
4 something that we will try to start bringing to the
5 Commission. We're in the process of putting together an
6 annual report that will look at a range of facilities, of
7 these types of facilities and the mining facilities. So
8 there will be annual basis, you'll be able to see
9 comparisons between the facilities.

10 And we said before, when you look at a
11 suite and when we're looking at 30 facilities, not
12 everybody can be in the top quartile. But we have so far
13 been very -- you know, when we say fully satisfactory,
14 saying this is where we would send other licensees to say
15 this is how it should be done.

16 **MEMBER HARVEY:** I know I'm coming back on
17 that and maybe for years, but this is the picture given to
18 the public. I mean, I recognize the fact that for the
19 industry, they put the efforts and are proud of what they
20 do, and there is not necessarily a correspondence between
21 the final picture and what could be expected. So that's
22 the only reason why I come back with that.

23 Okay, I've got part of the answer.

24 My other question is on page 2 of your
25 document. About the main stack emission, you mention that

1 the -- you have increased the frequency of monitoring.
2 Could you elaborate on that? What has been changed from
3 what it was before? What is the -- well, what was the
4 past frequency and the current one, and who does it, is it
5 operational? And is the staff, in my sub-question,
6 satisfied with the current situation?

7 **MR. CLARK:** Dale Clark, for the record.

8 Just to clarify, first of all, you're
9 pointing to an action level exceedance mentioned on page 2
10 of the Cameco CMD. Is that correct?

11 **MEMBER HARVEY:** M'hm. That's here.

12 What has changed?

13 **MR. CLARK:** Yes. Okay, I just wanted to
14 clarify the question.

15 So in this particular change and what's
16 mentioned here, this was an event where the main stack
17 emissions from the UO2 plant exceeded the action level on
18 one 24-hour period.

19 And to put that in context, the emissions
20 for that day were at 17 grams per hour, which is above the
21 action level, and as mentioned, that action level is set
22 as an early warning of a sign that there's a change in the
23 process and something that needs to be assessed, and
24 compared to the regulatory limit of 150 grams per hour.
25 So to put that in context, we're still talking about

1 approximately 10 percent of that regulatory limit.

2 The change that we put in place following
3 that event -- one of the changes, as you asked, is an
4 increased frequency, and that's -- of monitoring that
5 stack. That's specifically to put in place following an
6 extended shutdown period of the plant or following
7 maintenance activities that may take place, and that's
8 driven by the cause of the investigation into this
9 particular event where some maintenance activities caused
10 disturbance and we believe contributed to that action
11 level exceedance.

12 So the frequency is done by Cameco in-house
13 staff that we have. We increased the frequency so that
14 rather than collecting the data over a 24-hour period, we
15 collected two or three times during that 24-hour period,
16 so roughly 12-hour period most likely.

17 **MEMBER HARVEY:** What is the reaction time
18 if you've got -- well, if you will not exceed, but if
19 going up, what is the time reaction to do something?

20 **MR. CLARK:** Dale Clark, for the record.

21 Very quick -- we can make very quick
22 adjustments in the UO2 plant process. We have extensive
23 automated controls and information, in that and we can
24 react and respond very quickly, and that's why we're very
25 confident that this change in the increased frequency is

1 -- it gives us great confidence that we can prevent that
2 kind of occurrence again.

3 **MEMBER HARVEY:** Is the reading automatic
4 and somebody has to just to read the lecture, or you've
5 got to start it and you've got to ---

6 **MR. CLARK:** Dale Clark, for the record.

7 No, it's a sample that's collected by lab
8 technicians, taken back to a lab and analysed.

9 **MEMBER HARVEY:** Okay, thank you.
10 Are you satisfied with that?

11 **MR. RAVISHANKAR:** Ravi Ravishankar, for the
12 record.

13 In fact, when Cameco reported this
14 particular incident that was specifically our question in
15 terms of how it is sampled, and what they do is they take
16 filters once every 24 hours and take it to the lab and get
17 it analyzed. That represents the full days' emissions.

18 So what we asked them to do is every time
19 there is a start-up and that their frequency of sampling
20 -- that means how quickly they take the filter out and
21 take it to the lab. They increase the number of times
22 they take it to the lab in a single day. So that way, we
23 can find out if there were any issues very quickly within
24 a few hours instead of waiting for 24 hours.

25 So that is one of the things that CNSC

1 staff asked for it and Cameco responded positively and we
2 are satisfied with that.

3 **MEMBRE HARVEY:** Merci monsieur le
4 président.

5 **THE CHAIRMAN:** Thank you.

6 Dr. McDill?

7 **MEMBER McDILL:** Here we go. Question for
8 Cameco first and staff to comment, please.

9 In your slide on page 9, you gave us the
10 approximate area of simulated capture. Have you assessed
11 how close your simulation is to reality? Is there some
12 way of assuring that? Maybe staff has seen all of the
13 data.

14 **MR. CLARK:** Dale Clark for the record.

15 We are talking about the groundwater
16 capture zone chart. Yes, this is data and part of the
17 site-wide environmental management plan and information
18 that is updated annually.

19 In this case and in this particular slide,
20 this is based on actual data from nine of the pump and
21 treat wells that have been in operation for a number of
22 years, and based on the design rate of the four additional
23 wells that have been added in the past year.

24 So it is a combination and it does factor
25 in design rates and data from the recently installed

1 wells, and that will be updated as we collect the actual
2 data from those new wells and part of the annual report
3 and quarterly reports that we submit.

4 **MR. ELDER:** Peter Elder.

5 I'll ask Shizhong Lei who is our
6 groundwater geoscience specialist to answer our opinion on
7 the modelling.

8 **MR. LEI:** Shizhong Lei for the record.

9 Yes, CNSC staff agree with Cameco's
10 evaluation of the capture zone because the additional four
11 pumping wells only started working in October last year,
12 so they don't have -- they have to update that yet, but
13 CNSC staff is continuing monitoring the results and review
14 their results and they will be updated accordingly.

15 **MEMBER MCDILL:** Thank you.

16 My second questions relates to a question
17 that was asked at the beginning of the ---

18 **THE CHAIRMAN:** Sorry, before you leave this
19 spot, can somebody explain to me the math on page 8? How
20 does reducing the groundwater by 40 percent reduce the
21 uranium load by 70 percent? I thought it was all kind of
22 linear, right?

23 **MR. CLARK:** Dale Clark, for the record.

24 I will ask my colleague Rebecca Peters to
25 provide more information then.

1 **MS. PETERS:** Rebecca Peters, for the
2 record.

3 So in actuality, the way that the pump and
4 treat system is reducing the total flow of contaminants to
5 the harbour is first by reducing the amount of groundwater
6 that is going to the harbour.

7 The tricky part is that at various points
8 along the harbour wall there's different concentrations of
9 uranium. So it's not a direct linear equation and the
10 amount of groundwater that's passing to the harbour at
11 various points along that harbour wall is variable
12 depending on the soil parameters in that particular area.
13 So it's a rather complicated calculation that's done by
14 our third-party experts with the use of our groundwater
15 model that is submitted to CNSC staff annually as part of
16 our annual groundwater review.

17 **THE CHAIRMAN:** So, CNSC, YOU actually
18 verify those numbers? You verify the ---

19 **MR. ELDER:** I will ask Mike Rinker to look
20 at it.

21 **MR. RINKER:** Mike Rinker. I'm the Director
22 of the Environmental Risk Assessment Division.

23 There was a considerable amount of work
24 that went into modelling which is required by CNSC staff
25 to look at where the groundwater plumes of uranium were

1 located.

2 Cameco initially put in nine monitoring
3 wells, as they mentioned, that were operating for some
4 time and identified themselves the need for some
5 improvement and specifically targeted for additional wells
6 in areas of known high uranium concentration to
7 dramatically increase the amount of uranium they're
8 releasing to the turning basin.

9 **THE CHAIRMAN:** Was that a yes for
10 verifying?

11 **MR. RINKER:** We do verify, yes.

12 **THE CHAIRMAN:** Thank you.

13 Dr. McDill.

14 **MEMBER MCDILL:** Thank you.

15 This question goes back to a question that
16 was raised at the very beginning of the hearing. Cameco
17 considers itself to be a good corporate citizen, and do
18 you put on your website all parts of your community to
19 whom you donate or to whom you give support?

20 **MR. THORNE:** Andy Thorne, for the record.

21 Yes, actually supportive communities is one
22 of our measures of success for the corporation and as a
23 division of Cameco Corporation we adopt that measure of
24 success.

25 We are very active in the community, both

1 through philanthropy and also our involvement -- employees
2 involved in volunteering in the community in certain
3 events and certain charities. So we are involved in very
4 many aspects of the communities that we operate in, both
5 in Blind River and in Port Hope.

6 **MEMBER MCDILL:** But is there some central
7 place where some member of the community could see where
8 you are involved in the community?

9 **MR. THORNE:** Andy Thorne, for the record.

10 I don't believe we actually post on our
11 website all of the organizations that we do donate to. As
12 you live and work and play in Port Hope, it's very obvious
13 actually that Cameco is an important part of our
14 community.

15 So, for example, the Capitol Theatre in
16 Port Hope has recently been renamed to the Cameco Capital
17 Theatre. The Northumberland Hills Hospital, if you find
18 yourself in Northumberland Hills Hospital, you'll notice
19 that some of the corridors have been named after Cameco.
20 So if you work and play and are involved in the community
21 here, it's very obvious that Cameco is an important part
22 of this community and all of the communities that we
23 operate in.

24 **MEMBER MCDILL:** Thank you.

25 **THE CHAIRMAN:** Just again to follow up on

1 this, by the time we go through all the interventions
2 here, you're probably going to have a long list of people
3 that you support.

4 What's the problem about going the next
5 move and actually listing them?

6 **MR. THORNE:** Andy Thorne, for the record.

7 I think it's something that we could most
8 definitely look at. I think we obviously need to be
9 cautious and conscious of confidentiality, but it's
10 something I think we can commit to looking at as we move
11 forward.

12 **THE CHAIRMAN:** Thank you.

13 Mr. Tolgyesi.

14 **MEMBER TOLGYESI:** Merci, Monsieur le
15 Président.

16 I have maybe three or four questions.

17 One, you were talking about 300 drums being
18 overpacked and you expect to complete your second
19 warehouse by 2012 and eventually December 2012.

20 Do you have any long-term plan for the
21 waste storage drums disposal?

22 **MR. CLARK:** Dale Clark, for the record.

23 We do have a comprehensive waste management
24 program and one that we have made significant improvements
25 during the current licensing period that we're extremely

1 proud of and have, in a number of areas, significantly
2 reduced the overall inventory of waste in the different
3 locations.

4 We have committed to individually assessing
5 each of these drums, as stated, during this year and as
6 part of that waste management program we do have viable,
7 safe and approved outlets for material including a number
8 of different outlets that we have, and as part of that
9 waste management program we're committed to continuing to
10 work with those outlets, make sure that we take advantage
11 of them and minimize our inventory at all times and ensure
12 that we keep them viable and available for us in the
13 future as well.

14 **MEMBER TOLGYESI:** On page 2 of your
15 presentation, you were talking about uranium emissions
16 from the plant stack was above the action level due to
17 uranium dust build-up on the fan housing and ducting?

18 Was it a unique case or you had similar
19 incidents in the past?

20 **MR. CLARK:** Dale Clark, for the record.

21 I am not aware of any similar incidents to
22 that in the past, but that is an event that we take
23 seriously, as with all events, and complete an
24 investigation and we are quite satisfied and confident in
25 the corrective actions that have been implemented to

1 address that and ensure that we prevent recurrence.

2 **MEMBER TOLGYESI:** My question will be that,
3 you know, how have you managed with this dust produced in
4 every facility? So what's the kind of procedures or
5 housekeeping to make sure that there is no dust
6 accumulation? Because in your case it could be eventually
7 blow like you were doing that here.

8 **MR. CLARK:** Dale Clark, for the record.

9 We do have a number of systems and as part
10 of our environmental management plan and our commitment to
11 protecting the environment and the community, we have a
12 number of different systems in the different plants and
13 processing areas to control dust and minimize dusting.

14 As an example of that, during this current
15 licence period, we have invested significant dollars into
16 the installation of Hepa filters on building exhausts in
17 both process areas.

18 In this particular case that's described,
19 that was actually dusting or build up within ducting and
20 within part of the emission system leading to the stacking
21 of that particular plant area. So part of the corrective
22 actions around that event include inspection and cleaning
23 if necessary, post any maintenance activities that take
24 place in that area.

25 **MEMBER TOLGYESI:** Probably my last, Mr.

1 President, is that these hearings are to renew the licence
2 for 2012 to 2017. Now on the first page of your
3 presentation, you are saying that your objective is
4 doubling uranium production by 2018, which means that it
5 will be kind of -- I don't know what it means uranium
6 production where and how, but what will be the potential
7 impact on facilities, on these three facilities what we
8 are doing hearings today?

9 **MR. THORNE:** Andy Thorne, for the record.

10 Yes, you're correct. Cameco has a
11 strategic goal of doubling uranium production by 2018.
12 That strategic goal really relates to our U3O8 production
13 from our mines so the doubling of uranium production
14 relates to an increase of an historic production levels of
15 approximately 20 million pounds to a 40 million pound
16 level in 2018. So that strategic goal doesn't directly
17 affect us here in fuel services. Our current licence for
18 the UF6 facility is 12,500 tons of UF6 and our licence for
19 the UO2 facility is 2800 tons of UO2 and those levels will
20 remain the same and we will produce UF6 and UO2 at the
21 same levels that we have done historically.

22 So we're not anticipating any increase of
23 production levels here in Port Hope as a result of that
24 strategic goal of doubling uranium.

25 **MEMBER TOLGYESI:** So you will expect that

1 it will be kind of sales in the market -- international
2 market because you don't expect to affect your actual
3 operations here, except those from 18 to 24,000 what you
4 are requesting?

5 **MR. THORNE:** Andy Thorne, for the record.

6 In our conversion facility in Port Hope, we
7 don't have any current plans to expand production. We are
8 one of four conversion facilities in the western world and
9 they have the capacity to deal with that. Right now we
10 don't have any plans to expand our production.

11 **THE CHAIRMAN:** Then, I'm at a loss. If you
12 have no plan, why are you asking for an increase in
13 approval? What's the big rush? If you need to still
14 submit some detail proposal on how you are going to do it,
15 is it for ease of licensing, expediency? I'm trying to
16 understand what's the priority or urgency here.

17 **MR. THORNE:** Andy Thorne, for the record.

18 Just to clarify, my statement was relating
19 to Port Hope. The Port Hope conversion facility has no
20 current plans to increase production. Blind River
21 refinery has a -- we're asking a request to change --
22 we're asking to change the licence from 18,000 tons to
23 24,000 tons and that plant in Blind River produces UO3 and
24 we hope to be in a position to take some advantage of some
25 business opportunities in the future.

1 So really, the increase in Blind River is
2 being asked to make sure that we have the flexibility to
3 react to the market conditions as and when they present
4 themselves.

5 **THE CHAIRMAN:** Sorry, I may have
6 misunderstood, but I thought that you're looking for
7 authority for release treated water because you're going
8 to have different volume, more higher volume associated
9 with some increase production. What am I missing here?

10 **MR. THORNE:** Andy Thorne, for the record.

11 The clause in the licence that we would
12 like basically retained relates to our treated water
13 discharge. And that really relates to the pump and treat
14 system that we have put into to basically protect the
15 environment from the groundwater contamination that we
16 identified in 2007 and 2008.

17 So really that's -- we're looking at -- as
18 a result of those pump and treat wells, we've
19 significantly increased the volume of water that we have
20 to deal with at the Port Hope conversion facility and
21 we're looking at new technology to assist us with that.

22 That's really not related at all to any
23 production volumes at either of the sites or any of the
24 sites; it's purely related to our focus on protecting the
25 environment in dealing with the groundwater that we're

1 treating from our site-wide environmental management plan.
2 So those two things are not related.

3
4 **THE CHAIRMAN:** I think we will get back
5 into this.

6 Right now I really would like to start the
7 session for interventions. And I'd like to remind
8 everybody that we are allotting 10 minutes for the whole
9 intervention and please help us with this. It does not
10 mean that we have not read in detail every piece of paper
11 submitted to us. So it is an occasion for you to explain
12 and enhance the submission and so we would like to again
13 everybody help us adhering to the 10 minutes.

14 And the first presentation is about
15 Municipality of Port Hope as outlined in CMD 11-H16.22 and
16 H16.22A.

17 And Mayor Thompson, the floor is yours.

18
19 **11-H16.22 / H16.22A**

20 **Oral presentation by the**
21 **Municipality of Port Hope**

22
23 **MS. THOMPSON:** Thank you and for the
24 record, I am Linda Thompson, Mayor of the Municipality of
25 Port Hope and joining me today is Carl Cannon, our CAO and

1 also we have counselor Ellis in the audience with us
2 today.

3 On behalf of all residents of Port Hope, I
4 truly want to thank the Commission, their staff, the
5 Secretariat for coming to Port Hope. I'm sure the
6 logistics are not easy but we do appreciate your coming
7 here.

8 A brief community profile, of course, that
9 we usually give. We have been the focal point of the
10 nuclear industry for well over 70 years and of course, we
11 are home to Cameco, both conversion facility and fuel
12 bundle manufacturer along with offices of the low level
13 radioactive waste and of course the Port Hope area
14 initiative.

15 We continue to have a skill stable non-
16 transient and versatile labour force in and around. And
17 as you are aware and by the number of intervenors, we are
18 a very engaged community who is knowledgeable and they are
19 ultimately supportive of the nuclear industry. They asked
20 questions and that's made a difference in this community.

21 Our community has a strong understanding of
22 the environmental assessment in the CNSC process and the
23 community, the municipality has successfully utilized a
24 peer review process that has proven supportive by our
25 community and ensures that the municipality does its due

1 diligence in these matters that affect our community.

2 We have a long-term positive relationship
3 with Cameco and Cameco attracts a diverse and highly
4 skilled workforce to Port Hope. They are an excellent
5 corporate citizen.

6 As I noted Port Hope has continued and we
7 have presented in front of you with our peer review groups
8 previously in regards to Cameco's ongoing operations.
9 StanTec Consulting has reviewed Cameco's application for
10 the municipality of Port Hope and they have continued to
11 look at issues in regards to potential impact to health
12 and safety of the citizens of Port Hope, identify issues
13 where there's a requirement to communicate and work
14 cooperatively with the municipality and, of course,
15 members of our community and make recommendations that the
16 municipality can bring to you in regards to doing our due
17 diligence for our community.

18 Some general comments; you have our written
19 submission from Stantec and I'll just briefly review some
20 of those comments. Cameco's application is very clear and
21 concise and appears to have made substantial improvements
22 to operations and community relations. Cameco has
23 responded very well to several key challenges that have
24 emerged during the previous licensing period and kept the
25 municipality well informed. The application for renewal

1 is consistent with the current CNSC requirements.

2 Cameco has made and maintained and improved
3 its public information program during the past five years.
4 And Cameco and staff -- Cameco's staff participates in
5 regular meetings with the mayor, the CAO and continues to
6 provide regular updates to council, our staff, and the
7 community.

8 Key changes noted in Cameco's safety
9 culture including improvements to their management system
10 are a positive development promoting a higher standard of
11 safety in environmental performance going forward.

12 Stantec identified key challenges which the
13 municipality and council support through resolution. While
14 we know we're not discussing Vision 2010, the
15 implementation of Vision 2010 will challenge radiation
16 protection measures due to increased contractors and the
17 nature of historical material and buildings being handled
18 and we question what regulatory oversight will be employed
19 to ensure site-wide emissions of radio nuclides are
20 adequately controlled.

21 A substantial inventory of non-historical
22 low-level radioactive waste from Cameco is in storage in
23 Port Hope, but no commercially viable waste management
24 facility have been identified and we ask what measures are
25 being contemplated to promote a solution for this

1 material.

2 In discussions on the preliminary
3 decommissioning plan, which will be a part of the licence,
4 Cameco's current preliminary decommissioning plan assumes
5 low-level radioactive waste arising from the
6 decommissioning of the facility and unrelated to the
7 historic waste that is being handled by the Port Hope Area
8 Initiative is to be accommodated at a hypothetical
9 facility in Blind River. Experience would suggest to Port
10 Hope that this might not be acceptable to another
11 community; therefore, the cost of low-level radioactive
12 waste management to support decommission may be
13 underestimated.

14 In regards to the new licence itself, I
15 would like to applaud the CNSC with the new licence
16 proposal; it's shorter, more transparent and supported by
17 the Licence Condition Handbook. It consolidates compliance
18 verification criteria so that the Cameco Conversion
19 Facility has clear guidance on how to ensure compliance
20 with the licence. Where changes have been implemented,
21 they generally enshrine processes and procedures already
22 developed by Cameco and represent an incremental
23 tightening of radiation protections or emission standards.

24 Additional requirements introduced for
25 recording acquisition inventory and disposition of nuclear

1 substances is supported by the municipality along with the
2 new lower action levels per worker exposure to radiation
3 and the reduced action levels for stack emission rates for
4 uranium, hydrogen fluoride and ammonia.

5 In summary, we trust that the
6 municipality's concerns will be appropriately addressed by
7 the CNSC and the municipality continues to have a positive
8 relationship with Cameco Corporation. They are an
9 important member of our community; both economically and
10 socially and the municipality supports the renewal of
11 Cameco's nuclear fuel operation licence for the Port Hope
12 Conversion Facility.

13 Thank you.

14 **THE CHAIRMAN:** Thank you.

15 Questions?

16 Dr. McDill?

17 **MEMBER MCDILL:** Thank you.

18 Maybe I could ask both staff and Cameco to
19 comment on the waste issue with respect to the
20 decommissioning plan? I'll start with staff.

21 **MR. ELDER:** Can you -- sorry, I didn't
22 quite hear the last part of your ---

23 **MEMBER MCDILL:** It's difficult today
24 because if we go ---

25 **MR. ELDER:** Yes.

1 **MEMBER MCDILL:** --- too close it gets
2 fuzzy; too far away ---

3 **MR. ELDER:** Yes.

4 **MEMBER MCDILL:** --- and it disappears. So
5 it's an (inaudible) solution.

6 Is that better?

7 **MR. ELDER:** That's better. I can hear, yes.
8 So you -- just to clarify, we're talking about their
9 comment on the cost of decommissioning or the ---

10 **MEMBER MCDILL:** The issue of waste being
11 moved out and if that doesn't happen is the PDP -- is the
12 ---

13 **MR. ELDER:** Right.

14 **MEMBER MCDILL:** --- preliminary plan
15 sufficient?

16 **MR. ELDER:** Okay, so I'll come back in and
17 say I'll ask Bob Barker in through technology; he's
18 listening in Ottawa to answer how we look at
19 decommissioning plan and the PDP because the basic
20 principle is the PDP is the cost we think it was someone
21 else other than Cameco. So usually, it's based on very
22 generic numbers.

23 So I'll see if I can get Bob Barker in
24 Ottawa to give you some details.

25 **MR. BARKER:** Yes, good afternoon. It's

1 Robert Barker. I'm the Senior Project Officer in the
2 Waste and Decommissioning Division.

3 CNSC staff does not assess the social
4 acceptability of the licensee's preliminary
5 decommissioning plan for Port Hope, but it must meet CNSC
6 staff's expectations of being reasonable and technically
7 viable in phase. I think I would note that any proposal to
8 develop such a facility in Blind River would require a
9 licence amendment and trigger a public hearing to consider
10 such a proposal.

11 The other thing I'd like to point out is
12 the development of a mound for storage in Blind River
13 associated with future decommissioning is not a new
14 concept proposed by Cameco.

15 **MEMBER McDILL:** I'm sorry; I didn't
16 understand that. I don't know if anybody else got a little
17 more than I did.

18 Can we try again? Maybe Mr. Elder got some
19 of that.

20 **MR. ELDER:** So I guess -- I guess when in
21 back in and saying some of the ones we look at is -- but
22 our basic one is when we look at the financial guarantee
23 and especially on the costing of the PDP, we want them to
24 identify their plan, but the costing must be very generic
25 so they can't guarantee that something is going to happen.

1 So again, the plan -- the financial
2 guarantee must be based on a third party being able to
3 implement the plan; not on a specific option that it's
4 identified.

5 Again, there are two parts. You have to
6 have a plan; conceptually what are you going to do, but
7 when it comes to costing that conceptual plan; it must be
8 independent of the actual operator because the whole idea
9 of the financial guarantee is to care for other case where
10 the operator disappears. So we would not give them much.

11 You know, we would say you have to have a
12 lot of contingency in your estimates if you say you're
13 going to give it to Blind River because that option is
14 unlikely to be available to a third party. And there is
15 considerable contingencies in the financial guarantee; you
16 know, 30 percent plus.

17 **MEMBER MCDILL:** Does Cameco want to add to
18 that?

19 **MR. CLARK:** Yes, Dale Clark, for the
20 record.

21 A few points; first of all, we are very
22 confident in the accuracy and that that preliminary
23 decommissioning plan is a sound document and is an
24 accurate reflection of the cost today to meet the needs
25 required in that document.

1 A few examples, it is -- that document is
2 prepared and has followed the regulatory guides that have
3 been laid out for how to prepare a preliminary
4 decommissioning plan or a PDP. The cost estimates are
5 developed by professional, third-party cost estimators so
6 it's not strictly Cameco cost estimates internally; we use
7 independent third-party cost estimators.

8 It has been prepared and submitted and
9 accepted by CNSC staff. And in addition to that, I would
10 also point out that in this case and particularly to the
11 Blind River question, we have also submitted that PDP to
12 the Mayor of Blind River and to the local First Nations in
13 that area and we have committed to continuing to review
14 that document and update it as necessary at least every
15 five years or as significant changes happen. So we are
16 quite confident that it's an accurate reflection of the
17 cost today.

18 **THE CHAIRMAN:** Just so I understand; is it
19 your understanding this is a two-bookkeeping estimate
20 right now? Let's assume that it'll cost more. Who bears
21 the responsibility? Staff, you will confirm what's the --
22 what's the -- my understanding it's an estimate; right?

23 **MR. ELDER:** It's an estimate, and based on
24 the estimate, our guidance would say depending how good
25 that estimate is. So this is still something they're

1 going to do many years in the future. So on this type of
2 -- here's our conceptual plan, there would be a 30 percent
3 on -- contingency put on top of the estimate.

4 **THE CHAIRMAN:** Yeah, but many -- many
5 estimates, as you know, are varied.

6 **MR. ELDER:** Yes.

7 **THE CHAIRMAN:** So the actual cost of
8 decommissioning, who -- it's -- I assume it's the
9 proponents; that Cameco is still responsible for ---

10 **MR. ELDER:** Cameco is still -- the detailed
11 plan. Cameco is still responsible for this one. The
12 financial guarantee which in this case is a -- you know, a
13 letter of credit for us is just in case Cameco is no
14 longer there when decommissioning comes is that there is
15 some money available to the Federal Government to do the
16 work.

17 **THE CHAIRMAN:** Thank you.

18 **MR. ELDER:** But actual decommissioning plan
19 is Cameco's and there has to be updated on a routine
20 basis, yes.

21 **THE CHAIRMAN:** Dr. McDill?

22 **MEMBER MCDILL:** That's fine, thank you.

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

24 **MEMBER TOLGYESI:** This is to Port Hope
25 Municipality. According to one intervenor, the Cameco

1 telephone emergency system failed recently when used to
2 notify a water crisis.

3 How this telephone system is working? How
4 it is tested and what is the backup in case of failure or
5 emergency?

6 **MR. CANNON:** Sorry, for the record, Carl
7 Cannon.

8 I guess maybe it is with respect of
9 Municipality of Port Hope is fortunate to be one of 11
10 municipalities in Canada that has the particular system
11 and that we did, maybe fortunately or unfortunately, have
12 the opportunity to exercise that system during a recent
13 event we had with respect to our water treatment plant.

14 The rapid notification system was utilized
15 at that time and the system basically takes phone numbers
16 from an inventory. You can create parameters and,
17 geographically, if you say within this area we'd like the
18 numbers called and that we can then forward a particular
19 message which then, based on that message, it could be to
20 remain in place or it may be talking about just purely
21 information with respect to a particular emergency.

22 We did find during the exercise that it was
23 well received by the public, that we did cover
24 substantively those that we did want to reach. However,
25 we did appreciate and it certainly is a learning process,

1 that because of varying technologies, you can have your
2 phone over a computer, VOIP systems, and that you can have
3 phones through cable systems that it didn't automatically
4 reach those.

5 So as a result of that, we have upgraded
6 our system; it is a web-based system. And we have created
7 a -- through the supplier of the program, an automatic
8 register system where the public can come forward, enter
9 their phone numbers, and be -- the system can be
10 supplemented with their numbers.

11 So they can proactively come forward and
12 have their numbers placed on the system. If they are not
13 inclined to do it through the web-based system, they can
14 also call our fire and emergency services department and
15 get their numbers added to the system.

16 So through our recent event, we did get to
17 utilize it. It's really relatively new to us, but we
18 found it to be very effective. We did find that as a
19 result that it did need to be improved and supplemented
20 and we have created systems to allow individuals to add
21 their numbers, and we do promote it as part of our
22 emergency measures and preventions programs.

23 **THE CHAIRMAN:** This is opportunity for EMO
24 -- where is the EMO -- just to tell us whether that's all
25 consistent with your provincial plan. Since you're here,

1 you may as well tap into your knowledge.

2 **MR. NODWELL:** Thank you. For the record,
3 Dave Nodwell, Emergency Management Ontario.

4 We are familiar with the system and
5 certainly familiar with the situation that occurred a
6 number of months ago related to the water facility.

7 The requirements for notification in this
8 particular case are not along the lines of municipalities
9 adjacent to nuclear facilities where there are very
10 detailed parameters that are established for that
11 notification.

12 I can add to that in that Port Hope is
13 assessed on an annual basis, as are all municipalities
14 across Canada, for their compliance with the *Emergency*
15 *Management and Civil Protection Act* and that Port Hope is
16 indeed compliant with that act and, in fact, goes well
17 beyond what is considered the essential element --
18 essential level of development for their Emergency
19 Management Program.

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

21 **MEMBER TOLGYESI:** I will have one more.
22 Maybe it's a little bit more complicated is several
23 intervenors were talking about property values at Port
24 Hope. Do you have any comments on this subject?

25 **MS. THOMPSON:** Many of the questions that

1 have been raised -- sorry, Linda Thompson, for the record.

2 To step back, the municipality shares the
3 goal of reducing any negative perception of Port Hope and
4 has worked with the Port Hope Area Initiative, Cameco and
5 others.

6 To that end, we have requested assistance
7 from the Federal and Provincial Government to get the good
8 news out about Port Hope. Cameco routinely, through its
9 own actions, continues to contribute to getting out the
10 positive message about the community.

11 They participate in joint communications
12 meetings with the municipality and the Port Hope Area
13 Initiative. They provide funds to the municipality in
14 support of communication activities and participate with
15 the Municipality of Port Hope at updated meetings in
16 regards to these issues.

17 The Port Hope Area Initiative is working
18 with the Real Estate Board and providing detailed
19 information through that process.

20 **MEMBER TOLGYESI:** Did you see any
21 improvements following this implementation of this program
22 -- communications program?

23 **MS. THOMPSON:** Yes, we have had an
24 increased number of positive stories throughout the media,
25 and we continue to monitor that, and we are currently

1 working on the development of a community rebranding
2 process.

3 **THE CHAIRMAN:** Did -- the Minister of
4 Natural Resources made a big, big announcement last week.

5 **MS. THOMPSON:** Very big.

6 **THE CHAIRMAN:** Do you think that it will
7 have an impact on property values?

8 **MS. THOMPSON:** The announcement last week
9 identified the commitment of the Federal Government to the
10 Municipality of Port Hope and the ongoing work that will
11 happen here. The PDP program is a part of that and
12 identifies the commitment of the Federal Government to
13 that process.

14 **THE CHAIRMAN:** Mr. Tolgyesi? Dr.
15 Barriault?

16 **MEMBER BARRIAULT:** Just one brief question.
17 First of all, the reason why we're wearing headsets is we
18 couldn't understand because of the acoustics in the room
19 so forgive us.

20 On the present -- on the written
21 presentation by Stantec, first paragraph on page 3, there
22 is a reference to gamma radiation at the facility fence
23 lines. Is there gamma radiation emitting from the fence
24 line at Cameco?

25 **MS. THOMPSON:** Oops, I'm sorry; page 3?

1 Second ---

2 **MEMBER BARRIAULT:** Page 3 of 5, yes.

3 Is there gamma radiation emitting from the
4 fence line at Cameco?

5 **MS. THOMPSON:** I'm sorry, page 3?

6 **MEMBER BARRIAULT:** Page 3 of 5, yes.

7 **MS. THOMPSON:** M'hm.

8 **MEMBER BARRIAULT:** First paragraph.

9 **MS. THOMPSON:** Oh, I'm sorry.

10 **MEMBER BARRIAULT:** To Cameco please, yes.

11 **MR. CLARK:** Dale Clark, for the record.

12 We do measure and monitor gamma radiation
13 and have action levels established for gamma radiation
14 levels from the fence line at various levels, and we're
15 confident -- we maintain current levels within those
16 action levels and well within safe levels to ensure the
17 protection of the community.

18 **MEMBER BARRIAULT:** Does CNSC want to
19 comment on that?

20 **MR. ELDER:** Peter Elder, for the record.

21 We presented, if you see on our Slide 6 of
22 this one, is the effective dose to the public. And so you
23 can see that while the major component of that yes, it is
24 the gamma dose is a major component to the doses to
25 public, it still is a very small fraction of the one

1 millisievert public limit.

2 **MEMBER BARRIAULT:** I understand that, but
3 what I'm noticing really in your Slide 6 is that there's
4 an increase going on from last year to this year. And I
5 guess the next question, really, is that should we be
6 looking at a buffer zone so that we have zero as an
7 emission from the plant site?

8 **MR. ELDER:** Well, going back in and saying
9 -- you know, as we've said in the past and we can go back
10 in and we can get details on the health studies would be
11 that there are no observable effects above 100
12 millisieverts, that say to be cautious and make it
13 comparative of what you get from background, we set our
14 limits at one and this is a component from one facility
15 and you are talking less than .1 ---

16 **MEMBER BARRIAULT:** That's correct.

17 **MR. ELDER:** --- and much less than that.

18 So I'm going to ask Dr. Patsy Thompson to
19 add some detail on this one about the buffer zone as well.

20 **MEMBER BARRIAULT:** Thank you.

21 **DR. THOMPSON:** Patsy Thompson, for the
22 record.

23 We have reviewed the exposure scenarios
24 that are used to calculate dose system members to the
25 public from both air emissions, the gamma levels at fence

1 lines and things like that.

2 And what I'd like to point out is when we
3 talk about the gamma exposures to members of the public
4 for material that is stored on the Cameco property, we
5 actually do very conservative estimates with members of
6 the public walking around the fence line and spending
7 considerable time close to the area where the gamma
8 radiation is being emitted.

9 So on the one hand the numbers are very
10 conservative and as Mr. Elder mentioned the doses are
11 quite low, and we know from the work that's been done in
12 the Port Hope area that we're not seeing any adverse
13 health effects from the exposures.

14 But there has been a comment to the effect
15 that the gamma doses have been increasing. In fact, the
16 gamma doses, the highest gamma dose measured during this
17 licencing period was in 2007, the dose in 2010 where we
18 have a complete record is actually considerably lower than
19 the value in 2007. So we don't see a pattern of
20 increasing gamma radiation levels.

21 **MEMBER BARRIAULT:** Thank you.

22 Thank you Mr. Chairman.

23 **LE PRÉSIDENT:** Monsieur Harvey?

24 **MEMBRE HARVEY:** Merci monsieur le
25 président.

1 In the presentation made by Port Hope they
2 raise some key challenges about the Vision 2010 and the
3 current licence. So I would like to see, do you foresee
4 any problem on the monitoring part of it when you start?
5 Will that -- could that interfere with the current
6 monitoring; I mean the work you are doing to follow what
7 is done here at those two facilities?

8 **MR. ELDER:** Peter Elder, for the record.

9 There's -- you know, one of the things that
10 while there is an environmental assessment going on, on
11 Vision 2010, there is another component of saying once
12 you've -- as Cameco noted, they have not finalized their
13 option that they would deliver after that until that
14 environmental assessment.

15 So what -- we agree that there is -- Cameco
16 has to give us a lot of detail on how they would implement
17 Vision 2010. That said, in terms of radiation protection
18 our radiation protection rules are clear, we have certain
19 dose limits for workers, they're not going to change
20 because of Vision 2010. We have limits to the public.
21 And I note that for this facility it's -- 0.3
22 millisieverts, so it's actually less than the 1, we are
23 not going to change that because of Vision 2010.

24 Cameco will have to come up with a
25 monitoring plan about how they're going to deal with any

1 loose contamination that may be done. There are
2 definitely issues around taking down buildings while the
3 building next door is operating. Can you operate that
4 plant safely? Does your emergency system still work?

5 You know, they've got a fire response; can
6 it still fully do what it needs to do while they are doing
7 construction?

8 These are the type of issues that Cameco
9 has to give us a lot of details and that we will be
10 bringing back to the Commission before -- to implement
11 Vision 2010 will require a licence amendment. There will
12 be hearings around that licence amendment once Cameco has
13 given us the necessary detail for our staff to be in
14 position to make recommendations.

15 So we agree fully with the town on their
16 first point. There will be increased oversight. What it
17 is I can't tell you right now because Cameco has not given
18 us the details on what they're planning to do.

19 **MEMBER HARVEY:** Can you comment on that?

20 **MR. CLARK:** Dale Clark, for the record.

21 We are fully committed to the protection of
22 the environment and the community in which we live and
23 work and certainly that will continue throughout the life
24 of that Vision 2010 Project.

25 We are confident that we can provide the

1 necessary radiation protection controls to successfully
2 and safely implement that project. But as pointed out the
3 details of the control measures and of that project would
4 be addressed through a separate licencing process.

5 **MEMBER HARVEY:** Okay, but you recognized
6 those challenges here. I mean, this is part of your next
7 homework.

8 **MR. CLARK:** Dale Clark, for the record.

9 Yes, we do recognize those challenges and
10 we are confident that we can meet those challenges and
11 continue with that commitment that we've made.

12 **MEMBER HARVEY:** Thank you.

13 **THE CHAIRMAN:** I really would like to,
14 before the break, to have one more intervention. So
15 unless somebody has a real urgent question, I would like
16 to thank you, Mayor Thompson, and move on to the next
17 intervention.

18 So the next presentation is from Mayor of
19 the Town of Cobourg as outlined in CMD H16.16.

20 I understand Mayor Brocanier -- I don't
21 know if I'm pronouncing your name right -- the floor is
22 yours.

23

24 **11-H16.16**

25 **Oral presentation by the**

1 **Mayor of the Town of Cobourg**

2 **MR. BROCANIER:** For the record, Gil
3 Brocanier, Mayor of Cobourg. That's a municipality of
4 about 19,000 people; that's eight kilometres east of Port
5 Hope. And I will be making an oral presentation in
6 support of the Cameco's relicensing application.

7 And as Mayor of Cobourg I am actively
8 involved with our businesses and I schedule meetings with
9 business to understand their operations as well as their
10 needs.

11 And Cameco has a uranium conversation
12 facility in Port Hope and then a supporting division in
13 Cobourg.

14 So as Mayor of Cobourg I have an interest
15 that Cameco operates its plants in a safe and controlled
16 manner. Consequently, I held a meeting with a senior
17 manager of Cameco to understand the controls they use in
18 the process of uranium conversion.

19 Now, with a background of 26 years of
20 management in the food manufacturing business, I've always
21 operated under the mandate that processing systems and
22 controls ensure the safety of the consumer and the public;
23 it is the number one priority.

24 So in my interview with a Cameco
25 management, I found their quality management system

1 parallels the quality management systems that I used in
2 the food manufacturing industry.

3 Now, to be clear, a quality management
4 system focuses more on the principles and practices that
5 ensure our process is consistently and safely controlled
6 and there is recorded documentation to prove it, product
7 quality, however, is a natural outcome of a good quality
8 management system. So in my interview, I have learned the
9 documentation hierarchy of Cameco's quality management
10 system contains all of the elements that ensure consistent
11 process control and they are from top to bottom in the
12 hierarchy: policies, procedures, work instructions and
13 records.

14 The policies contain all the guiding
15 principles of the desired outcome of the organization; the
16 procedures are the level of documentation that start to
17 add in detail and clearly describe who is responsible to
18 do what and to do it when. Work instructions are the next
19 level and contain all the detailed instructions for each
20 and every task in the process. These work instructions
21 are not just guidelines but instructions that must be
22 followed exactly and therefore form the basis for a high
23 quality training program.

24 Records are the final layer in the
25 documentation hierarchy and physically form the largest

1 component of the documentation. In a quality management
2 system, records must be very detailed in the recording of
3 times, dates, exact test results, actions taken for any
4 out of range test and the signature of the tester and
5 recorder.

6 Finally, these records are filed for
7 reference either in the form hardcopy or electronically.
8 Either way, they must be accessible on demand.

9 It is important to state that this is not
10 the end of a quality management system. Further to this,
11 there are regular third-party audits of the written
12 procedures, work instructions and records, to ensure that
13 the procedures and work instructions are sound, up to date
14 and training has been conducted and the record show the
15 process has been properly monitored and controlled.

16 Even though there are more, I know that two
17 of the third-party auditors for Cameco are the CNSC and
18 the Ministry of the Environment. And in addition to
19 third-party audits, like any good quality management
20 system, Cameco system contains procedures for regular
21 internal audits which are conducted by their own staff who
22 are trained to audit on quality systems.

23 In closing, it is my confidence in
24 Cameco quality management system, which exactly parallels
25 the system I use in the food manufacturing business that

1 gives me the assurance that Cameco is committed to running
2 an operation that is controlled, safe for their employees
3 and safe to the public.

4 More importantly to this, high audit scores
5 they have received from the many third-party audits have
6 been conducted on Cameco Port Hope are proof that their
7 operation is controlled and safe. And I thank you for the
8 opportunity to speak.

9 **THE CHAIRMAN:** Thank you.

10 Monsieur Harvey?

11 **MEMBRE HARVEY:** Merci monsieur le
12 président.

13 Mr. Mayor, would you say that you got a
14 good knowledge of what is done in that industry. Would
15 you say that your citizens have the same comprehension and
16 the same confidence in the ---

17 **MAYOR BROCANIER:** I'm sorry; I'm having a
18 little bit of difficulty hearing you.

19 **MEMBER HARVEY:** I'm too close I think.

20 I'm just saying that you seem well aware of
21 the process and the procedures in the industry. And would
22 you say that the citizens of Cobourg are well aware or
23 well informed of that and that they don't have any
24 problems with the operations of those facilities?

25 **MAYOR BROCANIER:** Gil Brocanier, Mayor of

1 Cobourg, for the record.

2 So are you asking are the citizens of
3 Cobourg aware of the chemical operation?

4 **MEMBER HARVEY:** Yes.

5 **MAYOR BROCANIER:** I think very much so.
6 Cameco is a very high profile presence in our community.

7 **MEMBER HARVEY:** And they don't have any
8 problem or any concerns about the operation?

9 **MAYOR BROCANIER:** We have never had a
10 problem -- again Gil Brocanier, for the record.

11 We have never had a problem or a concern
12 with Cameco.

13 **MEMBRE HARVEY:** Merci.

14 Thank you.

15 **THE CHAIRMAN:** Dr. Tolgyesi?

16 **MEMBER TOLGYESI:** Do you have similar
17 challenges as Port Hope regarding property values?

18 **MAYOR BROCANIER:** I'm sorry, for some
19 reason, the mike is not coming through clear.

20 **MEMBER TOLGYESI:** Maybe you should shutdown
21 your mike when you are not speaking.

22 So does Cobourg municipality faces same
23 challenges as Port Hope regarding property values?

24 **MAYOR BROCANIER:** Gil Brocanier, Mayor of
25 Cobourg, for the record.

1 With respect to property rights? No.

2 **MEMBER TOLGYESI:** Values.

3 **MAYOR BROCANIER:** Oh, property values, no.
4 Actually Cobourg does not have a problem with property
5 values. I hear, on a regular basis, that the price of
6 houses and real estate in Cobourg is too high.

7 **THE CHAIRMAN:** Are they higher than Port
8 Hope?

9 **MAYOR BROCANIER:** Yes, they are higher than
10 Port Hope.

11 **THE CHAIRMAN:** Is there any reason for them
12 to be higher than Port Hope?

13 **MAYOR BROCANIER:** Well, I, as Mayor of
14 Cobourg, Gil Brocanier, I would like to think that it is
15 because of the community of Cobourg (laughter). Do I have
16 any evidence to prove otherwise? No I don't.

17 **THE CHAIRMAN:** Anybody else?

18 I have just one quick question. You seem
19 to be an expert in systems and processes but in the food
20 industry. Do you think they are really comparable; can
21 you compare the quality assurance in food processing with
22 chemical corporation?

23 **MAYER BROCANIER:** Gil Brocanier here, Mayor
24 of Cobourg, for the record.

25 Absolutely, I think -- when you are talking

1 about a quality management system, it doesn't matter
2 whether you are refining uranium, whether you are
3 producing widgets or whether you are manufacturing food.
4 It's all about process control and not only just process
5 control but process consistency.

6 So I think the quality management system
7 applies to any type of manufacturing and as I said, the
8 quality management system is a process control that kind
9 of ensures a product quality at the end but it's not the
10 focus of the quality management system.

11 **THE CHAIRMAN:** Okay.

12 Anybody else?

13 Mayor, thank you very much for your
14 appearance. We will take a break now for at least 10
15 minutes. So I have 4:10; so we will -- 4:25.

16
17 --- Upon recessing at 4:10 p.m.

18 --- Upon resuming at 4:29 p.m.

19
20 **THE CHAIRMAN:** And we are moving to the
21 next submission by the United Steel Workers local 13173 as
22 outlined in CMD 16.14, 16.14A and 16.14B. And I
23 understand that Mr. Davis, you will make the presentation,
24 please proceed.

25 And I think that we sound a lot better than

1 previously. I think somebody fixed the acoustics, good
2 job, thank you.

3 Go ahead please.

4
5 **11-H16.14 / 11-H16.14A / 11-H16.14B**

6 **Oral presentation by the**
7 **United Steelworkers,**
8 **Local 13173**

9
10 **MR. LEAVITT:** Mr. Chair, Commission
11 Members, I would like to express my sincere thanks and
12 gratitude that the Canadian Nuclear Safety Commission has
13 a licencing process where one can come and express their
14 support for an employer to be granted a licence to operate
15 a nuclear facility as I am a true believer in democracy,
16 fairness and free speech.

17 My name, for the record, is Chris Leavitt,
18 Union President of USW local 13173 and with me today is
19 Ron Davis, Local Union Chairperson for the Health Safety
20 Committee.

21 I am making this presentation on behalf of
22 our membership to which has been unionized since 1946. I
23 have been employed now at this facility for over 33 years
24 now while working in the production plan of UO2, UF6, as a
25 chemical operator and as a millwright.

1 A major focus of our union's work has been
2 improved the employer's responsibility for health safety
3 of its workers together with the environmental protection.
4 We have at the Port Hope facility a very well established
5 Health Safety Committee that are empowering themselves on
6 a regular basis with continued education by taking courses
7 through the Workers' Health and Safety Centre which is
8 funded by the Workers' Health Insurance Board.

9 It is the objective of both the company and
10 the union to establish high standard of health safety at
11 the Port Hope Cameco Facility. The two parties agree to
12 cooperate in the elimination of hazards in order to
13 prevent industrial injury or illness.

14 We have made great strides in the past
15 year, with working on safe -- work safe production theme
16 at a conversion. There is, I believe, a commitment
17 support from senior management for that continued
18 advancement of the education for members that we represent
19 and other site personnel.

20 Just to comment a few of the
21 accomplishments we as a steel workers as a whole have
22 accomplished over the period of time in history, the
23 formation of the *Occupation Health and Safety Act* which
24 was formed from the Ham Commission back in the mid-70's is
25 a prime example of that along with the establishment of

1 the day of mourning.

2 In addition, there was the Westray Mine
3 Bill which soon became commonly known as Bill C-45 which
4 holds corporate accountability and responsibility.

5 I'm now going to turn it over to Ron Davis
6 to do a quick Powerpoint presentation and comments. Thank
7 you.

8 **MR. DAVIS:** Thanks Chris. For the record,
9 my name is Ron Davis.

10 And each meeting and each shift at our
11 plant, we start off with a safety moment. And with
12 Environment Canada calling for a flash freeze tonight, I
13 want to remind everyone to drive safely and to walk safely
14 as it gets pretty slippery with the ice out there.

15 So during my talk, we will show some slides
16 where employees are performing sampling of air, water and
17 health and how controlled entry is made into the
18 production facilities at the plant as well as improvements
19 in the shop areas and our cell maintenance.

20 I am a full time union health safety
21 representative at the conversion facility. I've been at
22 the plant for 34 years.

23 My job at the plant is to promote safety
24 and to work with personnel to use their expertise to
25 identify and make recommendations to eliminate or control

1 hazards.

2 We have well trained committees and we
3 encourage employees to bring issues forward so they can be
4 addressed right away. Our goal is to eliminate the risks
5 and hazards so everyone can go home safe and enjoy a clean
6 and healthy environment.

7 Zero injuries and releases are the only
8 acceptable targets. And we strive to achieve that every
9 day.

10 Thank you.

11 **MR. LEAVITT:** Chris Leavitt, Union
12 President just concluding.

13 I wish to conclude that Cameco has strived
14 to meet all regulatory requirements and we as a union will
15 continue to work diligently to make sure that all acts of
16 safety as it relates to the employees, the community or
17 the environment are met.

18 We will work closely to make sure that
19 there is a continued present structure and support towards
20 health and safety. As President of USW Local 13173 at the
21 Cameco conversion facility, I believe that the facility is
22 being run in a safe and efficient manner.

23 I am recommending to the Commission to
24 grant Cameco Corporation a five-year licence period based
25 on the plant operating in a safe manner and meeting all

1 regulatory levels and requirements.

2 I fully recognize the Commission's right to
3 directing Cameco to make changes necessary at any time
4 within that licensing period.

5 I'd like to again thank the Chair and the
6 Commission members for giving me an opportunity to speak
7 today. Thank you.

8 **THE CHAIRMAN:** Thank you.

9 Questions?

10 Monsieur Harvey?

11 **MEMBRE HARVEY:** Merci monsieur le
12 président.

13 On page 2 of your written submission, the
14 fifth paragraph, we can read:

15 "We have an opportunity to be present
16 during CNSC officers' inspection and
17 meet with them. Meet when required
18 with the assign officer to address any
19 concerns to which the union may have."

20 Could you elaborate on that? And I would
21 like also to have the comment of the staff after.

22 **MR. LEAVITT:** Chris Leavitt, for the
23 record.

24 Yes, we meet quite -- when we do meet the
25 CNSC, if we do happen to have any issues that may just be

1 a questioning for clarity, we do have time with that
2 inspector on site, privately.

3 **MEMBER HARVEY:** Privately?

4 **MR. LEAVITT:** Privately, yes.

5 **MEMBER HARVEY:** This is to say without the
6 presence of a Cameco officer?

7 **MR. LEAVITT:** That's right. No Cameco
8 presence by management at that time. I would involve the
9 Health and Safety Chair. Seeing if Ron Davis, the Health
10 and Safety Chair, is not available, I would find
11 availability of some other senior committee member from
12 that Health Safety Committee.

13 **MEMBER HARVEY:** Cameco don't have any
14 problem with that I suppose?

15 **MR. CLARK:** Dale Clark, for the record.

16 No, we do not. We have common goals as
17 stated here and that's ensuring that the safety of our
18 workers and the environment and our community. And we
19 work cooperatively with the CNSC staff and the local
20 unions, both local unions to achieve that.

21 **MEMBER HARVEY:** Comment?

22 **MR. ELDER:** Peter Elder, for the record.

23 For these major nuclear facilities, it's
24 normal part of our inspection program that our inspectors
25 meet with union representatives without management

1 present.

2 And again it's a way for them to make --
3 raise issues without any concerns. Not saying there are
4 concerns but we like to hear about how programs are
5 working from the union members as well.

6 **MEMBER HARVEY:** So is it the same process
7 everywhere with other facilities?

8 **MR. ELDER:** Generally, yes. You know and
9 these are not formally part of our inspections. This is
10 what you do on the side of inspections. And if there are
11 any particular issues, we won't necessarily tell the
12 management where the issue came from and we just do
13 something that we will raise with them, yeah.

14 **MEMBER HARVEY:** Thank you.

15 **THE CHAIRMAN:** Do -- what has been the
16 experience? Are those meetings really raising sort of new
17 issues, interesting issues, issues that require attention?
18 I mean ---

19 **MR. ELDER:** My experience and I've sat in
20 on them in previous roles with them is that you do get
21 issues raised. A lot of it is, in some ways, confirming
22 some of our concerns when we see trends and events, we
23 will see if we get the same information from the unions.

24 And then that just encourages us to
25 continue to push in those areas. So there is some value

1 to them, you know. The other thing we always make clear
2 what our role is as a regulator; we're not the negotiator
3 between them on other issues.

4 But yes, there is definitely value. And we
5 want to see on -- and make sure that if they have
6 concerns, they know how to get in contact with us, and we
7 provide emails and things like, you know, contacts so they
8 can raise issues as well.

9 **THE CHAIRMAN:** Dr. McDill?

10 **MEMBER MCDILL:** Thank you.

11 How many USW -- how many United Steel
12 Workers are at the conversion facility?

13 **MR. LEAVITT:** For the record, Chris
14 Leavitt, Union President.

15 There is 230 members at this facility that
16 I represent.

17 **MEMBER MCDILL:** So 103 of those 230
18 responded to your request for a letter?

19 **MR. LEAVITT:** The ones we could get out and
20 see. There's obviously a lot of shift workers. I think
21 the numbers would have been quite higher than that 103
22 that submitted in addition to our own submission.

23 But yes.

24 **MEMBER MCDILL:** What motivated the request
25 for the letter? This is the first I've seen a bulk letter

1 like this from unionized employees.

2 **MR. LEAVITT:** It wasn't -- Chris Leavitt of
3 the record, Union President.

4 It wasn't driven at all from the union
5 executive, if you want to for say -- to clear that up.

6 It was more of a membership driven. It was
7 an initiative that was taken that we supported if they
8 wanted to.

9 **THE CHAIRMAN:** But somebody did draft a
10 fill in the blank leading the witness so to speak? Right?

11 **MR. LEAVITT:** Chris Leavitt, for the
12 record.

13 Yes, you're correct.

14 **THE CHAIRMAN:** What I'm -- there's another
15 hearing going on somewhere out west where every such
16 person asks also for their 10-minute presentation. I'm
17 surprised nobody asked for that.

18 **MR. LEAVITT:** We're very respectful --
19 Chris Leavitt, for the record.

20 Just being very respectful of the process,
21 Chairperson.

22 **THE CHAIRMAN:** I'm just joking a bit.
23 Dr. McDill?

24 **MEMBER McDILL:** No, only to comment that
25 103 of 230 is on the order of half, a little more than,

1 right?

2 **THE CHAIRMAN:** Anybody else?

3 Dr. Barriault?

4 **MEMBER BARRIAULT:** Just a brief question to
5 the union. When was the last time that you had a
6 difference of opinion on health and safety issues with
7 management?

8 **MR. DAVIS:** For the record, Ron Davis.

9 We have several differences of opinion but
10 we have committees, we work through them issues and we
11 have nothing to hide and we expect the same from them.

12 So we respect them when they deal with the
13 issues and we expect the same when we deal with issues
14 when we have to deal.

15 **MEMBER BARRIAULT:** So it will always come
16 to, I guess, a resolution of the problem without going ---

17 **MR. DAVIS:** Yes, we don't let issues
18 fester, we work on them.

19 **MEMBER BARRIAULT:** Would Cameco care to
20 comment on that?

21 **MR. CLARK:** Dale Clark, for the record.

22 I would absolutely concur with those
23 comments. I would say our philosophy and our objective is
24 absolutely the same, and that's to ensure that our workers
25 go home safely every single day and we are united on that

1 approach.

2 And, you know, while we certainly have many
3 discussions around a wide number of issues, the fact is,
4 is that we do have those discussions. We have very open
5 and honest and transparent discussions. And that's a good
6 healthy thing and I think there's a good healthy
7 relationship to achieving that common objective.

8 **MEMBER BARRIAULT:** Thank you.

9 Thank you, Mr. Chairman.

10 **THE CHAIRMAN:** Anybody else?

11 Mr. Tolgyesi?

12 **MEMBER TOLGYESI:** One short one. You are
13 saying that the union is participating in an investigation
14 of dangerous occurrences following an accident. Do you
15 have any safety audits which accompany -- I suppose you
16 have the audit system -- and do labour representatives
17 participate on this audit committees?

18 **MR. CLARK:** Dale Clark, for the record.

19 If I understand your question correctly, we
20 do have joint workplace health safety committees and
21 policy committees between both Cameco management and union
22 representation, and those committees do conduct routine
23 inspections of all areas of the plant and work areas.
24 Those are joint inspections that are done on a regular
25 basis. And that also includes, as you say, investigations

1 following events which are investigated jointly as well.

2 **MEMBER TOLGYESI:** I was thinking about
3 something formal as an audit, you know, at you're working
4 place or observe your working procedures, et cetera, and
5 how far union's involved with that.

6 **MR. DAVIS:** Ron Davis, for the record.

7 We are involved with all of the policies,
8 procedures and we audit them periodically over -- we have
9 one year, three years, five years, different procedures
10 and stuff and we are involved in that.

11 We actually had a policy meeting yesterday
12 where we went over seven of the procedures.

13 **MEMBER TOLGYESI:** My last one is that you
14 were saying that the joint health and safety committee
15 just recently were trained on the IRS. It's the intention
16 of Cameco to extend this training to all employees?

17 **MR. CLARK:** Dale Clark, for the record.

18 We did conduct additional training on the
19 IRS system, as you mentioned, that was primarily aimed
20 initially at the joint workplace health safety committees
21 and the policy committee, and you know, that was the
22 primary focus.

23 We have -- since that time we've also
24 conducted that same training for supervisors throughout
25 the plant and do plan to do some abbreviated version of

1 that same training for all employees this year as well.

2 **THE CHAIRMAN:** Okay, thank you. Thank you
3 very much.

4 We will move to the next submission by
5 Atomic Energy of Canada Limited as outlined in CMD 16.34
6 and 16.34A.

7 I turn the floor to Ms. Christine Fahey for
8 the presentation.

9

10 **11-H16.34 / 11-H16.34A**

11 **Oral presentation by**

12 **Atomic Energy of Canada Limited**

13

14 **MS. FAHEY:** Good afternoon, Dr. Binder,
15 Members of the Commission.

16 For the record, my name is Christine Fahey;
17 I'm the Project Director for the Port Hope Area
18 Initiative. With me here today is Mr. Glenn Case, the
19 Manager of Project Engineering.

20 I'm here today to present an oral
21 intervention in support of Cameco's application to renew
22 its Class 1B nuclear fuel facility operating licence for
23 the Port Hope Conversion Facility for a period of five
24 years.

25 The Port Hope Area Initiative or PHAI is a

1 federally sponsored project to remediate the historic low
2 level radioactive waste situated within the Municipalities
3 of Port Hope and Clarington.

4 The waste liabilities were generated
5 between 1932 and 1988 and arose from the radium and
6 uranium refining and processing operations of Eldorado
7 Nuclear Limited, a former Crown corporation, and its
8 private sector predecessors.

9 The scope and terms of the PHAI are set out
10 in a legal agreement between the federal and municipal
11 governments. Federal operation -- pardon me -- federal
12 obligations in the agreement have been assigned by Natural
13 Resources Canada to Atomic Energy of Canada Limited, AECL,
14 the lead agency in the PHAI management office.

15 AECL manages the overall project and is the
16 proponent for environmental assessment and licensing
17 purposes.

18 The PHAI comprises two projects, the Port
19 Hope project and the Port Granby project. In each
20 community the clean-up and construction activities will
21 result in the consolidation of waste in a new above ground
22 engineered mound. The CNSC has issued licenses for both
23 these projects and federal funding to implement the
24 projects was announced last week.

25 In the case of the Port Hope project an

1 estimated 1.2 million cubic meters of waste will be
2 emplaced in the new mound to be located on the site of the
3 existing Welcome waste management facility.

4 Of this total 150,000 cubic meters has been
5 reserved for Cameco decommissioning waste as set out in
6 the PHAI legal agreement. This waste allotment is
7 currently safely managed by Cameco at the Port Hope
8 Conversion Facility or will be generated through
9 decommissioning activities of the Cameco Vision 2010
10 Project.

11 We understand that the Vision 2010 Project
12 is awaiting an EA decision and its licence application
13 will follow, likely as an amendment to the conversion
14 facility licence that you are considering today.

15 Cameco and AECL have a long history of
16 cooperation. Over a decade we have interfaced on
17 technical, operational and communication fronts with the
18 aim of meeting common interests, which include safe
19 operations and minimizing the potentially adverse impacts
20 of our respective businesses on the local community.

21 In 2010, following your issue of the Port
22 Hope project licence to AECL, land transfers necessary for
23 the construction of the new long term waste facility in
24 Port Hope was successfully completed by Cameco and the
25 Crown. For the Port Granby project the land transfers

1 will be completed by March 31st.

2 At the existing waste management facilities
3 at Welcome and Port Granby the smooth transition of
4 operating responsibility is governed by transition service
5 agreements. Under these agreements Cameco provides short
6 term operation support and training for AECL staff and on-
7 going environmental monitoring services from resources
8 based at the conversion facility.

9 The experience at the Welcome facility in
10 2010 was very positive for both parties and we are
11 expecting the same high level of cooperation with the
12 transition of operational responsibilities at Port Granby
13 which will begin in the coming weeks.

14 Our cooperative efforts have been on-going
15 for the longest period and the planning related to the
16 emplacement of the Cameco decommissioning waste in the new
17 Port Hope mound. Through nearly 100 meetings over the
18 past decade AECL and Cameco have developed thorough
19 understandings of our respective project scopes and
20 interfaces. We have used this understanding to develop
21 technical approaches for completing the clean-up and waste
22 transfers and to define acceptance criteria for the waste
23 to be emplaced in the mound.

24 We have also participated in the reviews of
25 our respective environmental assessments and Cameco staff

1 recently participated in the review of our detailed
2 engineering design.

3 Over the past couple of years in particular
4 we have focused on developing a schedule that optimizes
5 the implementation of both projects.

6 The Port Hope project is planned to be
7 implemented in parallel with Cameco's Vision 2010 Project.
8 Though these two projects are distinct undertakings with
9 separate regulatory reviews and approvals, the two
10 projects are linked as a result of the location of the
11 waste materials.

12 This slide shows, in yellow text, the Port
13 Hope project remediation sites that are in close proximity
14 to the Port Hope Conversion Facility and underscores the
15 need for careful project sequencing. For Cameco's Vision
16 2010 project, one of the first areas needed is the
17 waterworks site, which is just left or to the west of the
18 conversion facility on this slide. Cameco and AECL have
19 been working together to plan the clean-up of this site
20 early in the Port Hope project's implementation.

21 A second area of coordination is with
22 regards to the work in the harbour. In order for AECL to
23 remove the impacted sediments in the Port Hope Harbour,
24 all of the harbour walls will first need to be
25 rehabilitated. The designs for the harbour wall upgrades

1 incorporate Cameco's requirements for maintaining the
2 conversion facility's cooling water intakes and discharges
3 so that its operational needs will continue to be met.

4 On the centre pier, which is part of
5 Cameco's conversion facility licence, the first operation
6 will be the removal of soil temporarily stored under the
7 tarpaulin on the centre pier. This material will be
8 removed by AECL. Next, Cameco will remove the drum
9 materials in the buildings on the pier and deliver these
10 to the new mount facility in accordance with specified
11 packaging and delivery requirements.

12 The PHAI will then commence the harbour
13 dredging operation using the centre pier as a staging
14 area. When this is accomplished, the contaminated
15 material and industrial waste that comprises the centre
16 pier itself will be remediated. Throughout the entire
17 waterfront clean-up, which will span a period of five
18 years, Cameco and AECL will ensure the flood plain
19 protection requirements are satisfied.

20 Further, both parties are committed to
21 ensuring the delivery of materials from the waterfront
22 area to the new waste facility will comply with EA
23 requirements for truck transportation.

24 As both the Port Hope and Vision 2010
25 projects are advanced from the design to construction

1 phases, AECL and Cameco recognize the critical importance
2 of stakeholder outreach.

3 In communicating with the public and
4 seeking input from members of the community, we are
5 cognisant of the need to distinguish our respective
6 activities that are unrelated while emphasizing the
7 aspects of our operations which are distinctly linked,
8 such as those noted on the previous slide. To this end,
9 our communications specialists and management teams
10 dialogue regularly to plan our outreach activities and
11 share experiences.

12 Minimizing the impacts of the PHAI and
13 Vision 2010 projects while maximizing the many positive
14 benefits to the community is a common goal shared by AECL
15 and Cameco. Working cooperatively with the municipality
16 of Port Hope and local citizens, we are committed to being
17 good neighbours and to returning large portions of the
18 waterfront to the community.

19 To conclude, I'd like to reemphasize the
20 key points of this intervention. The PHAI and Vision 2010
21 projects are closely linked. AECL and Cameco have worked
22 cooperatively for a decade to ensure our respective plans
23 are integrated and coordinated. We value our relationship
24 with the municipality and are committed to minimizing the
25 impacts of project activities on the community.

1 AECL and Cameco enjoy a strong relationship
2 on many levels. Local management representatives dialogue
3 on matters of joint interest, while our technical,
4 operational, and communication experts meet regularly to
5 discuss specific interfaces.

6 We recognize that the Vision 2010 project
7 will be the subject of a separate licensing process
8 following the EA decision later this year. Expecting that
9 that process will involve an amendment to the Port Hope
10 Conversion facility licence, we strongly endorse Cameco's
11 request to have its Class 1B license renewed.

12 Thank you, Dr. Binder, for this opportunity
13 to intervene.

14 **THE CHAIRMAN:** Thank you.

15 Questions?

16 No?

17 **MEMBER TOLGYESI:** Could you be more
18 specific? What's the AECL's involvement in the public
19 outreach?

20 **MS. FAHEY:** AECL is the lead federal
21 organization in the Port Hope Area Initiative Management
22 Office, and we implement the federal obligations of the
23 legal agreement. A significant obligation in the legal
24 agreement is to communicate and consult with the
25 municipality and members of the public.

1 **MEMBER TOLGYESI:** And to communicate. But
2 what do you do concretely? What it means? You do public
3 meetings, I don't know, you publish a periodic weekly
4 paper or what?

5 **MS. FAHEY:** Public consultation has been
6 underway since 2001. There have been more than 200
7 meetings with the public to get input. We publish
8 newsletters for both the Port Hope and Port Granby
9 projects. We have a dedicated project information
10 exchange, whereby any day of the week, eight hours a day,
11 any member of the public can come in and speak with our
12 staff. We operate a website as well as social media
13 sites. We do outreach to many community associations,
14 such as the Rotary, Lions Club. We also deliver
15 educational components of the high school curriculum from
16 Grade 9 to Grade 12. That's just a flavouring of what we
17 do.

18 **MEMBER TOLGYESI:** Are you on Facebook or
19 these kind of social networks?

20 **MS. FAHEY:** Yes, we have both a Facebook
21 and Twitter account, and we have a website as well,
22 www.phai.ca.

23 **THE CHAIRMAN:** Anybody else?
24 Monsieur Harvey?

25 **MEMBER HARVEY:** What is -- you mentioned

1 that there is a very -- those two projects are linked
2 together to a certain degree. In time, where is the
3 junction point for -- what I want to say is, could the
4 Vision 2010 start without the other project having
5 started? Where is the ---

6 **MS. FAHEY:** Christine Fahey, for the
7 record.

8 Our project has been approved for
9 implementation with an announcement on Friday by the
10 Minister of Natural Resources. For the first two years,
11 our project will focus on enabling infrastructure centred
12 at the welcome waste management facility. As will be
13 discussed in a licensing hearing later in 2012, our first
14 priority is to build a new water treatment plant.

15 So while that water treatment plant is
16 being constructed and commissioned, Cameco will be
17 completing its EA and licensing process and detailed
18 design, as I believe Mr. Clarke alluded to in his
19 presentation.

20 **MEMBER HARVEY:** So Vision 2010 could not
21 start before two years, I mean?

22 **MR. THORNE:** Andy Thorne, for the record.

23 If I may, just before I answer that
24 question, I would just like to take this opportunity just
25 to clarify an answer that I gave to Dr. McDill in relation

1 to our community support program.

2 Just to clarify what I said, I think it's
3 important -- I stated that we don't disclose specific
4 amounts of money that we provide to the organizations
5 within our communities. That being said, at this year's
6 fall fair, we did actually have quite a major stand or an
7 exhibit that actually listed all of the recipients of
8 funding from Cameco in our support of the community. So
9 that has been provided to the community. Those were
10 listed.

11 In addition to that, we also have on our
12 website; we have listed a number of the major receivers of
13 that community support from Cameco. So I just wanted to
14 just add that and clarify that point.

15 In relation to Vision 2010 and the Port
16 Hope area initiative, we've worked very closely with the
17 Port Hope area initiative. We recognize the importance of
18 making sure that our two programs are well aligned. We
19 have started the Port Hope area initiative -- sorry, we
20 have started the Vision 2010 project in relation to.
21 We're currently in the pre-feasibility stage and we're in
22 the EA stage.

23 As far as construction is concerned, the
24 plan is for the material that's being remediated at the
25 Port Hope facility would need -- the final resting place

1 for that material is the welcome waste management
2 facility. So it's important that those two projects run
3 very closely in parallel in the communications between
4 both, well, all of the stakeholders in the community are
5 done well and we understand each other's projects
6 intimately.

7 **THE CHAIRMAN:** Dr. Barriault?

8 **MEMBER BARRIAULT:** Just one brief question
9 to CNSC staff. A few of the intervenors commented on the
10 fact that they wonder at the amount of presence that CNSC
11 has at this site on an ongoing basis. Perhaps you'd care
12 to comment on that? And what's going to happen with
13 Vision 2010? I know this is not for this -- why we're
14 having this meeting, but just to clarify some of those
15 issues.

16 **MR. ELDER:** Peter Elder, for the record.

17 I think in our presentation we've said that
18 over the last five years, we've done about 30-35
19 inspections for the conversion facility. You'll see
20 there's about -- a slightly smaller number, but somewhere
21 in that range.

22 For the other one, we are aware that
23 certainly there are certain aspects from both Vision 2010
24 and the PHAI started going forward, that there will be
25 need for more compliance inspection work.

1 We are very sensitive also how we're going
2 to look at and make sure that there is an appropriate CNSC
3 presence, especially when they're doing the residential
4 clean-ups.

5 We -- you know, so we know there's this
6 need. So once the -- the timing gets out and we can say
7 we do, you know, longer term projections of what we need,
8 we have some -- some idea right now what it would be.

9 There were various options in terms of do
10 we send their inspectors by Ottawa? It's a three-hour
11 train ride. Do you set them up in an office here or we
12 also already have an office at -- situated at Darlington
13 in NPP which is about 40 minutes away.

14 So another option is you can have an
15 inspector whose office is at Darlington and sort of his
16 working day, his inspections are done in -- in the -- so
17 we've -- we've identified those options. We really need
18 to see how much work is being done and how well that
19 coordination actually happens before we can make final
20 choices.

21 But will there be more presence?
22 Absolutely. An inspection is risk-based. It's -- it's
23 based on activities. We understand -- we know there are
24 more activities going on and then some of these need --
25 they're unusual activities. They're not routine. So we

1 intend to do quite a bit of oversight, especially at the
2 start up of them.

3 **MEMBER BARRIAULT:** Any problems getting
4 budget for having staff here?

5 **MR. ELDER:** Well, we work under cost
6 recovery. So, you know, when these new projects come into
7 it, we have the mechanisms.

8 And not that we quickly say, you know --
9 we'll have arguments about -- and discussions internally
10 where our priorities are. But once we've decided this one
11 -- these are cost recoverable activities then we can cost
12 recover from Cameco for them.

13 **MEMBER BARRIAULT:** Thank you.

14 Thank you, Mr. Chair.

15 **THE CHAIRMAN:** Any -- any other question?

16 I have just one clarification. The
17 Minister in announcing the 1.28 billion, does that include
18 Port Granby?

19 **MS. FAHEY:** Christine Fahey, for the
20 record.

21 Yes, that includes both Port Hope and Port
22 Granby projects.

23 **THE CHAIRMAN:** And it's in addition to the
24 money already spent?

25 **MS. FAHEY:** That is correct.

1 Christine Fahey, for the record.

2 **THE CHAIRMAN:** So is there enough money for
3 you to do the job?

4 **MS. FAHEY:** The -- the amount announced is
5 based on an estimate our office put forward to the
6 government.

7 **THE CHAIRMAN:** Over 10 years?

8 **MS. FAHEY:** Over 10 years.

9 **THE CHAIRMAN:** Okay. Thank you. Just
10 wanted to make sure I hear it from you.

11 Anybody else?

12 Thank you very much.

13 We move to the next submission from Mr.
14 Eric Campbell as outlined in CMD 16.35 and 16.35A.

15 Mr. Campbell, the floor is yours.

16

17 **11-H16.35 / 11-H16.35A**

18 **Oral Presentation by**

19 **Eric Campbell**

20

21 **MR. CAMPBELL:** Thank you.

22 Members of the Commission, ladies and
23 gentlemen, my name is Eric Campbell and I'm President of
24 Paper Bag Consulting.

25 I received funding through the CNSC's

1 participant funding program in order to measure awareness
2 and attitudes amongst Port Hope youth both with respect to
3 nuclear energy in general as well as with respect to the
4 Port Hope conversion facility specifically.

5 Let me start by apologizing. I -- I have a
6 bit of a cold and so I'm glad the PA is working better now
7 or I would be totally incomprehensible.

8 I'd like to -- to briefly go over some of
9 the -- the main findings of the survey, the survey which I
10 disseminated to 171 youth with the help of my partner Port
11 Hope High School. The survey for members of the public is
12 available on the documents' table if you would like to
13 consult it. It's also attached to my final report.

14 The survey was designed to measure, as I
15 mentioned, awareness and attitudes. In terms of
16 awareness, we were measuring both general nuclear
17 awareness as well as Port Hope Conversion Facility's
18 specific awareness. Awareness was mentioned -- awareness
19 was measured through a number of factual questions in both
20 case.

21 The results from these questions were
22 adapted in order to give an awareness score. And so the
23 first finding is that the -- the general awareness of
24 nuclear energy amongst youth in Port Hope is low. They
25 scored an average of 39.7 percent. With respect to Port

1 Hope Conversion Facility, awareness is critically low with
2 youth scoring an average of 23.8 percent.

3 With respect to attitudes, again beginning
4 with general attitudes with respect to nuclear energy,
5 there is moderate concern about the safety risks
6 associated with nuclear energy.

7 Respondents ranked on an average of 4.74 or
8 in the realm of somewhat concerned. And when asked, "How
9 safe do you feel living near Port Hope Conversion
10 Facility?" the average ranking amongst the respondents was
11 5.46 in the realm of somewhat safe.

12 Finally, I'd like to draw your attention to
13 some findings of interest. First of all, only 24 percent
14 of respondents reported having learned or being exposed to
15 learning about nuclear energy on the internet.

16 Second, that only 25 percent are aware of
17 an emergency plan for their community, should there be an
18 accident or an emergency at the Port Hope Conversion
19 Facility.

20 Third, that there is no correlation between
21 age and levels of awareness. That is, as respondents are
22 -- the older respondents get, there is no -- we don't see
23 any increased level of awareness. That could be
24 indicative of a number of things.

25 And fourth, that more than one in three

1 believe that nuclear energy is used in microwave ovens.
2 That maybe can serve as an indication of the degree of
3 confusion that might exist with respect to nuclear energy.

4 And finally that findings suggest that Port
5 Hope youth are not attentive to potential health and
6 environmental issues at Port Hope Conversion Facility.

7 Based on these findings, I submit the
8 overarching recommendation that the CNSC may coordinate an
9 outreach in education with measureable results an explicit
10 target for itself, as well as an explicit requirement for
11 perspective licensees going forward, such that communities
12 hosting nuclear facilities such as Port Hope are
13 consistently and dependably both informed and willing.

14 Of course, my research focused on the youth
15 portion of these communities, but I was operating on the
16 premise that youth form an important -- an important
17 component of these communities.

18 Thank you.

19 **THE CHAIRMAN:** Thank you.

20 Who wants to start?

21 Mr. Tolgyesi?

22 Go ahead.

23 **MEMBER MCDILL:** Thank you.

24 On your letter dated Friday, December the
25 16th in the bottom paragraph you say:

1 "Currently the youth segment of the community surrounding
2 CRL can be characterized as uninformed and only partially
3 willing."

4 So I'm assuming that that's a typographical
5 error. It's also in the -- in the document you presented.
6 But maybe the communities surrounding both the Port Hope
7 and CRL are equally uninformed and only partially willing?

8 **MR. CAMPBELL:** Eric Campbell, for the
9 record.

10 Unfortunately, I can't attribute that
11 mistake to my cold. That is a typo and well, this
12 research was done entirely independently of my research in
13 the Chalk River community.

14 Certainly there are some similarities and
15 one of the similarities is that both youth populations can
16 be characterized as uninformed and only partially willing.

17 **MEMBER MCDILL:** I realize the funding was
18 given for this community, but it would have been
19 interesting to see the two side by side.

20 They're both relatively small communities
21 although Port Hope obviously isn't closer to a big place
22 like Toronto compared to Sierra.

23 Thank you. I just wanted to clarify that;
24 that they are both -- the conclusion is true for both.

25 **MR. CAMPBELL:** Absolutely, apologies for

1 the correction that needed.

2 **MEMBER TOLGYESI:** Mr. Campbell, you are
3 saying that according to the survey, 70 people and one
4 percent of youth learned about nuclear energy in school.

5 I understand you are saying also that in
6 question 10 that only 25 percent is aware or 75 percent is
7 not aware about emergency procedures which puts up a
8 question; what's the curriculum -- or what's said in the
9 school about nuclear energy? Okay, because one side --
10 that's where the young people is learning about -- other
11 side, emergency measures which are quite important; nobody
12 -- most of youngs, they don't know it.

13 So how complete is the curriculum on the
14 nuclear energy in the school? Do you have any comments or
15 -- Cameco?

16 **MR. CAMPBELL:** Eric Campbell, for the
17 record.

18 I'm wary of drawing conclusions that aren't
19 directly suggested by the findings of the survey, but I'm
20 aware of that discrepancy and all I can say based on the
21 results of the survey is that while youth report being
22 exposed to information and to learning about nuclear
23 energy at school, there are obviously question marks
24 around the depth of that knowledge or the depth of that --
25 the education and the outreach that they're being exposed

1 to.

2 **MR. CLARK:** Dale Clark, for the record.

3 I would say, first of all, that Cameco is
4 very proud of the public information program that we have
5 and maintain in the community and we believe it is a very
6 effective program overall and that we also recognize the
7 challenge associated with engaging with the youth and as
8 presented here.

9 Among the methods and the tools that we use
10 to communicate with the schools and with the students
11 today, there are a number of different tools that we use
12 there. For example, we put forward an annual seminar for
13 the teachers in the region as part of their professional-
14 development activities and professional-development days
15 where we host and provide information and provide tours to
16 those teachers in the area. It's been a very successful
17 program; very well attended.

18 Our research centre is quite actively
19 involved in local schools and does go out to schools and
20 engage in particular with the science programs in local
21 schools. Our sponsorship has brought a program called
22 "Scientists in Schools" -- brought that to local schools
23 in the area.

24 Cameco has also put forward scholarships in
25 chemistry, in computer science programs for local

1 graduates from Port Hope.

2 And then, of course, we also have, as been
3 mentioned, our local and divisional website and presence
4 at activities such as the fall fair which do engage with
5 many members of the community and has activities for youth
6 as well as adults.

7 So we recognize it as a challenge, but we
8 are overall quite proud of our public information program
9 and those are examples of the tools that we use today to
10 communicate with the youth.

11 **MEMBER TOLGYESI:** Do you use -- once again,
12 I repeat Twitter and the Facebook addresses because that's
13 the places where the young -- it is 14 to 18 years old; so
14 that's where they communicate or they go quite a bit?

15 **MR. CLARK:** Dale Clark, for the record.

16 We do not currently have with the division
17 or the site a Twitter or Facebook account. But that is
18 part of -- you know, we do maintain that divisional
19 website which we provide a lot of information on and
20 access to information. And we do acknowledge that's an
21 opportunity for us to look at ways to better engage with
22 youth in the future.

23 **MEMBER TOLGYESI:** And my last is to the
24 staff; could you comment? Do we have or does the
25 Commission have already, kind of, forms of community

1 outreach initiatives in the area and dedicated, probably,
2 to youngsters?

3 **MR. ELDER:** Peter Elder, for the record.

4 We have a number of communication and
5 outreach activities in terms of those things like we do
6 open houses around events; we've done information sessions
7 at CNSC 101; one of which we did do in Port Hope.

8 In terms of those focused on youth, there
9 is some educational-type material on our website so it's
10 again focused at a, sort of, high school-type-level.

11 We've also -- in terms of what we require
12 the licensees to do, they are required to have a public
13 information program with measurable goals and one of the
14 things with this -- actually with this licence, we're
15 putting some more formal licence conditions on Cameco to
16 have a -- you know, to maintain that public information
17 program, but also to report on their -- how their public
18 information program is working.

19 So in terms of Mr. Campbell's overall
20 recommendation that we do a more systematic one, we are
21 moving the licensees towards that. We are also looking at
22 trying to work with school boards as well.

23 **MEMBRE HARVEY:** Merci monsieur le
24 président.

25 The concern I have with that is what should

1 be our expectation? I agree that 24 person is very low,
2 but what do we expect; 40, 50, 60, 80? Have you ever done
3 a senior study with youth elsewhere for other subject like
4 health care, quality of food; anything? Have you done that
5 and how can you compare the result for this study with the
6 others?

7 **MR. CAMPBELL:** Eric Campbell, for the
8 record. Thank you for the question.

9 I haven't conducted any such studies
10 myself, but I have -- certainly there are studies out
11 there that do show -- and I understand your sentiments
12 that youth are one of the most difficult, most challenging
13 audiences to engage and certainly nuclear presents its own
14 challenges also because it's a very technical and
15 scientific based source of energy and it's complicated for
16 youth.

17 So I can't quote any figures from other
18 studies in terms of how many youth generally know how, you
19 know, who their local MP is or rather, kind of, local
20 public knowledge. But certainly I can say that studies do
21 show that youth are a very difficult audience to reach and
22 to engage with.

23 I don't think that I think many of the
24 survey -- the results of the survey do reflect that
25 reality. However, I think the purpose of the survey is

1 also to show where solutions are or to start leading
2 towards the discovery of the solutions as to how to engage
3 youth on the subject.

4 **MEMBER HARVEY:** Thank you.

5 The object of my question was the --
6 because before to engage resources and efforts to do
7 something, you've got to get some target and if we compare
8 such study with others, it's the same thing; well, the
9 problem could be as well, I mean.

10 **MR. CAMPBELL:** Eric Campbell, for the
11 record.

12 If I could comment on that; it's the good
13 judgment of the Commission to decide how rigorous and to
14 how difficult the questions I asked in the survey are.
15 They are based on an educational resources found both on
16 the CNSC's website targeted to this age group as well as
17 on the Canadian Nuclear Association's website.

18 So this is knowledge that is accessible to
19 youth and, ideally -- I mean part of the intention of
20 putting together the awareness scores is -- we all know
21 that 50 is a passing mark at school and no student will
22 graduate from high school or graduate from any year with a
23 mark of below 50, and certainly both awareness scores that
24 we see, based on the questions I asked and survey, are far
25 below 50, far below passing grade.

1 **MEMBER HARVEY:** Will the students receive a
2 copy of the study, just to show them the results?

3 **MR. CAMPBELL:** Eric Campbell, for the
4 record.

5 I will -- I have not yet, but I will -- it
6 was my intention to make the report available to the
7 Principal at Port Hope High School, as he was my principal
8 partner in arranging to go into the high school. Whether
9 he decides to make the information available to the
10 students is at his discretion.

11 **MEMBER HARVEY:** It might be a good start in
12 a way to show them where they are.

13 **MR. CAMPBELL:** I think students know that
14 they -- I mean, based on the results of Questions 12 and
15 13, "Do you feel you know enough about what happens at the
16 Port Hope conversion facility?" The vast majority
17 indicated no to that question. They know they don't know
18 enough and the majority also said they would like to know
19 more.

20 **MEMBER HARVEY:** Thank you.

21 **THE CHAIRMAN:** Anything else?

22 First of all, let me tell you I found the
23 study very interesting and I was really disappointed with
24 the results. Of all the towns in Canada, I had expected
25 kids here to be aware. At least the parents seem to be

1 aware, but then I look around and I'll be lucky if there's
2 anybody below 30 in this audience. I was thinking that
3 you were the youngest guy in the audience here. Maybe you
4 two can compare notes.

5 But I guess the question is, well, it may
6 not be a concern for this particular segment of the
7 population at all, which is surprising by itself given all
8 the effort of raising some of the issues, given that we
9 are here; we are broadcasting. We've been here quite
10 often. I guess we are not reaching that particular
11 community.

12 So how do you explain it? Is it really
13 lack of interest, lack of concern?

14 **MR. CAMPBELL:** Eric Campbell, for the
15 record.

16 Thank you for the question. I think that
17 speaks to the heart of why this research was important and
18 why I'm grateful to the Commission for funding it.

19 Port Hope, initially, I also had the same
20 expectation that Port Hope youth should maybe rank amongst
21 the most knowledgeable and most aware in terms of youth
22 hosts of a nuclear facility, but the survey results
23 indicate and certainly lots of anecdotal evidence I've
24 received along the way also shows that there's lots of
25 nuclear happenings in Port Hope, lots of -- a variety of

1 stakeholders, a variety of facilities, of rich history.
2 Again, that includes a number of stakeholders. And so it
3 is a complicated nuclear context here and for young people
4 to sift through all that information and all that, all
5 these messages -- you know, the Port Hope area initiative
6 talks about them doing outreach. The CNSC talks about
7 doing outreach, and Cameco talks about doing outreach.
8 There's so much information coming from different
9 directions that all seems intertwined to youth that I am
10 not surprised to see the low scores. I think it is very
11 hard for them to build a picture of exactly, you know, how
12 the nuclear industry -- where it's situated in their
13 community and who's part of it.

14 In terms of their lack of concern, I think
15 that youth aren't proactive all the time in seeking out
16 information. They have eight hours a day at school or six
17 or seven hours a day at school. They've got information
18 fed to them and when they come home from school, they tend
19 to socialize or, you know, they've already had their fill
20 of information. So expecting them to go on the internet
21 or expecting to go to community events to become further
22 engaged is, well, absolutely laudable. It's maybe
23 unreasonable for us to expect of the majority of youth.

24 My belief is that you have to hit them
25 where they live or where they spend the majority of their

1 time, at school or at home.

2 The survey shows, Question 1, that again
3 the most often-cited sources of education for youth are
4 school and parents. Internet ranks third and a variety of
5 other sources come dead last.

6 So school, I think, is a fertile ground.

7 **THE CHAIRMAN:** Mr. Tolgyesi.

8 **MEMBER TOLGYESI:** Mr. Campbell, do you
9 think that the youth are more knowledgeable of other
10 industry sectors than nuclear?

11 **MR. CAMPBELL:** Eric Campbell, for the
12 record.

13 That's an interesting question. In this
14 community -- I used to live in Cobourg, so I'm familiar
15 with this community and then with some of the industry
16 that is present in this community, and I really have no
17 grounds upon which to hypothesize if they would know more
18 about those industries. My guess, if I were to have one,
19 is probably not.

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

21 We will move on to the next submission from
22 Mr. Morand, as outlined in CMD H-16.37 and H-16.37A.

23 Mr. Morand, the floor is yours.

24

25 **11-H16.37 / 11-H16.37A**

1 **Oral presentation by**

2 **Mr. John Morand**

3
4 **MR. MORAND:** It's a fully integrated
5 electronic presentation that I provided to your staff.
6 You are only using PowerPoint 2003, so I brought my laptop
7 with 2010 and apparently we're having a bit of a problem.

8 It worked earlier, so if we can take a
9 minute? It's exactly nine minutes and 56 seconds.

10 **THE CHAIRMAN:** I'll stop the clock for you.

11 **(LAUGHTER/RIRES)**

12 **MR. MORAND:** For the record, my name is
13 John Morand. I am a retired or semi-retired lawyer,
14 living at the foot of King Street in Port Hope.

15 Cameco is an important economic contributor
16 to the economy of Port Hope. Cameco also represents a
17 challenge to the building of a stronger economic base in
18 Port Hope, but could be a leader. Cameco has inherited a
19 legacy of bad environmental decisions and have been part
20 of creating a nuclear stigma impacting property values.

21 To their credit, Cameco has taken steps to
22 increase security, both fire and physical. Cameco has
23 taken steps to improve air quality and is attempting to
24 stop contaminated ground water from entering the lake.

25 If we were to do it today, Cameco would not

1 be located on the waterfront of Port Hope but rather on
2 its property in Ward 2 with a large buffer.

3 Cameco is one of the four parties
4 responsible for the stigma issue that impacts Port Hope
5 property values. The other three players are the federal
6 government, El Dorado, the LLRW Office and Port Hope Area
7 Initiative Management Office both get national coverage
8 every time they do something which impacts property
9 values.

10 Commissioners, as part of this licence
11 hearing, you need to focus on Port Hope property values as
12 well as part of the relicensing of the Cameco operating
13 and storage facility.

14 Having made the observations above, I
15 support the CNSC renewing the Cameco licence for a five-
16 year period with a mid-term review.

17 Over the past five years, we have seen a
18 number of occurrences take place at the facility that
19 would have profited from a mid-term review. Lessons of
20 concern to the public and possibly reduce the social
21 application of stigma that we face as property and
22 business owners in Port Hope.

23 Property values have reduced significantly
24 in Port Hope from January 2006 to November of 2001. We
25 are told that increasing numbers of people are applying

1 for the PVP program and over \$2 million has been awarded
2 in compensation, most of it since the licence was granted.
3 We are just seeing the tip of the iceberg.

4 We need a coordinated, strategic effort
5 from all levels of government to protect the asset base
6 for many seniors and others who are taking a beating
7 financially on the sale of their home, if they can sell it
8 at all rather than handing the keys back to the bank.

9 Cameco must play a critical and strategic
10 role in that effort by bringing money, people and ideas to
11 the table to rebrand our community.

12 The Commission must challenge them to be
13 one of the leaders in rebuilding our property values
14 through rebranding.

15 One of the roles of the CNSC relates to
16 health, mental stress, apprehension, concern and illness
17 over falling property values is going to increase
18 particularly in our seniors who have been counting on the
19 equity in their homes for a comfortable retirement.

20 Future home buyers want their investment
21 protected. They want to know that once the LLRW clean-up
22 is completed that there will be no more uranium deposits
23 from airborne particles on their property.

24 Commissioners, you should require Cameco to
25 produce an environmental plan by the mid-term review that

1 outlines to what extent airborne uranium particles can be
2 reduced from this 50+ future to points of egress of
3 particles from the facility thus protecting the community
4 from further nuclear contamination.

5 Cameco currently has almost 100 million on
6 deposit with the CNSC for decommissioning of the facility.
7 After the major leaks in the processing facilities into
8 the groundwater and potentially Lake Ontario, 100 million
9 is barely a start.

10 An additional 500 million should be
11 deposited with the CNSC by Cameco and invested for growth.
12 Can a CNSC staff member tell us how much is currently on
13 deposit for Port Hope? What interest rate is the money
14 invested at and how much accumulated interest is there?

15 Potential property buyers and investors
16 would be happier to know that sufficient funds are on
17 deposit to clean up their town to a bank financing level
18 when a Cameco facility is closed or moved to another site
19 in Ward 2 with a large buffer.

20 Two licence hearings ago, in response to a
21 question from Dr. Barnes, Bob Steane indicated that the
22 shelf life of the two facilities, the UO2 plant and the
23 UF6 plant was about 13 years. This licence renewal will
24 take us beyond that period of time. Then what, more risk?

25 Cameco has many facilities around the world

1 and each of them needs to be decommissioned at some point
2 in the near future at substantial cost and time.

3 At two previous Commission hearings, I have
4 suggested the following: that a surcharge be negotiated
5 internationally on each kilogram of uranium sold. That
6 surcharge or tax will be paid by the purchaser directly to
7 the appropriate agency in a producing country, Canada for
8 instance.

9 The money would be invested and used
10 to decommission and create long-term storage facilities.
11 A new centre of excellence could be created in Canada with
12 a small portion of those funds and located here in Port
13 Hope, in conjunction with a major international
14 university. The taxpayers of Canada should not bear the
15 brunt of nuclear clean-up.

16 The facility would create new
17 industry, new jobs and increase our property values. We
18 need help to protect our seniors' largest asset, their
19 homes that will provide funds for future assisted living.

20 Poles demonstrate that one of the major
21 obstacles faced by the uranium industry is lack of trust
22 of governments and scientists by the average person. The
23 CNSC has to face that challenge effectively. They have
24 not gained the full confidence of Port Hope ratepayers.

25 Commissioners, you may be asking

1 yourselves, how bad can the radiological history of Port
2 Hope impact property values? Is there really a stigma or
3 is this more anti-nuclear crap that has nothing to do with
4 health and safety, your role? Good questions, all.

5 Let me answer a few of them with personal
6 information. I own a home, four bedrooms at 204 Ontario
7 Street. Five years ago, it was valued at 250,000. I
8 listed it almost three years ago for 218,000, 32,000 lower
9 because of Port Hope's contamination. I have had four
10 valid offers and none of them closed. My realtor thinks
11 that a stigma or reputation of Port Hope has had a
12 negative effect on those sales not closing. I have
13 recently moved the price down for the fourth time to
14 184,900 and still see no buyers in sight or better yet,
15 on-site.

16 I own the home next door, 200 Ontario. I
17 bought it in the mid-1990s for 80,000, renovated it, lived
18 in it and then rented it out. My impact notice contains
19 the following information. January 1, 2005 value 163,000;
20 January 1, 2008 value 212,000, January 1, 2012 value
21 212,000. My home at 200 Ontario has not risen in value
22 since 2008 and when I listed it several years ago, I could
23 not get offers at 167,000. The current real estate board
24 stats show a dramatic increase in property values from
25 June of 2011 to November 27, 2011 in Port Hope.

1 From January 2006 until June of 2011, real
2 estate values in Cobourg have gone up about 4.4 percent
3 while Port Hope values have held steady with an increase
4 of less than .0033 percent in Port Hope over the same time
5 period. In effect, there was a 4.4 percent difference in
6 property values.

7 I am using residential property in the
8 100,000 to 250,000 range for this comparison. From June
9 of 2006 to November 27, 2011, the delta in real estate
10 prices has increased to 8.77. That difference is mainly a
11 decrease in Port Hope values by over 3.3 percent. Year
12 over year, the prices in Port Hope have decreased by
13 \$15,042 from an average in 2010 of 194,042 to an average
14 of 179,000 to November 27 of 2011. This represents a
15 decrease of 7.75 percent year to year across property in
16 Ward One.

17 The socio amplification impact of media,
18 including newspapers, radio, TV, worldwide web pages, U-
19 tube, Twitter, Facebook and blogs, as well as abysmal
20 commencement of the remediation has impacted real estate
21 values beyond any projection save that of one made in LLRW
22 economic study that indicated 12 percent and a Jacques
23 Whitford group peer review study that also estimated at
24 least 12 percent within a mile of any facility. Their
25 estimates may be conservative.

1 Peer review studies for the EPA in the
2 United States indicate nuclear contamination issues impact
3 property values up to 100 miles distant but most studies
4 show impacts up to eight miles and an increase in property
5 values starting out from the site of about 14,000 per mile
6 and that was in 1983 dollars.

7 In other words, two miles out from the site
8 property values are \$28,000 higher.

9 As mentioned above, the PVP program reports
10 an average pay-out of 50,000 which closely links a
11 difference in all residential property values between
12 Cobourg and Port Hope at slightly in excess of 45,500 in
13 2011 in Cobourg's favour.

14 In summary Commissioners, please grant a
15 five-year renewal with a mid-term review, grant a five-
16 year renewal with an additional 500 million on deposit for
17 decommissioning, grant a five-year renewal with a mid-term
18 review with the currents that a fully commissioned plant
19 be presented prior to the renewal, next renewal developed
20 by the company through a public process.

21 Consider developing and implementing a 10
22 percent surcharge on each kilogram of nuclear fuel sold
23 with funds going to an investment and research corporation
24 H-producing nation. The role of that corporation will be
25 develop sustainable methods of disposing of nuclear waste.

1 Locate that Canadian facility in Port Hope to create jobs,
2 wealth and reasonable property values.

3 My last slide shows what average people
4 think. Please keep in mind that the Cameco facilities
5 currently also a storage facility.

6 I would be very happy to answer any of your
7 questions. Thank you for this opportunity to make a
8 presentation.

9 **THE CHAIRMAN:** I just gave you a
10 compliment, very good use of 10 minutes.

11 Okay, open for questions?

12 Dr. McDill?

13 **MEMBER McDILL:** For the sake of the
14 community and the intervenor, perhaps I could ask staff to
15 go over how the preliminary decommissioning plan is
16 developed and how financial guarantees are established for
17 facilities of this size and where the intervenor could
18 perhaps find it?

19 **MR. ELDER:** Peter Elder, for the record.

20 So if you want to know where to find it; on
21 our website, we have two guides and they are available on
22 preliminary decommissioning planning. There is also a CSA
23 standard but the guides are on our site as well as the
24 guide on financial guarantees, which tells you what form
25 -- the acceptable forms of financial guarantees.

1 So the process is that the licensing in
2 Cameco in this case is required to provide a preliminary
3 decommissioning plan that meets the requirements of guides
4 and then required to cost that plan. The costing is done
5 based on we review it against available information and
6 the cost of actual clean-ups and decommissioning is a big
7 factor in terms of those cost estimates. And then the
8 Applicant is required to provide a financial guarantee to
9 meet those costs.

10 In Cameco's case, this is a non-revocable
11 letter of credit that is payable to the CNSC. So this is
12 not a built-up fund that they are building up.

13 It's Cameco pays a bank and the bank then
14 gives a letter of credit. It's non-revocable, so the bank
15 can't revoke it. For our view, it's -- we are a secured
16 creditor on this one. And we take a lot of care in this
17 one because this is us or the federal government who will
18 become liable if Cameco disappears.

19 In terms of the current one we talked a
20 bit, there is an increase based on the current revision.
21 We require, again, Cameco every five years to update their
22 preliminary decommissioning fund. And there has been
23 about a five million dollar increase. I think Cameco can
24 walk into this one, but -- walk you through this, but,
25 actually, the Cameco site is fairly small.

1 So what -- it's not actually the clean-up
2 of the site that is the driving factor. It's actually the
3 taking down of the buildings that is driving the labour
4 costs on decommissioning so -- as it compared to the Port
5 Hope area initiative where there actually is quite a large
6 number of sites in the hundreds that have to be cleaned
7 up. So you know, but we do look at the actual costs of
8 activities and take this into consideration when we're
9 reviewing the PDPs.

10 **MEMBER McDILL:** Thank you.

11 Has there ever been a community that has
12 been involved in the preparation of a PDP, Preliminary
13 Decommissioning Plan, to your knowledge?

14 **MR. ELDER:** Not to my knowledge. I don't
15 know how our connection to Ottawa is going. I could go
16 back in Ottawa to check if you want. But I won't right
17 away.

18 The other point, as I said, when you get
19 closer to the actual one, you turn that preliminary
20 decommissioning plan into an actual decommissioning plan.

21 Those decommissioning plans are actual
22 decommissioning. There's heavy public involvement into
23 the development of those final plans, so there usually is
24 a very intensive public hearing process. It could be
25 environment assessment; it could be another process to get

1 the public input on those plans.

2 **THE CHAIRMAN:** Just on a micro level, the
3 decommissioning of Dalhousie just happened very recently
4 and the university had to kick in additional funds over
5 and above the actual decommission plan to fulfil their
6 obligation to clean up the site.

7 **MR. ELDER:** Just -- but -- Peter Elder.
8 To clarify on that one, they also --
9 depending on what you want to do on this site. So in
10 Dalhousie's case, it was a small reactor. Their guarantee
11 was to remove the reactor and decontaminate the room.

12 What, then, they actually wanted done was
13 to convert that space into another type of lab. And
14 there's a big cost in that conversion, so you have to be
15 careful when you're comparing the estimates to the actual
16 ones.

17 But we asked them to give all the figures
18 so that we can do those comparisons. But yes, there can
19 be significant increases, which is why we asked for these
20 guarantees to be reviewed every five years.

21 **THE CHAIRMAN:** But Mister -- where is the
22 plan? Was there -- where is the decommission plan? Was
23 that tabled somewhere? Just remind me again. And is it
24 available somewhere?

25 **MR. ELDER:** It's Cameco's document, so I

1 guess you can ask Cameco how available it is.

2 I don't offhand -- they have to submit it
3 to us. I can't offhand know what sort of protection it
4 has on it, but ---

5 **MR. CLARK:** Dale Clark, for the record.

6 We have -- you know, as explained, we have
7 prepared that preliminary decommissioning plan and we've
8 updated it recently as per that commitment of updating it
9 every five years.

10 We've submitted that to CNSC staff. That
11 has been accepted. We have -- that is not a document that
12 we have released to the public. But we have submitted
13 that document and are confident and following the outline
14 that Mr. Elder described and the process that goes into
15 that.

16 We're confident in the results, the quality
17 and the accuracy of the results of that plan.

18 **THE CHAIRMAN:** Sorry; are there any --
19 don't want to put you on the spot, but are there any
20 commercial confidences in there that prevent you from
21 publishing it or putting it on the web?

22 **MR. CLARK:** Dale Clark, for the record.

23 It's my understanding that these have been
24 submitted as confidential documents in -- to date. And
25 that is our plan going forward at this time.

1 **THE CHAIRMAN:** Are all decommissioning
2 plans confidential?

3 **MR. ELDER:** This one I'll ask and try to
4 get Bob Barker in Ottawa to answer that one. He's got
5 more familiarity with a wide range of decommissioning
6 plans.

7 **THE CHAIRMAN:** Ottawa, are you with us?

8 **MR. BARKER:** Bob Barker, for the record.

9 **THE CHAIRMAN:** Can you move a little bit
10 away from the mike?

11 **MR. BARKER:** Okay. How's that?

12 **THE CHAIRMAN:** Even further. Okay, try
13 now.

14 **MR. BARKER:** Okay. The preliminary
15 decommissioning plans traditionally are protected
16 documents. We have documents under a security system so
17 that they are available to the public, perhaps, but we'd
18 require the requests.

19 **THE CHAIRMAN:** We can't hear you, really.
20 Anybody could interpret this?

21 **MR. ELDER:** So -- Peter -- I got the
22 protected part. He said traditionally these are protected
23 documents. That's something that when we review and we
24 review our requirements, too, we can look into this in
25 terms of what portion of those should be publicly

1 available as well.

2 **THE CHAIRMAN:** Thank you.

3 Dr. McDill.

4 **MEMBER McDILL:** I think one of the
5 intervenor's questions has been answered, which is with
6 respect to the letter of credit, irrevocable letter of
7 credit. So that's taken care of.

8 I don't recall Dr. Barnes asking the
9 question two hearings ago. And I don't recall Bob Steen's
10 response, but I assume that Cameco intends to go at least
11 to the end of the next licence period.

12 **MR. CLARK:** Yeah, Dale Clark, for the
13 record.

14 We absolutely do. In terms of the lifetime
15 of the plants, we don't -- I don't have a specific year or
16 date, but we are confident and believe that, you know, if
17 properly maintained that these production facilities can
18 operate and continue to operate safely, protecting the
19 environment and our workers and the community for many,
20 many years into the future.

21 And one example I'd highlight as a -- to
22 demonstrate that is the significant investment over the
23 current licensing period into the infrastructure of the
24 buildings, the liquid management systems, the floors and
25 the infrastructure of those buildings as a significant

1 investment that is an example of enabling those buildings
2 to operate safely for many, many years into the future.

3 **MEMBER MCDILL:** And Cameco as a corporation
4 has financial guarantees for all of its nuclear sites, is
5 that not correct? So the amount of money that's
6 associated with this one, I'll ask staff to confirm, is
7 not tied up with any of the other sites.

8 **MR. THORNE:** Yeah, Andy Thorne, for the
9 record.

10 This irrevocable letter of credit is
11 specifically for the Port Hope conversion facility; that's
12 correct.

13 **MEMBER MCDILL:** Staff can confirm on all
14 the other Cameco sites?

15 **MR. ELDER:** So they have separate letters
16 of credit for each facility, yeah, so they're not
17 combined. There are actually separate ones for each one.

18 And just not with the Cameco one, but you
19 know, the more -- Dalhousie as an example. We also have a
20 more recent example in the mines on Cluff Lake where they
21 actually did the actual decommissioning for less than the
22 financial guarantee.

23 **THE CHAIRMAN:** Mr. Morand, you wanted to
24 make a comment?

25 **MR. MORAND:** For the record, John Morand.

1 We have a good example here in Port Hope of
2 how costs grow. The original estimate for the radiation
3 was 240, 250 million. The Minister, last Friday,
4 announced 1.1 billion, 280 million for the clean-up of the
5 two sites, about 280 million for the Port Britain site and
6 a billion for the Port Hope site.

7 So there should be some way that these
8 letters are indexed to reflect construction costs or
9 whatever else so at some point in the future the
10 community's not caught short and the country's not caught
11 short.

12 **THE CHAIRMAN:** But they are every five
13 years. That's the process right now until you actually
14 get serious in the actual decommissioning.

15 **MR. MORAND:** None of us in the public have
16 been aware of that, and it's good to find that out.

17 **THE CHAIRMAN:** Dr. McDill, you still have
18 the floor. Other questions?

19 Mr. Tolgyesi.

20 **MEMBER TOLGYESI:** Mr. Morand, you were
21 talking about -- could you provide some more information
22 regarding cleaning costs across the plant? It's quite
23 wide.

24 And you were talking that it should be
25 about \$500 million. Could you -- could you provide some

1 details how you get to these figures and when you're
2 talking about the plant what you are taking in account?

3 **MR. MORAND:** Sorry. Technology I'm good
4 with them sometimes. Pushing buttons, I'm not so good.

5 A number of years ago, I had an opportunity
6 to have a lengthy discussion with Bob Stein about
7 relocating the facility to their 400 acres on the 401. At
8 that point, he indicated that the cost of relocating the
9 facility would be in the ratio of about a billion dollars.

10 Since I've been following what was going on
11 in Kazakhstan and looked at some construction costs
12 elsewhere, we had a discussion in terms of about a half a
13 billion dollars to really clean the site to bank
14 financing, as was mentioned. There are different levels
15 of clean-up.

16 So if you wanted to use that site for some
17 development in the future, offices or -- or whatever --
18 it's a beautiful waterfront -- then you would need right
19 to bank financing level, and that's much more expensive
20 than other types of clean-up.

21 **THE CHAIRMAN:** Anybody else?

22 Monsieur Harvey?

23 **MEMBER HARVEY:** Merci, monsieur le
24 président.

25 Page 5 of your presentation, the last

1 paragraph:

2 "Polls demonstrate that one of the
3 major problems faced by the uranium
4 industry is lack of trust of
5 governments and scientists by the
6 average person. The CNSC has to face
7 that challenge effectively. They have
8 not gained the full confidence of Port
9 Hope ratepayers."

10 What is the source of that, your -- it's
11 based on what? I mean for Port Hope.

12 **MR. MORAND:** I'm just having a poll
13 conducted and I'll have the results of that in several
14 weeks. But just talking with the people in the community,
15 and those of you who were here several years ago, recall
16 that there was a huge amount of distrust in terms of the
17 CNSC at that part and bringing the CNSC to town, having
18 webinars at the Council chamber here have gone a long way
19 in changing that.

20 But generally, when you look at the learned
21 journals in terms of amplification of stigma, in terms of
22 the impact of stigma on real estate, what you find is that
23 one of the major problems in terms of correcting a problem
24 is that people don't believe experts. They don't believe
25 government because what they have is they have people on

1 one side bring in an expert; that expert says this.
2 People on the other side bring in an expert; that expert
3 says this. The government brings in an expert; that
4 expert says that.

5 So the average person has really started to
6 discount the PhDs and a whole bunch of other things and
7 are now starting to look at what's really happening. And
8 when you talk here in the community, what's really
9 happening is we're going through a dramatic drop in
10 property values.

11 Our Mayor went to the Minister, provincial
12 Minister, August 22nd of this year and talked about the
13 terrible stigma on our community. I have a copy of her
14 presentation here. It's really impacting.

15 I have copies of the real estate listings
16 and, indeed, the real estate listing books that I take all
17 this information from. I have copies from brokers here,
18 one of whom had five open houses. It's -- the people just
19 feel it and when somebody tells them differently, they
20 discount it.

21 So we've got to come up with better ways of
22 developing lines of trust. And you've gone a long way, I
23 have to admit that. I remember I think it was one of you
24 knocking on a door at two o'clock in the morning in Ottawa
25 trying to find something to eat after being up most of the

1 day.

2 So the things are much, much better in
3 terms of the way that you're respecting the public and
4 giving us an opportunity to speak. It's a wonderful
5 change, and congratulations.

6 **THE CHAIRMAN:** So what survey are you doing
7 that you can share with all of us? You just mentioned
8 you're doing a survey yourself.

9 **MR. MORAND:** Yes. Yes, I'm -- I've
10 retained someone. What I do, when I came out of
11 retirement from the practice of law, the only type of work
12 I do is mediations and arbitrations relating to the
13 Property Value Protection Program here in Port Hope.

14 So all of my time is spent with people
15 looking at appraisals, talking to real estate agents,
16 reviewing documents that -- actually, one of them you
17 didn't even have at the hearing on the licensing, which
18 talks about property values in 1990, 1991. This was done
19 Price -- by PriceWaterhouse to set up the PVP Program.

20 It indicates that property values in Port
21 Hope at that time, '91, '92, were about \$6,000 difference
22 and that the higher-priced homes in the \$200,000 to
23 \$300,000 range were higher priced here in Port Hope.

24 The latest shows -- and a study will be
25 coming out from the Port Hope Area Initiative office,

1 showing about 50,000 in difference. So there's been a
2 dramatic impact here, particularly since Dr. Coldicutt
3 showed up in Canada.

4 And in this study, actually, there's a very
5 telling comment. It says -- and these scenarios in here
6 are a 20 percent drop in property values, up to. And it
7 says:

8 "Our scenarios do not make provision
9 for unseen events that could have a
10 significant impact on property values
11 such as health issues, accidents
12 occurring at the site along hull roads
13 or at source locations, a major shift
14 in community attitude and publicity
15 regarding the project and similar
16 elements."

17 So what we've had going on, particularly
18 with media reports, is a heck of an impact. I also will
19 give to Louis Levere(ph) a copy of a letter, one of many I
20 have from real estate agents.

21 He had five showings. Thirty-two (32)
22 people come to the showings, positive feedback from 32
23 people on the house, 20 of the visitors from the GTA.
24 Nineteen (19) percent of the visitors from the GTA -- that
25 used to be our best market -- or 95 percent of them

1 expressed a concern about the remediation and the
2 community with radiation.

3 Those who withdrew, 55 percent, which
4 is consistent with some American studies that show that 62
5 percent of people will not locate in a community that has
6 a major issue. It doesn't have to be radiological. It
7 could be toxic, whatever. There's a lot of studies and,
8 in fact, some of them are quoted in this report.

9 So -- and the decrease in price, he's
10 showing \$55,000 on properties. So you know, we've got
11 some real issues going on.

12 The Minister last week gave us a great
13 announcement. I had a short opportunity to talk with him,
14 congratulated him. It's really a bonus to us here in Port
15 Hope. It's just how we use it to try and turn things
16 around.

17 **THE CHAIRMAN:** Okay. Thank you.

18 **MEMBER HARVEY:** Just -- are you linking
19 that stigma to the contamination, the soil, ground
20 contamination or the presence of ---

21 **MR. MORAND:** Oh, absolutely. It starts in
22 this study back in 2001 and 2002 where they talk about the
23 stigma at that point in Port Hope and the reason why the
24 property prices are lower in Port Hope here in that period
25 of time.

1 I'm in -- I was a professional economic
2 developer. I taught at the university level economic
3 development and I was Chairman of the International
4 Economic Development Council. I'm still an honorary Board
5 of their -- Board member and an honorary life member and
6 fellow member.

7 And I did three studies in this community,
8 1980, 1990 and 2000. And I've seen and reported on the
9 impact of the threat, concern, whatever of toxic
10 materials.

11 You know, there's -- I included in my, my
12 material about 20 studies on -- from various -- from
13 Harvard, from University of Oregon, et cetera, on this
14 issue, and I know they weren't reproduced into a DVD for
15 you. Perhaps that could be done.

16 But one of them, Smolen, did an issue --
17 did a review in Dayton, Ohio. And there, as I mentioned,
18 it's -- it was -- in 1993, about 14,000 a mile as you move
19 out from the site in terms of property increases. And in
20 one site, there was no houses sold within a mile for four
21 years.

22 So there's -- there's definitely an issue.
23 It's how we deal with it. And I think we have the people
24 and the brains here in this community to deal with it, and
25 I'm happy to see the government of Canada come forward

1 with what I would call serious money. I don't think it's
2 enough long term, but it's one heck of a start.

3 So my congratulations to the Minister and
4 to the CNSC and your deliberations in terms of making sure
5 that things are done for the health and safety of us all.

6 **THE CHAIRMAN:** Geez, I'd like to quit now
7 on this high note.

8 I think we do need to move on, unless
9 anybody have some -- I think what we're going to do now is
10 we're going to break for dinner, 6:00 to 7:00, and
11 reconvene again at seven o'clock. And even though Mark
12 has promised us to wind up at 9:00, we will go as long as
13 we need to go. So thank you.

14

15 --- Upon recessing at 6:01 p.m.

16 L'audience est suspendue à 18h01

17 --- Upon resuming at 7:01 p.m.

18 L'audience est reprise à

19 19h01

20 **THE CHAIRMAN:** Okay. Can everybody settle
21 down? We are back and we are moving to the next
22 submission from Mr. Farola as outlined in CMD 16.38.

23 I remind everybody that we're still looking
24 for 10 minutes max. We have read all the submission.

25 So, Mr. Ferola, please continue.

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2

11-H16.38

3

Oral presentation by

4

Hannibal Farola

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MR. FAROLA: To the Honourable Members of the Panel of CNSC, ladies and gentlemen, good evening.

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For the record, my name is Hannibal Farola and first and foremost I would like to commend, in fact praise, the honourable and distinguished Members of Panel for what you are doing today. I don't know if everybody fully appreciated the enormity or the significance of this activity, because from where I came from, in that part of the world up to this very moment, representatives of the government and business sectors sign deals or business permits are given without consulting people.

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What happens to their citizens? They just wake up one day and their houses are demolished. Factories come up. Business buildings come up. Homes are gone. But here we are yet today, representatives of the government, business sector, Cameco. I represent the employee, worker, and I believe there are people from Port Hope and Cobourg representing the people in Canada.

24

25

This is great. This is reality, but this is a dream in some parts of world. So praise and

1 acknowledgement to the Panel for doing this.

2 Having mentioned where I came from, I came
3 from Asia, specifically from the Philippines. It's been
4 six years now since I first arrived in Truro, Nova Scotia.
5 My family and I, we are all landed immigrants and
6 permanent residents here in Canada. I'm a medical
7 technologist in the Philippines and a former member of the
8 Philippine National Police Force. I was assigned in the
9 Philippines National Police Crime Laboratory with an
10 official designation of forensic chemical officer.

11 Three months ago, Cameco Port Hope
12 conversion facility hired me as a temporary plant guard.
13 I am covering an officer who is enjoying a Cameco benefit
14 of maternity leave so that she can enjoy and spend some
15 quality time with her newborn baby and her family.

16 Once that said officer comes back to work,
17 my employment will be terminated.

18 So you would be asking why would I care for
19 Cameco? Why would I care for their licence? I have two
20 reasons. My first reason is personal. For the past six
21 years that I've been here in Canada, it's only Cameco who
22 recognized my training, my profession and they compensated
23 me based on that merit.

24 You see, I came from a country where
25 professionals like me, highly skilled individuals like me,

1 we venture out to different countries to find work and
2 send money back to our poor family in our poor country.
3 For the past six years, highly skilled and professional
4 people like me experience -- I experienced being
5 discriminated, being alienated, underpaid or not given an
6 opportunity, but I finally found Cameco and Cameco found
7 me. That's my first reason.

8 The second reason is the professional in me
9 compels me to share what I have known, what I have seen
10 for the past three months. Cameco deserves their licence.
11 They operate under the guidance and comply with every
12 regulation set forth by the CNSC.

13 In my letter, I have enumerated numerous
14 pros and cons in different types of energies, but with the
15 constraint of time I cannot share all of them.

16 Now I know on those different types of
17 energy that nuclear is the best, the safest form of
18 energy. We're talking about uranium. Uranium for me, for
19 now, is the best alternative for all fossil fuels. I know
20 that this size of a typical pellet of uranium produces the
21 same amount -- this is seven grams -- but it produces the
22 same amount as 3.5 barrels of crude oil. That seven
23 grams, that size of uranium can produce the same amount as
24 1,780 pounds of coal. That same seven grams of uranium
25 can produce the same amount as 17,000 cubic feet of

1 natural gas. It is the best alternative to fossil fuel,
2 which by the way is running low from years of exploitation
3 and extraction.

4 I know there are so many scary stories or
5 operation with regards to nuclear reactors or nuclear
6 generations, but I don't know if everybody appreciated
7 that the biggest nuclear is in the sun. We see it every
8 day when we wake up. That's the biggest nuclear
9 fission(sic) there is. It keeps us warm, gives us light,
10 gives us life, and yet it's there. It's go big; it's so
11 huge we cannot control it, so we cannot control the
12 radiation coming in.

13 Now, we are talking about our facility,
14 Cameco. All the processes involved in the production
15 conversion of uranium are all regulated and monitored, we
16 have our in-house medical radiation technologists, which
17 their sole purpose in employment is to check radiation and
18 leaks every day, day in, day out, 24 hours a day, all year
19 long. Everybody who goes to our facility submit
20 themselves to full-body scans. We wear proper protective
21 equipment. We carry around dosimeters. We submit our
22 urines.

23 My part as a plant guard, we make sure that
24 only authorized people come in. Some my coworkers are
25 also members of the Fire Safety Inspection, inspectors.

1 We have our own water pump or fire pump. We have our
2 emergency team and we employ the latest technology in
3 terms of security. When I go to work, the people who are
4 30 years older and above far outnumber the number of
5 people who are 30 years old and below.

6 When I go out from work and I drive around
7 Port Hope, the same thing I see, I see 30 years old and
8 above, even 60-70, very healthy people walking around,
9 talking with their friends, talking with their neighbours,
10 walking with their dog. The same scenario if you go to
11 Pickering or in Darlington where there is the OPG, you'll
12 see elderly, healthy people.

13 I can't help but compare it with my
14 countrymen who live near the facility where it's oil-
15 powered generating electricity plants, and the same thing
16 can be observed in China and Asia for this kind of
17 neighbourhood. It seems there's no elderly there or
18 healthy elderly. It seems to me Asians die young because
19 of pollution and toxicity.

20 So to the Honourable Members of the Panel,
21 please grant Cameco their licence to operate, convert
22 uranium products for all the right reasons and because you
23 owe it to the next generation of Canadians to enjoy life,
24 comfortable life with electricity through sustainable and
25 safe energy.

1 Cameco is a great Canadian company and
2 every Canadian should be proud of Cameco. I am proud to
3 be working for Cameco. I am not Canadian yet.

4 So the Honourable Members of the Panel, I
5 thank you for this opportunity and I am hoping for a
6 favorable action towards granting Cameco their licence.

7 Good evening.

8 **THE CHAIRMAN:** Thank you. Questions?
9 Comments? Dr. McDill.

10 **MEMBER MCDILL:** Thank you for a very
11 heartfelt and, I think, extremely -- well, not extremely,
12 a unique presentation. We've never had one quite like
13 that, at least in my experience.

14 **MR. FAROLA:** Thank you.

15 **MEMBER MCDILL:** You did it without notes.

16 **MR. FAROLA:** Thank you.

17 **THE CHAIRMAN:** Anybody?

18 You mentioned the test. I actually want to
19 hear how often do you take the urine test? What's the
20 company policy about urine tests? By all means.

21 **MR. FAROLA:** Yes, sir. We have our post
22 and our -- I'm sorry, the pre and post urine samples. So
23 on our first day of shift, we submit urine sample and on
24 the end of our shift -- like, for example, if I work three
25 days or five days on the fifth day I submit another

1 sample.

2 **THE CHAIRMAN:** Is that a policy for all
3 employees?

4 **MR. CLARK:** Dale Clark, for the record.

5 That example is accurate for many of our
6 employees. The program is actually dependent on where in
7 the plant location you work. So in some areas it is daily
8 samples, in other areas it may be weekly or monthly
9 samples.

10 **THE CHAIRMAN:** And do you share the result
11 with the employees?

12 **MR. CLARK:** Dale Clark, for the record.

13 We do. We do certainly get automated
14 warnings on any level that is above an action level or an
15 internal administrative level that triggers some action by
16 the team.

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

18 Anybody?

19 Well, thank you very much, and I wish you
20 all the best in whatever you're going to do next.

21 Next is a submission by the Physicians for
22 Global Survival as outlined in CMD H16.39 and I understand
23 that Dr. Linda Harvey will make the presentation. Please
24 proceed.

25

1 **11-H16.39**

2 **Oral presentation by the**
3 **Physicians for Global Survival**

4
5 **DR. HARVEY:** Thank you to the Commission
6 for allowing me this opportunity to speak. My name is Dr.
7 Linda Harvey and I'm representing Physicians for Global
8 Survival. I've spoken several times in the past at CNSC
9 hearings on my own initiative. I'm now working with this
10 organization.

11 PGS is very aware that the radioactive
12 contamination from all phases of the nuclear industry is a
13 global problem which has medical consequences. PGS is
14 concerned that the increasing dissemination of radioactive
15 material is making many areas unsafe and unfit for human
16 use.

17 From our perspective this is exactly what
18 is taking place in Port Hope. Over two million cubic
19 meters of low level radioactive waste lie distributed
20 through the town in ravines, in parks, in schoolyards and
21 under buildings.

22 Levels of gamma radiation in several parts
23 of downtown including the water works area, CN/CP Viaduct
24 area and Alexander Street Ravine have been recorded at 100
25 microRem per hour; this is from the government survey in

1 1994. This is sufficient to deliver a yearly dose of 8.76
2 millisieverts per year which is far in excess of the 1
3 millisievert per year allowed for public exposure from
4 nuclear materials. This is unacceptable.

5 Most of this waste is residue from the
6 operation of the current licensee, Cameco, and its
7 predecessor Eldorado Nuclear.

8 It is interesting to note that it was known
9 in 1931, shortly before the Eldorado/Cameco facility
10 opened, that the radioactive ores coming from Northern
11 Ontario were deadly and should be handled with extreme
12 caution in a carefully monitored workplace.

13 The situation that has been allowed to
14 arise in Port Hope represents a regulatory failure.

15 We have grave concerns that neither the
16 industry nor the regulator is competent to manage this
17 facility in a safe and responsible manner.

18 It might be important to pause here and
19 look at the question of standards. Just because something
20 is within current standards does not mean it is safe. It
21 may simply mean that certain hazards associated with that
22 material are not known or were not addressed in setting
23 the standard.

24 In the case of radioactive materials and
25 radiation, the current allowable standard is 1

1 millisievert per year for the public and 20 millisieverts
2 per year for the nuclear industry or 105 years.

3 Is this protective? According to
4 guidelines from the International Commission on
5 Radiological Protection, the cancer risk from radiation
6 exposure is about -- is 0.04 cases per sievert. This is a
7 fairly conservative estimate.

8 Over a 40-year career at 20 millisieverts
9 per year a worker will be exposed to 800 millisieverts or
10 0.8 sieverts. His odds of getting cancer are then 0.08
11 times 0.04 or 0.032. That is approximately three in a
12 hundred. So if a hundred workers are so exposed, three of
13 them will be expected to get cancer.

14 The nuclear industry in Canada employs,
15 I've been told, approximately 70,000 workers. Over a
16 lifetime in the industry, 70,000 times 0.032 or 2,240 of
17 them will be expected to get cancer as a result of this
18 level exposure.

19 Clearly this standard is not protective.
20 In reality, most nuclear workers are not exposed to
21 anywhere near this amount of radiation and relatively few
22 of them get sick, but this exposure is allowed. Clearly
23 this standard is inappropriate.

24 The new uranium and air standard of 0.03
25 micrograms per cubic metre is also not protective.

1 According to material published in the Canadian Council of
2 Ministers of the Environment in 2007, soil levels of
3 uranium can increase as a result of airborne deposition.
4 In order to maintain a level they consider safe for
5 residential soil, levels in air should not exceed 0.002
6 micrograms per cubic metre. More detail in this
7 calculation is given in our written submission.

8 It is problematical whether Cameco can get
9 their uranium emissions below 0.002 micrograms per cubic
10 metre judging from the past numbers that I have available
11 to me.

12 Hiding behind the assumption that because
13 something is within the standard it is safe is
14 indefensible.

15 Is there any evidence that there has been
16 harm done to the residents of Port Hope to date through
17 exposures considered safe by the nuclear industry? This
18 subject is treated in more detail in our written
19 submission.

20 In summary, there are statistically
21 significant elevations of cancer of the trachea, bronchus
22 and lung, pharynx and sinuses in Port Hope as compared to
23 Ontario for the period 1971 to 1996. These are all bodily
24 structures which are in the path of oncoming ingoing
25 airborne contamination.

1 These statistics are presented in CNSC
2 synthesis report "Understanding Health Studies and Risk
3 Assessments" conducted in the Port Hope Community from the
4 1950s to the present, which was put out in April 2009.
5 The authors conclude against scientific justification that
6 there has been no harm to the citizens of Port Hope. In
7 fact, there is a very real possibility that people in Port
8 Hope have fallen ill as a result of exposures created by
9 the nuclear industry.

10 It is imperative to apply the precautionary
11 principle and the prevention of future illness from the
12 continued emissions and waste generation of the Cameco
13 facility. This is the issue which this licence hearing
14 should be addressing above all others. This issue is not
15 even mentioned in most of the material we have reviewed on
16 the matter. It is our concern that the CNSC has failed to
17 appreciate the significance of its own medical data on
18 this population.

19 Far more concerning than cancer is the
20 issue of genetic damage to reproductive cells which can be
21 carried forward through generations. This damage is not
22 reversible and combined with ongoing exposures in an
23 increasingly contaminated world is cumulative. This
24 damage may take many generations to manifest itself in
25 visible disease or deformity and by the time it does,

1 considerable deterioration will have occurred in the human
2 genome.

3 Ongoing genetic deterioration can persist
4 even after radiation exposure has ceased. Genetic
5 instability in cultured cells has been shown to persist 25
6 to 50 population doublings after a brief irradiation with
7 x-rays, gamma rays or alpha particles. This is
8 characterized by increases in spontaneous mutation rates,
9 ongoing chromosomal rearrangements, and possibly increased
10 sensitivity to other external mutagens.

11 There are a number of possible mechanisms
12 for this phenomenon including damage to the systems
13 regulating DNA replication or to the DNA repair
14 capabilities.

15 Many of these effects can be seen in the
16 test tube at doses as low as 1.6 to 10 milligray; that's
17 32 to 200 millisieverts of alpha radiation or 50 milligray
18 or 50 millisieverts of low LET radiation.

19 These doses are in a range which might be
20 relevant to the Port Hope population and/or Cameco
21 employees.

22 Whereas, it is not possible to extrapolate
23 directly from the in vitro data to living humans, we must
24 recognize that we are made of rather similar biochemical
25 material.

1 Is there any evidence that these effects do
2 occur in higher organisms and in humans? Yes, there is.
3 Scientists working in the contaminated territories around
4 Chernobyl report on instances in which rates of
5 chromosomal aberrations, mutations, embryonic death
6 continue to increase in voles, mice, and songbirds long
7 after ambient radiation levels are starting to decrease.
8 Offspring of many of these organisms reared away from the
9 contaminations continue to deteriorate genetically.

10 It is too soon to reliably see this effect
11 in humans, although there are signs of it appearing in the
12 liquidators that cleaned up the Chernobyl plant and in
13 their children.

14 There is little doubt that it will occur.
15 We share these genetic mechanisms with the rest of the
16 living kingdom.

17 PGS has serious concerns about the level of
18 radioactive contamination that has been allowed to develop
19 in Port Hope and as a group of physicians we have no
20 choice but to recommend that ongoing pollution of the town
21 of Port Hope with radioactive material should cease.

22 Thank you.

23 **THE CHAIRMAN:** Thank you.

24 Questions?

25 Dr. Barriault?

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

2 In your first page you list over two
3 million cubic metres of low level radioactive waste.

4 **MS. HARVEY:** Sorry, I cannot hear you.

5 **MEMBER BARRIAULT:** I'm sorry.

6 **MS. HARVEY:** I can't hear you.

7 **MEMBER BARRIAULT:** Can you hear me now?

8 **MS. HARVEY:** Yes, better.

9 **MEMBER BARRIAULT:** Okay. In your first
10 page of your presentation you list that we have over two
11 million cubic metres of contaminated soil. That number
12 comes from where?

13 **MS. HARVEY:** That comes from adding up the
14 -- I've got some documentation that I got from the PHAI
15 office and I've added up all of the bits and pieces in
16 that and come to that figure.

17 **MEMBER BARRIAULT:** Thank you.

18 Does Cameco want to comment on that? Do
19 you have over two million cubic metres?

20 **MR. THORNE:** Andy Thorne, for the record.

21 No, we do not. I think it's important to
22 note that that's information provided by the PHAI, the
23 Port Hope Area Initiative, which relates to material in
24 the Port Hope area. That's not related to Cameco's
25 operations.

1 **MEMBER BARRIAULT:** Okay. Does CNSC want to
2 comment on that number?

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

4 Of the volumes of waste that I'm aware of
5 for the Port Hope Area Initiative that is on the order of
6 1.1 million cubic metres, but that's for the Port Hope
7 Area Initiative. Cameco has some contaminated soil, but
8 it's much, much less.

9 **MEMBER BARRIAULT:** My reason for asking is
10 if there is much more than what we're planning for then
11 what do we do with the excess, I guess is what I'm
12 thinking?

13 **MR. RINKER:** For the Port Hope Area
14 Initiative, there is a facility that's designed to hold --
15 currently designed to hold on the order of two million.
16 The amount of waste is around just over one million. So
17 there's enough contingency to cover any waste.

18 **MEMBER BARRIAULT:** Okay. Thank you.

19 I guess my next question is the 100
20 microRem per hour contamination of these areas. Are they
21 protected, is the public protected, and where are these
22 areas? I guess, you know, if we can ask CNSC to comment
23 on this.

24 **DR. THOMPSON:** Patsy Thompson, for the
25 record.

1 We're not sure how the 8.7 millisieverts
2 per year was calculated, but my assumption is it assumes
3 that someone is standing near the dose rate of 100
4 microgRem per hour for an entire year, adding up to 8.7
5 millisieverts per year. Obviously that's not a reasonable
6 scenario. No individual will be around that -- those
7 waste piles for a significant period of time.

8 The waste piles that are currently in Port
9 Hope are covered and protected and monitoring is going on.
10 So those are not areas accessible to members of the
11 public.

12 Areas that area accessible to members of
13 the public have dose rates that are much lower and the
14 information that we have, and we've presented to the
15 Commission on a number of occasions, the doses to members
16 of the public in Port Hope from various activities are
17 well below the public dose limit.

18 **MEMBER BARRIAULT:** Thank you.

19 Thank you, Mr. Chairman.

20 **THE CHAIRMAN:** Thank you.

21 Monsieur Harvey?

22 **MEMBER HARVEY:** Merci, monsieur le
23 president.

24 On page 2 of your written submission, third
25 paragraph, Ms. Harvey mentioned that given -- at the end

1 of the paragraph -- given that these areas of expertise
2 are not well represented and CNSC staff organization have
3 grave concerns about the ability of CNSC to then stay
4 abreast -- anyway, could you comment on that? Could CNSC
5 comment on that point?

6 **DR. THOMPSON:** Patsy Thompson, for the
7 record.

8 It's a statement that we hear often from
9 intervenors and it gives the impression that CNSC staff
10 are in their offices reviewing licensee reports, and we
11 don't have the scientific and technical staff to conduct
12 independent research when needed to review scientific
13 literature, and that's clearly not the case. The CNSC
14 employs a significant number of staff in the radiation
15 protection and environmental protection areas.

16 For example, people in my directorate, we
17 have a number of staff with PhDs and Masters Degrees who
18 are technically competent and have the scientific
19 expertise to do the things that are mentioned here.

20 In terms of staying abreast of current
21 research, we have done independent research, we've
22 published a number of papers in peer review journals, and
23 we have a number of staff on scientific expert committees
24 who have been internationally recognized for the quality
25 of their work.

1 **MEMBER HARVEY:** Thank you.

2 Another point is on page 3, third
3 paragraph. There's some calculation here and to get to
4 the point that three of them -- three over 100 workers
5 will be expected to get cancer. Can you comment that and
6 what should we understand by that?

7 **DR. THOMPSON:** Patsy Thompson, for the
8 record.

9 What we understand is that the intervenor
10 has taken the linear no threshold relationship and the
11 risk factors that have been developed from the studies,
12 for example, such as the atomic bomb survivor and other
13 epidemiological studies that have shown risks of increased
14 cancer, and those rates above 100 millisieverts and the
15 LNT essentially extrapolates that risk down to zero
16 exposure to get the relationship.

17 So using the linear no threshold
18 relationship, an increase in the risk of cancer can be
19 calculated for a given exposure over a number of people.
20 Many international organizations like the ICRP and UNSCR
21 have clearly stated that this is not an appropriate use of
22 the linear no threshold relationship.

23 But having said that, very few workers --
24 and we've presented the data to the Commission -- at Port
25 Hope Conversion Facility and other places -- other nuclear

1 facilities in Canada, we don't have any workers who
2 receive exposures at the dose limit because of the
3 radiation protection programs and the ALARA requirements.
4 So in fact, the calculated theoretical risk would be much
5 lower.

6 In addition, the CNSC Staff have done a
7 number of epidemiological studies that have been published
8 in peer review journals, and one such study is the study
9 we've done on the Eldorado workers and from that study
10 there are 3,000 workers from the Port Hope Conversion
11 Facility that are included.

12 And that study shows that for workers who
13 are not exposed to radon, in the case of Port Hope for
14 example, that we see no increased risk in cancer incidents
15 in any of those workers, and that's been peer reviewed and
16 it's been published in a credible journal.

17 We have also done recently a reanalysis of
18 the Canadian nuclear power plant workers where we have
19 several thousand -- tens of thousands of workers, and
20 there again, we show in published -- in these studies that
21 we see no increased risk of cancer for the populations of
22 Canadian nuclear power workers, and as the case was for
23 the Port Hope workers.

24 **MEMBER HARVEY:** Thank you.

25 Ms. Harvey, yes you can add ---

1 **MS. HARVEY:** I would like an opportunity to
2 respond to some of those comments, please.

3 **MEMBER HARVEY:** Yes.

4 **MS. HARVEY:** First of all, this is a
5 scientific discussion and I would need to get my papers in
6 order to counter that. But there are studies of workers
7 in nuclear facilities that show increased effects of
8 certain cancers down to quite substantially less than 100
9 millisieverts of overall exposure.

10 Now, I don't know how those studies have
11 been reinterpreted. I would like to see that work and
12 that data. If you could send that to me I'd appreciate
13 it, so that I can review that.

14 Now, in terms of the eight millisieverts of
15 exposure in Port Hope, that is assuming that a person is
16 on that site for one year. If houses are ever built on
17 those sites, if it becomes lost to -- the information
18 becomes lost where these radioactive sites are -- that is
19 not impossible -- that's the maximum exposure that those
20 people would be expected to experience right now with
21 what's there.

22 And Patsy can do the calculation and she'll
23 find that that's what it comes out to.

24 Now, I requested at the last hearing I was
25 at here and at the tritium hearing in Ottawa, that a

1 scientific forum be set up so that other independent
2 sciences -- scientists could discuss with CNSC the merits
3 and shortcomings of the scientific material that is coming
4 out on all of these issues. I would like to see that
5 done. I would really, really appreciate that -- if you
6 could do that.

7 Thank you.

8 **MEMBER HARVEY:** Thank you.

9 **THE CHAIRMAN:** Dr. McDill?

10 **MEMBER McDILL:** Thank you.

11 Are there still remaining any of the levels
12 of gamma that Dr. Harvey refers to from 1991 -- present
13 outside the fence line anywhere that you're aware of?

14 Sorry, try again. Dr. Harvey referred to
15 some levels of gamma taken in 1991.

16 **MS. HARVEY:** Nineteen ninety-four (1994).

17 **MEMBER McDILL:** Nineteen ninety-four
18 (1994), thank you for the correction. Are -- to your
19 knowledge, are there any levels of that size, if you like,
20 still outside the fence line anywhere; like the viaduct,
21 there were some other places mentioned?

22 **MR. CLARK:** Dale Clark, for the record.

23 Could you just point out maybe in that
24 report, again, where that was mentioned?

25 **MEMBER McDILL:** I am referring to -- I have

1 got all these little notes all over here -- page 1 of the
2 submission, I believe; yes.

3 So levels of gamma radiation in several
4 parts of downtown including the water works area, the CN-
5 CP Viaduct area, and the Alexander Street Ravine have been
6 recorded at over -- but that was 1994?

7 **MR. CLARK:** Yes, Dale Clark, for the
8 record.

9 I -- first off, I would say I believe these
10 are locations outside of the facility and outside of our
11 scope of operations today and I would -- although I can't
12 speak specifically to the test done in 1994, I would
13 believe that that is certainly outside of the scope of our
14 operations.

15 I can say that our -- as has been said
16 earlier -- our levels of radiation are monitored very
17 closely at the fence line and monitor what comes from our
18 operation and our facility. Those levels, as have been
19 said earlier, are a fraction of the safe limits; in fact,
20 I believe less than 5 percent of the safe limit to ensure
21 protection of the health of the community and the
22 environment in that area.

23 So in terms of our operation, I can say
24 that we are well within those safe limits.

25 **MEMBER McDILL:** I will pass the same

1 question to staff. Maybe the -- maybe they have an idea.
2 We'll be legacy then.

3 **MS. THOMPSON:** Patsy Thompson, for the
4 record.

5 The gamma-dose information that we have for
6 the Port Hope Conversion Facility is similar to what has
7 been -- just been said; it has been at or below 60
8 microsieverts per year around the Port Hope Conversion
9 Facility fence line.

10 In terms of the historical values that are
11 presented here, what we know is currently the levels in
12 publicly accessible places are not at that level, but to
13 have clear, more accurate data, we would need to come back
14 tomorrow with the details if you need the information.

15 **MEMBER MCDILL:** You believe the information
16 is available?

17 **MS. THOMPSON:** Patsy Thompson, for the
18 record.

19 I believe some information is available
20 because some of these sites are licensed by the CNSC.

21 **MEMBER MCDILL:** I think it would be helpful
22 for the community, please.

23 **MR. ELDER:** Peter Elder here.

24 We will get you the data from the sites
25 because this is going at the historical sites and some of

1 these sites have been put under licence since 1994 so that
2 they are no longer accessible to the public and some of
3 them have been, you know, mounded to make sure that
4 (inaudible). So we will go try to get all the data for
5 the sites and then this, but this is not the level that
6 you can see in the town; in the residential properties.

7 **MEMBER McDILL:** Thank you.

8 As the areas were brought up in the
9 intervention, I think it is worth having it clarified
10 sometime.

11 My -- is it still my turn?

12 I realize this is a difficult place to talk
13 about scientific things like statistical significance, but
14 I wonder if I can ask staff to just try and make a stab at
15 the information on the page that begins in Table 9, page
16 42 with respect to the incidence of cancers of the
17 trachea, bronchus, and lung in Port Hope because the
18 intervenor has brought that up?

19 It is under the section "Harm to Port
20 Hope," but it is at the top of the second page of that.

21 **MS. THOMPSON:** Patsy Thompson, for the
22 record.

23 The information that is quoted is from the
24 CNSC info document on the -- what we used to call the
25 "Port Hope Synthesis Report." However, the interpretation

1 of the information is not accurate.

2 The findings of the report were that the
3 risk of respiratory diseases, as mentioned here, were
4 statistically significantly increased in relation to
5 Ontario averages. However, that finding was not unique to
6 Port Hope; it included the same findings in Northumberland
7 County. So the whole county had the same findings; not
8 unique to Port Hope and the regional public health agency
9 and their -- I think it was called the "Rapid Index" --
10 concluded that these diseases were typical of populations
11 with smoking habits and were more related to smoking.

12 And so we concluded that this was not
13 related to the conversion facility essentially because it
14 was not unique to Port Hope and the public health
15 officials found that the lifestyle of the communities in
16 the county, this could be attributed to smoking.

17 We also did a detailed review of the
18 scientific literature in terms of the radiation effects on
19 various cancers and this is not something we would see
20 with the type of exposures that are typical of Port Hope
21 from the uranium -- stack releases of uranium and gamma
22 radiation exposures at the low levels that we find in Port
23 Hope.

24 **MS. HARVEY:** May I address that?

25 First of all, you cannot make the

1 conclusion that there is no harm without a proper cohort
2 or case control study. You cannot assume anything about
3 causation from the type of data that we have available,
4 period. So it is up to you to set up such a study and get
5 that data before you can draw that conclusion.

6 **THE CHAIRMAN:** Okay, we are not going to
7 get here into a you-said, she-said kind of debate here.
8 You registered your comment.

9 Dr. McDill, I interrupted.

10 Mr. Tolgyesi?

11 **MEMBER TOLGYESI:** On page 3 standards, it
12 is the fourth paragraph; we are coming back to the tritium
13 drinking water standards where the intervenor is saying
14 that the current Canadian standard for tritium in drinking
15 water is 70,000 becquerels. It is unlikely that this is
16 protected. Could the staff comment on this limit?

17 **MS. THOMPSON:** Patsy Thompson, for the
18 record.

19 Our first comment would be to say that
20 tritium is not a radio nuclide that is used, produced or
21 released from the Port Hope Conversion Facility so it is
22 not really an issue for the Cameco licence renewal.

23 In terms of the -- whether the standard is
24 protective or not, the CNSC has put on our website an
25 information document where we present the basis for the

1 various standards for tritium across the world and the
2 standards vary in between something like 15 to close to
3 100,000 becquerels per litre and in all countries they are
4 deemed to be safe.

5 In Canada, the 7,000 becquerel per litre is
6 based on the World Health Organization recommendations and
7 that is based on the public dose of 0.1 millisievert per
8 year for a daily consumption of 2 litres of water per day.
9 So we consider that standard to be safe and what we have
10 also reported in the information document is that tritium
11 concentrations at all drinking water supply plants around
12 nuclear facilities in Canada are less than 18 Becquerel's
13 per litre so they would be much less than even the
14 European Guideline which is not a standard, it's a
15 guideline.

16 **DR. HARVEY:** May I comment on that?

17 The Ontario Drinking Advisory Council
18 recommends 20.

19 **THE CHAIRMAN:** Right, but it's not a
20 standard yet and it's still -- until Health Canada and the
21 medical professionals adopt it as a health standard we are
22 bound by some standards.

23 You may not like this standard, you may
24 consider it not to be protective but there are certain
25 things we can and certain things we cannot do.

1 **DR. HARVEY:** I think if there's any
2 question that it's not protective there needs to be more
3 work done on it.

4 **THE CHAIRMAN:** Well, the World Health
5 Organization and Health Canada deemed them to be
6 protective.

7 Mr. Tolgyesi?

8 Anybody else?

9 Well I got two questions; I keep hearing
10 about -- I thought we've already dealt with the famous
11 German KIKK study. I thought somebody put a wooden stake
12 into that study, deemed it to be -- it was discredited if
13 memory serves right. Can somebody help me once and for
14 all on that study? Let me start with you, CNSC.

15 **DR. THOMPSON:** Patsy Thompson, for the
16 record.

17 The KIKK study has stood the test of time
18 in terms of findings of increase risk of leukemia for
19 children within 5 kilometres of the Krüemmel Nuclear Power
20 Plant have persisted over time, so it's a recognized
21 cluster. It's one of the few clusters around nuclear
22 facilities recognizing that there are many, many leukemia
23 clusters in the world where no nuclear facilities exist.
24 So that's one point.

25 The other point is that the German

1 Radiation Protection Institute responded to this study by
2 forming a committee of international experts to review the
3 way the study was conducted and to determine if the
4 relationship with nuclear power plants and therefore, if
5 there was a radiation dose, could be supported by this
6 study.

7 The group of international experts
8 concluded that there was no relationship to radiation
9 exposure. The cluster did persist over time but we didn't
10 know -- we can't explain the cause of that leukemia
11 cluster.

12 In 2009, there has been additional work
13 done on that cluster and we have found out from that study
14 that the relationship between rural and urban areas
15 explains some of the risk. And so the risk of leukemia in
16 those children seems to be explained in part by whether
17 they -- there's a rural or urban environment.

18 There has been a study that has been
19 accepted for publication by the French -- two French
20 research organizations that received a pre-print, an
21 official pre-print last week, and that study shows that in
22 French nuclear power plants there have been also some
23 clusters that have been seen, a relationship with
24 distance.

25 But in the French study we have information

1 on zoning in relation to radiation doses and that study
2 clearly shows that there's no relationship to dose.

3 And so the KIKK study, in relation to other
4 clusters that have observed for example in the U.K. and
5 France, in all cases show there's no relationship to
6 radiation exposures.

7 And similarly in Port Hope the work that
8 has been done indicates that in Port Hope there is no
9 increased risk of leukemia in children. That's been well
10 documented and we have done a case control study of
11 nuclear power plant workers, exposures and relationship
12 with their children and whether there was an increased
13 risk of leukemia and we have not found an increased risk
14 of leukemia in that Canadian Cohort Case Control study.

15 **THE CHAIRMAN:** Dr. Harvey, you have the
16 last word.

17 **DR. HARVEY:** Thank you.

18 I'm not convinced by those interpretations
19 of that data. It still seems to me that there's a lot of
20 leukemia happening around of a lot of nuclear power plants
21 and I don't think we've laid this issue to rest.

22 And that's one of the reasons I would like
23 to see a scientific forum where a whole bunch of people
24 can get together and discuss these things.

25 That's one way of getting to the truth of

1 this matter.

2 **THE CHAIRMAN:** Thank you.

3 Anybody else?

4 Thank you very much.

5 I would like to move on to a submission by
6 the United Steelworkers Local 8562, as outlined in CMD
7 H16.46 and 16.46A.

8 I understand that Mr. Lent you will make
9 the presentation.

10 Please proceed.

11

12

13 **11-H16.46 / 11-H16.46A**

14 **Oral presentation by**

15 **United Steelworkers Local 8562**

16

17 **MR. LENT:** Adam Lent, for the record.

18 I would like to begin by thanking everybody
19 here for the opportunity to speak to you today on our
20 memberships behalf and in support of Cameco's re-licensing
21 application.

22 As I said, my name is Adam Lent and I am
23 the President of the USW Local 8562, which is the Union
24 that represents security guards, fire systems inspectors
25 and emergency response team members at Port Hope

1 Conversion Facility in Port Hope.

2 Our members work each day, helps to ensure
3 that Cameco meets or exceed regulatory requirements in
4 areas that include fire detection and suppression and our
5 security guards, our work enables our facility to
6 proactively address issues and concerns before they ever
7 have the opportunity to become hazardous to people or the
8 environment.

9 As emergency response team members our
10 training and proficiency in HAZ-MAT and industrial
11 firefighting measures also help to ensure that if an
12 emergency arises it will be handled and responded to
13 safely, quickly, and in a manner that limits impact to the
14 environment.

15 I've been at Cameco for six years and in
16 that relatively short period of time I have witnessed
17 significant improvements to our site Security Department.

18 Although there have been considerable
19 advancements to the equipment and the practices that we
20 use, I think the most significant change I've witnessed is
21 a result of the safety culture that has been established
22 at our site, which can be attributed to the United Steel
23 Workers and Cameco's commitments towards safety in the
24 environment.

25 I think our members and our entire site

1 deserve credit for fostering a workplace where a
2 questioning attitude is encouraged and where safety and
3 the environment are considered priorities.

4 The safety culture that exists at Cameco
5 and its commitment to excellence and continual improvement
6 are reflected in progressive steps such as the creation of
7 a full-time health and safety position and the development
8 of Cameco's safety charter.

9 We feel that these practices help keep our
10 employees safe which as a result helps to make our
11 community a much safer place to be.

12 In addition to being a Cameco employee, I
13 am also a fourth generation resident of Port Hope with
14 more than 20 family members that also live here.

15 So I'm encouraged to see how committed
16 Cameco is towards providing a safe and rewarding workplace
17 to its employees and I am proud to work for a company that
18 supports its community the way that Cameco does.

19 On behalf of USW Local 8562, I would like
20 to commit our support towards Cameco's five-year re-
21 licensing application and we would be happy to answer any
22 questions that don't involve any prescribed information.

23 **THE CHAIRMAN:** Thank you.

24 Question? Dr. Barriault.

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

1 Historically the Steelworkers have been
2 involved in occupational health and safety, can you
3 explain what kind of training you go through with the
4 Steelworkers in terms of occupational health and safety?

5 **MR. LENT:** Adam Lent, for the record.

6 With the other Local that exists at our
7 facility, Local 13173, we do joint training, a lot of that
8 actually the president of Local 13173 teaches, so we have
9 quite a resource there.

10 Traditionally we have just used Chris,
11 we've done training through him, and Cameco actually has
12 an agreement with the Locals to pay, I believe it's a
13 certain sum, I think it's \$8,000 for -- towards training
14 for both the Locals.

15 **THE CHAIRMAN:** Thank you.

16 Does Cameco want to comment on that?

17 **MR. CLARK:** Dale Clark, for the record.

18 Similar to comments from the other Local I
19 would emphasize that we have a common goal here and that
20 is to ensure that every worker goes home safe at the end
21 of every day.

22 That's consistent with Mr. Lent has said
23 here and we continue to work together, we have a very good
24 working relationship and we continue to work together to
25 achieving that goal.

1 **MEMBER BARRIAULT:** Thank you.

2 Thank you, Mr. Chairman

3 **THE CHAIRMAN:** Anybody else?

4 Mr. Tolgyesi.

5 **MEMBER TOLGYESI:** You are a union
6 representing Emergency Response Team, could you tell me
7 what kind of collaboration and integration of your
8 services, emergency services are into the municipal and
9 eventually regional and provincial emergency response
10 plan; how you communicate? Do you have drills together or
11 have you collaborated, have you planned, have you
12 developed an action plan?

13 **MR. LENT:** Adam Lent, for the record.

14 In the past I know that we have conducted
15 drills in cooperation with Port Hope Fire Department and
16 the Port Hope Police.

17 As for the plans, as for the structure of
18 those, I think I'm probably not the best person to talk to
19 about those. Dale or the Superintendent of our Division
20 Emergency Services could probably give you more specifics
21 about that but I can tell you that we have conducted
22 drills in conjunction with Port Hope Fire Department and
23 the police.

24 **THE CHAIRMAN:** Maybe it's a good time if we
25 still have the Fire Marshall, Office of the Fire Marshall

1 here; maybe he can say a few words about coordination with
2 the Cameco effort.

3 **MR. LAMERZ:** My name is Olaf Lamerz; I am
4 with the Office of the Fire Marshall, for the record.

5 We do understand when it comes to levels of
6 service and agreements that exist that Cameco and the
7 Municipality of Port Hope do have agreements in place.
8 The actual details of those agreements for cooperation
9 would be best described in detail by Cameco itself and
10 representatives from Port Hope.

11 **THE CHAIRMAN:** Go ahead Cameco.

12 **MR. CLARK:** Dale Clark, for the record.

13 We do have extensive cooperation with the
14 Municipality of Port Hope and local emergency services as
15 part of our site and community response plans.

16 We have a MOU a Memorandum of Understanding
17 with the municipality in these regards. We do regular
18 drills with the municipality and with the local emergency
19 services. That is part of our routine and testing of our
20 own capabilities, and working closely with the
21 municipality to ensure that we're effective in those plans
22 and that we maintain that commitment to protect the
23 community and the public through our operations.

24 **THE CHAIRMAN:** Go ahead.

25 **MEMBER TOLGYESI:** How far or how you train,

1 I suppose you have agreement with the municipal fire
2 fighters, Fire Marshall, how you do the training so if
3 they have to be involved in operations on the site? What
4 kind of training they receive?

5 **MR. CLARK:** Dale Clark, for the record.

6 First of all I would emphasize that we have
7 a very capable emergency response crew of Cameco emergency
8 responders, one that we're very proud of.

9 And the training has been substantially
10 increased in the capabilities over the current licence
11 period. So we're very proud of the capabilities of our
12 Cameco emergency response team, which for example includes
13 over 50 emergency response team members on site, and
14 Cameco employees.

15 So in terms of response to onsite events
16 that is primarily driven and would be handled through our
17 own in-house and Cameco emergency responders who know the
18 facility, know the chemicals and the hazards and we have -
19 - work closely with the municipality and the emergency
20 services to utilize those emergency services in a support
21 role or outside the facility.

22 **MEMBER TOLGYESI:** You don't have any
23 comments at that point?

24 **MR. LAMERZ:** Olaf Lamerz, for the record.

25 The level of service that a municipality

1 provides to its residents or to an industry within their
2 municipality is a level that the municipality sets.

3 So the municipality would best determine
4 what their needs are for those emergency responses and
5 then work with their partners to achieve those levels of
6 training.

7 The Office of the Fire Marshall doesn't
8 identify or indicate what levels of training they need to
9 have, that's all dependent on the level of service they
10 determine for their municipality and the needs that they
11 have for their community.

12 **MEMBER TOLGYESI:** Staff, do you have any
13 comments? I'm sorry.

14 **MR. ELDER:** Sorry; Peter Elder, for the
15 record.

16 Just two comments, one is Cameco, you know,
17 any licensee is required to have emergency response plan,
18 that includes making sure that they have the appropriate
19 arrangements in place with the municipality as well.

20 So this is something that we look at in
21 terms that when we are rating and looking at the emergency
22 response plan that connection into the municipality and
23 showing us that they have appropriate agreement in place
24 is looked at.

25 The other one, I'll ask Mr. Jaferi to talk

1 about in inspections, we actually inspect how these
2 arrangements work as well.

3 **MR. JAFERI:** Jafir Jaferi, for the record.

4 Yes, normally every five years we do the
5 audit on their emergency response. And the last one was
6 done in 2008, August, and it included an observation; one
7 of their emergency response activity basically was a mock
8 exercise if there's a UF6 release inside the plant how
9 their emergency response team will be activated and go and
10 control that release.

11 So CNSC staff did observe that exercise in
12 2008, August, and it was found that their emergency
13 response team is very qualified and prepared to respond.

14 **THE CHAIRMAN:** Thank you.

15 Anybody else, any other question?

16 First of all, I guess there was 17 members
17 -- how many -- how big is the union, how many employees?

18 **MR. LENT:** Adam Lent, for the record.

19 I'm going to have to deflect that just
20 because from what I understand any security as far as
21 numbers, as far as...

22 **THE CHAIRMAN:** Okay, one of those.

23 **MR. LENT:** It's prescribed information.

24 **THE CHAIRMAN:** Because I'm just reacting to
25 17 members signed the letter. So you have at least 17?

1 **MR. LENT:** Yes.

2 **(LAUGHTER/RIRES)**

3 **THE CHAIRMAN:** I got it right.

4 **MR. LENT:** Yes, we don't have any less than
5 17.

6 **THE CHAIRMAN:** Okay, that's good, I'll go
7 with that.

8 The other comment is in this letter, this
9 generic letter, there's somebody saying appointment of our
10 new unionized health and safety representative. I'm
11 trying to find out, is that a new position or is it a new
12 appointment?

13 **MR. LENT:** Adam Lent, for the record.

14 Yeah, that would refer to Ron Davis who
15 spoke with you earlier. He's the member of Local 13173.
16 It was a new position that was created as a full-time
17 health and safety representative for the entire site.

18 **THE CHAIRMAN:** So there was no -- there was
19 no such a position before? I am -- I'm awfully surprised.

20 **MR. CLARK:** Dale Clark, for the record.

21 We do have multiple safety officers onsite
22 and a very competent and thorough safety department that
23 we have had onsite for many, many years.

24 But this was a good strong success and one
25 that we're very proud of, we've highlighted as a success

1 and an example of the common objective and common
2 commitment to safety between both Cameco and the local
3 unions on site. This was the first union hourly safety
4 representative position that has been appointed. Previous
5 safety or existing safety officer positions have been
6 staff positions. This is an hourly representation as a
7 safety officer, safety representative.

8 **THE CHAIRMAN:** So this is the conventional
9 health and safety?

10 **MR. CLARK:** That's correct.

11 **THE CHAIRMAN:** So do we still have Labour
12 Canada here? No. I was going to ask for their opinion.
13 We'll save it for maybe tomorrow.

14 Okay, anything else?

15 Thank you very much.

16 The next submission is by Cobourg
17 Waterfront Festival Central Board Directors as outlined in
18 CMD H16.48.

19 I understand that, Ms. Kulik, you will make
20 the presentation. Please proceed.

21
22 **11-H16.48**

23 **Oral presentation by the**
24 **Cobourg Waterfront Festival**
25 **Central Board Directors**

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MS. KULIK: Yes, I'm Patricia Kulik and I'm currently the Chair of Cobourg Waterfront Festival Board of Directors.

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The festival is the largest annual fundraising event here in Northumberland County. It occurs on Canada Day weekend every year. And it is organized by a large group of volunteers composed of the Rotary Club of Cobourg, the Lions Clubs of Cobourg and the Town of Cobourg. Hundreds of volunteers work at the festival every year.

In order to defray costs to the festival we go out and look for sponsorships to help with the carrying costs. The Cameco Corporation has been a marquee sponsor for the waterfront festival for several years and has assisted in financial -- its financial success.

The assistance that Cameco gives us goes directly to operating, that way we're able to take all the money that we raised and put it back into our community.

Some of the money that's raised has gone towards the \$500,000 donation to Northumberland Hills Hospital, a completed refurbishment and beautification of Cobourg waterfront, donations to our new community centre, donations to youth organizations like the Dragon Boat Club and also in the assistance of needy people.

1 There are other festivals. However, after the Port Hope
2 Area Initiative and the waterfront consolidated plan, as
3 is envisioned by Vision 2010, the Port Hope Area
4 Initiative and work by the municipality, we look forward
5 to having that in the future.

6 **MEMBER McDILL:** And I assume you'll talk to
7 Cameco?

8 **(LAUGHTER/RIRES)**

9 **MS. THOMPSON:** I can comment -- Mayor Linda
10 Thompson, for the record.

11 I can comment they are a supporter of many
12 events in our community.

13 **MEMBER McDILL:** Thank you, Mr. Chair.

14 **THE CHAIRMAN:** Anybody else?

15 Thank you very much.

16 The next submission is from Mr. Seitz --
17 Seitz, did I get it right -- as outlined in CMD H16.51.

18 Mr. Seitz, the floor is yours.

19
20 **11-H16.51**

21 **Oral presentation by**

22 **Tim Seitz**

23 **MR. SEITZ:** Thank you. Thank you for this
24 opportunity to come here and speak about my concerns about
25 nuclear energy and nuclear waste.

1 I understand the purpose of this meeting is
2 to give Cameco a licence to continue producing the fuel
3 that is used by nuclear reactors to fission for electrical
4 output I guess.

5 The one thing I'd like to emphasize is that
6 this nuclear fuel, all of it that you produce, its
7 ultimate destination is to become nuclear waste. Nuclear
8 waste requires responsible management.

9 And I also receive information from the
10 nuclear waste management organization. The nuclear waste
11 that is being produced from your fuel is high level
12 nuclear waste and that's going to require a high level of
13 security, it's going to require perpetual management.

14 We all know that it lasts forever, and when
15 I use the term "forever" I mean longer than any society
16 that we've had on this planet.

17 So it's not just Cameco that I'm concerned
18 about it's about the nuclear industry. I must state
19 strongly what my position is. I am for the abolition of
20 all nuclear fissioning applications outside of research.
21 I think we need to learn more. But I don't think we're
22 ready for applications.

23 Now, I've been interested in this ever
24 since high school. I was in high school in 1952 when
25 President Eisenhower announced the Atoms for Peace

1 Program, and one of the promises was that we would have
2 power too cheap to meet it. And all subsequent history
3 from that time on is to the contrary, it is the most
4 expensive form of electrical power we have.

5 Fissioning uranium to boil water is a very
6 expensive way to boil water. Uranium has to be
7 safeguarded at all steps.

8 In 1991 Dr. Gordon Edwards, who is head of
9 the Concerned Citizens for Nuclear Responsibility,
10 attended a conference in Austria of other concerned
11 scientists, and their conclusion was that uranium should
12 be left in the ground.

13 Now, if it were left in the ground it would
14 only produce 13 daughter products that are also
15 radioactive. But once you fission uranium you've created
16 a real witches brew because of our 92 elements, most of
17 which are stable, we've now created over 200 unstable
18 siblings of those elements, strontium, cobalt, plutonium -
19 - need I go on? This is all a consequence of nuclear
20 fissioning applications.

21 And I haven't talked about warheads because
22 I don't really think it's going to come to that. I can't
23 think of that. In fact, it's unthinkable.

24 But what is thinkable is to think about the
25 consequences of spreading nuclear waste around this

1 planet.

2 Now, the concern here in Port Hope is with
3 low level nuclear waste, the kind that is created from
4 fashioning uranium into the hexafluoride which is going to
5 be used for fuel.

6 Nuclear reactors also create a secondary
7 level of nuclear waste and that is the containment
8 vehicles of the reactor itself and the storage.

9 So there are three levels of nuclear waste,
10 high level, which you don't want to let get into the wrong
11 hands, for obvious reasons and then the secondary level
12 and then the low level.

13 We're concerned with low-level radiation
14 here. I'm concerned with all three; that's why I am here.
15 I drove down from Kingston tonight, through fog and rain,
16 just to sit here and tell you this; to let you know my own
17 personal concern.

18 So I am asking that we think about our
19 grandchildren. They are still going to be paying for the
20 babysitting of this nuclear waste.

21 I have heard many promises through the
22 years from the nuclear industry saying oh, don't worry
23 about it; tomorrow we will have solved the problem. It
24 has always been put in that previews of coming attractions
25 sense; nowhere on the planet have they solved this

1 problem.

2 One of the promises in the 1950s that was
3 made was that nuclear waste will not be a problem. Guess
4 which year? Nineteen-sixty (1960). For then we will have
5 found out how to burn it up and we will have fusion; that
6 has not happened either. Nature is not as simple as that.

7 The devil is in the details and it requires
8 research. I want you to research. I want you to listen
9 to people like Physicians for Global Responsibility
10 because they are talking about what happens inside our
11 skin; it is not just the environment outside our skin.
12 You do not want to ingest tritium or any of the other
13 radio nuclides.

14 There are three effects. One is
15 carcinogenic; causing cancer. The other one is teragenic
16 (phonetic); if you have a hydrogen exchange with any of
17 the DNA and that hydrogen is unstable -- which tritium is
18 -- it is the unstable sibling of hydrogen and it is going
19 to destroy that strand of DNA. And the third effect is
20 teratogenic; inside of a mother's womb -- a pregnant
21 mother -- there is water and water is composed of hydrogen
22 and that hydrogen may have tritium in it; there's the
23 embryo.

24 So three levels inside our skin so I want
25 you to think about those things.

1 Thank you.

2 **THE CHAIRMAN:** Thank you.

3 Questions? Mr. Togyesi?

4 **MEMBER TOLGYESI:** You were saying that it
5 is 240 tonnes -- thousand tonnes of nuclear waste skated
6 around the planet today and you were saying that also
7 there is three types -- three different levels of risk.
8 There is a high radioactivity and the two other ones.

9 Could you, first of all, tell me about how
10 you get to this 240,000 tonnes and could you say what is
11 the proportion of these three types of nuclear waste? I
12 suppose this 240,000 is altogether.

13 **MR. SEITZ:** Two hundred forty thousand
14 (240,000) tonnes is a high-level nuclear waste of which in
15 Ontario we have 40,000 tonnes that we have to be concerned
16 about; that is what the purpose of the nuclear waste
17 management organization is.

18 Also, at the end of the Soviet Union in
19 1991, when they were becoming bankrupt, they were very
20 concerned about how they were going to pay their technical
21 people to look after the nuclear waste -- now, I include
22 nuclear warheads as nuclear waste; a very dramatic form of
23 nuclear waste -- and they were concerned that this might
24 get into the wrong hands.

25 And one of the things I heard is that the

1 United States paid them not to let that fall into the
2 wrong hands. So the mere fact that nuclear waste exists
3 means that it has to be managed.

4 **MEMBER TOLGYESI:** My question is to staff.
5 Could you comment; what is the annual nuclear waste
6 generation in Canada and, in particular, Port Hope?

7 **MR. ELDER:** Peter Elder, for the record.

8 I do not have those numbers with me right
9 now in terms of -- if you are talking about high-level
10 waste or -- I mean, he is pointing out high-level waste is
11 spent fuel from reactors and he has also mentioned that
12 there is an organization that has been set up by --
13 mandated to be set up by the Federal Government to deal
14 with this and our nuclear waste management organization.
15 And they are also required -- the nuclear utilities are
16 required to fund this organization.

17 The number is about the right number so --
18 but I cannot -- I do not have the precise one. Again,
19 there is no -- I think there is no high-level waste
20 produced in Port Hope.

21 **MR. SEITZ:** But we supply the fuel that
22 creates high-level (inaudible) waste.

23 **THE CHAIRMAN:** But Cameco, you wouldn't
24 know whatever you produce from your own facility; what it
25 might be?

1 **MR. CLARK:** Dale Clark, for the record.

2 We do have a very well defined and
3 comprehensive waste management program. We take our
4 obligations to this program very seriously in our
5 commitment to protecting the environment and the
6 communities in which we live and work.

7 So we effectively and safely manage all of
8 the low-level waste and then I would emphasize this is
9 extremely low-level waste that we are talking about for
10 our site, specifically.

11 That waste management program focuses
12 primarily on recycling of our materials and by-products as
13 much as possible and it is largely how we minimize the
14 volume of annual waste that is generated. We have no
15 liquid wastes from the facility.

16 We generate in the neighbourhood of about
17 100 tonnes of solid waste annually and I would emphasize
18 that we have viable, safe, approved outlets identified for
19 all of those waste streams and we work hard today to take
20 advantage of those and meet those obligations today and to
21 keep those open and viable for the future as well.

22 **THE CHAIRMAN:** Thank you.

23 Anybody else? Dr. McDill?

24 **MEMBER McDILL:** Thank you.

25 I realize this is a Cameco hearing, but

1 perhaps for the intervenor, if I could ask staff to
2 discuss the state of the art in high-level waste
3 management; let's pick -- maybe you don't know, but
4 Finland, for example. Where are they in terms of their
5 high-level waste?

6 **MR. ELDER:** Peter Elder, for the record.

7 In terms of that, there are two countries
8 that have -- are in the process of building high-level
9 waste repositories. That would be Finland and Sweden.
10 Both are using very similar technology of constructing
11 inside a geological repository and then containing the
12 fuel in copper canisters and then placed inside a
13 repository.

14 France and the UK are exploring very
15 similar technologies. So there are countries that have
16 had approval to go ahead and construct these types of
17 facilities.

18 **MEMBER McDILL:** Thank you.

19 **MR. SEITZ:** May I add ---

20 **THE CHAIRMAN:** Mr. Seitz, your last word.

21 **MR. SEITZ:** Yes, my last comment being that
22 Canada was also exploring the possibility for storing
23 high-level nuclear waste in the 1980s at White Shell,
24 Manitoba and they drilled down into the Canadian Shield
25 thinking that that would be a safe place. The upshot of

1 that was that no matter where they went in that granite,
2 water also came; that was unexpected.

3 So I'm happy to hear that these things are
4 in progress and we do need research in those areas, but
5 again, I maintain there is no place on the planet that has
6 a safe nuclear repository for high-level waste yet.

7 Thank you.

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

9 **MR. SEITZ:** Thank you.

10 **THE CHAIRMAN:** We need a biological break
11 here for about 10 minutes, please. So we will reconvene
12 at eight thirty.

13 Thank you.

14

15 --- Upon recessing at 8:22 p.m./

16 L'audience est suspendue à 20h22

17 --- Upon resuming at 8:33 p.m./

18 L'audience est reprise à 20h33

19

20 **THE CHAIRMAN:** Okay, can we get going
21 again, please?

22 The next presentation is from Families
23 Against Radiation Exposure, FARE, as outlined in CMD
24 H16.85.

25 I understand that Mr. Derrick Kelly will do

1 the opening remarks. Please proceed.

2
3 **11-H16.85**

4 **Oral presentation by**

5 **Families Against Radiation**

6 **Exposure (FARE)**

7
8 **MR. KELLY:** Commissioners, Derrick Kelly
9 with Port Hope's Families Against Radiation Exposure.

10 Back in the fall, we were invited to submit
11 to the CNSC for a funding for this -- for intervenor
12 funding for this hearing, to which we did. And the
13 gentleman sitting to my left is our expert intervenor that
14 we've had -- we've gotten. His name is Kevin Kamps.

15 Kevin is with the organization out of
16 Washington, D.C. known as "Beyond Nuclear". He's a
17 radioactive waste specialist. He's also a member of the
18 Great Lakes United Task Force, Nuclear Free Green Energy
19 Task Force. So I'm going to hand this intervention over
20 to Kevin.

21 Kevin?

22 **MR. KAMPS:** Thanks, Derrick.

23 President and Commissioners, thank you for
24 this opportunity. It's an honour to represent Families
25 Against Radiation Exposure in this proceeding.

1 I will speak about half of my time on the
2 radioactive stigma effect and then, with the remainder of
3 my time, I'll talk about the increased risk of flooding in
4 Port Hope as well as security risks to the facility.

5 So to start off, I'd like to express my
6 gratitude and my debt to Dr. Alan Marshall of Masaryk
7 University in the Czech Republic. His paper "Social
8 Equity and Nuclear Waste Management" helped me to frame my
9 thoughts on these issues and to apply them to the Port
10 Hope situation.

11 And I'd also like to express my debt to
12 such authors as Penny Sanger of "Blind Faith" and Pat
13 McNamara who authored "Nuclear Genocide in Canada". I
14 learned a lot of history about this community and the Port
15 Hope facility from them, from their writings.

16 And I'd also like to express gratitude to
17 Pat Lawson, who's here tonight, who provided a lot of oral
18 history over the past decade on our monthly Great Lakes
19 United calls about the situation here.

20 My experience with radioactive stigma
21 effects comes from my work on the Yucca Mountain
22 repository proposal in the United States, the proposed
23 high-level radioactive waste dump, which has been
24 cancelled in the last couple years by the Obama
25 administration, as well as from another proposed high-

1 level radioactive waste facility at Skull Valley Goshute's
2 Indian Reservation in Utah. These were high-level
3 radioactive waste disposal and/or storage facilities.

4 And more recently, again on the Yucca
5 Mountain issue, another manifestation of the radioactive
6 stigma impact could be seen by the actions of states like
7 South Carolina and Washington who have filed lawsuits
8 against the federal government because of the cancellation
9 of the Yucca Mountain proposal because they are stuck with
10 the high-level radioactive waste in their states.

11 And this follows an old tradition in the
12 United States, for example, the State of Idaho which many
13 years ago sued the federal government, the Department of
14 Energy, and got a date certain for the removal of high-
15 level radioactive waste from the State of Idaho.

16 And many of these lawsuits, many of these
17 concerns revolve around the stigma of being a radioactive
18 waste dump, but it's not just radioactive waste dumps,
19 it's also the transportation routes involved.

20 And so, in my written submission, I wrote a
21 section about the *Komis* case. That's the last name of a
22 family in Santa Fe, New Mexico whose land just happened to
23 be adjacent to what was designated as a radioactive waste
24 transportation route.

25 And this was not high-level radioactive

1 waste, this was transuranic waste, this was plutonium
2 contaminated military wastes bound for the Waste Isolation
3 Pilot Plant in New Mexico.

4 And in that case, the family sued the City
5 of Santa Fe for this designation next to their land and a
6 jury awarded them \$337,000 in property value damage from
7 this proposal and this decision was upheld in the courts.

8 So the stigma effects, as you can see, not
9 only apply to dumps, to transportation routes, but they
10 also apply to uranium mines.

11 In Virginia right now, there's tremendous
12 concern about a proposed uranium mine; its impacts on
13 property values.

14 These concerns also apply to nuclear power
15 plants.

16 And I'll just give a local example here.
17 This comes from the Joint Review Panel Environmental
18 Assessment Report for the Darlington New Nuclear Power
19 Plant Project published in August of 2011, and this
20 Section 6.6 on page 109 is about the visual effect of
21 cooling towers, and I quote:

22 "The panel notes that the Municipality
23 of Clarrington expressed concerns about
24 the perceived stigma of cooling towers
25 and the resulting socio-economic

1 effect they could have on the local
2 and regional study areas. The
3 municipality stated that it is most
4 concerned with the visual effect that
5 the plume would have on visitors
6 passing through the region on Highway
7 401 because it may deter people and
8 businesses from moving to the area."

9 And further down, on page 110, this is a
10 quote:

11 "The panel notes that OPG acknowledged
12 that the visual effect from cooling
13 towers may have an adverse effect on
14 the use and enjoyment of other
15 surrounding properties and could
16 potentially reduce property values."

17 And so it's interesting that not only the
18 actual source of the radiological risk but also something
19 that's not radiological in nature but symbolizes it can
20 have the stigma impacts on a community.

21 And the stigma impacts I've mentioned can
22 take the form of decreased property values, but it can
23 also take the form of causing tourism to decrease, also
24 causing business investment to decrease, as was mentioned
25 by the panel.

1 And these historic radioactive stigma
2 impacts that have been borne by this community, as I
3 mentioned, one of the initiating stories that prompted the
4 writing of "Blind Faith" was the discovery of Eldorado
5 contamination in a local elementary school in the mid-
6 1970s.

7 But the on-going operations of Cameco,
8 which brings us here today, the five-year licence
9 extension, will amplify; will cause these risks to grow
10 worse over time. This will be because of continued
11 uranium emissions by permit by the CNSC and other
12 government regulators allowing uranium emissions, as well
13 as fluorine emissions.

14 There's another example I mentioned in the
15 written submission which is radioactive ammonia fertilizer
16 used for growing agricultural crops that emanates from
17 Cameco's operations.

18 Another one that was raised tonight that
19 will increase concerns about radioactive stigma is the
20 request by Cameco to retain the right to discharge treated
21 liquid effluent if it so chooses in the future.

22 And, certainly, the 2007 revelation that
23 there was a radioactive leak between the UF6 plant just
24 exacerbates these problems that have plagued this
25 community for so long.

1 And the reasons for the concern are not in
2 the imagination of those in the public who are concerned
3 about such things. I just refer to the U.S. National
4 Academy of Sciences and I'd like to read a short section
5 from my written submission to emphasize it:

6 "The U.S. National Academy of Sciences
7 has, for decades, affirmed that any
8 exposure to radioactive activity, no
9 matter how small, still carries a
10 health risk of cancer and that these
11 risks accumulate over a lifetime. The
12 higher the dose, the higher the risk.
13 However, even extremely low doses
14 still carry a health risk."

15 NAS reaffirmed this linear no threshold
16 finding in the seventh iteration of its biological effects
17 of ionizing radiation published in 2005. To make matters
18 worse, NAS reported in BR7 that a supra linear
19 relationship at very low doses may indeed exist. That is,
20 at very low doses, radiation seems to cause
21 disproportionately high health damage per unit dose.

22 These are the very types of exposures faced
23 in Port Hope.

24 I also mention in my written submission the
25 work of Dr. Arjun Makhijani at the Institute for Energy

1 and Environmental Research, who was retained as an expert
2 witness by a nuclear information and resource service
3 regarding the disposal of depleted uranium wastes from
4 uranium enrichment facilities. And his findings on the
5 radiological hazards of uranium indicated that it should
6 be treated in the same was a transuranic wastes and
7 greater than Class C low level radioactive wastes. That
8 is deep geologic disposal.

9 Another mention in my written submission
10 was the work of Dr. Doug Brugge at Tufts University in
11 Boston, who has done work on the estrogen mimicking
12 effects of uranium, a part of its toxic chemical
13 properties, its hormone disruption in mammals.

14 I also mentioned the hazards of fluorine,
15 specifically uranium hexafluoride from the work of Dr.
16 Miles Goldstick, specifically The Hex Connection, Some
17 Problems and Hazards Associated with the Transport of
18 Uranium Hexafluoride. And again I'd like to read from a
19 short section of the written submission to emphasize the
20 hazards of fluorine.

21 "Miles Goldstick warned not only about
22 uranium's own radiological and toxic
23 chemical hazards but also about the
24 significant chemical toxicity of
25 fluorine compounds involved in uranium

1 hexafluoride conversion, its storage,
2 its transport, and its waste
3 management processes. His PhD
4 dissertation is entitled the Hex
5 Connection, published in 1991."

6 Included is a long list of UF6 accidents
7 over the course of decades including a fatal accident in
8 1986 at Kerr McGee's Sequoyah Nuclear Fuels Uranium
9 Conversion Plant in Oklahoma. One worker died four hours
10 after the accident from toxic chemical exposure and severe
11 hydrofluoric acid burns. Over 100 other workers and
12 nearby residents were hospitalized for various lengths of
13 time.

14 The resulting toxic cloud was reported to
15 be five kilometres long and 100 metres high, which
16 eventually covered a seven square kilometre area and
17 reached points 18 kilometres downwind before dissipating.
18 As reported by Goldstick, the consequences would have been
19 much more serious if the cloud hadn't been disbursed by a
20 40 kilometre per hour wind.

21 Another infamous UF6 accident Goldstick
22 describes is the August 1984 sinking of the cargo ship Mon
23 Louis in the English Channel with 30 full UF6 transport
24 containers aboard. Government authorities involved
25 downplayed and even initially attempted to cover up the

1 accident. Details on how much, if any, UF6 leaked out
2 were not publicly disclosed.

3 Goldstick's work serves as a stark reminder
4 of the dangers inherent in the activities carried out at
5 Cameco's uranium conversion facility in Port Hope,
6 including transport to and from. Cameco's U308 transport
7 accident one year ago enroute from Canada to China serves
8 as yet another warning that Cameco's uranium
9 transportation safety across the board, including at the
10 Port Hope Conversion Facility must be strengthened.

11 So I'd like to move on in the last few
12 minutes to talk about security risks.

13 **THE CHAIRMAN:** You are way over the 10
14 minutes so please ---

15 **MR. KAMPS:** Am I over 10 minutes?

16 **THE CHAIRMAN:** Yes.

17 **MR. KAMPS:** Well, I'll be very brief then.

18 **THE CHAIRMAN:** Okay.

19 **MR. KAMPS:** I would just like to point out
20 that the security risks faced here would stem from the
21 history of involvement in nuclear weapons activities as
22 well as the work involving depleted uranium because of its
23 connection to armaments as well.

24 And regarding flooding, I would just like
25 to share with the Commission the experience that we had in

1 the United States, in Nebraska last summer. Historic
2 winter snows combined with historic spring rains caused a
3 massive flood on the Missouri River, which put the Fort
4 Calhoun Nuclear Power Plant at extreme risk. It was
5 within a metre of loss of control. And the lesson to be
6 learned is that with climate change all bets are off in
7 terms of the weather.

8 So Port Hope has a long history of
9 flooding. The 1980 flood is just one of many examples.
10 And something that was raised in the proceedings before
11 your very body on slightly enriched uranium here several
12 years ago, there were calls from this community for much
13 more comprehensive flooding analysis, 100 year flood,
14 1,000 year flood analysis, and that should be a part of
15 this proceeding because of the dangers of flooding due to
16 climate change in the next five years and beyond. As
17 Cameco has said, they hope to operate for years to come.

18 Thank you.

19 **THE CHAIRMAN:** Thank you.

20 Okay, questions?

21 Monsieur Harvey?

22 **MEMBER HARVEY:** We were just talking about
23 the flood here and I ask Cameco to comment on that, to
24 what extent they are protected and what has to be done,
25 what has been done, and taking into account the climate

1 change -- well, go ahead.

2 **MR. CLARKE:** Dale Clark, for the record.

3 Your question on flooding and what we've
4 done, I would start and say that we have -- we've worked
5 very closely with the Ganaraska Region Conservation
6 Authority, or the GRCA, who's obviously impacted in this
7 area. And a number of years back we conducted a flood
8 plain study with the GRCA.

9 That study assessed the -- for the
10 regulatory flood conditions and the flood plain mapping of
11 the area, that study was completed, approved by the GRCA
12 and concluded that our facility is not in the flood plain
13 for this area, and as referenced by the 1980 flood event
14 that did not impact our facility in any way.

15 **MEMBER HARVEY:** How could climate change
16 have an impact on those studies? When was it, was it in
17 2006 or -- the study you are referring to?

18 **MR. CLARK:** Dale Clark, for the record.

19 Yes, that was conducted in 2006, that's
20 correct.

21 **MEMBER HARVEY:** But the same study would be
22 conducted now, would it be a different result?

23 **MR. CLARK:** Dale Clark, for the record.

24 No, that would -- my understanding is that
25 would be -- that is based on the regulatory flood

1 conditions and the flood plain mapping of the area and the
2 region, that assessment was done and that conclusion is
3 still valid today, that we are not located in the flood
4 plain.

5 Having said that, we do continue to model
6 beyond on design basis events and we've done that, and we
7 will continue to assess that and incorporate that into our
8 incident response plans for beyond design basis event,
9 beyond that regulatory flood condition and make sure that
10 we remain protected and we maintain that commitment to the
11 environment and the community in which we live and work
12 today.

13 **MEMBER HARVEY:** Can you give us an idea of
14 the degree of protection, how many metres, for example,
15 from the maximum level of a flood, centimetres or metres?

16 **MR. CLARK:** Dale Clark, for the record.

17 I can't share a specific number but by that
18 conclusion that we're not in the flood plain, we're not
19 talking about feet or metres of impact on the site. We're
20 saying we're not in the flood plain.

21 And now having said that, and the comment
22 that we do assess beyond design basis events as well, and
23 we have done modelling on that. And we do incorporate
24 that into our incident response plans and we have
25 emergency response procedures to install, you know, flood

1 diversion dams and techniques if necessary.

2 We also have -- it's important to note, I
3 believe, that we have facilities that are able to be very
4 quickly and safely shut down, very different types of
5 facilities than others in the nuclear industry. These are
6 operating plants that can be quickly and safely shut down
7 in the event of any such emergency. So we are confident
8 that we're well protected in those events.

9 **MEMBER HARVEY:** What would be the nature of
10 the impact if the floor, for example, would be flooded?
11 Could there be contamination going to the harbour and the
12 lake?

13 **MR. CLARK:** Dale Clark, for the record.

14 Overall, I would say we're well suited to
15 handle the impact of that and mitigate any events and
16 consequences from that type of event.

17 An example of that is actually, you know,
18 the fact that during the current license period we've
19 achieved the NFPA 801 compliance in all areas of the
20 operating site, and that ensures that we have the
21 capability of retaining a certain volume of water within
22 the building structures and the operating plants.

23 So we're quite confident that we can
24 collect and maintain that. The operations can be quickly
25 and safely shut down, so we believe there's no impact --

1 no risk to workers or the environment in those events.

2 **MEMBER HARVEY:** Thank you.

3 Could the staff comment on that, please?

4 **MR. ELDER:** Peter Elder, for the record.

5 We do have your information on the flooding
6 so I'll pass it back in a second.

7 I'd like to say he mentioned -- Cameco
8 mentioned looking at beyond a design basis event. We --
9 this is something we asked -- required to all licensees to
10 do with it -- to look at after Fukushima and including
11 their ability to withstand extreme events, and most of the
12 ones -- there's mention about making sure that they had --
13 one of the things we've done in the past is make sure they
14 have adequate fire protection.

15 And for these facilities you mentioned of
16 the things -- if you have a fire and you have to use
17 water, you must have the capability to capture that fire
18 water, so that serves as some protection against flooding
19 as well.

20 In terms of the flooding risk around the
21 facility, I'll pass the question back to Shizhong Lei.

22 **MR. LEI:** For the record, Shizhong Lei.
23 I'm a hydrologist at CNSC.

24 In around 2005 Ganaraska River Conservation
25 Authority commissioned a flood risk assessment study. In

1 that study the CNSC staff reviewed in detail and
2 identified some areas that needed to be improved.

3 Later on and under the request from the
4 CNSC staff, Cameco commissioned their own flooding study
5 for the site with the site specific survey data and they
6 considered various scenarios. And to the site of Cameco
7 the Ganaraska River had the highest flood in 1980. That's
8 a flow rate -- the highest flow rate in the river near the
9 site was 425 cubic meters per second.

10 In this flood study and the -- not only
11 assisted this scenario, they also assisted the 100 year
12 flood, the regional flood, as well as the probable maximum
13 flood. To just give a comparison, the probable maximum
14 flood is more than three times higher than the highest
15 records on the site which is 1,453 cubic meters per
16 second.

17 Even under that, the highest probable
18 maximum flood condition, under the current conditions some
19 areas of the site will be flooded, there will be some
20 ponding. However, there's no water that would get into
21 any of those buildings.

22 And during that assessment CNSC staff will
23 specifically ask question what would happen if the water
24 if gets into the building and this assessment report,
25 which was carefully reviewed by CNSC staff, indicates that

1 the water -- flooding water will not get into the
2 buildings at the site.

3 **THE CHAIRMAN:** Can I -- look, I'm puzzled
4 by something here. We're not talking about a nuclear
5 power plant, right, this is a conversion facility.

6 So let's assume that the whole plant is
7 covered with water, what's the worst -- there's no
8 reaction, there's not going to be any explosion, there's
9 nothing -- no melt down, so we are worried about just
10 uranium getting into the water. Is that correct?

11 **MR. LEI:** Shizhong Lei.

12 That's correct. This scenario Cameco
13 committed to additional beyond design basis event
14 analysis. We don't have the results yet.

15 What we have learned so far is that even
16 under the physically extreme condition of flooding still
17 the water wouldn't be high enough to get into any of those
18 buildings.

19 **THE CHAIRMAN:** Dr. McDill?

20 **MEMBER McDILL:** Is there a criticality risk
21 here if there's a large amount of water? You need to have
22 a sphere or some number of...

23 **MR. CLARK:** Dale Clark, for the record.

24 No, there's not. We're dealing in
25 processing natural uranium there.

1 **MEMBER McDILL:** And staff concurs there is
2 no criticality?

3 **MR. CLARK:** There is no criticality risk.
4 Cameco for this facility does possess a small amount of
5 enriched uranium but not enough to go critical. So it's
6 less than a critical mass so you don't have to worry about
7 the geography of it. So what you would be worrying about
8 is spread of the uranium yes, potentially.

9 **THE CHAIRMAN:** Mr. Kamps, you wanted to add
10 something to this?

11 **MR. KAMPS:** Yeah, thank you, if I could
12 ask, through the Chair to Mr. Clark, is he referring to
13 the buildings on the center pier as well or is it just the
14 Eldorado proper building 50 or the UF6 and UO2?

15 Because the center pier buildings that
16 Cameco leases from the town certainly is right at the
17 mouth of the Ganaraska River and I don't know how it could
18 not be on the flood plain.

19 **MR. CLARK:** Dale Clark, for the record.

20 I am referring to our operating site and
21 the operating areas, primarily the UF6 and UO2 plant on
22 the main site. But again, I would highlight -- and as you
23 pointed out, we -- you know, the operations -- the
24 operations on the main site certainly are well capable of
25 safe and immediate shutdowns, and in other areas we are

1 talking about warehouse or storage areas and we believe we
2 are well capable of withstanding and mitigating the events
3 as those described.

4 **THE CHAIRMAN:** Monsieur Harvey?

5 **MEMBER HARVEY:** I'll ask the staff, about
6 that the pier, what is the situation there if there is an
7 extreme event?

8 **PETER ELDER:** Peter Elder, for the record.

9 The pier contains low level waste. There's
10 low level waste stored there. This is hopefully,
11 eventually, fairly soon going to be moved as part of the
12 Port Hope Area Initiative.

13 Again, so you would look at it if you had
14 flooding you would be looking at the potential for the
15 spread of that low level waste, but you would need a quite
16 severe flood as well.

17 **MEMBER HARVEY:** And you were saying that
18 you will get additional data from -- or the study is
19 complete ---

20 **MR. ELDER:** One of the things we asked,
21 again as part of looking at for Fukushima, is that they
22 actually have -- even though these are very low
23 probability events, that they actually do have some --
24 look at how they would deal with such a flood.

25 So what they're talking about is making

1 sure that they were in a position and thought about you
2 would set up barricades if you actually got into this
3 situation.

4 So they said yes, we will look at this and
5 I believe they're supposed to give that information by
6 March. So it's very going back into having documented
7 procedures around how would you deal with very severe
8 events.

9 **THE CHAIRMAN:** Anybody else, question?
10 Dr. McDill?

11 **MEMBER MCDILL:** Thank you.

12 I'll ask FARE and then they can direct me
13 to where in the report they like.

14 There do not appear to be any
15 recommendations, any summary of recommendations in this
16 document. So perhaps you could summarize what you --
17 through FARE or FARE through you, could summarize what you
18 believe the critical recommendations you would make, if
19 you could summarize them for me.

20 **MR. KAMPS:** Well, one recommendation that
21 comes to mind would be based on the Steelworkers
22 presentation, the first Steelworkers Union presentation
23 who talked about zero releases. That would be health
24 protective for sure.

25 I think the point that I'm trying to make

1 about radioactive stigma is that there's a long history of
2 radioactive contamination in this community, and so
3 treating five more years of operations as a routine matter
4 is superimposed on eight decades of radioactive
5 contamination in this community.

6 So again I refer to the National Academy of
7 Sciences, which not only recognizes the hazard at
8 extremely low levels of radiation exposure, but also
9 affirms that those risks are accumulative over a life time
10 of exposure.

11 So a recommendation is that so-called low
12 level emissions of radioactive substances, toxic chemical
13 substances at such close range to a community without a
14 buffer zone that has experienced these exposures for many
15 decades on end is not a routine matter.

16 **THE CHAIRMAN:** Can I get a clarification on
17 this. You keep mentioning -- you've mentioned a couple of
18 times on page 5 of your submission, you talk about the
19 supra linear relationship. Can you -- I mean, I've never
20 heard about this. I've heard about the linear model. Now
21 this seems to be that it is even disproportionately high
22 health damage the lower you go. I don't understand it. Can
23 you explain where does it come from?

24 **MR. KAMPS:** This is a finding from the
25 National Academy of Sciences BEIR7 report, Biological

1 Effects of Ionizing Radiation.

2 **THE CHAIRMAN:** Is that--staff, please, that
3 wasn't my understanding of what the report said.

4 **MR. BUNDY:** Kevin Bundy, Radiation
5 Biologist, Canadian Nuclear Safety Commission.

6 I've got a copy of BIER7 here and I've
7 looked for any reference for super linearity in there and
8 I can't find it. And I've actually word searched an
9 electronic version and I can't find it. But that being
10 said, I know there are some in the community that say that
11 a super linear response, in other words, the damage from
12 radiation is actually greater at smaller doses than higher
13 doses. Yes, that's a possibility. The reality is, as
14 we've said many times before, the doses below 100
15 millisieverts, we don't see any effect. But being prudent
16 and cautious, we assume there's a linear, no-threshold
17 theory that says that with any risk of exposure to
18 radiation there is proportional risk. And that's used for
19 the basis for setting the dose limits and for the reason
20 why we require ALARA from our licensees; to make sure all
21 doses are as low as reasonably achievable, to keep those
22 doses as low as possible. And as we've seen here today
23 with the actual results for the worker doses at Cameco,
24 that is -- the doses are very low; they are at most 4
25 millisieverts a year and the average a little over 1

1 millisievert per year.

2 Because we don't know and that reason --
3 below 100 millisieverts, yes, super linearity may be in
4 effect. There's also many other theories that say there's
5 actually -- it is a hermetic effect, that radiation at
6 that low dose is actually beneficial. We know that there
7 is a threshold effect; that the dose doesn't actually --
8 you don't start getting damage until a certain dose is
9 reached. Any of them, at this stage, it's possible.
10 Epidemiology studies aren't really powerful enough yet to
11 show that and so we're relying on a number of lab studies
12 to try to see if we can find out that answer, but we don't
13 have that answer yet.

14 **MR. KAMPS:** Could I ask a clarifying
15 question? I just heard you say that a 100 millisievert
16 dose has no observable effect?

17 **MR. BUNDY:** Well, let me explain that a
18 little bit more.

19 An acute dose of 100 millisieverts or
20 thereabouts, sometimes around 80 millisieverts, there has
21 not been any discernable health effects for radiation
22 exposures to humans at those levels.

23 **MR. KAMPS:** Because my understanding is
24 that a 10-rem dose, if you're going to allow a 10 rem per
25 year dose to a population, you would expect a one in four

1 fatal cancer rate from such exposures.

2 **MR. BUNDY:** But that is a projection of the
3 linear, non-threshold theory. You don't actually see
4 those because the background level of radiation of cancer
5 is roughly about 25 percent in the human population. So
6 you have a fluctuation of that cancer within that range so
7 it's not possible to say that a dose of that radiation has
8 caused an effect. That's why we prudently use the LNT for
9 radiation protection purposes.

10 **MR. KAMPS:** My understanding is that using
11 the formulas from NAS BEIR7, that a 10 rem per year dose
12 experienced for a lifetime would lead to a 25 percent
13 fatal cancer rate from the exposure.

14 **MS. THOMPSON:** Mr. Binder, could I maybe
15 just -- in relation to that calculation, if 10,000 people
16 in Port Hope were exposed all year, every year to 1
17 millisievert per year, we would see, using the LNT, 1
18 cancer in 10,000 people. The natural background rate of
19 cancer in 10,000 people is 4,200 so 1 cancer relative to
20 4,200 is not detectable because the natural background
21 cancer rate varies.

22 When we look at the actual exposures to
23 members of the public around nuclear facilities, there are
24 a few microsieveverts so the actual cancer risk using the
25 LNT which is not supposed to be used that way, but if we

1 use it, then it would be 1 cancer in 1 million people if 1
2 million people were exposed to that level -- if 10,000
3 people were exposed to that level. So the cancer risk,
4 even using the LNT, is extremely low for populations
5 living around nuclear facilities including Port Hope.

6 **THE CHAIRMAN:** Dr. McDill?

7 **MR. KAMPS:** Could I ask what risk model the
8 CNSC staff uses?

9 **MS. THOMPSON:** Just quoted numbers from
10 BEIR7 LNT.

11 **MR. KAMPS:** You're using the BEIR7?

12 **MS. THOMPSON:** Patsy Thompson, for the
13 record.

14 We've just said that the CNSC prudently
15 uses the LNT for radiation protection purposes and that
16 is to drive ALARA and doses to members of the public and
17 workers as low as possible.

18 **MR. KAMPS:** So you don't use the ICRP risk
19 model?

20 **MS. THOMPSON:** Patsy Thompson, for the
21 record.

22 My understanding is ICRP and BEIR7 both use
23 or both recommend the LNT models.

24 **MR. KAMPS:** Is that for gamma or alpha and
25 beta?

1 **MS. THOMPSON:** Patsy Thompson, for the
2 record.

3 Not to give a radiation protection course,
4 but the LNT models are based on models that deal with
5 radiation doses; all doses combined. The ICRP does have
6 weighting factors for alpha radiation, for example, that
7 is known to be more effective at causing cancer. So the
8 CNSC uses the best science including the appropriate
9 weighting factors for all of our radiation.

10 **MR. KAMPS:** If I might just interject, I
11 think there seems to be a huge problem with
12 interpretations and I don't think any of us here are
13 talking apples to apples and I would concur with Dr. Linda
14 Harvey as we need something and I know this is beyond the
15 Commissioners -- what you can do, but somebody has to put
16 a recommendation in, in that we have proper scientific and
17 medical debate on this issue and that hasn't happened.
18 And it is quite clear from the he said/she said- arguments
19 we get into here at these hearings.

20 Thank you.

21 **THE CHAIRMAN:** Dr. McDill?

22 **MEMBER McDILL:** I think most of the things
23 I wanted to ask are --have been said in the most recent
24 exchange so maybe I'll ask one or two more things.

25 On page 5 of this document, there is a

1 statement concerning fertilizer for farm fields and I
2 think I would like to ask Cameco to discuss that briefly
3 and staff to comment briefly.

4 **MR. CLARK:** Dale Clark, for the record.

5 The uranium dioxide conversion process at
6 our facility does produce a by-product, ammonium nitrate
7 specifically. That by-product does go -- undergo some
8 additional treatment and, excuse me -- some additional
9 treatment and processing and that by-product is sold as a
10 local fertilizer feed material. This is a program that
11 has been reviewed by CNSC and Agriculture Canada for many
12 years and has been deemed a very safe and comprehensive
13 program; one that we're very proud of and confident in the
14 safety and the protection that's provided by this program.
15 And as some examples of that, I can speak to the typical
16 results for uranium content in that ammonium nitrate is,
17 in our case, on average between 1 to 2 parts per million
18 uranium.

19 And to put that in context with other
20 common, commercial fertilizer sources; urea fertilizer,
21 for example, has a typical content of approximately 9
22 parts per million. Potash fertilizer has a typical
23 content of about 4 parts per million. And phosphate
24 fertilizer has a typical content of up to 75 parts per
25 million. All are commonly used and very safe forms of

1 fertilizer material so we are very proud and confident in
2 the safety of this program that has been reviewed by CNSC
3 and Agriculture Canada and serves to protect the public
4 and the community.

5 **MR. ELDER:** Peter Elder, for the record.

6 I just confirmed that before Cameco was
7 allowed to start this process, there were extensive
8 reviews of the safety of the product by not only CNSC/AECB
9 and Agriculture Canada, but also Health Canada and the
10 Ontario Ministry of the Environment and all these numbers
11 were set to make sure that there is no risk from the use
12 of this fertilizer, in turn, which included confirming
13 that it was in the same range as other commercial -- the
14 uranium in it was in the same range as other commercially
15 available products.

16 **MR. KAMPS:** Could I just -- I'm sorry,
17 could I just say that the -- this gets to the heart of the
18 NAS report that there is no safe level of radioactivity
19 exposure. It may be permissible, it may be allowable by
20 the CNSC or Agriculture Canada, but to claim that it's
21 safe or risk free is not appropriate.

22 And I just wanted to quote from page 2 of
23 my written submission. This is a quote from 1933 from the
24 first operations manager at Eldorado Nuclear Radium
25 Refinery. He said to the local newspaper that:

1 "Radium is highly dangerous, the
2 slightest fraction of a milligram
3 taken into the system leads to various
4 diseases.

5 And this was a warning he gave in 1933.

6 "At high enough exposure [this is a
7 quote] not a doctor on earth can save
8 the unfortunate person who is affected
9 from too much radium exposure."

10 And so we're talking about radium exposures
11 permissible or allowable from this ammonium fertilizer
12 that Cameco sells to local farmers of a level of 370
13 millabecquerels per litre, and again the NAS study is that
14 even at low doses there is a risk associated.

15 So we're talking about multiple exposures
16 to the local population from air emissions, from leaks in
17 2007 into soil and groundwater, into the lake, into the
18 drinking water supply. These are multiple exposures that
19 I don't think the standards are accounting for in terms of
20 health risk.

21 **DR. THOMPSON:** Patsy Thompson, for the
22 record.

23 One thing we need to clarify is that
24 uranium that is applied to soils in fertilizers or through
25 uranium dust or any other form is actually not bio-

1 available. If you have, for example, one unit of uranium
2 in soils, the plant that grows on the soil will have 0.00-
3 something uranium. So the actual uranium stays bound to
4 soil particles as it is not taken up by plants, so it's
5 not available for uptake by humans.

6 And that is the basis for the safety of the
7 fertilizers containing uranium or other metals. Very few
8 of them are actually bio-available. They will stay in the
9 soils and not be transferred to plants. And this data
10 that is widely available. It's been published in
11 scientific periodic journals and as part of compendiums
12 used for risk assessments internationally.

13 **THE CHAIRMAN:** Dr. McDill?

14 **MEMBER McDILL:** Does FARE look at, for
15 example, since this is your document, other forms of
16 fertilizer that are used in the region? Do you examine
17 phosphate fertilizers or urea fertilizers or potash
18 fertilizers that may in fact have more, even if it is not
19 taken up, do you examine that? Do you get concerned about
20 it?

21 **MR. KELLY:** Commissioner McDill, FARE is a
22 community activist group that is concerned about
23 unnecessary manmade radiation exposures and doing
24 everything in our power to help reduce that. We don't
25 examine anything. We rely on other -- hopefully Health

1 Canada and the Provincial Ministry of Environment as well
2 as other independent experts to do that. We get their
3 information and try to provide it to the community as an
4 alternative source of information that unfortunately we
5 don't get from the industry and the CNSC staff.

6 **MEMBER MCDILL:** The reason I'm asking you
7 is that this is your document. I could turn to the person
8 next to you but this is your document so that's why I am
9 asking you the question.

10 **MR. KELLY:** Fair enough.

11 **MEMBER MCDILL:** So with your permission,
12 I'll ask the person sitting next to you an opinion
13 question based on other fertilizers.

14 I mean, there are many things in this
15 document, many things you have stated in this document.

16 **MR. KAMPS:** There's many things, I'm sorry?

17 **MEMBER MCDILL:** That have been stated in
18 this document. This is just one that I am asking about
19 right now.

20 **MR. KAMPS:** Well, I was focused on this
21 proceeding so I didn't look at other fertilizers, but what
22 comes to mind is a class action law suit in Florida in an
23 area where potash fertilizer is mined and processed and
24 there are health impacts on local communities there.
25 There is a class action law suit having to do with the

1 radioactive impact of those fertilizers.

2 Another thing that comes to mind is the
3 question of smoking tobacco. What is the specific health
4 threat from smoking tobacco? Is it the tobacco plant
5 itself? What is the chemical problem?

6 So I would -- I'm not sure if Dr. Gordon
7 Edwards will be at this proceeding in the next few days
8 but I've learned from him that the radioactive content of
9 tobacco caused by artificial fertilizer is indeed a big
10 factor in the disease causation of smoking tobacco and
11 it's because of the radioactivity of fertilizer.

12 So I think it is a significant societal
13 issue that needs to be addressed. But I think that Cameco
14 is selling a by-product from its operations that is
15 contaminated with uranium and radium that their
16 predecessor company warned about 75 years ago as extremely
17 threatening to human health is something that shouldn't be
18 going on. It seems like it's a cheaper way of disposing
19 of a radioactively contaminated waste product from their
20 operations.

21 I mean, it's a modern example of what
22 happened here in the '30s and '40s and '50s where Cameco
23 had -- or Eldorado had some things they didn't need any
24 more and wanted to get rid of, like soil to be used as
25 fill, and just today, you know, what was the figure, a

1 \$1.28 billion clean-up job is the result. That's what
2 happens when you distribute radioactive contamination into
3 the environment. So this is a modern example of doing
4 that.

5 **MEMBER MCDILL:** Thank you.

6 Thank you, Mr. Chairman.

7 **THE CHAIRMAN:** There is a big difference
8 though because we do have other agencies now that will
9 have to actually scrutinize the proposal. So we have the
10 Department of Agriculture, just like you have in the U.S.
11 We have a Department of Health and without their
12 assurances -- and the Ministry -- the Provincial Ministry
13 of Environment -- we wouldn't allow it.

14 So somebody has got to take the safety case
15 and make a decision. That's the big difference between
16 now and what happened in '33.

17 **MR. KAMPS:** There's been a cost benefit
18 analysis.

19 **THE CHAIRMAN:** We don't care about the cost
20 benefit analysis. We care about the health impact and we
21 worry and that's why ---

22 **MR. KAMPS:** That's it. It's the cost to
23 the company of disposing of these materials versus the
24 benefit to the company. It's the ---

25 **THE CHAIRMAN:** That's their calculations,

1 it's not our calculation. Our calculation is, it's safe
2 ---

3 **MR. KAMPS:** You can't say safety. I've
4 heard the CNSC staff make blanket statements about safety.
5 The company did as well.

6 **THE CHAIRMAN:** When our Health Canada deems
7 something to be safe, we accept it as being safe. You're
8 right. So now if you want to argue with the whole medical
9 profession internationally, well that's a different fight.

10 **MR. KAMPS:** Well, there was a previous
11 medical opinion expressed from this very microphone
12 earlier so ---

13 **THE CHAIRMAN:** Okay, anybody else? Any
14 other?

15 Go ahead, please.

16 **MEMBER McDILL:** One more question please.
17 Could I ask both Cameco and staff to expand
18 on the requirement for Aboriginal consultation, which is
19 referred to on page 15 of this document, first with
20 respect to First Nations that are -- I won't use the -- we
21 have a border here but the border doesn't necessarily
22 apply to First Nations. So could I ask for an expansion
23 on that as well, please, first the consultation and then
24 the issue of the border?

25 **MR. ELDER:** Peter Elder, for the record.

1 I'll touch on the consultation because I
2 think, as the Commission is well aware of, we have --
3 there is a federal duty to consult on these type of
4 decisions.

5 So one of the things, this actual report is
6 part of participant funding, so when we write to the First
7 Nations we're actually telling them there is capacity if
8 you want capacity to intervene.

9 So we are saying what we did and what we
10 got back, we're reporting on what was done. And there are
11 test cases in the court in Canada of what is a reasonable
12 consultation for this type of thing.

13 We also look in terms of that the
14 indigenous group in Canada are fully aware of where they
15 do or don't respect the mortar, so when you go back and
16 talk to a Mohawk they don't differentiate. So when we go
17 talk to them we expect there to talk to them.

18 So I'm a little -- I don't know what -- the
19 question is it's taking one sentence and we have to
20 summarize a lot of information, a lot of work we do into a
21 very short summary document for the CMD that covers a lot
22 of information.

23 So we do take the Aboriginal consultation
24 requirements on us, which are from our Constitution, very
25 seriously. How we approach it is codified. It's

1 available on our website and we apply this process in a
2 consistent manner.

3 **MEMBER MCDILL:** Somebody came forward from
4 the back so I think perhaps ---

5 **MS. MANN:** Kimberley Mann, Senior Advisor,
6 Aboriginal Consultation for the CNSC.

7 I completely agree with what Mr. Elder
8 said. As per our CMD, we contacted --- we identified a
9 number of Aboriginal groups and Aboriginal organizations
10 around the area.

11 We sent them letters of notification which
12 included the application. It included later the CMD. It
13 included the notification for participant funding. We also
14 followed up with phone calls, asked if there was any
15 questions that we can respond to. We sent reminders of
16 the deadline to register, of the deadline to apply for
17 participant funding and none of the aboriginal groups
18 identified in this area have responded to any of our
19 offers.

20 So based on the information and the no
21 response, we don't think there's any aboriginal -- sorry,
22 we don't think there's any adverse impacts to any
23 aboriginal rights in the area.

24 As for the border, the duty to consult does
25 not extend to aboriginal groups outside Canada.

1 **MEMBER McDILL:** Thank you.

2 So you, I am guessing, object to the
3 statement "minimal outreach?"

4 **MS. MANN:** Kimberley Mann, for the record.

5 I do object. We have to try to find a
6 balance. We try to encourage groups. We want to notify
7 them. We want them to participate in our processes, but
8 we also have to balance that.

9 There is consultation fatigue. Chief
10 Marsden of the Alderville First Nation did -- we did speak
11 with him and there was some confusion because we have sent
12 him so much notification about varying products in the
13 area. So we emailed him just a description on the status
14 of all the projects and he was satisfied with that and
15 didn't come back with any questions or concerns.

16 **MEMBER McDILL:** And Cameco, from your point
17 of view of consultation?

18 **MR. CLARK:** Dale Clark, for the record.

19 We are aware and we do take our duty to
20 consult very seriously and have certainly complied with
21 that responsibility during this licence period.

22 We have -- on numerous occasions, we have
23 provided the information, the invitations to events,
24 whether that be the community forums or other events that
25 we have in the area to the local aboriginal groups. For

1 the most part, I would concur what was just said, that
2 they have chosen not to participate in most of those
3 events.

4 One example where we have engaged more
5 personally is with the Métis Nation of Ontario and we have
6 had senior management meetings with the Métis Nation of
7 Ontario and have an open dialogue and communication that
8 is able to take place there. So we will continue with
9 that responsibility and maintain that open dialogue to
10 ensure that information is out there, open and
11 transparent.

12 **MEMBER McDILL:** And do you consult on both
13 sides of the international boundary or on this side?

14 **MR. CLARK:** Dale Clark, for the record.
15 I believe that is just on the Canadian
16 side.

17 **MEMBER McDILL:** Thank you, Mr. Chairman.

18 **THE CHAIRMAN:** Thank you.

19 Anybody else? Any other questions? No?

20 I just had one and that is about the
21 depleted uranium from Saskatchewan getting around the
22 globe. I don't remember if I have seen it somewhere into
23 weapons.

24 What I am trying -- I thought the depleted
25 uranium comes under the NCEA and the EAA agreements; is

1 depleted uranium metal for AOT's use
2 in the manufacturing of depleted
3 uranium penetrators and U.S.
4 Department of Defence contracts."

5 So for one thing, the dates 1988 to 1990
6 would seem to implicate Cameco more directly, but further
7 down on that same page -- this is from the work of Dr.
8 Gordon Edwards, the head of Canadian Coalition for Nuclear
9 Responsibility; this is a quote:

10 "To produce just 1 kilogram of 5
11 percent enriched uranium requires an
12 input of 11.8 kilograms of natural
13 uranium and results in 10.8 kilograms
14 of depleted uranium."

15 [And then he continues] "In other
16 words, over 90 percent of all
17 Saskatchewan uranium that was ever
18 sent to the USA for enrichment for
19 peaceful purposes as nuclear reactor
20 fuel has remained in the USA as
21 depleted uranium, DU." [And he goes on
22 to say] "There is absolutely no
23 distinction between the DU of Canadian
24 origin and the DU of other origins;
25 U.S., Australia, et cetera. It all

1 goes into the same large stockpiles of
2 DU and a portion of the stockpile of
3 DU has always been used freely and
4 without any compunctions by the U.S.
5 military for military purposes. Thus,
6 there is some Canadian uranium in
7 every DU weapon."

8 **THE CHAIRMAN:** Cameco, do you want to
9 reply?

10 My understanding is that we have an
11 agreement -- we, Canada, has an agreement with the U.S.
12 that prohibits use of uranium and depleted uranium for
13 non-peaceful activity.

14 So can you explain this or it is
15 something that is our problem or it is an American non-
16 complying with our agreement?

17 **MR. CLARK:** Dale Clark, for the record.

18 I -- in terms of this, I would just -- I
19 would reiterate that Cameco produces and sells uranium for
20 peaceful purposes and we work closely with the Canadian
21 government and with the IAEA. The Canadian government
22 oversees these exports to all countries to ensure that
23 they are used for peaceful purposes.

24 **THE CHAIRMAN:** Staff?

25 **MR. ELDER:** Peter Elder, for the record.

1 to produce the plutonium that is used
2 in almost all nuclear warheads."

3 So there are multiple connections to the
4 military usage and my point -- the context of this -- is
5 that because Cameco and Eldorado before it have been
6 involved in these activities, that there may be some who
7 would regard this as a facility involved in military
8 activities.

9 We have a similar problem in the United
10 States. About a decade or 15 years ago, a commercial
11 nuclear power plant in Tennessee, Watts Bar, was permitted
12 to produce tritium for hydrogen bombs. And so we raised
13 this concern in the United States as well. When you blur
14 the lines between nuclear power and nuclear weapons, it
15 could open up the threat of security concerns, a tax upon
16 these facilities because they would be regarded by enemies
17 as a part of the military industrial complex. That is the
18 context for this discussion.

19 **THE CHAIRMAN:** Well, I'll await -- that is
20 not our understanding how shipments from Canada are being
21 used, but I will defer to try to get some evidence about
22 that. So thank you for that.

23 What are we going to do now?

24 We are now scheduled -- thank you for your
25 presentation. We are now scheduled to kind of break up

1 but -- okay, we will do some of the written material for
2 about a half an hour because we still haven't had enough,
3 and just to alleviate some of the work for tomorrow.

4 So, Marc, guide us to where ---

5 **MR. LEBLANC:** So we'll start in two
6 minutes. Thank you.

7 **(SHORT PAUSE/COURTE PAUSE)**

8 **THE CHAIRMAN:** So the way we're going to
9 proceed is the Secretary of the Commission will identify
10 the intervenors and we will interrupt only when we have
11 questions.

12 So, Marc?

13 **MR. LEBLANC:** So we have a large number of
14 written interventions. We don't plan on going through all
15 of them this evening but we'll do a few so that we can, as
16 the President mentioned, give a bit more time for the oral
17 presentations tomorrow and maximize our time here in Port
18 Hope.

19 So the first written submission is from Ms.
20 Lori Carter as outlined in CMD 11-16.2.

21
22 **11-H16.2**

23 **Written submission from**

24 **Lori Carter**

25

1 **MR. LEBLANC:** Any questions from the
2 Members?

3 So the next written submission is from Ms.
4 Debbie Hoselton as outlined in CMD 11-H16.3.

5

6 **11-H16.3**

7 **Written submission from**

8 **Debbie Hoselton**

9

10 **MR. LEBLANC:** Any questions from the
11 Members?

12 **THE CHAIRMAN:** I have one. The
13 intervention mentioned a co-op student. I'm just curious
14 to know how many co-op students you hire every year?

15 **MR. CLARK:** Dale Clark, for the record.

16 That varies from year to year, but probably
17 in the neighbourhood of three to four -- three to five
18 summer students or co-op students that we utilize in the
19 conversion facility every year.

20 **THE CHAIRMAN:** Any particular place to
21 recruit them or is it kind of a national ---

22 **MR. CLARK:** I'm sorry?

23 **THE CHAIRMAN:** Where do you find them?

24 **MR. CLARK:** Multiple sources. We do find
25 some through university contacts that we have in place.

1 We also do utilize employee relations and connections and
2 provide opportunities for families and students of
3 employee families. So multiple sources that we take those
4 co-op students or summer students from.

5 **THE CHAIRMAN:** Do you hire any of them?

6 **MR. CLARK:** I'm sorry?

7 **THE CHAIRMAN:** Do you hire any of them?

8 **MR. CLARK:** We have. Actually we have had
9 some good success from that. And, in fact, just this year
10 we have hired one of those students that worked as a co-op
11 student for a number of years or for two terms I believe,
12 and have hired as a full-time engineer and is a very good
13 success for us.

14 **THE CHAIRMAN:** Thank you.

15 **MR. LEBLANC:** The next written submission
16 is from Lake Ontario Waterkeeper as outlined in CMD 11-
17 H16.4.

18
19 **11-H16.4**

20 **Written submission from**
21 **Lake Ontario Waterkeeper**

22 **MR. LEBLANC:** Any questions from Members?

23 **THE CHAIRMAN:** Oh, yeah, we got lots for
24 them.

25 **Dr. Barriault?**

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

2 I guess one of the questions -- or one of
3 the comments really in the bullets in the first executive
4 summary at the beginning is the discharge of effluent --
5 untreated effluent waters from the plant. I guess I'd
6 like to hear some comments on that.

7 It's on the executive summary of that
8 presentation. It refers to both discharge process and
9 stormwater emissions.

10 **MR. CLARK:** Dale Clark, for the record.

11 So for the comment on the process effluent
12 discharge, I mentioned in the presentation and at the Day
13 One Hearing we are requesting to retain that flexibility
14 to -- that the current licence provides to discharge this
15 treated water. And I would emphasize that we're talking
16 about treated water from the site and that's what we have
17 in the current licence and have safe release limits
18 established for in the current licence and have operated
19 to those standards in the past. So we're asking to retain
20 the flexibility of those limits for that treated water
21 only. That is for treated water.

22 That's important for us today and, as I
23 mentioned, primarily because we have added a number of
24 additional groundwater treatment wells around the facility
25 in recent years that has added to the demand on our

1 wastewater treatment circuit. And as that -- as we near
2 capacity of that circuit we are investigating and
3 assessing different options to ensure that we can meet
4 that commitment going forward, maintain that protection
5 for the environment that we have today, and that includes
6 assessing different options.

7 Some of those options, such as a reverse
8 osmosis unit, may include the reinstatement of that
9 discharge of a treated water stream, which is what we have
10 in the licence today and have maintained for a number of
11 years.

12 **MEMBER BARRIAULT:** Do you want to comment
13 also on your stormwater emissions?

14 **MR. CLARK:** Yes, so the stormwater, this is
15 primarily covered by the Ministry of the Environment
16 conditions. Our stormwater -- there is a requirement to
17 do a comprehensive stormwater survey and assessment on a
18 regular basis. We've conducted that. We've completed
19 that both in 2010 and 2011.

20 That data was included in the risk
21 assessment for the site, completed in 2010, and concludes
22 no risk to the public or the environment associated with
23 these discharges of stormwater.

24 In addition, the stormwater and as part of
25 that risk assessment process we've established objectives,

1 treatment level -- sorry -- objectives for certain
2 loadings in that stormwater. And I would say stormwater
3 management will continue to be a key component of our
4 environmental management plan going forward.

5 So we will continue to focus on that and
6 meet those commitments as laid out by the Ministry of the
7 Environment.

8 **MEMBER BARRIAULT:** Thank you.

9 CNSC, the comment is made that the licence
10 should address stormwater emissions from the site, which
11 currently contains more than twice the CNSC internal
12 limits on uranium discharge. Is this correct?

13 **MR. ELDER:** I'll ask Mike Rinker to address
14 that.

15 **MEMBER BARRIAULT:** Thank you.

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

17 The CNSC staff also looked at stormwater
18 re-analysis that was done in 2009/2010 and the stormwater
19 quality and the impacts on the environment and the people
20 was looked at in the context of the environmental risk
21 assessment that was done at that time.

22 Within the framework of that risk
23 assessment criteria or objectives were set to the releases
24 of things like, for example, uranium, that would either
25 provide protection to humans or protection of the

1 environment, whichever was least, to make sure that both
2 environment and people were protected.

3 The results of that stormwater analysis
4 showed that stormwater -- releases of uranium from
5 stormwater are around two to three percent of those
6 criteria. So they're quite low compared to what is --
7 what would be a threshold that would pose a risk to the
8 environment and to people.

9 **MEMBER BARRIAULT:** I guess the question may
10 be misunderstood.

11 What I'm understanding is that it exceeds
12 twice your internal limits for CNSC. Is that correct?

13 **DR. THOMPSON:** Patsy Thompson, for the
14 record.

15 The CNSC when an assessment was done under
16 the *Canadian Environmental Protection Act* to look at the
17 environmental impacts of radionuclides, we looked at best
18 practices for treatment of uranium from effluent from
19 milling processes. And at that time the technology could
20 readily achieve 100 micrograms per litre. And so on that
21 basis the CNSC has used 100 micrograms per litre as a
22 design objective for treatment of effluent containing
23 uranium.

24 What the intervenor raises is the issue
25 that uranium in stormwater has been measured to

1 concentrations of about 218 micrograms per litre, and so
2 it gives the impression that the impacts to the
3 environment would be significant.

4 What isn't mentioned in that is that the
5 actual volume of water discharge to Lake Ontario is quite
6 small and so the loading -- so the concentrations in the
7 volume going to Lake Ontario is the equivalent of about
8 five kilograms per year, which is very much less than any
9 mining operation's discharge annually. This is the
10 comparison that the intervenor did.

11 And so from that point of view, the
12 concentrations are high, the volumes are low, and there is
13 no impact to Lake Ontario.

14 But stormwater management is something that
15 has been assessed through the Vision 2010 comprehensive
16 study under CEAA and moving forward it's one of the water
17 management systems that will need to be looked at for
18 conducting the activities related to Vision 2010.

19 **MEMBER BARRIAULT:** Thank you.

20 Thank you, Mr. Chairman.

21 **THE CHAIRMAN:** Monsieur Harvey?

22 **MEMBER HARVEY:** Yes, I would like to come
23 back to the request for change to the proposed licence.
24 You mention in your presentation that the existing water
25 treatment facility is nearing its capacity or close of the

1 capacity. Are you -- I mean...

2 **MR. CLARK:** Dale Clark, for the record.

3 Well, I don't have an exact figure of the
4 capacity but we are probably in the range of 80 to 90
5 percent of the capacity. So we are certainly able to
6 maintain that and maintain our commitment and protection
7 of the environment today. We are committed to that.

8 But we recognize that we are -- you know,
9 we're coming close to that limit and we're proactively
10 looking at ways to ensure that we can meet that commitment
11 going forward in the future as well.

12 **MEMBER HARVEY:** What could bring the volume
13 to the full capacity? What changes would oblige?

14 **MR. CLARK:** Dale Clark, for the record.

15 There are other examples that we can think
16 of that could contribute to additional water loadings on
17 site, whether that's one-time increases or on-going. You
18 know, changes in the washing of equipment on site in terms
19 of, you know, any excavation work on site that may take
20 place, may deal with or generate a volume of water during
21 that particular construction work. Or it may be simply
22 for reliability purposes of the existing unit.

23 So there may be a number of different
24 causes. I wouldn't say there's one change that we expect
25 to anticipate today. We are more -- we're being proactive

1 in identifying these options before those situations come
2 up.

3 **MEMBER HARVEY:** But the request is mainly
4 based on the process you are -- I'm just trying to find
5 the place. You're evaluating additional treatment
6 processes, employing technology such as reverse osmosis,
7 but is this the only solution or there is other solutions
8 that would not bring you to that request?

9 **MR. CLARK:** So ---

10 **MEMBER HARVEY:** In fact, is it the easiest
11 solution?

12 **MR. CLARK:** Dale Clark, for the record.

13 Currently we evaporate that water and
14 that's our method of treatment today. We are looking at a
15 number of different options. I mentioned the reverse
16 osmosis. That's one option available and not necessarily
17 the only option.

18 But we are looking at different
19 environmentally friendly and more efficient methods that
20 may be available to us. So there may be others but we are
21 -- we're assessing those options today.

22 **MEMBER HARVEY:** So going back to past
23 practices is quite often not very well -- a very nice
24 practice, at least in the view from the public to say that
25 it wasn't -- well, anyway, go ahead.

1 **MR. CLARK:** The reverse osmosis unit that I
2 mentioned is certainly a new process. If I understand you
3 correctly, you know, expanding the current system capacity
4 is an option but we're looking at multiple options and
5 ways of improving the efficiency of that process. There
6 may be other options available to us. And we're committed
7 to maintaining that commitment of protecting the
8 environment through that groundwater treatment program
9 that we have.

10 And again, it's important to emphasize this
11 is -- we're talking about treated water, treated water
12 that exists in the licence conditions today, and we have
13 operated and had that operation within safe limits
14 established in the licence today for many years in the
15 past.

16 **THE CHAIRMAN:** But you've got to understand
17 our position here. You've on your own stopped releasing
18 treated water. To now all of a sudden go back is not
19 something that we are looking forward to, let's put it
20 this way. So we'd like to know what will it take for you
21 to keep to your commitment of no release of treated water,
22 period?

23 **MR. CLARK:** Dale Clark, for the record.

24 I would say, the -- you know, through the
25 current method and through the evaporation system there is

1 -- that material is released through the evaporation. You
2 know, there is controls and we measure or we ensure that
3 the emissions through that system are controlled and
4 within our site limits and our emission management
5 program.

6 We are committed to know -- certainly we do
7 not and would not be discharging any untreated -- any
8 process -- untreated process effluent here. But we
9 believe this is an important aspect in order to maintain
10 that commitment going forward for the groundwater
11 treatment program. We believe it's important to maintain
12 that option and flexibility that we have today and have
13 operated safely with those conditions for many years in
14 the past.

15 **MEMBER HARVEY:** Mr. Elder, you mentioned, I
16 think this morning, that you were waiting some information
17 about that. Is it -- am I right?

18 **MR. ELDER:** Peter Elder, for the record.
19 What we stated before -- we stated this
20 morning and we stated again, is there are two aspects when
21 we do effluent monitoring. You need to have a limit and
22 then you also need -- we require that the action levels
23 that make sure your process is doing what it's supposed to
24 do, operating normally from an engineering, are you using
25 best practices and process.

1 So we can say the limit is protective but
2 we always require that action level underneath. So we
3 don't have the information to put in place those action
4 levels -- those lower level controls to make sure they
5 don't get near those limits.

6 So that's what's missing at this stage and
7 those are very dependent on the technology. So you can
8 say my limit is fine, but I don't really know how they're
9 going to meet and make sure they ensure they respect that
10 limit.

11 **MEMBER HARVEY:** Do you think going back to
12 that is a good practice.

13 **MR. ELDER:** If they are using state-of-the
14 art technology to treat this water to make sure that
15 they're getting not only the uranium but all the other
16 material that they may have to treat in the groundwater,
17 it may be -- we're concentrating right now in terms of the
18 releases of uranium and what uranium number is.

19 They have to be in a position to show that
20 they are treating with all the material by any process,
21 evaporation, as that groundwater will contain other things
22 besides uranium and we're looking at all ways to make sure
23 you're treating everything.

24 So the best option really depends a bit on
25 what you're going to be treating.

1 Their increase is to do with the fact that
2 they're treating -- they're dealing with more groundwater.
3 So we want to ensure that they're -- evaporation is always
4 perfectly fine. For uranium, we also make sure it's
5 perfectly fine for everything else. There may be other
6 options that are worthwhile of being explored.

7 **MEMBER HARVEY:** Are you saying that the
8 evaporation is best?

9 **MR. ELDER:** I'll pass it back to Mike
10 Rinker to say.

11 Under some circumstances, for some things.
12 It may not be the best all the time.

13 **MR. RINKER:** Mike Rinker, for the record.
14 Certainly as it's performing now,
15 evaporation is an excellent technology. But I think if we
16 look in the context of water management at the Port Hope
17 site, what's being released is the evaporated water which
18 does have a release and there's also a groundwater plume
19 with uranium in it that is -- 70 percent is being captured
20 and sent to the treatment plant, but not all of it is.

21 If there was further work to be done at
22 Port Hope in terms of treating groundwater, would we
23 balance between the release of some of that contaminated
24 uranium in groundwater as a plume versus capturing it and
25 treating it somehow, whether through an evaporator or

1 through some other means? There's some benefits to that.

2 So if we exceeded -- if Cameco exceeded the
3 capacity of the evaporator because they needed to treat
4 some additional contaminated groundwater, I think whether
5 it's additional treatment by an evaporator or some other
6 means, there's some positives to that.

7 But as Mr. Elder has said, we would need to
8 look at that into the context of what exactly is Cameco's
9 plan and why would they need that extra capacity for
10 treatment? Is it for contamination that's being released
11 without treatment or is it for some other means? These
12 have context to our assessment.

13 **MEMBER HARVEY:** If you do that, is this to
14 say that you're going to abandon the evaporation or you
15 will just compensate with the releases?

16 **MR. THORNE:** Andy Thorne, for the record.

17 I would just like to say the evaporation
18 technology that we currently utilize at the conversion
19 facility is a very effective means of treating and dealing
20 with the groundwater that we're generating.

21 One of the disadvantages of that technology
22 is it's extremely energy-intensive. So as a company,
23 we're always striving to look at ways to reduce our impact
24 on the environment through environmental leadership and
25 part of this, we look at other technologies is really

1 trying to look at, is there other technology that is less
2 energy intense and producing less greenhouse gases, and
3 perhaps this state-of-the-art reverse osmosis is a better
4 solution for us in the long term.

5 So that's really why we're taking time to
6 pause and look at the different technology available to
7 us.

8 And if we choose and decide that reverse
9 osmosis is the way to go, it's not possible to deploy that
10 technology without a treated effluent stream from that
11 equipment.

12 So that's really why we're at this juncture
13 right now.

14 **THE CHAIRMAN:** I'm told that we're running
15 out of satellite time here. So how much more time do we
16 actually have? Two minutes?

17 I think we may have to continue this
18 tomorrow. I didn't expect technology to stop us. So why
19 don't we break here without finishing this. So we will
20 just pick it up -- we will finish it up tomorrow because I
21 think this is a hot topic and I don't think that we're
22 finished with it yet.

23 So tell us, what are we going to do and
24 when are we going to do it tomorrow morning?

25 **MR. LEBLANC:** Yes, we'll start at 8:30.

1 We'll complete this written submission and then we'll go
2 with the oral presentations as per the published agenda.

3 So 8:30 tomorrow morning.

4 **THE CHAIRMAN:** Thank you, all.

5 --- Upon adjourning at 9:58 p.m./L'audience est levée à

6 21h58

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