

**Canadian Nuclear  
Safety Commission**

**Commission canadienne de  
sûreté nucléaire**

**Public hearing**

**Audience publique**

**Cameco Corporation:**

Application by Cameco  
Corporation for the Renewal of  
Class IB Nuclear Fuel Facility  
Operating Licence for Blind River  
Refinery in Ontario

**Cameco Corporation :**

Demande de Cameco Corporation  
pour le renouvellement de son permis  
d'exploitation d'une usine de  
combustibles nucléaires de catégorie  
IB à Blind River en Ontario

**November 3<sup>rd</sup>, 2011**

**Le 3 novembre 2011**

Public Hearing Room  
14<sup>th</sup> floor  
280 Slater Street  
Ottawa, Ontario

Salle d'audiences publiques  
14<sup>e</sup> étage  
280, rue Slater  
Ottawa (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

1       **Cameco Corporation:**  
2       **Application by Cameco**  
3       **Corporation for the Renewal of**  
4       **Class IB Nuclear Fuel Facility**  
5       **Operating Licence for Blind River**  
6       **Refinery in Ontario**

7  
8                   **MR. LEBLANC:** So this is Day One of the  
9       public hearing for the Blind River Refinery. The Notice  
10      of Public Hearing 2011-H10 was published on August 24<sup>th</sup>,  
11      2011.

12                   Submissions from Cameco and CNSC staff were  
13      due and filed by October 3<sup>rd</sup>, 2011. The presentations  
14      from Cameco and CNSC staff were filed on October 26<sup>th</sup>.  
15      Commission Member Document or CMD 11-H18.A is confidential  
16      and will be discussed in closed session, if necessary,  
17      after the public portion of the hearing. The Commission  
18      has already determined that such a closed session will not  
19      be necessary.

20                   Day Two of the public hearing is scheduled  
21      for January 18<sup>th</sup> and 19<sup>th</sup>, 2012 and will be held at the  
22      Town Park Recreation Centre in Port Hope. The public is  
23      invited to participate either by oral presentation or  
24      written submission at the Day Two hearing. The deadline  
25      for the public to file a request to participate and a

1 written submission is December 19<sup>th</sup>.

2 In a notice published on August 16<sup>th</sup>, the  
3 CNSC announced that it is allotting funds under its  
4 participant funding program. October 14<sup>th</sup> was the  
5 deadline to file a request to receive participant funding.  
6 The Commission received three requests for funding  
7 regarding the Blind River Refinery. A funding review  
8 committee independent of the Commission, as it is made up  
9 of external members not related to the CNSC, rendered its  
10 decision recently and approved two of the three requests.

11 Mr. President?

12 **THE CHAIRMAN:** Okay, I would like to start  
13 the hearing by calling on a presentation from Cameco  
14 Corporation, as outlined in Commission Member Document  
15 H18.1 and H18.1A.

16 I understand that, Mr. Thorne, you're going  
17 to make a presentation that will start with a short  
18 description of the common elements for the three  
19 installations and then you'll move onto Blind River. So  
20 please proceed.

21

22 **11-H18.1 / 11-H18.1A**

23 **Oral presentation by**

24 **Cameco Corporation**

25

1                   **MR. THORNE:** Good morning, President Binder  
2                   and Members of the Commission. My name is Andy Thorne and  
3                   I'm the Vice-President of Cameco's Fuel Services Division,  
4                   and I'll be making a short presentation today on behalf of  
5                   the Division.

6                   In 2007, Cameco established the Fuel  
7                   Services Division with a divisional head office located in  
8                   Port Hope. This provides an important link between Cameco  
9                   Corporation and its Ontario operations ensuring better  
10                  oversight and encouraging the sharing of best practices  
11                  amongst the facilities.

12                  The Fuel Services Division has developed a  
13                  strategic plan which is aligned to the corporate strategy  
14                  and Cameco's four measures of success, which are safe  
15                  healthy and rewarding workplace, clean environment,  
16                  supportive communities and outstanding financial  
17                  performance. This strategic plan is reflected in site  
18                  objectives and targets ensuring division operations  
19                  achieve safe, clean and reliable operations.

20                  The Fuel Services Division is comprised of  
21                  five locations in Ontario. That includes three CNSC  
22                  licensed facilities. These are the Blind River Refinery,  
23                  the Port Hope Conversion Facility and Cameco Fuel  
24                  Manufacturing in Port Hope. Non-licensed facilities are  
25                  Cameco Fuel Manufacturing in Cobourg and the Divisional

1           Headquarters located in Port Hope.

2                           The Fuel Services Division leadership team  
3 ensures that site objectives are aligned with Cameco's  
4 corporate vision and values and provides the necessary  
5 oversight of safety, environmental, operational and  
6 regulatory matters.

7                           The divisional management team meets  
8 regularly to review operational performance against  
9 targets and provides key financial and procurement  
10 services. The management team is also very supportive of  
11 efforts to share best practices as well as promoting  
12 collaboration between the various sites.

13                           As indicated on this slide, the Fuel  
14 Services Division is led by myself and includes the  
15 general managers of the CNSC licence facilities as well as  
16 divisional directors for compliance and licensing, finance  
17 and procurement, transportation and public and government  
18 affairs.

19                           The Fuel Services Division provides support  
20 to its operations through a number of avenues. These  
21 include environmental leadership, initiatives, including  
22 hydrogeology and waste management, environmental  
23 assessments, fire and security, public, regulatory and  
24 government relations, procurement and materials  
25 management, as well as financial services. These

1 initiatives, in support of our operations, are designed to  
2 ensure the achievement of safe, clean and reliable  
3 production in the years to come.

4 We are proud of the accomplishments we have  
5 achieved, and I look forward to my general managers  
6 sharing these successes with you.

7 That concludes my remarks, and I'll now  
8 pass the presentation over to Chris Astles, who is the  
9 General Manager of the Blind River Refinery. Thank you.

10 Chris?

11 **MR. ASTLES:** For the record, my name is  
12 Chris Astles, General Manager of the Cameco's Blind River  
13 Refinery. With me today is Joe DeGraw, Superintendent  
14 Quality, Compliance and Licensing for the refinery.

15 I will be making today's presentation on  
16 behalf of the refinery.

17 The refinery currently has a five-year  
18 operating licence from the CNSC which expires at the end  
19 of February 2012.

20 As the Commission is aware from our  
21 Application, we are requesting a 10-year operating licence  
22 at this time. We feel our performance over the operating  
23 history of the refinery warrants a longer licence.

24 As part of our Application we're also  
25 looking to increase our licence annual production capacity

1 from 18,000 tonnes of uranium as  $UO_3$  to 24,000 tonnes of  
2  $UO_3$ .

3 Despite the current economic downturn,  
4 Cameco believes the nuclear industry has a great future  
5 and we want to position ourselves to be able to take  
6 advantage of growth opportunities when they present  
7 themselves.

8 At Cameco we are committed to protecting  
9 the health and safety of people and the environment, and  
10 our operating performance over the years speaks to this  
11 commitment. The design, construction, and operation of  
12 the refinery is intended to eliminate or minimize the  
13 potential of radiological, chemical, or other physical  
14 hazards to facility personnel, local residents, or the  
15 surrounding community.

16 This picture shows the licensed facility.  
17 As indicated in our Application and CMD, Cameco owns a  
18 considerable buffer zone around the facility.

19 I am pleased to inform the Commission that  
20 the Blind River Refinery achieved five years without a  
21 lost time injury in June of 2011. Previously, the  
22 refinery had achieved over 11 years without incurring a  
23 lost time injury. This remains a record for Cameco's  
24 Canadian operations and is one we hope to match and exceed  
25 during the next licensing period.

1                   The refinery was reregistered to the ISO  
2                   14,001 environmental management system earlier this year.  
3                   The operations has been registered to the standards since  
4                   2002.

5                   Cameco has always tried to foster good  
6                   relationships with the communities in which we operate and  
7                   Blind River is no exception. A public information survey  
8                   conducted in 2009 reaffirmed that community support for  
9                   the operation remains strong.

10                  As I mentioned earlier, the requested  
11                  production capacity increase will allow us to take  
12                  advantage of opportunities as they arise.

13                  We have a number of different systems in  
14                  place to support our overall management system. During  
15                  the current licensing period Cameco developed a new  
16                  corrective action program to improve the quality of  
17                  internal accident and incident investigations, and also  
18                  developed a new electronic database called CIRS to  
19                  standardize the documentation of these events and  
20                  subsequent corrective actions.

21                  Succession planning and leadership  
22                  developments are also key components to Cameco's overall  
23                  management system. The leadership development program  
24                  enables us to give our supervisory employees the  
25                  additional tools, skills, and confidence they need to



1       succeed in the organization.

2                        Cameco has been implementing a systematic  
3       approach to training at all of our Canadian operations  
4       over the last few years. The SAT process covers initial  
5       employee training and routine requalification training, as  
6       well as requalification training of employees after an  
7       extended absence from the workplace.

8                        The refinery continues to place a strong  
9       emphasis on communication with employees at all levels of  
10      the operation. A key component of this communications  
11      plan is the approach of management by walking around to  
12      foster interaction with employees. Cameco also encourages  
13      all employees to build and maintain a questioning attitude  
14      with respect to health, safety, radiation protection, and  
15      environmental issues at the site.

16                      To proactively address workforce  
17      requirements a workforce succession planning process was  
18      initiated in 2010 in conjunction with Cameco's corporate  
19      human resources talent management function.

20                      The refinery has not exceeded any CNSC  
21      regulatory action levels or limits during the current  
22      licensing period. The new corrective action process and  
23      use of the CIRS database to document, trend, and track  
24      events and corrective actions is described in some detail  
25      in our CMD. An example of this is the lessons learned

1 from the Port Hope Conversion Facility subsurface  
2 contamination event investigation and subsequent  
3 corrective actions.

4 Based on this event the refinery reviewed  
5 and improved the inspection program for our own subsurface  
6 systems. We also hired a qualified third party expert to  
7 review our entire groundwater monitoring program. While  
8 the review indicated the existing groundwater monitoring  
9 program was acceptable, there were a number of  
10 recommendations made to improve the program including the  
11 drilling of additional monitoring wells around our site.  
12 Cameco has incorporated these recommendations including  
13 the drilling of additional wells into the current site  
14 groundwater monitoring program. The new wells were  
15 drilled in 2008.

16 Over the licensing period the Blind River  
17 Refinery has made a number of operational improvements  
18 that have had a direct impact on the operation. One of  
19 the most significant changes has been the elimination of  
20 ammonia as a chemical reagent at the site by modifying the  
21 process. The ammonia was used to neutralize nitric acid  
22 in the OK liquor prior to final concentration to uranyl  
23 nitrate hexahydrate.

24 During this licence period the site has  
25 designed and installed a drum decontamination circuit that

1 has allowed for the disposal of over 100,000 drums. In  
2 2007 Cameco installed a new pollution control circuit for  
3 our incinerator to meet new Canada-wide emissions  
4 standards. Commissioning of the circuit took place in  
5 2009 with the processing of contaminated and combustibles  
6 generated from both Blind River Refinery and the Port Hope  
7 Conversion Facility.

8 Also we have purchased new laboratory  
9 instrumentation for environmental sampling analysis to  
10 increase the reliability and accuracy. We have also  
11 looked at other areas of risk mitigation to the  
12 environment; an example would be the elimination of bulk  
13 storage of sulphuric acids.

14 The refinery maintains a safety report  
15 which is typically updated every five years. The report  
16 summarizes a systematic review of the site operations to  
17 identify and assess hazards and potential risks to the  
18 public and the environment from refinery operations.  
19 Cameco uses a hazards and operability, or a HAZOP approach  
20 to assess new processes and equipment.

21 In support of our requested production  
22 capacity increase, an independent third party engineering  
23 assessment was conducted with respect to operating the U03  
24 plant at higher production rates. The assessment  
25 indicated, with some minor process modifications, the

1 plant could safely operate at the higher rates needed to  
2 achieve the higher annual production throughput. These  
3 process modifications are planned for the next licensing  
4 period.

5 The facility is compliant to the NFPA 801  
6 standard for fire protection and has conducted a fire  
7 hazard analysis, or FHA, for the refinery that meets the  
8 requirements of this standard. The FHA has been reviewed  
9 and accepted by the CNSC staff.

10 During the current licensing period the  
11 provincial MOE introduced a new environmental regulation  
12 requiring sites, such as the refinery, to develop a  
13 documented spill prevention and contingency plan that  
14 contain specific information.

15 In addition, a third party expert was  
16 retained to assess our facility against lessons learned  
17 from the Fukushima Daiichi event. The experts concluded  
18 that our facility had adequate defence in-depth safety  
19 barriers in place to protect the public, workers, and the  
20 environment and has adequate emergency preparedness and  
21 emergency response capabilities.

22 Improving the overall physical design of  
23 the refinery is a continuous process. As mentioned  
24 earlier, the site has further enhanced its fire protection  
25 system. The installation of the drum cutting and

1 decontamination circuit went through significant design  
2 control and third party oversight. This included third  
3 party safety analysis of the robotics operation, fire  
4 hazard analysis review for compliance, job hazard analysis  
5 of the operation by a third party, as well as detailed  
6 training and operating instructions. We have also  
7 improved the protection of the environment with the paving  
8 of storage yards where drum material is being stored.

9           Near the end of the previous licensing  
10 period all of Cameco's Canadian operations migrated to  
11 SAP, which is a corporate-wide enterprise application  
12 software for asset management, maintenance management,  
13 accounting, and purchasing functions. The site was  
14 inspected by the technical safety and standards authority  
15 in 2010 and subsequently received new certificates of  
16 authorization. We also conducted in-house and third party  
17 testing of our fire protection systems.

18           Cameco made numerous changes and  
19 improvements to our in-surface inspection program as a  
20 result of the Port Hope Conversion Facility subsurface  
21 contamination event. As well, the site's preventive  
22 maintenance reports and KPIs are summarized and reviewed  
23 regularly by site management to ensure all regulatory and  
24 safety related PMs are being carried out and the  
25 objectives are being met.

1           The refinery has a comprehensive radiation  
2 protection program in place with both an external and  
3 internal dosimetry program, an extensive in-plant sampling  
4 program, a respiratory protection program that meets the  
5 requirements of the CSA standard and an extensive  
6 radiation surveying and contamination monitoring program.  
7 There were no exceedences of CNSC limits with respect to  
8 radiation protection during the current licensing period.

9           The radiation protection program is one of  
10 the site programs that has considerable oversight, as all  
11 aspects of the program are audited on a routine basis as  
12 part of the internal audit program. In addition, the  
13 program is also audited by independent, qualified, third  
14 parties to verify compliance against applicable regulatory  
15 requirements and licence requirements.

16           Reducing employee exposure is a constant  
17 focus at the refinery. A new automated UO3 drumming  
18 station has been installed with UO3 being transferred from  
19 a tote bin through a drumming station that is dust free  
20 and enclosed, minimizing the potential for employee  
21 radiation exposure.

22           As well, the refinery historically utilized  
23 nuclear gauges in various process areas for measuring of  
24 process conditions. The nuclear gauges are no longer  
25 required and we removed from the site using a qualified

1 licensed contractor.

2 The double drum dumper has been modified to  
3 reduce air-in leakage, increase dust removal and improve  
4 the protection of the employees. Not only were physical  
5 changes carried out, but operating procedures were  
6 improved for employee protection.

7 To reduce employee exposure, shielding has  
8 been placed around the calcin product storage pad.

9 In order to ensure we remain compliant with  
10 all safety and health-related legal and regulatory  
11 requirements, Cameco contracts with qualified third-party  
12 expert to periodically assess our compliance to the  
13 relevant sections of the *Canada Labour Code* and associated  
14 regulations.

15 Achieving five years lost-time injury free  
16 is a significant milestone. This success is attributed to  
17 attitude and commitment of the employees to work safely,  
18 by management to support and management by walking around  
19 philosophy, and the questioning attitude by all employees.

20 We have implemented an Arc Flash Program  
21 that ensures employees are qualified and can work safely  
22 while doing electrical isolation. We have also  
23 implemented a formalized housekeeping program to improve  
24 safety at the site.

25 Our hazard recognition program is a key

1 area for employee protection, and this is a systematic  
2 review process for jobs that will be conducted where the  
3 review identifies areas that must be addressed. This  
4 includes locking out of equipment, clearing of lines prior  
5 to first break, verification of radiation levels prior to  
6 work beginning, and working at heights or confined-space  
7 requirements.

8 The refinery has had no exceedences of CNSC  
9 regulatory limits or action levels during the current  
10 licensing period. Cameco contracts to a third party to  
11 assess our compliance to federal and provincial  
12 environmental legislation. The significant environmental  
13 improvements made during the licensing period are noted on  
14 the slide.

15 The site has successfully eliminated the  
16 use of ammonia as a processing reagent, eliminating the  
17 number one potential hazard for the refinery with respect  
18 to public safety.

19 We have installed the 14 additional  
20 groundwater sampling wells around the refinery.

21 Installation of the NO<sub>x</sub> analyzer for  
22 monitoring emissions and the installation of a  
23 refrigeration circuit to improve the absorber NO<sub>x</sub>  
24 abatement process.

25 The installation of the incinerator air



1 pollution control circuit has been very successful at  
2 significantly reducing emissions.

3 Cameco is committed to emergency management  
4 and fire protection. A sizable portion of the training  
5 done at the refinery each year is spent on emergency  
6 response-related training activities. ERT personnel are  
7 trained to the NFPA 472 and NFPA 600 standards.

8 The mutual aid agreement signed with the  
9 Blind River Fire Department and Blind River Refinery  
10 provides an additional layer of support to the refinery's  
11 emergency response capability.

12 Cameco's commitment to support the local  
13 emergency response organizations has extended to their  
14 training requirements with Cameco providing financial  
15 assistance to send volunteer fire fighters from Blind  
16 River, Mississauga First Nation, Township of the North  
17 Shore and Huron Shores Township to Lambton Fire College.

18 Emergency response is a key component to  
19 the site fire protection program. In developing the fire  
20 protection program, a defence in-depth approach was used  
21 to ensure that the fire protection measures are adequate.  
22 The fire protection Program is made up of the fire hazard  
23 analysis and the fire protection supporting documents.

24 Cameco is committed to the support of the  
25 local fire departments with a donation of equipment and

1 funds to help their groups. In the past, we have donated  
2 an aerial fire trunk, bunker gear, SCBA packs, thermal  
3 imaging cameras as well as other equipment.

4 In the area of waste management, we have  
5 done a lot of work during the current licensing period in  
6 reducing the inventory of historical waste materials and  
7 we are quite pleased with our efforts.

8 We have been able to effectively process  
9 and-or otherwise dispose of more waste material during the  
10 current licensing period than any other previous licensing  
11 period going back to the 1980s. This list identifies some  
12 of the significant improvements made during the licensing  
13 period.

14 The refinery's security plan and procedures  
15 meets CNSC regulatory requirements. CNSC security  
16 specialists conduct routine inspections at the site.

17 Throughout the licensing period, the IAEA  
18 has conducted numerous scheduled audits as well as random,  
19 short-notice inspections better known as SNRIs. The SNRI  
20 requires that the site provides inventory records for a  
21 set period of time and the inventory on site is reconciled  
22 against the inventory ledger.

23 As well, the site maintains a design  
24 verification where process operations are inspected to  
25 confirm that there has been no unidentified changes for

1 the IAEA. Throughout this period, the site has maintained  
2 the requirements of the IAEA and will continue to in the  
3 future.

4 Cameco complies with all regulatory  
5 requirements with respect to transport regulations  
6 including training -- re-training requirements for all  
7 employees involved in the handling, packaging and shipping  
8 of radioactive materials.

9 Cameco does have an approved emergency  
10 response assistance plan on file with Transport Canada.  
11 Cameco also has qualified staff ready and available to  
12 respond to offsite transportation events.

13 During the licensing period, there have  
14 been two transportation events. In both events, there was  
15 no impact or radiological exposure to the public or to the  
16 environment. Reports on both events were sent to the CNSC  
17 transportation staff.

18 Cameco has no projects going through  
19 environmental assessment process at this time.

20 The site takes its aboriginal consultation  
21 seriously and maintains constant communications with our  
22 nearest neighbour which is Mississauga First Nation. As  
23 an example of our commitment to this community, a  
24 Memorandum of Understanding was signed with the Chief of  
25 Mississauga First Nation and myself as general manager of

1 the site.

2 THE MOU is an agreement between the two  
3 parties with a commitment to work collaboratively in areas  
4 of mutual concern, to maintain regular communications, and  
5 to maintain a respectful relationship.

6 Cameco continues to support Mississauga  
7 First Nation initiatives and projects with not only  
8 monetary contributions, but also in areas where we can  
9 supply resources for technical assistance. As a result of  
10 our community -- as a result of our commitment to  
11 community relations, the relationship between Cameco and  
12 Mississauga First Nation continues to improve.

13 The site has a preliminary decommissioning  
14 plan which has been updated during the current licensing  
15 period and accepted by the CNSC. As well, the site  
16 maintains all other required regulatory approvals and  
17 permits from provincial regulatory authorities.

18 For Cameco, our community relationships are  
19 very important. In a recent survey we had conducted by a  
20 third party, the results show that Cameco has 94 percent  
21 of the community support for the continued operation of  
22 the refinery. Open communications is a key to our  
23 success.

24 We hold information meetings annually with  
25 the Town Council and the Mississauga First Nation Band

1 Council. The site also conducts numerous tours at the  
2 refinery and provides many presentations for local  
3 interest groups. We also meet with the Blind River area  
4 environmental monitoring committee, which is a committee  
5 of the Town but has representations from local  
6 communities.

7 Information on the Blind River operation  
8 can be found on the Cameco website which also provides a  
9 link to the new community website. The quarterly and  
10 annual compliance reports are provided to the Town and  
11 Mississauga First Nation and are also on the website.

12 The Blind River Refinery operation does not  
13 require nuclear liability insurance.

14 At this time, there are no other -- no  
15 additional or other matters to discuss. This concludes my  
16 presentation on the performance of the Blind River  
17 Refinery.

18 I am proud of the robust programs and  
19 processes that ensure the safe, clean and reliable  
20 operation of the site today and into the future. I  
21 believe we have clearly demonstrated that we're qualified  
22 to receive a new 10-year operating licence. I would be  
23 pleased to answer any questions you may have at this time.

24 Thank you.

25 **THE CHAIRMAN:** Thank you.

1                   Before opening the floor for questions, I'd  
2                   like to hear from CNSC staff as outlined in CMD H-18 and I  
3                   understand, Mr. Elder, you're going to make the  
4                   presentation. Please proceed.

5  
6                   **11-H18**

7                   **Oral presentation by**

8                   **CNSC staff**

9  
10                   **MR. ELDER:** Thank you. Good morning, Mr.  
11                   President, Members of the Commission. My name is Peter  
12                   Elder. I'm the Director General of the Directorate of  
13                   Nuclear Cycle and Facilities Regulation.

14                   With me at the front table today are Mr.  
15                   B.R. Ravishankar, Director of the Processing and Research  
16                   Facilities Division, and Mr. Jafir Jaferi who is the  
17                   Senior Project Officer in that division. And we also have  
18                   a number of other supporting staff with us this morning.

19                   Before turning to the presentation on Blind  
20                   River, I would like to note some overall points on the  
21                   three Cameco facilities that are being discussed today.

22                   CNSC staff welcome the efforts to develop  
23                   common programs across the three facilities that Mr.  
24                   Thorne has mentioned. We view this as a positive  
25                   development that allows for sharing of best practices and

1 lessons learned from events.

2 In our reviews we do assess how these  
3 programs are performing at the individual's facilities,  
4 but also identify any corporate level issues where  
5 appropriate.

6 Second, I would like to note that while  
7 these facilities form part of the nuclear fuel cycle they  
8 are quite diverse and have different inherent risks. So  
9 the focus of CNSC staff work may be different for these  
10 facilities.

11 To provide the Commission with a better  
12 comprehensive view between the similar regulated  
13 facilities in the nuclear fuel cycle CNSC staff plan to  
14 present an annual compliance report on these facilities,  
15 including uranium mines and mills and the fuel facilities  
16 under discussion today. We are looking to present the  
17 first such report to the Commission in March of 2012.

18 I would now like to return to the  
19 presentation on the Blind River Refinery which is  
20 contained in CMD 11-H18.

21 This presentation is divided into seven  
22 parts. First we provide an introduction to the facility  
23 and the current licence, then move on to an overview of  
24 Cameco's licence renewal application. Third we look at  
25 CNSC's compliance verification activities during this

1 period. Fourth, we look at the assessment of the  
2 licensee's performance with respect to the safety and  
3 control areas. And then we will focus on particular  
4 performance of this facility in the certain areas, moving  
5 on to the other matters of regulatory interest. And the  
6 last two parts will cover the conclusions and  
7 recommendations.

8 I will now pass the presentation over to  
9 Mr. Ravishankar.

10 **MR. RAVISHANKAR:** Thank you, Mr. Elder.  
11 Good morning, Mr. President and Members of the Commission.  
12 We start with the introduction part.

13 Cameco Corporation of Saskatoon,  
14 Saskatchewan owns and operates a uranium refinery  
15 hereafter called the facility, in Blind River, Ontario.  
16 The facility is located about 650 kilometres north of  
17 Toronto.

18 The facility currently employs  
19 approximately 160 people. It has been in operation since  
20 1983. This slide shows the aerial view of the Blind River  
21 Refinery and its surroundings. The town of Blind River is  
22 about five kilometres to the east of the refinery.

23 The large water body on top part of the  
24 slide is Lake Huron, and the refinery is located on its  
25 north shore. The Mississauga River is on the east side on



1 the slide. Next to the river and the refinery is a public  
2 golf course.

3 Cameco's Property encompasses an area of  
4 approximately 253 hectares in total. This includes a  
5 secured area of approximately 11 hectares representing the  
6 CNSC licensed area. The nearest permanent residence is  
7 about one kilometre away from the facility.

8 The facility receives uranium ore  
9 concentrates from mines worldwide. The facility  
10 chemically refines various milled uranium concentrates  
11 received from mines to produce uranium trioxide powder.

12 In the refining process nitric acid is  
13 added to uranium ore concentrate to produce uranyl nitrate  
14 solution. Impurities are removed from the uranyl nitrate  
15 solution by a solvent extraction process.

16 The purified uranyl nitrate is concentrated  
17 and dried to produce uranium trioxide powder. The primary  
18 recipients of this product are Cameco's Port Hope  
19 Conversion Facility and Springfields Fuels Limited in the  
20 United Kingdom.

21 Regarding the current licence, the  
22 Commission issued it in February, 2007 for a five-year  
23 term starting from March 1, 2007 to February 29th, 2012.  
24 The current licence authorizes Cameco to produce up to  
25 18,000 tonnes of uranium as uranium trioxide.

1           Only natural uranium is handled at this  
2           facility. There are no outstanding issues from the  
3           previous public hearings on this facility.

4           Upon Cameco's request the Commission  
5           amended the current licence twice. Once in April, 2007 to  
6           allow the licensee to upgrade the emission control  
7           systems, offered existing hazardous waste incinerator.  
8           The second amendment was granted in June of this year to  
9           allow the licensee to increase operating hours of the  
10          incinerator from 12 hours to 24 hours per day.

11          We will now move to the second part of our  
12          presentation on staff's assessment of Cameco's licence  
13          renewal application. In April, 2011 Cameco submitted its  
14          licence renewal application for the Blind River Refinery.  
15          Cameco's application includes two changes to its current  
16          licence, as follows: The licence term to be increased  
17          from five to ten years, and the annual production capacity  
18          to be increased by 33 percent.

19          CNSC staff reviewed Cameco's licence  
20          renewal application against the CNSC's regulatory  
21          requirements. Based on this review CNSC staff concluded  
22          that Cameco's application was complete and it met  
23          requirements.

24          Next we will present staff's review of  
25          Cameco's requested changes to its current licence. In its

1 application Cameco requested to increase its licence term  
2 from five to ten years. CNSC staff have reviewed Cameco's  
3 request and found it acceptable for the following reasons:  
4 Cameco has consistently met the CNSC's regulatory  
5 requirements. The refinery has well-established processes  
6 with low risks. Hazards associated with licensed  
7 activities are well-characterized and controlled. Cameco  
8 has an effective management to respond to items requiring  
9 corrective actions.

10 Additionally, CNSC Staff have an effective  
11 compliance program for this facility. CNSC Staff's review  
12 concluded that the proposed ten years' licence term is  
13 acceptable.

14 Now we present staff's review of Cameco's  
15 second request to increase annual production rate from  
16 18,000 to 24,000 tonnes of uranium as uranium trioxide.  
17 This is a 33 percent increase in the annual production  
18 rate.

19 CNSC staff have reviewed Cameco's request  
20 to increase the refinery's production capacity. Based on  
21 this review CNSC staff concluded that the requested  
22 production increase is safe and acceptable because it  
23 involves no new processes, chemicals or hazards. It would  
24 not increase risks to persons or the environment.

25 An environmental assessment completed in

1 2008 concluded that there will be no significant adverse  
2 environmental effects. The safety related systems and  
3 mitigation measures in place provide satisfactory defence  
4 in depth for the continued safe operations of the  
5 facility.

6 In addition to the two changes requested by  
7 Cameco, CNSC staff are proposing to modify the content and  
8 format of the existing licence. This is a major change,  
9 but consistent with other Class 1 nuclear facilities'  
10 licences recently issued by the Commission.

11 These changes are part of the revised CNSC  
12 licensing framework that allows for better clarity to the  
13 licensee on CNSC compliance verification criteria and  
14 provides an effective change control process.

15 The changes were done as part of CNSC's  
16 efforts to harmonize its licensing and compliance  
17 framework, as well as to align its processes with global  
18 practices.

19 While the licensee remains responsible for  
20 the safe operation of the facility CNSC Staff will  
21 continue regulatory oversight of the licensee's compliance  
22 based on the requirements specified in the Licence  
23 Conditions' Handbook.

24 Now I will pass the presentation over to  
25 Mr. Jaferi.

1                   **MR. JAFERI:** Thank you, Mr. Ravishankar.  
2                   My name is Jafir Jaferi. We will now present the third  
3                   part of our presentation on CNSC staff's compliance  
4                   verification during the review period.

5                   CNSC staff have established a compliance  
6                   verification activity plan for the facility. Under this  
7                   plan CNSC staff conducted several activities to assure  
8                   that the licensed activities are being carried out safely  
9                   and in compliance with CNSC's requirement.

10                  CNSC staff's compliance verification  
11                  activities include the following: 1) quarterly inspection  
12                  of Cameco's safety related systems and programs; 2)  
13                  desktop reviews of Cameco's submissions including  
14                  quarterly and annual compliance reports, third-party  
15                  review reports on modifications, event reports and updated  
16                  safety program documents.

17                  Number 3, assessments of Cameco's proposed  
18                  corrective actions to address deficiencies found during  
19                  the compliance inspection.

20                  And, number 4, verification of Cameco's  
21                  effective and timely completion of corrective actions.

22                  This compliance plan is based on the  
23                  relative risks of all nuclear facilities and is consistent  
24                  with CNSC's risk-informed regulatory approach.

25                  We now present staff's assessment of

1 licensee's overall performance in safety and control  
2 areas.

3 Cameco's Blind River facility maintains  
4 comprehensive and mature programs in all safety and  
5 control areas.

6 Deficiencies found during inspections and  
7 desktop reviews have been satisfactorily addressed by  
8 Cameco in accordance with its corrective action plans.

9 Currently, there are no safety significant  
10 items outstanding at this facility. The Blind River  
11 facility is in compliance with the CNSC's requirements.

12 Overall, Cameco has upgraded the facility  
13 safely and its performance in all safety and control areas  
14 is satisfactory.

15 In the next two slides, we will present  
16 CNSC staff's assessment of Cameco facility's performance  
17 in various safety and control areas.

18 This slide covers 7 of the 14 safety  
19 control areas. The remaining 7 will be shown in the next  
20 slide.

21 As you can see from the table, Cameco  
22 achieved satisfactory performance ratings in all safety  
23 and control areas. These areas include management system,  
24 human performance management, operating performance,  
25 safety analysis, physical design, fitness for service, and

1 radiation protection.

2 Overall, Cameco operated the facility  
3 safely and in compliance with the CNSC requirements during  
4 the review period. No safety and control area has been  
5 assigned a downward trend in performance.

6 The remaining seven safety and control  
7 areas include conventional health and safety,  
8 environmental protection, emergency management and fire  
9 protection, waste management, security, safeguards and  
10 packaging and transport.

11 As you can see from the table, Cameco  
12 achieved satisfactory ratings in all safety and control  
13 areas. Although Cameco made improvements in all safety  
14 and control areas during the review period, significant  
15 improvements were made in the waste management area. For  
16 that reason, staff assigned an improving trend for that  
17 area.

18 Information pertaining to the safety and  
19 control area of security is protected and is submitted  
20 separately in CMD 11-H18.A.

21 In the next few slides, staff will present  
22 additional information and performance statistics related  
23 to radiation protection, environmental protection and  
24 conventional health and safety.

25 We start with the radiation protection.

1 Cameco continues to maintain an effective radiation  
2 protection program to keep doses to workers and the public  
3 as low as reasonably achievable.

4 All employees of the facility are  
5 designated nuclear energy workers and/or monitored for  
6 radiation exposures.

7 The maximum annual effective dose to a  
8 worker was 15.9 milliSieverts. This is 32 percent of the  
9 CNSC's regulatory limit of 50 milliSieverts per year.

10 For the 5-year dosimeter period from 2006  
11 to 2010, the maximum cumulative effective dose to a worker  
12 was 58.2 milliSieverts. This is 58 percent of the CNSC's  
13 regulatory limit of 100 milliSieverts per 5 years.

14 The public radiation dose resulting from  
15 the facility operations is calculated annually for a  
16 location in the Huron Pines public golf course adjacent to  
17 the facility.

18 The maximum effective dose calculated to a  
19 hypothetical member of the public at the golf course  
20 monitoring station was 0.036 milliSieverts per year during  
21 the period from 2006 to 2010.

22 This slide presents the annual effective  
23 radiation doses to workers during 2006 to 2010. The data  
24 for 2011 is not available until early 2012. The blue bars  
25 show the maximum and the green ones show the average



1 annual effective doses to workers.

2 The maximum and average annual effective  
3 doses to workers were 15.9 and 3.4 milliSieverts,  
4 respectively, during 2006 to 2010.

5 As you can see from the graph, radiation  
6 doses to workers were well below the annual regulatory  
7 limit.

8 As required by the CNSC, Cameco has  
9 established monthly and quarterly action levels for  
10 radiation doses to workers. These action levels have been  
11 set well below the regulatory limit and were not exceeded  
12 during the review period.

13 In this and the next three slides, we will  
14 present key performance data for Cameco's environmental  
15 protection program.

16 The CNSC regulations require licensees to  
17 take all reasonable precautions to protect the environment  
18 and control releases of nuclear and hazardous substances  
19 to the environment.

20 Cameco continues to maintain a  
21 comprehensive environmental protection program at the  
22 facility. Under this program, Cameco controls and  
23 monitors releases of nuclear and hazardous substances to  
24 the environment.

25 Cameco's Blind River refinery has three

1 stacks for airborne uranium releases to the environment.  
2 As required by the licence, Cameco monitors these three  
3 stacks on a daily basis to determine compliance with the  
4 licence release limits.

5 Also, Cameco has three sources of liquid  
6 effluents from the facility. These are plant effluents,  
7 stormwater runoff and sewage treatment effluent. These  
8 effluents are collected in lagoons and treated as required  
9 prior to discharge to Lake Huron through a diffuser.

10 Since 2007, environmental releases from the  
11 facility have been well below the licence limits.

12 This figure shows annual average uranium  
13 emission rates from the facility during 2007 to 2011. The  
14 2011 data is as of June 30<sup>th</sup>.

15 The current licence limit for uranium  
16 emissions is based on the derived release limit equivalent  
17 to the CNSC's regulatory dose limit of 1 milliSievert per  
18 year to a member of the public.

19 The proposed new licence limit for uranium  
20 emissions is 1/20<sup>th</sup> of the current one and is based on a  
21 public dose of 0.05 milliSievert per year.

22 The annual average uranium emission rates  
23 were in the range of 0.0001 to 0.00015 kilogram during  
24 2007 to 2011. These emission rates are well below the  
25 current and the proposed licence limit.

1                   The total amount of airborne uranium  
2 released into the environment per year was in the range of  
3 3.1 to 5.4 kilograms during 2007 to 2011.

4                   This figure shows the annual average  
5 uranium releases from the facility through liquid  
6 effluence during 2007 to 2011. The 2011 data is as of  
7 June 30<sup>th</sup>.

8                   The annual average uranium concentration  
9 and liquid effluents released were in the range of 0.01 to  
10 0.03 milligrams per litre during 2007 to 2011.

11                  The uranium concentration and liquid  
12 effluent discharges are well below the current and the  
13 proposed licence limit.

14                  The corresponding total amount of uranium  
15 released from the facility through liquid effluent into  
16 the environment per year was in the range of 2.1 to 4.8  
17 kilograms.

18                  The groundwater monitoring results provided  
19 in Table 12 in the CMD show no increasing trends for any  
20 of the parameters monitored.

21                  The data for 2009 and 2010 in Table Number  
22 12 were corrected and a revised table was distributed to  
23 the Members of the Commission. This revised table  
24 replaces Table Number 12 on page 42 of the CMD.

25                  For the next licence period, CNSC staff are

1       proposing environmental release limits that are more  
2       stringent than the current one.

3               For example, the proposed uranium release  
4       limits are based on the calculated dose to the public of  
5       0.05 milliSieverts per year instead of 1 milliSievert per  
6       year. While not precedent setting, the result of this  
7       change is that the proposed release limits are 1/20<sup>th</sup> of  
8       the current licensed release limit.

9               And for the liquid effluent, the uranium  
10       concentration limit is reduced by a factor of 1/10<sup>th</sup>, from  
11       20 to 2 milligrams per litre, based on improvements made  
12       by Cameco in its effluent treatment systems at the  
13       facility.

14               CNSC staff has discussed proposed new  
15       release limits with Cameco management to determine if any  
16       transitional period was required. Cameco indicated that  
17       they can't comply with the new limits without any  
18       transitional period. Accordingly, staff have recommended  
19       that the Commission approve the proposed renewed licence  
20       with reduced release limits.

21               In addition, CNSC staff requested Cameco to  
22       review their action levels to reflect its current  
23       operational performance of the facility.

24               The main purpose of these action levels is  
25       to give early warnings for process upsets or poor

1 performance of emission control systems. As requested,  
2 Cameco completed the review of action levels and proposed  
3 more stringent action levels as part of its continuous  
4 improvement commitment.

5 CNSC staff have review and accepted the  
6 proposed reduced action levels. The new action levels are  
7 specified in the licence conditions handbook given in  
8 Part 2 of the CMD.

9 Regarding conventional health and safety,  
10 Cameco has an effective health and safety program in place  
11 to protect workers from industrial hazards at the  
12 facility. Cameco has a facility health and safety  
13 committee which conducts monthly safety inspections,  
14 reviews incidents for causes and corrective actions, and  
15 recommends health and safety improvements.

16 During the current licensing period, Cameco  
17 operated the facility safely without any lost time  
18 injuries to workers or any other CNSC reportable event.

19 Let us move on to the fifth part of our  
20 presentation on the other matters of regulatory interest.  
21 We start with the environmental assessment.

22 As reported earlier, Cameco's proposed  
23 production increased project was previously assessed under  
24 the *Canadian Environmental Assessment Act* in August 2008.  
25 The Commission, in its Record of Proceedings including

1 Reason for Decision dated November 3<sup>rd</sup>, 2008, decided that  
2 the project, taking into account identified mitigation  
3 measures, is not likely to cause significant adverse  
4 environment effects. Hence, there is no requirement for  
5 any new federal environmental assessment for the requested  
6 licence renewal.

7 Cameco has an acceptable public information  
8 program in place for its Blind River facility. Under this  
9 program Cameco established a dedicated web site, public  
10 communication plan for emergencies, and periodic reporting  
11 of its facility's performance to the Town of Blind River.

12 CNSC staff recommended a new condition in  
13 the proposed licence requiring licensee to maintain and  
14 implement a public information program.

15 Regarding cost recovery, Cameco's Blind  
16 River facility is in full compliance with the CNSC's Cost  
17 Recovery Regulations.

18 Cameco submitted its revised preliminary  
19 decommissioning plan, PDP, dated March 2011 for the Blind  
20 River facility. The revised PDP has been reviewed and  
21 accepted by CNSC staff. The decommissioning cost estimate  
22 has now increased from \$36 million to \$38.6 million.

23 The current licence requires Cameco to  
24 maintain a financial guarantee acceptable to the  
25 Commission. Cameco currently maintains the required

1 financial guarantee in the form of an irrevocable letter  
2 of credit for the value of \$36 million CAD. The March  
3 2011 cost estimate was \$38.3 million, however, based on  
4 CNSC staff's comment, Cameco revised it to \$38.6 million  
5 in September 2011. Staff is recommending that the  
6 Commission accept the revised cost estimate of \$38.6  
7 million.

8           Respecting aboriginal consultation, staff  
9 identified and sent letters of notification to 12  
10 aboriginal groups and organizations. The letters included  
11 a copy of the licence application and provided information  
12 on the public hearings and the availability of participant  
13 funding. Follow-up phone calls were made to confirm  
14 receipt and answer questions.

15           Some aboriginal groups have shown interest  
16 in the renewal and have requested more information. In  
17 these cases staff have provided a copy of both CNSC staff  
18 and Cameco's CMDs, and have also provided contact  
19 information for Cameco staff.

20           Finally, staff are aware that Serpent River  
21 First Nation has applied for participant funding and have  
22 also taken a tour of the Blind River facility.

23           CNSC has made participant funding for  
24 intervenors of this licence renewal application. A total  
25 amount of \$25,000 has been made available for that

1       purpose.

2                       Regarding post-Fukushima review, CNSC staff  
3       issued in March 2011 a request for actions pursuant to  
4       subsection 12.2 of the General Nuclear Safety & Control  
5       Regulations, requiring Cameco to review initial lessons  
6       learned and to re-examine the safety case for the  
7       facility, with the focus on external hazards such as  
8       seismic, flooding and fire events.

9                       Cameco submitted their final evaluation  
10       report to CNSC staff in August 2011 and concluded that he  
11       Blind River facility is safe with respect to the public,  
12       workers, and the environment, and is capable of mitigating  
13       both natural and man-made risks.

14                      The report identified one gap related to  
15       flood modelling for that facility. As part of their final  
16       evaluation report, Cameco developed an action plan to  
17       address the modelling gap and has committed to complete it  
18       by March 2012.

19                      I will now pass the presentation back to  
20       Mr. Elder to conclude.

21                      **MR. ELDER:** Thank you.

22                      Considering the past performance and the  
23       programs and resources in place for the Blind River  
24       facility, CNSC staff have concluded that Cameco's  
25       application for licence renewal has met the CNSC's



1 requirements.

2 Cameco has operated the facility in  
3 compliance with the CNSC's regulatory requirements over  
4 the current licence period, and Cameco is qualified to  
5 carry out the activities that the proposed renewed licence  
6 will allow, including the production increase.

7 Based on these conclusions, CNSC staff  
8 recommend the Commission (1) approve Cameco's request to  
9 modify its existing facility to increase annual production  
10 capacity by 33 percent; accept Cameco's revised amount for  
11 a financial guarantee of \$38.6 million; and approve  
12 issuance of a proposed 10-year operating licence for the  
13 Blind River Refinery.

14 This ends our presentation and staff are  
15 now available to answer any questions the Commission may  
16 have. Thank you.

17 **THE CHAIRMAN:** Thank you. Okay, I would  
18 like to open the floor for questions from Commission  
19 Members, and I'll start with Mr. Harvey, s'il vous plait.

20 **MEMBER HARVEY:** Merci monsieur le  
21 président.

22 My first question is directed to staff.  
23 It's just a clarification in page 2 of Cameco's document.

24 In the first paragraph, top of the page,  
25 the last sentence:

1 "Their refinery also prepares and  
2 ships UO3 to other customers around  
3 the world. We are licensed by the  
4 CNSC or the equivalent authority."

5 Does CNSC have something to do with --  
6 outside Canada, because as it is written here, it's like -  
7 - well, some facility outside Canada would be licensed by  
8 CNSC?

9 You've got the sentence?

10 **MR. ELDER:** Yes, I've got it. Sorry --  
11 Peter Elder, for the record.

12 You're on page 2 and it -- so in the -- to  
13 ship the UO3 outside, Cameco is required to have an export  
14 permit. And part of our review in making sure of issuing  
15 that permit, is making sure that they have the appropriate  
16 import permits with the other country. And we also  
17 confirm that we have the appropriate arrangements under  
18 our non-proliferation treaty obligations, to make sure  
19 that anything that is exported from Canada is only used  
20 for peaceful purposes.

21 I can see the statement, but Cameco needs  
22 to actually get permission from both ends to do the  
23 export.

24 **MEMBER HARVEY:** Okay, but the licence is  
25 not coming from Canada, I mean from CNSC. Okay, just a

1 clarification.

2 But Cameco, in page 3, you mention that  
3 "the facility develops a three and 10-year budget plan."

4 So could you just elaborate on that, how it  
5 works and what is the value of one plan over the other?  
6 How does it work?

7 **MR. ASTLES:** For the record, Chris Astles.

8 The purpose of the three-year and 10-year  
9 budgeting plan is it forecasts what kind of production  
10 numbers we need, staffing levels, what kind of financial  
11 support revenues we are going to generate. So it's more  
12 of a strategic planning for the immediate future, which is  
13 the three-year's, and the 10-year plan is more the  
14 development type of planning.

15 **MEMBER HARVEY:** That could not have  
16 anything to stop, for example, to stop a project that  
17 would have to be realized in one facility because you --  
18 well you don't have enough budget for that, so you will  
19 stop a project here and do something in the other  
20 facility? Is it independent for each facility or it's a  
21 budget for the whole Cameco?

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

23 The 10-year planning cycle and the 10-year  
24 planning process is individual for each site. There is a  
25 relationship between the sites in the division, but that

1 process would not -- one site would not affect another as  
2 far as stopping projects is concerned, no.

3 **MEMBER HARVEY:** It's independent?

4 **MR. THORNE:** It's independent in that  
5 regard, yes.

6 **MEMBER HARVEY:** Okay, thank you.

7 **THE CHAIRMAN:** Can I ask a related  
8 question? Is your increase in production demand comes  
9 from this 10-year projection about the demand out there  
10 for uranium?

11 **MR. ASTLES:** For the record, Chris Astles.  
12 Yes, the 10-year plan is more of a  
13 strategic strategy of what we believe the markets could  
14 support for production in the future. So we are simply  
15 wishing to position ourselves so that if the markets do  
16 significantly improve, we'll be in a position to make that  
17 material or that production.

18 **THE CHAIRMAN:** So right now, you are not  
19 going to increase production next year? I mean, I'm  
20 trying to understand when this increase will start kicking  
21 in.

22 **MR. ASTLES:** For the record, Chris Astles.

23 Yes, we haven't specified as to when this  
24 increase will kick in because, as of right now, we don't  
25 know what the five-year and 10-year actual productions

1 will be. So it's just simply positioning ourselves. We  
2 are not planning to do the changes in the next year.

3 **THE CHAIRMAN:** Thank you. Monsieur Harvey.

4 **MEMBER HARVEY:** On page 3, always in  
5 Cameco's document, you mention that:

6 "The waste management and the waste  
7 reduction strategies will be a main  
8 focus during the next licensing  
9 period."

10 So do you have some idea of what are your  
11 targets and what has to be ameliorated?

12 **MR. ASTLES:** For the record, Chris Astles.

13 Yes, waste management strategies is based  
14 on the theory of reducing the waste on site. In the last  
15 year and a half, we've done significant changes to the  
16 inventories with removal of materials like slightly  
17 contaminated oils, sand, and gravel. The construction and  
18 installation of a drum cleaning and grip blast circuit has  
19 allowed us to finally dispose of used drums to a scrap  
20 dealer as a recycled product. And next year, we will be  
21 focusing on materials such as shredded drums that are on  
22 the property.

23 **MEMBER HARVEY:** Talking of drums, you  
24 mentioned that you process 100,000 drums. So that was --  
25 I suppose that was a backlog of many years that you -- is

1           it now very clean and you don't have any backlog and  
2           everything has gone somewhere?

3                       **MR. ASTLES:** For the record, Chris Astles.

4                       I wish we could say that the backlog has  
5           been processed, but since the installation of the drum  
6           cleaning circuit, we have reduced it. So there is about  
7           30,000 drums remaining that have to be processed, and we  
8           are looking at over the next couple of years to actually  
9           eliminate that backlog while operating the circuit, as  
10          drums are being generated on a daily basis.

11                      **MEMBER HARVEY:** Okay. On page 5,

12                                "In addition, an independent third  
13                               party expert conducts compliance  
14                               audits in the area of health, safety  
15                               and environmental legislation to  
16                               ensure that the refinery continues to  
17                               meet applicable requirements."

18                               When was the last month and what is the  
19           frequency of such audit?"

20                      **MR. DeGRAW:** Joe DeGraw, for the record.

21                               We audit all of the applicable  
22           environmental and health and safety legislation on a  
23           three-year cycle, so we audit basically a portion every  
24           year. And actually the next compliance audit is actually  
25           scheduled for the week of November 14<sup>th</sup>. It's coming up

1 very, very soon.

2 So what we have is we maintain a list of  
3 the applicable Federal, Provincial, Environmental, Health  
4 and Safety legislation that applies to the site and each  
5 year -- so we submit a list of what we want the third-  
6 party expert to review. They get that list. They prepare  
7 their questions. They come on site for three or four days  
8 and go through that and give us a report.

9 **MEMBER HARVEY:** About the third-party  
10 experts, you've got many of them or it's always the same  
11 ones coming in?

12 **MR. DeGRAW:** Joe DeGraw for the record.

13 Historically, we have used the same  
14 company, although there are other companies that perform  
15 similar -- would perform similar duties.

16 **MEMBER HARVEY:** Page 6 or 7, I should say  
17 7, talking of reported events, you mention, for example,  
18 "In 2007, there were 111 events  
19 reported where 393 events reported in  
20 2010."

21 I understand that the first year, you've  
22 got more reported events, but I suppose that in the future  
23 that should reduce?

24 **MR. ASTLES:** For the sort of events that we  
25 are referring to, its strategy -- or the focus with these

1 reported events is it's a communications tool, so that we  
2 can find out what's happening in the refinery, take  
3 corrective actions, lessons learned from it. So overall,  
4 they may reduce in time, but it's also a demonstration of  
5 the reporting or the questioning attitude of the employees  
6 that they do report events, no matter how minor so we do  
7 learn from them. So we don't really want to see them  
8 reduced, we want to continue on with the questioning  
9 attitude.

10 **MEMBER HARVEY:** I would like to hear the  
11 staff on that point.

12 **MR. ELDER:** Peter Elder, for the record.  
13 They are applying a system that is very  
14 similar that's been used in other facilities. Actually,  
15 it's based somewhat on what is used in nuclear power  
16 plants. And in these ones the number of events is  
17 actually usually an indicator of how -- of your safety  
18 culture in the low level events, and you actually want a  
19 large number of low-level events reported. When they say  
20 events, this could be, "I used this procedure and it  
21 wasn't very clear. It needs to be rewritten so someone  
22 doesn't do something wrong."

23 They are very, very minor improvements to  
24 documents, to processes and that, and this is actually a  
25 sign of a healthy safety culture when you have a large --



1 employees constantly looking for minor improvements.

2 So while it's called "events" they aren't  
3 events in terms of spills or accidents. They are more  
4 looking at where -- ways that you can actually improve the  
5 operation or the safety of the facility.

6 **MEMBER HARVEY:** Well, I suppose that some  
7 of them must be -- well, maybe not major but more  
8 important than small things.

9 **MR. ELDER:** So one of the other points that  
10 you have to do in this type of system is there has to be a  
11 constant review by management of the significance of the  
12 events and make sure that the more significant ones are  
13 being addressed.

14 So when we come in and look at how a system  
15 like this is working, we look very closely at how they  
16 categorize their events and make sure they take  
17 appropriate action on the more significant events.

18 **MEMBER HARVEY:** Just turning to Cameco, do  
19 you have an idea of that number, 393 events, how many  
20 events were more important, without saying major?

21 **MR. ASTLES:** Chris Astles, for the record.

22 As part of the process there was a risk  
23 ranking or risk matrix that ranks the level of risk which  
24 takes in a number of different factors, and of those we  
25 had six level three events which require specific types of

1 investigations and follow-ups.

2 **MEMBER HARVEY:** On page 18 on 44 about the  
3 challenges, you mentioned that they're a relatively small  
4 workforce and hiring, training and retaining, you have a  
5 special strategy for that, being a small force. Are you  
6 aligned with some college or some university; how do you  
7 do that?

8 **MR. ASTLES:** Chris Astles, for the record.

9 Yes, we recognize the challenges of living  
10 in a small community and a small workforce and retaining  
11 the knowledge of the employees. So one of the first  
12 things to look at is our training process, the SAT, focus  
13 training programs at the site.

14 We also do recruiting of people through the  
15 college and universities local to Blind River. So it's  
16 people used to living in Northern Ontario that will stay  
17 in Blind River once we recruit them and train them.

18 There's no doubt that staffing levels at  
19 Blind River are small. That's the effectiveness of the  
20 site. And the training is the key to our success.

21 **MEMBER HARVEY:** I think I will pass and  
22 I'll come back later.

23 **THE CHAIRMAN:** Okay. Thank you.

24 Dr. Barriault?

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

1                   With the increase -- I guess this question  
2                   is going to be first to Cameco and then to CNSC. With the  
3                   increase of production from 18,000 tonnes to 24,000  
4                   tonnes, I'm wondering what is going to be the impact on  
5                   your emissions, on your bi-products, on your tailings?  
6                   What happens to the plant with that increase? Do you  
7                   foresee a big increase?

8                   **MR. ASTLES:** For the record, Chris Astles.

9                   No, as part of the process we had to have  
10                  an EASR submitted and approved through -- by the CNSC,  
11                  which has been done.

12                  **MEMBER BARRIAULT:** M'hm.

13                  **MR. ASTLES:** As far as the actual  
14                  emissions, there's -- through the process we followed  
15                  there isn't going to be no significant increase to any of  
16                  the emissions for the refinery.

17                  **MEMBER BARRIAULT:** There won't be any bi-  
18                  products to the chemical processes; your nitric acids, for  
19                  example, what happens to those?

20                  **MR. ASTLES:** Chris Astles, for the record.

21                  The refinery has a raffinate nitric acid  
22                  recovery circuit so the acid that comes into the refinery  
23                  we're basically recovering and recycling back to the  
24                  digestion circuit for dissolution. So it's somewhat of a  
25                  closed loop.

1           The bi-products or recycled products that  
2 we generate are currently being processed as a mill feed  
3 in a company in the States with future processing to be  
4 done at Key Lake.

5           **MEMBER BARRIAULT:** So the bi-products then  
6 they're shipped down to the U.S. to a plant to be used for  
7 something else?

8           **MR. ASTLES:** Yes. Chris Astles, for the  
9 record.

10           Yes, they recover the late uranium in  
11 there. The feed to their mill would be about anywhere  
12 from two to eight percent uranium in our calcine product.

13           **MEMBER BARRIAULT:** Thank you.

14           Does CNSC staff want to comment on this?

15           **MR. RAVISHANKAR:** Ravishankar, for the  
16 record.

17           Yes, CNSC staff is aware of the increase in  
18 bi-products by about 30 percent, and CNSC staff has  
19 reviewed and accepted the plan proposed by Cameco to  
20 handle this.

21           **MEMBER BARRIAULT:** I guess it begs the next  
22 question really. What would be the impact on the  
23 financial guarantee in terms of future clean-up?

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

25           In terms of -- you notice that we had them

1 update their financial guarantee after this one. So that  
2 bi-product is actually -- most of it is recycled back into  
3 the uranium cycle, so it does not sit there on the site.

4 So there is actually very little increase  
5 associated with the changes, other than they are going to  
6 put in some more equipment in the plant that then will  
7 have to be decommissioned when you get around to  
8 decommissioning.

9 **MEMBER BARRIAULT:** When you get there.

10 Go ahead.

11 **THE CHAIRMAN:** Can I piggyback on this?

12 Just for clarification, remind us again in  
13 the environmental assessment that was done, was the 24,000  
14 increase in production explicitly mentioned? Is that the  
15 limit? I mean, can it go up to 30,000, 40,000?

16 And by your recommendation to allow it to  
17 go to 24, is it a maximum that's going to be written  
18 somewhere and they cannot exceed?

19 **MR. RAVISHANKAR:** Ravishankar, for the  
20 record.

21 Yes, the 24,000 tonnes per year was  
22 specifically mentioned in the environmental assessment and  
23 was reviewed for that limit. So there is a higher limit  
24 that the environmental assessment has looked at.

25 **THE CHAIRMAN:** So the licence will prohibit

1 any exceedance to this if they decide to go that way?

2 **MR. RAVISHANKAR:** That's correct.

3 **THE CHAIRMAN:** And in the environmental  
4 assessment the environmental impact on such production  
5 increase were assessed and deemed to be of limited impact.  
6 Is that correct?

7 **MR. RAVISHANKAR:** Ravishankar, for the  
8 record.

9 Yes, the environmental assessment looked at  
10 24,000 tonnes production and there was no adverse effect  
11 that was determined.

12 **THE CHAIRMAN:** Thank you.

13 Dr. Barriault?

14 **MEMBER BARRIAULT:** Thank you.

15 On CNSC presentation, page 2 -- I'm sorry,  
16 Cameco presentation, page 2 -- no, CNSC presentation. I'm  
17 sorry. You've got the slide saying that it can be either  
18 satisfactory or below expectation at the top of the page.  
19 And I guess I'm not clear if you can have it both ways.  
20 Can you have it below expectation and satisfactory?

21 That's your waste management 3.5.

22 **THE REGISTRAR:** We are referring here to  
23 the CMD and not the slide deck ---

24 **MEMBER BARRIAULT:** Yes.

25 **THE REGISTRAR:** --- at the top of page 2?

1                   **MEMBER BARRIAULT:** Yes, that's correct.  
2 I'm sorry. No, the slide deck is contradictory ---

3                   **THE REGISTRAR:** Yes.

4                   **MEMBER BARRIAULT:** --- because it's  
5 satisfactory.

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

7                   We wanted to highlight in the summary table  
8 that if you look at the detail on the waste management  
9 assessment, some point during the last five years we did  
10 assess it as being below expectations because of the  
11 issues that Commissioner Harvey has already addressed  
12 about the backlog in terms of the drums. So what we're  
13 saying is that it was actually saying it is now  
14 satisfactory and we clarified that in the presentation.

15                   **MEMBER BARRIAULT:** So even though all the  
16 drums were not cleaned up it's still satisfactory?

17                   **MR. ELDER:** We feel that there has been  
18 enough progress -- it was more to make sure that they  
19 actually had the program in place so that we could look  
20 into the future that they were actually -- had the  
21 capability to deal in the -- deal with the problem.  
22 Initially, they actually didn't have any plan to deal with  
23 it.

24                   **MEMBER BARRIAULT:** Thank you.

25                   I guess my next question is to Cameco. You

1 have an arc flash program. Is this pertaining to welding  
2 or what's this arc flash that you're talking about?

3 **MR. ASTLES:** For the record, Chris Astles.

4 It's a provincial legislation for  
5 protection of employees doing electrical disconnects. So  
6 when you start a job on repairing a pump someone has to  
7 disconnect the starter so that it's electrically de-  
8 energized at the pump. So it's the protection and the  
9 training required for that person to actually throw the  
10 breaker.

11 **MEMBER BARRIAULT:** Okay. Thank you. I  
12 wasn't clear on that one really.

13 The next question deals with your  
14 occupational health program and zero loss-time injury over  
15 five years, which is commendable by the way. But having  
16 said that, really, is that obviously you must have some  
17 injuries. You know, what is the volume of your injuries;  
18 what are they associated with, mainly hand injuries, back  
19 injuries; what happens?

20 **MR. ASTLES:** For the record, Chris Astles.

21 Yes, with the SIR system we use it as a  
22 method of tracking the injuries and doing trend analysis  
23 and identifying areas of concern.

24 And as typical with most industries, hand  
25 injuries are the number one culprit in this case, so



1       there's a lot of focus given with employees on proper PPE,  
2       such as the types of gloves, the type of work they're  
3       doing to protect the hands.

4                 But we don't limit it to just hands, we  
5       look at other -- like the second choice or third highest  
6       culprit, whether it be eye injuries or backs or stuff like  
7       that.

8                 For the site, though, we do have a fairly  
9       low first aid and medical aid injury rate as far as our  
10      performance goes.

11                **MEMBER BARRIAULT:** Okay. The actual  
12      numbers of work-related injuries.

13                **MR. ASTLES:** For the record, Chris Astles.  
14      Yes, medical treatment frequency of 2007 was 7.2, 2008  
15      6.7, 2009 2.6.

16                **MEMBER BARRIAULT:** But those are the  
17      frequencies, not the actual ---

18                **MR. ASTLES:** Right. The actuals, I do know  
19      for instance this year we have three what we refer to as  
20      medical aid or medical consultation ---

21                **MEMBER BARRIAULT:** Okay.

22                **MR. ASTLES:** --- types. And I believe 24  
23      first aids.

24                **MEMBER BARRIAULT:** And you break ---

25                **MR. ASTLES:** And this is typical.

1                   **MEMBER BARRIAULT:** And you break this down  
2                   -- I'm sorry. You break these down into modified work, or  
3                   obviously you must have a modified work program.

4                   **MR. ASTLES:** Yes. Chris Astles for the  
5                   record. We're required to have modified work programs for  
6                   employees, so they are broken down based on, were there  
7                   modified works taken, change of duties, things like that.

8                   **MEMBER BARRIAULT:** Okay. So in reality you  
9                   may have people going to a different job than what they  
10                  usually do, rather than having a lost-time injury?

11                  **MR. ASTLES:** For the record, Chris Astles.  
12                  I'll say yes that that is what could happen. But with  
13                  only the three medical aids it's obvious that it's not  
14                  happening, that we're not giving types of work that are  
15                  meaningless just to avoid a lost time. It's not the  
16                  process or the culture we want to create.

17                  **MEMBER BARRIAULT:** No, exactly. And that  
18                  was the reason for the question of course.

19                  On slide 1718 of CNSC presentation, you  
20                  have new proposed licence limits, and I'm not clear on  
21                  what these new proposed licence limits are based on. Is  
22                  it based on ALARA principle or is it just a number that's  
23                  pulled out of a hat and say: Hey, this is going to be it?

24                  **MR. RAVISHANKAR:** I will request Mr. Mike  
25                  Rinker, Director of the Environmental Risk Assessment

1 Division to speak to this.

2 **MEMBER BARRIAULT:** Thank you.

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

4 The revised effluent limits are really  
5 based on what we see as facility performance. This  
6 facility is performing very well in terms of releases.  
7 But if we could consider a dose to the public there's no  
8 evidence really that -- of dose below a hundred  
9 millisieverts per annum is causing any health effects.  
10 And the public dose limit being set therefore at one  
11 millisievert per annum still is fairly high for this  
12 facility.

13 And to really get a good sense for when the  
14 facility is not operating as it is able to operate, we  
15 thought it relevant to tighten the limits even farther to  
16 50 microsieveverts per annum. Certainly well-below any  
17 level that we would expect health effects, but a better  
18 sense of when the facility could trigger some sort of  
19 action to make sure they're operating as well as they  
20 could.

21 **MEMBER BARRIAULT:** And it begs the next  
22 question really, is that will this limit be applied to all  
23 other plants, all other refineries?

24 **MR. ELDER:** Peter Elder for the record.

25 This is the approach that we've taken for

1 starting last year with GE Hitachi. So the similar  
2 facilities we are using a similar approach. When you get  
3 to the Port Hope conversion facility it's actually an  
4 approach that has been in place for the Port Hope  
5 conversion facility for a number of years. So, yes, we  
6 are trying to standardize this approach where they can  
7 demonstrate the performance.

8 And we've stopped at the 50 microsieverts,  
9 because based on ALARA, that's internationally where below  
10 that there's considered to be a negligible risk and many  
11 people stop regulating below that level. But we're not  
12 stopping regulating, we're saying, that's your limit,  
13 don't go over that. Recognizing that we also make sure  
14 using the action levels that the facilities do perform as  
15 they're designed to perform.

16 **MEMBER BARRIAULT:** Thank you. Cameco, how  
17 do you feel about this? Is this a negotiated number, or -  
18 --

19 **MR. ASTLES:** Chris Astles for the record.  
20 We were in consultation with the CNSC at the outset of the  
21 proposal of the new limits. And the reality is Cameco,  
22 specifically Blind River, were committed to continual  
23 improvement. And the historical trends of our emissions  
24 both effluent and stats has been very good with good  
25 process of changes to reduce the limits.

1                   So there's nothing wrong with being  
2 challenged to continue making improvements.

3                   **MEMBER BARRIAULT:** Okay, thank you. Thank  
4 you Mr. Chairman, that's all for now.

5                   **THE CHAIRMAN:** Thank you. Dr. McDill.

6                   **MEMBER MCDILL:** Thank you.

7                   My first question is two, one for each  
8 slide deck. What is the transportation route for the  
9 uranium trioxide to the UK from Blind River? Is it down  
10 to Port Hope and out?

11                  **MR. ASTLES:** Chris Astles for the record.

12                  The transportation route is, the ISO  
13 containers are obviously packaged in Blind River and then  
14 transported by truck to a rail yard in Toronto. And then  
15 from Toronto it goes to rail to Montreal and then shipped  
16 from there.

17                  **MEMBER MCDILL:** So it doesn't go through  
18 the Montreal lock system? Just curious. Maybe staff  
19 knows?

20                  **UNIDENTIFIED SPEAKER:** No.

21                  **MEMBER MCDILL:** No.

22                  **UNIDENTIFIED SPEAKER:** Go by train.

23                  **MEMBER MCDILL:** Rail to Montreal then out,  
24 but where out in Montreal?

25                  **MR. ELDER:** Peter Elder for the

1 record.

2 They would be transferred to ships at the  
3 harbour in Montreal. So I can't exactly, know exactly  
4 what system they go through.

5 **MEMBER McDILL:** Great, thank you.

6 And in Cameco's deck you said there were  
7 four gauges removed from processing areas. How have you  
8 made up that -- it says "redundant" but how are you  
9 verifying that?

10 **MR. ASTLES:** Yeah. There's a number of  
11 nuclear gauges. They were used for process control for  
12 measuring level or density process identifiers like that,  
13 and we've been able to use other methods. We use  
14 hydrometers, temperature controllers. So it's a process  
15 change that allowed us to remove it -- remove them.

16 **MEMBER McDILL:** So these were gauges for  
17 the process, not any other kind of gauge; it was for the  
18 process itself?

19 **MR. ASTLES:** That's correct, yes.

20 **MEMBER McDILL:** All right, okay.

21 **MR. ASTLES:** For the process.

22 **MEMBER McDILL:** Thank you.

23 My next question, in staff's presentation  
24 on page 41 there's a reference to monitoring wells. Maybe  
25 I could ask both Cameco and staff to describe what is the

1 distribution of the wells around the site? They cover a  
2 variety of depths and staff, are you certain that the  
3 distribution is appropriate to detect developing problems?  
4 Start with Cameco.

5 **MR. DeGRAW:** Joe DeGraw for the record.

6 Yes. We do have a number of monitoring  
7 wells around the facility, both upstream and downstream,  
8 and obviously many more downstream with the facility. And  
9 they are at different depths. And one of the things we  
10 did as was indicated in both our CMD I believe and the  
11 presentation is, is we did hire, again, a third party  
12 expert back in 2007 I believe, to review our existing  
13 program and the location of wells, and they did recommend  
14 that we add 14 wells.

15 Some of these were in existing locations,  
16 but in some places we only had wells at one depth, so in  
17 some cases it was a recommendation to install a second  
18 well at a deeper depth. And so a number of these are both  
19 inside the facility and outside the facility.

20 **MR. RAVISHANKAR:** Ravishankar for the  
21 record. Before I pass the mic to Mr. Mike Rinker, I would  
22 like to state that from CNSC staff point-of-view the  
23 groundwater concentrations are very low and there has been  
24 no evidence of subsurface contamination on the property.  
25 Perhaps Mike Rinker will give further details.

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

2                   A review of the network of groundwater  
3 wells is based on in 2006, there was an environmental risk  
4 assessment that was done where we looked at the risks  
5 including all pathways.

6                   In 2009 we did a review of the  
7 environmental monitoring program. So not just the  
8 quarterly and annual review of results, but the design of  
9 the program itself.

10                  There were some improvements made to the  
11 groundwater monitoring system and we're happy with the way  
12 it is now.

13                  **MEMBER McDILL:** Thank you.

14                  **THE CHAIRMAN:** Can I piggyback on that one?  
15 So I just want to make sure that the result you are  
16 getting, the measurement, is consistent with the MOE  
17 upcoming limits. And what I want to know is MOE and  
18 Environment Canada, are they satisfied with the way you're  
19 proceeding here? And will the result be acceptable to  
20 them?

21                  **MR. DeGRAW:** Joe DeGraw for the record.

22                  Both the CNSC and MOE receive copies of our  
23 annual compliance reports, which is where we provide the  
24 summary of the groundwater data every year. To my  
25 knowledge they haven't commented back to us one way or



1 another on that.

2 **THE CHAIRMAN:** So can we make sure that MOE  
3 staff are available in day two to make a pronouncement on  
4 the plan here.

5 **MR. RAVISHANKAR:** Ravishankar, for the  
6 record.

7 Yes, we'll make sure that MOE is contacted  
8 with respect to the availability for Day Two.

9 I would like to state here that the  
10 upcoming new standard that you've referred to, perhaps you  
11 were referring to the uranium in air standard. These  
12 concentrations that we were referring to right now is the  
13 concentration of uranium in groundwater, which is an  
14 indicator of whether there is contamination coming from  
15 the operations from Blind River Refinery and ---

16 **THE CHAIRMAN:** But I thought they were  
17 coming also for -- I thought there was also a new standard  
18 coming for water -- uranium in water and in air?

19 **MR. ELDER:** We will confirm. We are not  
20 aware of anything in terms of uranium in water and in  
21 groundwater bay standard. They have had recent standards  
22 on clean-up of soil, but these are for remediation of  
23 facilities. So that would only be applicable in this case  
24 when you got around to decommissioning the facility some  
25 time in the future.



1 checked?

2 **MR. DeGRAW:** Joe DeGraw, for the record.

3 In the Cameco CMD the comment would refer  
4 to our in-plant air sampling program for uranium. In the  
5 staff CMD they're actually referring to the hi-vol  
6 samplers, which is a sampling of ambient air off-site.

7 That is looked at, and was looked at as  
8 part of the environmental assessment, basically how well  
9 the emissions from the refinery did correlate with the --  
10 with our hi-vol data. That was looked at in the  
11 environmental assessment. That was done a few years ago.  
12 I can't remember the details, other than they compared  
13 reasonably well, considering the very low uranium  
14 emissions we have.

15 **MEMBER McDILL:** But in your in-plant  
16 verification it's done by calculation. Is there any way  
17 of verifying by monitor?

18 **MR. DeGRAW:** Joe Degraw, for the record.

19 Yes, actually, and we have done that this  
20 year. We, again, hired an independent third party  
21 contractor to sample emissions, to see how well they  
22 compare with what our calculations indicate, and we don't  
23 have the final numbers, but, basically, they look like we  
24 get a reasonable comparison.

25 **MR. JAFERI:** Jafir Jaferi, for the record.

1                   There are two types of airborne uranium  
2 monitoring; one is inside the plant, to get the level,  
3 what is the uranium in the air inside the plant, which is  
4 done on several work places. There are static monitors  
5 which will provide daily average.

6                   But there is another monitoring which is  
7 outside the plant; it's in the ambient air. Those are  
8 five, six locations, including the Town of Blind River,  
9 which is even five kilometres away, and they are located  
10 in four or five places outside the plant, and we call it  
11 hi-vol sampling. That's done by all the regulators,  
12 whether it's the MOE or Environment Canada, and they meet  
13 that requirement.

14                   So there are two types of airborne uranium  
15 monitoring, one inside the plant to protect workers; one  
16 outside the plant to protect the public.

17                   **MEMBER MCDILL:** Have you seen this report  
18 that Cameco is referring to, or the documentation that  
19 they're referring to?

20                   **MR. JAFERI:** Yes. Cameco submits quarterly  
21 a compliance report which includes all the monitoring  
22 results, including inside the plant monitoring as well as  
23 the outside.

24                   **MEMBER MCDILL:** My concern is principally  
25 in the calculated values because we've had a couple of --

1       yes, please.

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

3                   The models that Cameco is referring to were  
4 parts of the environmental risk assessment, so we have  
5 reviewed those through those studies.

6                   **MEMBER MCDILL:** Thank you.

7                   With respect to the totes that are used --  
8 these are mentioned on page 39 of Cameco's -- recently  
9 there's been -- I guess it was an ENR on a tote failure,  
10 so can Cameco tell me, how often are the totes inspected;  
11 is there a process, is there a protocol for checking the  
12 totes as they come in and go out?

13                   **MR. ASTLES:** Chris Astles, for the record.

14                   Yes, there's a process for the inspection  
15 of the totes, so as they're being packaged or prepared for  
16 shipment there's a visual inspection by the employee doing  
17 the packaging.

18                   As well, there's -- through our  
19 preventative maintenance program there's annual testing of  
20 the totes for items such as weld fatigue, thickness  
21 testing, areas such as that.

22                   **MEMBER MCDILL:** And staff is satisfied that  
23 that is being carried out appropriately?

24                   **MR. JAFERI:** Jafir Jaferi, for the record.

25                   Yes.

1                   **MEMBER MCDILL:** Very succinct, thank you.

2                   I wonder if the Blind River topographical  
3 slide could be brought up. Whoever's got the picture of  
4 -- looking down on the plant where you can see all the --  
5 you both had one. Perfect, thank you.

6                   Where is the waste management area? Maybe  
7 Cameco could ---

8                   **MR. ASTLES:** We don't have a designated  
9 area considered to be waste management. We simply store  
10 the drums of shed material within the fence line.

11                  **MEMBER MCDILL:** So everything is inside,  
12 there's nothing -- okay.

13                  So what is the highest ever water line  
14 seen? Maybe you've talked to the local Aboriginal people,  
15 maybe there's a -- have you ---

16                  **MR. ASTLES:** Are you -- for the record,  
17 Chris Astles. Are you referring to a flood?

18                  **MEMBER MCDILL:** I mean, you've got a river  
19 there and a lake there, there's got to have been a really  
20 bad spring sometime along the way.

21                  **MR. ASTLES:** For the record, Chris Astles.

22                  Yes. Further down -- I'll refer to it as  
23 "Highway 17" -- the water did reach the highway and did  
24 cross it, but along the riverbank I would say it hasn't  
25 risen up or breached the riverbank in -- well, in my

1 lifetime in Blind River.

2 **MEMBER McDILL:** That hardly goes back to  
3 ancient times. Nevertheless...

4 **(LAUGHTER/RIRES)**

5 **MEMBER McDILL:** All right, let me try  
6 another approach.

7 What is the gap in the flood modelling then  
8 that was referred to?

9 **MR. ASTLES:** For the record, Christ Astles.  
10 We hired a consultant to come in and do a  
11 flood analysis for the potential of, you know, high winds,  
12 wave action, as well as the possibility of dam failure  
13 further upstream. And the owners of the dams that are up  
14 the Mississauga River their emergency response plans  
15 indicates that there's a potential for flooding on the  
16 property.

17 So what we're trying to do is resolve how  
18 they did their calculations, what kind of data did they  
19 use, and why is there a difference between the two of us.

20 **MEMBER McDILL:** Does staff want to comment?

21 **MR. RAVISHANKAR:** Ravishankar, for the  
22 record.

23 Yes, CNSC staff confirms that there is a  
24 disagreement between two different modellers in terms of  
25 what -- certain assumptions that they have made.

1 Further details on the flooding component  
2 are the historical aspects.

3 I would like to pass the mic to Dr.  
4 Shizhong Lei.

5 **MR. LEI:** Shizhong Lei, for the record.

6 The flood risk assessment conducted by  
7 Cameco for the Blind River was done in 1980, so there is  
8 quite some time past, and there's new updated information  
9 that needs to be considered, and the consultant for Blind  
10 River has recommended using the updated information to  
11 update their flood risk assessment.

12 CNSC staff reviewed the report and approved  
13 their action plan.

14 **MEMBER McDILL:** Has Cameco asked the  
15 Mississagi First Nation if they have a body of knowledge  
16 on where the water has been over the various seven  
17 generations?

18 **MR. ASTLES:** For the record, yes. Those  
19 conversations have been held with myself and of course the  
20 Chief about the history of the site, activities that have  
21 happened, what kind of historic sites are there, as well  
22 as conditions of the Mississagi River, topics like that.  
23 And in the conversations never have they inferred that  
24 this area has been flooded out.

25 **MEMBER McDILL:** Because presumably they



1           were there before the dams were there, so the natural  
2           water levels would be part of the historic knowledge?

3                   **MR. ASTLES:** For the record, yes.

4                   **MEMBER McDILL:** And my last question ---

5                   **THE CHAIRMAN:** Sorry, still on that topic.  
6           It sound to me like a Fukushima -- post-Fukushima kind of  
7           debate here.

8                   **MR. ASTLES:** Yes.

9                   **THE CHAIRMAN:** And what I want to know is,  
10          at the end of the day are we going to see the report, or  
11          is the report from Blind River about doomsday scenario,  
12          where what never happened before maybe not likely to  
13          happen in the future, but we're still going to take an  
14          analysis about what if. And hopefully we can see this,  
15          because we understand that there was a reply to the 12/2,  
16          and you mention it.

17                                So is that all going to be available, is  
18          available for ---

19                   **MR. ELDER:** We can -- Cameco I'm sure would  
20          be happy to provide you a copy of the report. There are  
21          just two comments I'd like to make on these facilities,  
22          all three that we're discussing today. Is that when you  
23          look at the doomsday scenarios and what a potential it is,  
24          there is no need for ongoing cooling or power at these  
25          facilities.

1                   So it's, you have an initial event and then  
2 you have to deal with it. It's not like you'd see in  
3 Fukushima where they have a tsunami and a major nuclear  
4 incident actually three or four days later.

5                   That said, these facilities were designed  
6 to deal with floods and other areas. And what we're  
7 seeing right now is the major gap, not a gap, but  
8 something that needs to be investigated on this one, is  
9 the event that would cause a dam failure. And are they  
10 adequately protected to -- for the facility?

11                   There is protection against floods, since  
12 the question is, would that deal with all scenarios that  
13 you could conceive of, given the situation. So the main  
14 thing to look at is a dam failure. This is not a very  
15 sizeably active zone.

16                   But the initial reports were getting is  
17 that the existing protections are sufficient to handle  
18 almost anything that has been conceived of.

19                   **THE CHAIRMAN:** Well, I think that's what  
20 they -- we're looking for an answer to the question, what  
21 if the site is flooded? Not the probability of it  
22 flooded, what if it is flooded? What happen to the waste?  
23 What happen, you know, what is the environmental impact?  
24 And I think that's something that we need an answer.  
25 Because it's not a nuclear power plant, what in this

1 particular case the concern that one might have?

2 **MR. THORNE:** Sir, Andy Thorne for the  
3 record.

4 Cameco has responded to the 12/2 letter.  
5 We've done assessments of all of our licensed facilities,  
6 including the three licence fuel services operations.  
7 These assessments are carried out by a third party.

8 This one specific in a beyond design basis  
9 scenario of a dam failure requires some additional work.  
10 And we have committed, we have submitted the initial  
11 report to the CNSC, and we have committed to continue this  
12 work into next year and provide updates on a quarterly  
13 basis.

14 So our intent is to review this, you know,  
15 potential beyond design basis event and understand that  
16 more fully.

17 **THE CHAIRMAN:** Thank you. Dr. McDill.

18 **MEMBER MCDILL:** Two last questions. The  
19 first one, there were some palettes that were mis-shipped,  
20 there were three small fires over the last little while.  
21 Is staff satisfied that there is no slippage and attention  
22 to detail going on?

23 **MR. JAFERI:** Jafir Jaferi for the record.

24 Yes. Those three fires were minor  
25 incipient fires where operator used the fire extinguisher

1 and put out the fire. There was no need for any emergency  
2 response type things.

3 **MEMBER McDILL:** I'll ask Cameco to comment  
4 if they wish, in fairness.

5 **MR. ASTLES:** For the record, Chris Astles.

6 No, we don't perceive that there's any  
7 slippage for the observation, oversight or attention to  
8 the operation.

9 **MEMBER McDILL:** Thank you.

10 And last question since we brought it up,  
11 with respect to fence lines and waste, by which I mean  
12 things like drums. Should the drums be segregated? I  
13 mean, they're all in one place? Should they be all in one  
14 place? Should there be some special attention given to  
15 them?

16 **MR. ASTLES:** For the record, Chris Astles.

17 I guess by clarification, the drums are  
18 segregated so we use a specific yard to store the  
19 concentrates. Another yard for scrap materials. Another  
20 yard for scrap steel that needs to -- it's going to be  
21 disposed of. So the yards are organized by the materials  
22 that are on site.

23 **MEMBER McDILL:** And staff is satisfied that  
24 that's appropriate?

25 **MR. JAFERI:** Jaferi Jafir for the record.

1                   Yes, most of the raw material is the  
2 Yellowcake, lots of drums. And they have been stored  
3 inside plus outside in designated areas. And the other  
4 major item is the by-product, we were talking about  
5 (inaudible). Yes, those drums are stored outside in a  
6 designated area with proper signs around.

7                   **MEMBER MCDILL:** Thank you, Mr. Chair.

8                   **THE CHAIRMAN:** Thank you. Monsieur  
9 Tolgyesi.

10                  **MEMBER TOLGYESI:** Merci Monsieur President.

11                   One is going back just to the licence. If  
12 I understand well, what you were saying that the 24,000  
13 tonne maximum capacity will be specified in the licence?  
14 Because right now it's not there. It's in the Licensing  
15 Handbook, a conditions handbook. So it will be specified  
16 in the licence that the maximum capacity should be 25,000  
17 tonnes -- 24,000 tonnes?

18                  **MR. ELDER:** Peter Elder for the record.

19                   It's actually, although as I said, it is  
20 considered to be part of the licensing basis because the  
21 EA is assessed on that one. So when you see condition 1.1  
22 that says, here's the licensing basis, that is considered  
23 to be part of the licensing basis.

24                   So we could not -- our opinion would be,  
25 yes, it specified the numbers in the handbook, so if they

1 wanted to change it from kilograms of uranium to kilograms  
2 of uranium trioxide we could change that in the handbook.  
3 But anything that changed actual the number in terms of  
4 uranium would be considered an amendment to the licence  
5 that would require Commission approval.

6 **MEMBER TOLGYESI:** What's the difference,  
7 because right now it's in the licence? It's specified in  
8 the present licence, the current licence they specify that  
9 18,000 is there. It will imply kind of changes, or what  
10 will be the impact on the licensee or on the staff?

11 **MR. ELDER:** Peter Elder for the record.

12 Just to clarify the question, whether it's  
13 in the licence or in the handbook, you're asking what the  
14 difference would be? What we found is that we were  
15 getting occasionally you were amending a licence to get --  
16 just because of an administrative amendment because --  
17 depending on what they monitor, depending on this type of  
18 thing, it explicitly says right now as it was sort of  
19 uranium as in uranium trioxide. And if they had a  
20 different chemical form or that, you would actually have  
21 to amend the licence.

22 And we're saying it's better to say, this  
23 is your design basis, this is what you've been analyzed  
24 to. You must live within that, and it doesn't matter if  
25 it's uranium and uranium trioxide or any other form. It

1 just it gives us a little flexibility to not be bound  
2 precisely to administratively to a particular language.

3 In other places like the action levels it  
4 allows us to do -- a licensee to do continuous improvement  
5 without actually having to amend the licence. To get us  
6 out of things, like if we want them to lower their action  
7 levels because their performance is better, that's an  
8 improvement, then we don't think you need an improvement  
9 to -- you don't have to amend the licence to improve. And  
10 that's what we're trying to avoid on that.

11 **MEMBER TOLGYESI:** I'm going to come back a  
12 little bit to this increased production capacity; right  
13 now what you are saying that natural uranium concentrate  
14 is coming from world-wide, from Canada and from outside.  
15 What's the proportion which is coming from within Canada?

16 **MR. ASTLES:** For the record, Chris Astles.  
17 The amount of uranium we get from Canada  
18 itself it does vary year to year. It could range anywhere  
19 from 40 to 60 percent of our annual production.

20 **MEMBER TOLGYESI:** And what do you expect  
21 this additional 6,000 tonnes would come from what, will be  
22 split at the same proportion or it will mostly come from  
23 outside?

24 **MR. ASTLES:** For the record, Chris Astles.  
25 I don't believe we can answer that at this

1 time, because the reality is as new mines come on  
2 throughout the world, whether they be in Canada, the  
3 States or elsewhere, so it depends on what is available on  
4 the market for uranium production at that time.

5 **MEMBER TOLGYESI:** My next question is that  
6 what you are saying that the majority of your production  
7 is shipped to Port Hope Conversion Facility, however, Port  
8 Hope does not ask for increased capacity. So what you  
9 will do with this additional production?

10 **MR. ASTLES:** Chris Astles, for the record.

11 Yes, the capacity of Port Hope is their  
12 combined potential production capacity of both the UF6 and  
13 the UO2, as well as the UF6 capacity for Springfield's  
14 fuels in the U.K., and there's always the potential of  
15 other conversion facilities wishing to have our UO3 as a  
16 feed product to their circuits. So we're not completely  
17 dependent on the Port Hope production to make our annual  
18 production.

19 **MEMBER TOLGYESI:** You are asking for this  
20 increase of capacity, so when you are looking, you know,  
21 this post-Fukushima what's happened, like Germany stops  
22 the -- at least they were saying that they will stop  
23 nuclear energy, and some other countries, Belgium, et  
24 cetera. What do you think; what's the potential for this  
25 production?



1                   **MR. THORNE:** Andy Thorne, for the record.  
2                   Cameco is an organization very confident in  
3                   the energy growth around the world. You're correct,  
4                   Germany has made some announcements recently that they're  
5                   going to step out of the nuclear power field. But, you  
6                   know, counter to that, if you look into Asia, India and  
7                   China there's a huge growth as we look out over the next  
8                   decade or two. We're expecting huge growth in other areas  
9                   of the world. While you're right, some other countries do  
10                  back out of nuclear, but still the prospects for nuclear  
11                  look very strong moving forward.

12                  **MEMBER TOLGYESI:** What you are saying on  
13                  page 12 that there will be only minor upgrades or  
14                  installations of equipment within the facility which will  
15                  require this increase in production, what it means; what  
16                  type of upgrades what you are looking for; what's the --  
17                  and production line and what's in storage capacity; what's  
18                  in the waste handling, et cetera?

19                  **MR. ASTLES:** For the record, Chris Astles.  
20                  The Blind River Refinery has a lot of  
21                  redundancy built into the design allowing for the  
22                  increased daily rates. The specific changes -- there are  
23                  two major changes to the refinery we need to do, is the  
24                  installation of two additional strip columns which are  
25                  required to remove the uranium from the solvent through

1 the solvent extraction process, and then the other area is  
2 the denitration area where you dry the uranyl nitrate  
3 hexahydrate to a dry powder, the UO<sub>3</sub>.

4 And in this area we need three new  
5 denitration pots, and this area was actually designed for  
6 a total of 16 pots when Lumis designed and constructed the  
7 refinery and currently we only have the 13 pots in place.  
8 So the area is already designed for the additional three  
9 pots.

10 And those are the major changes.  
11 Everything else is quite minor, looking at steam trap  
12 sizes, level control valve trim sizes, nothing of major  
13 significance.

14 **MEMBER TOLGYESI:** So there will be no  
15 shutdowns or whatever in the actual production line  
16 because of building or installing these new facilities?

17 **MR. ASTLES:** For the record, Chris Astles.  
18 The installation of the strip columns will  
19 require a shutdown but we would do the work through a  
20 summer shutdown, which is typically anywhere from four to  
21 six weeks long, mainly because we'd have to purge the area  
22 of the solvent before we're doing any welding in the area  
23 just as a safety precaution. So there would be no  
24 extended shutdown to do the alterations.

25 **MEMBER TOLGYESI:** What's the maximum range

1 of uranium concentration what you're receiving in your  
2 facility?

3 **MR. ASTLES:** The range of concentrates,  
4 depending on the mill they come from, it could be anywhere  
5 from -- by contractual requirements, anywhere from 65 to  
6 84 percent uranium in the feed.

7 **MEMBER TOLGYESI:** And do you have any by-  
8 products or leftovers from chemicals what you are using  
9 which are in concentrate which you are asking for specific  
10 attention, or you are producing some chemicals as a waste  
11 which you should store?

12 **MR. ASTLES:** For the chemical process we  
13 have actually two recycle streams, both of which contain  
14 trace uranium which are used as mill feed at other  
15 facilities, calcine product and of course the regeneration  
16 product from the solvent treatment circuit.

17 **MEMBER TOLGYESI:** You are talking about  
18 this backlog, you know, which was I think it's a backlog  
19 for drums since 2008, and you said that you are reducing  
20 them but not eliminating them. Is there a kind of limit  
21 as a storage capacity for this type of drums or any type  
22 of waste which you are producing?

23 **MR. ASTLES:** There is no -- Chris Astles,  
24 for the record.

25 There is no actual limit as to the number

1 of drums or material we can hold on site. The limitations  
2 are restricted by the area that we have within the secure  
3 compound or the fenced in area, the 28 acres. So there's  
4 no designated number of drums we can have on site.

5 **MEMBER TOLGYESI:** What about staff, do you  
6 agree it's correct or it should be limited somewhere  
7 somehow?

8 **MR. JAFERI:** Jafir Jaferi, for the record.  
9 Yes, we agree. This is the largest  
10 refinery which brings yellowcake all over the world and we  
11 don't think it's productive to put any limit on the  
12 storage of uranium compound on site.

13 **MEMBER TOLGYESI:** And there is no risk  
14 whatsoever because of the volume of this storage, what's  
15 on the site?

16 **MR. JAFERI:** Jafir Jaferi again.  
17 The storage is done safely. We make sure  
18 that things are not left in the open. Everything is in  
19 containment and properly stored so that doses to workers,  
20 you know, are going to be increased if it's not properly  
21 controlled and contained.

22 **MEMBER TOLGYESI:** Is this storage level or  
23 capacity communicated to the residents or to other  
24 stakeholders?

25 **MR. ASTLES:** The communications with the

1 local residents is more on the operational activities at  
2 the site, and there is information provided as to the  
3 storage material and the types of materials we handle  
4 there, but the actual volumes it's not something we  
5 readily share from a business aspect.

6 **MEMBER TOLGYESI:** You are saying on your  
7 page 14 that all aspects are documented in an  
8 environmental aspect registry. Could you tell me who  
9 keeps this register; is it accessible to the public? And  
10 when you are saying that it's updated on a frequency not  
11 to exceeding three years, what it means?

12 **MR. DeGRAW:** Joe DeGraw, for the record.

13 The environmental aspects registry is a  
14 requirement of our environmental management system. As  
15 was indicated in our presentation and our CMD we are  
16 registered to the ISO 14,001 standard, which is an  
17 international standard for environmental management  
18 systems, and that standard has a number of requirements  
19 with respect to record control, document control, internal  
20 auditing and so on.

21 And one of the requirements is to maintain  
22 an environmental aspects registry, which is to look at all  
23 of the activities at your site and what are the  
24 environmental implications of those activities. So it's  
25 sort of like a risk registry. So it's something that we

1 have and maintain ourselves and it's something that the  
2 ISO registrar does review every year when they come on  
3 site to assess our program and make sure we're maintaining  
4 our standard.

5 **MEMBER TOLGYESI:** So it's not available to  
6 the public as such and ---

7 **MR. DeGRAW:** That is correct.

8 **THE CHAIRMAN:** Why not?

9 **MR. DeGRAW:** Joe DeGraw, for the record.  
10 The short answer is nobody's asked for it.  
11 And the other thing, if -- and if we choose to, you know,  
12 that decision could be made. We certainly do share our --  
13 what our significant risks are. That information would be  
14 shared because one of the things you do is identify what  
15 your significant risks are. But again, that --- you know,  
16 nobody has asked -- specifically asked us for that  
17 information. If they did we would consider that request.

18 **THE CHAIRMAN:** That goes across the whole  
19 facilities. I mean, if you share this information with  
20 the ISO community; isn't that in the public domain anyhow?  
21 Or is it done under a, sort of, confidential agreement?  
22 I'm not familiar with the process.

23 **MR. DeGRAW:** Joe DeGraw, for the record.

24 I'm not 100 percent sure either, but I  
25 don't believe the ISO community shares that. I think

1 because they have access to a lot of our confidential  
2 information in order to assess our management system, that  
3 information isn't -- they wouldn't make that public,  
4 necessarily.

5 **THE CHAIRMAN:** Okay.

6 **MEMBER TOLGYESI:** And when you are saying  
7 that this registry is updated on a frequency not to exceed  
8 three years, could you be more specific?

9 **MR. DeGRAW:** Joe DeGraw, for the record.

10 Right now we're updating it about every  
11 three years. But initially when we first formed it -- and  
12 we've been registered to the standard since 2002, so when  
13 we first developed it, basically, it gets updated as,  
14 obviously, we make changes to the process or add new  
15 chemicals. That's when you would want to add things.

16 So the first few years we used it, we found  
17 a lot of things that maybe we initially missed the first  
18 time. So there was a lot of changes required initially.  
19 So we were updating it annually for the first number of  
20 years. But since then it is being updated every three  
21 years, though again, there's nothing stopping us from  
22 updating it more often if we felt the need. It's our  
23 document; it's our process, so it's totally up to us how  
24 we wish to proceed with it.

25 **MEMBER TOLGYESI:** I have two last

1 questions, Mr. President. One is that on page 42 you are  
2 talking about this public consultation and Blind River  
3 residents are supportive. You are saying that majority of  
4 residents, it's 79 percent, do not have any specific  
5 concerns. Which means 21, they have. Could you be more  
6 specific on what these concerns could be or they are?

7 **MR. ASTLES:** For the record, Chris Astles.

8 It'd be difficult to identify the actual  
9 concerns based on that survey because the questioning is  
10 quite generic. That's why as part of our public  
11 communications program, we do the annual updates with the  
12 town council, local interest groups, Mississauga First  
13 Nation Chief and council so that we get the information  
14 out there more readily.

15 We're also doing more information sharing  
16 with outside communities such as in Elliot Lake; we  
17 requested access to Spanish -- the community of Spanish,  
18 at their town council so that we can update them as well.  
19 So the actual concerns, we wouldn't have the exact  
20 details.

21 **MEMBER TOLGYESI:** So they are not really  
22 significant?

23 **MR. ASTLES:** No, they wouldn't be  
24 significant.

25 **MEMBER TOLGYESI:** You don't have any



1 examples because, you know, something could be significant  
2 for me and not necessarily for you?

3 **MR. ASTLES:** Chris Astles, for the record.

4 Yes, what we can do is review the survey  
5 results and try to be more definitive of what the concerns  
6 may have been and present them at the day two.

7 **MEMBER TOLGYESI:** Just a comment, probably  
8 on the day two it will be good. Also, you are talking  
9 about these wells, control wells, what you are sampling.  
10 There are no maps or anything which could show us that,  
11 you know, tell us what's going on.

12 And my last one I wish to present is that  
13 on page 40 that Cameco describes the general frame of  
14 consultation with the Métis Nation, First Nation  
15 Reservation, which is closest, I think, to your  
16 facilities. However, according to the staff presentation  
17 and on page 54, there are 10 other aboriginal groups who  
18 may have an interest in the licensing renewal. So what  
19 type of consultation or communication is done with these  
20 other groups, or other organizations?

21 **MR. ASTLES:** Yes, the consultation that  
22 we've done over the years has been specific with  
23 Mississauga First Nation, who is our nearest neighbour.  
24 Of course, they're approximately a kilometre from the  
25 operation itself. The other First Nations are all along

1 the north shore of Lake Huron. So they're anywhere's from  
2 close to Sault Ste. Marie up to the Massey area, so quite  
3 a distance from the refinery.

4 Over the years as significant changes  
5 such as the EASR for the production increase was done,  
6 documentation has been provided to the local First Nations  
7 requesting if they have any questions, comments, or  
8 concerns to please contact us. And historically, we  
9 haven't seen any concern from these other groups. It's  
10 always been communicated through or with Mississauga First  
11 Nation.

12 **MEMBER TOLGYESI:** I'm not a golfer, but  
13 just to ask, you know, what's your communications if an  
14 emergency situation is there on the site, the golf course  
15 is just next to. Do you have some sirens, or I don't know  
16 what you do with communications to prevent people -- and  
17 it's the same thing applies to the Blind River, it's a  
18 sirens or I don't know what's there?

19 **MR. ASTLES:** Chris Astles, for the record.

20 I guess the first thing to recognize is  
21 that the operation itself, the elimination of the ammonia  
22 at the site was a significant change to the operation in  
23 that, that was the chemical that could have a potential  
24 impact offsite or to the public outside the fence line.

25 The current operation isn't -- doesn't have

1 the type of risks or hazards that would have that type of  
2 an impact. However, in our emergency response plan we do  
3 have a communications protocol where we would call groups  
4 such as the town, the mayor, the chief, or the golf  
5 course, in the event of something going on there.

6 **THE CHAIRMAN:** Okay. Anymore? Monsieur  
7 Harvey?

8 **MEMBER HARVEY:** Monsieur President, just --  
9 maybe just one question before a small comment. Looking  
10 at the safety and control area and rating, I mean, we  
11 don't see quite often fully satisfactory; it's mostly  
12 always satisfactory. And the trend is mostly minor  
13 change, no change. And in that case, here, my comment is  
14 general, but in that case taking the environmental  
15 protection for example. You have in page 17 of the  
16 presentation:

17 "Air emissions remained well below the  
18 licence limits. Liquid effluent  
19 remained well below the licensed  
20 limit."

21 And to that point that you are lowering the  
22 limits.

23 So my question is what it takes to get a  
24 better performance and to get the fully satisfactory?  
25 When you are at the point that you are lowering the

1 limits, isn't it satisfactory or more than satisfactory?  
2 My question goes to the staff and maybe if Cameco wants to  
3 comment.

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

5 I think I'll start, but on the environment  
6 we may pass it to Mike Rinker on this one because there  
7 are many aspects to an environmental protection program  
8 beyond your actual emissions. But in general we are --  
9 you know, to be frank we are still in the transition to  
10 these new ratings. This is the first time we've used them  
11 comprehensively on this facility. And this is the first  
12 time I think you'll see changes as we get all the licences  
13 with license condition handbooks where the requirements in  
14 each area of our compliance are more detailed, spelled  
15 out. And we're trying to move to a more systematic  
16 approach on these things.

17 But in absence of the comparison, to say I  
18 wanted you to do these things and you've done those things  
19 plus five others; in the past those ratings were largely  
20 based on judgement and regulators don't like to say  
21 everything's perfectly fine, we can always find something  
22 to improve.

23 So one of the things we've been looking at  
24 is -- continues -- how do you build in the fact that there  
25 is continuous improvement. Are you -- when you say it's

1 fully satisfactory, does that mean they no longer have to  
2 improve, my response would be no, they need to continue to  
3 improve.

4 So it is a complex thing but what we're  
5 trying to do is make sure that the expectations, what we  
6 measure them against, are very clearly defined in the  
7 handbooks. And then I think as you go through that one,  
8 we'll be able to separate out the satisfactory performance  
9 to the ones that are actually going beyond satisfactory.

10 **MEMBER HARVEY:** I'm just saying that  
11 because there is a certain satisfaction from anybody to  
12 see that the others are appreciating the efforts.

13 And reading all those documents here there  
14 is not too many things that are wrong or major problems  
15 and things like that. So I agree with you that you don't  
16 give the -- a gift every time you make a small move but --  
17 well, it's a comment and I think sometime it could happen  
18 to see a full satisfactory when there is nothing to say.  
19 And I was just giving those examples of lowering the  
20 limits, it's something. Anyway, I appreciate that, that  
21 you are doing that but it's -- okay.

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

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

24 I guess my next question really is with  
25 regards to the 10-year licence. Why are you requesting a

1 10-year licence at this time and, having said that, what  
2 regulatory requirements are we going to put in there to  
3 make sure that it's being monitored?

4 **MR. ASTLES:** Chris Astles, for the record.

5 The reason we are asking for the 10-year  
6 licence is based on the performance of the current  
7 licensing period and previous licensing periods.

8 We have had very good environmental safety  
9 performance, public relations, so we've demonstrated a  
10 commitment to continually improve at the site.

11 As far as oversight, the CNSC will continue  
12 -- I believe it is in their handbook -- with the regular  
13 inspections of the site, the visits they do, the audit  
14 program they do, as well as a mid-term presentation on the  
15 activity and the performance at that time.

16 **MEMBER BARRIAULT:** Thank you.

17 CNSC, what are you going to do to monitor  
18 this 10-year licence I guess is -- and I know you  
19 described some of this, but just for the record?

20 **MR. RAVISHANKAR:** Ravishankar, for the  
21 record.

22 CNSC staff is confident that the existing  
23 programs in place for the various safety and control areas  
24 is able to sustain the increased production at 24,000  
25 tonnes per year and 10 years -- 10-year licence period.

1                   And our program in terms of compliance  
2 verification along with the licence condition handbook  
3 flexibility that provides further specifications for the  
4 licensee is sufficient for -- to manage the compliance  
5 verification over a 10-year period.

6                   **MEMBER BARRIAULT:** So you're satisfied that  
7 you can monitor it effectively and report back to us how  
8 frequently?

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

10                   As we mentioned, what we're planning to do  
11 is do actual grouping of all of the facilities on the fuel  
12 cycle, the front end, the mines, these facilities and the  
13 other fuel fabrications into an annual compliance report.

14                   So you would get information on the  
15 compliance things on an annual basis from the staff point  
16 of view.

17                   **MEMBER BARRIAULT:** Thank you, that's fine.

18                   Thank you, Mr. Chair.

19                   **THE CHAIRMAN:** Thank you.

20                   Anybody else? Any other?

21                   Okay, I've got just a couple of quick ones.

22                   Your survey of -- I guess it's the Citizen  
23 that got you the 94 percent support was in 2009. Are you  
24 planning to update this post-Fukushima?

25                   You know, it would be nice to see if there

1 is any change. And that runs across the three facilities,  
2 actually.

3 **MR. ASTLES:** For the record, Chris Astles.  
4 The direct answer is, yes, we will be  
5 updating it.

6 The previous survey -- well, that was the  
7 first one for the facility so it was interesting to see  
8 the results, and definitely within the next licensing  
9 period to do it a number of times; so yes.

10 **MR. THORNE:** Andy Thorne, for the record.  
11 Just to comment on the other facilities.  
12 These surveys are actually out of sequence. We don't do  
13 them all at the same time at each facility.

14 And, interestingly, just to your comment,  
15 in Port Hope the survey that we recently did was actually  
16 post-Fukushima and we still see extremely strong support  
17 from our community post that event in Japan.

18 So we have done a survey post-Fukushima  
19 and, to Chris' point, we will -- we fully intend to repeat  
20 that survey in Blind River sometime in the future.

21 **THE CHAIRMAN:** Thank you.

22 You still do incineration on-site. Will  
23 that continue, increase; what are you incinerating?

24 **MR. ASTLES:** Chris Astles, for the record.  
25 Currently, the incinerator is used to



1 process the contaminated combustibles from both the Blind  
2 River Refinery and the conversion facility in Port Hope.  
3 It is still operating. It's operating quite well.

4 At the mid-term hearing a concern was  
5 raised to the fact that we were backlogged in material to  
6 be processed. We have caught that up and the current  
7 operation such that we're maintaining current inventory.  
8 So as we generate it, we run the incinerator and process  
9 it, and it will continue into the future.

10 **THE CHAIRMAN:** And what kind of emission  
11 control do we have on that incinerator?

12 **MR. ASTLES:** The incinerator has a -- Chris  
13 Astles, for the record -- has an APC system which consists  
14 of scrubber columns, baghouse for filtration of the  
15 particulate and dust, as well as activated carbon beds for  
16 removal of dioxins and furans.

17 And the results of the incinerator  
18 performance has been quite good, and it's part of the CMD  
19 submission; Table 10 of the CMD.

20 **THE CHAIRMAN:** M'hm.

21 On safeguards, how many -- this is for  
22 staff -- how many IAEA visits the site got on safeguards?

23 And, by the way, is there enriched uranium  
24 on site at all?

25 **MR. RAVISHANKAR:** Ravishankar, for the

1 record.

2 To our knowledge there is no enriched  
3 uranium on site at Blind River Refinery.

4 With respect to the IAEA inspections, I  
5 believe that there were 10 inspections that were during  
6 the licence period, out of which seven of them CNSC staff  
7 accompanied IAEA inspectors.

8 **THE CHAIRMAN:** Why do they need 10  
9 inspections for that particular site?

10 **MR. BURTON:** Patrick Burton. I'm the  
11 Senior Safeguards Advisor for the CNSC, for the record.

12 The IAEA visits the Blind River site  
13 according to a procedure that we have agreed with them,  
14 and in that procedure it specifies sort of a maximum  
15 frequency of inspections that the IAEA will carry out.  
16 The number is based on their own risk assessment of the  
17 Blind River facility.

18 **THE CHAIRMAN:** Sounds a bit bizarre that in  
19 the global monitoring, Blind River has deserved 10 visits  
20 ---

21 **MR. BURTON:** Ten (10) visits ---

22 **THE CHAIRMAN:** --- compared to all the rest  
23 of the higher risks, I would argue.

24 **MR. BURTON:** Ten (10) visits is over the  
25 entire licensing period. In a given year, Blind River

1 will receive two to four visits depending on ---

2 **THE CHAIRMAN:** That's what I mean.

3 **MR. BURTON:** --- how ---

4 **THE CHAIRMAN:** that's what I mean.

5 Don't you think that's over the top?

6 **MR. BURTON:** It's actually a slight  
7 reduction from what used to be there, but it is still a  
8 significant expenditure of IAEA, CNSC and Cameco  
9 resources.

10 **THE CHAIRMAN:** Cameco, you want to comment?

11 Are you now trying to find a way to  
12 facilitate this? And I understand you're developing some  
13 software to make the process a bit easier?

14 **MR. ASTLES:** For the record, Chris Astles.

15 Yes, with respect to the software, it's the  
16 setting it up so that the data -- inventory data is easier  
17 to transfer to the IAEA records. So that's an ongoing  
18 process and should be implemented soon.

19 As far as the visits by the IAEA, it's just  
20 the cost of doing business for this site. We've developed  
21 relationships with the inspectors that come on site.  
22 We've gotten great support from the CNSC during these  
23 visits. So it's just the cost of doing business for us.

24 **THE CHAIRMAN:** Did you ever find some  
25 useful input from ---

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( LAUGHTER/RIRES )

**MR. ASTLES:** For the record, Chris Astles.

It's more information given to the IAEA of operating conditions and inventory controls, so the information it's to the IAEA.

**THE CHAIRMAN:** So they never report back to you on your performance?

**MR. ASTLES:** For the record, Chris Astles.

They will tell us, through either phone conversations or letters, thanking us for participating in the inspections and the help we've given them.

**THE CHAIRMAN:** Thank you.

One quick question; you have a dosimetry service; who does your Q/A? You know, we recently got concerned about the some of the dosimetry quality assurances. Who does yours?

**MR. DeGRAW:** Joe DeGraw, for the record.

We have an external dosimetry service provider licensed, obviously, by the CNSC for our dosimeter badges, so they obviously would do their own Q/A.

We also have a licensed internal dosimetry program between Blind River and the service provider, licensed obviously by the CNSC for our dosimeter badges. So they obviously would do their own QA. We also have a

1 licensed internal dosimetry program between Blind River  
2 and the Port Hope conversion facility, and so we do our  
3 own QA for that. And that obviously includes internal  
4 audits.

5 Again, we get a third party independent  
6 contractor to do an annual audit of our internal dosimetry  
7 program. And that, again, that was just recently done  
8 about a month ago for both at Blind River and the  
9 conversion facility.

10 **THE CHAIRMAN:** So the extent of QA it's not  
11 Health Canada by any chance?

12 **MR. DeGRAW:** Joe DeGraw for the record.

13 No. It's a contractor that we hire to  
14 carry out that work, and they look at all aspects of the  
15 program.

16 **THE CHAIRMAN:** I see somebody -- some  
17 expert from CNSC want to make a comment?

18 **MS. PURVIS:** Yeah. Caroline Purvis for the  
19 record.

20 So my response applies to all three of the  
21 facilities that we're hearing today. None of these  
22 facilities use the Health Canada commercial service for  
23 their external dosimetry.

24 **THE CHAIRMAN:** And they will reply to the  
25 12/2 request?

1                   **MS. PURVIS:** Excellent question. Yes, so  
2 they do have a different commercial service for their  
3 external dosimetry, who all of which have also received a  
4 request to validate their technical algorithms. And at  
5 the current time we have no reason to believe that the  
6 other services are giving incorrect information. That  
7 also includes the internal dosimetry that's licensed by  
8 Cameco.

9                   **THE CHAIRMAN:** Thank you. My last question  
10 is, in your relationship with the First Nation, how many  
11 employees of First Nation do you actually engage? Is that  
12 a source of employment for some of the ---

13                   **MR. ASTLES:** For the record, Chris Astles.  
14 Yes, we look at employment through the Blind River area,  
15 which is Blind River itself, the community and the First  
16 Nation -- Mississagi First Nation. We look at the --  
17 Mississagi First Nation there's about 350 full-time band  
18 members, and in Blind River about 3500. So about a ten to  
19 one ratio for employment opportunities. Currently we have  
20 about 17 percent of our staff would be of First Nation  
21 origin.

22                   **THE CHAIRMAN:** You said 17?

23                   **MR. ASTLES:** Seventeen percent. But that's  
24 not limited just Mississagi First Nation. We do have  
25 members -- employees from other bands as well.

1                   **THE CHAIRMAN:** Thank you. Anybody else?  
2 Last chance. Okay. Thank you very much.

3                   We're going to take a break.

4                   **THE REGISTRAR:** I'm going to close it?

5                   **THE CHAIRMAN:** Go ahead.

6                   **THE REGISTRAR:** So this hearing is -- this  
7 brings a close the public portion of the hearing. And as  
8 I mentioned earlier we're now going in closed session for  
9 a discussion on security matters.

10                   So this hearing is to be continued with day  
11 two on January 18 and 19th, 2012 at the Town Park  
12 Recreation Center in Port Hope. The public is invited to  
13 participate either by oral presentation or written  
14 submission on hearing day two. Persons who wish to  
15 intervene must file submissions by December 19th, 2011.

16                   The hearing is now adjourned to January  
17 18th. And we will now take a short break of ten minutes  
18 and start the hearing on the application for renewal of  
19 the licence for the Port Hope conversion facility at  
20 11:35.

21                   **THE CHAIRMAN:** Thank you.

22

23 --- Upon recessing

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