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 3rd, 2011

Le 3 novembre 2011

Public Hearing Room
14th floor
280 Slater Street
Ottawa, Ontario

Salle d'audiences publiques
14e 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:

Mr. Marc Leblanc

Secrétaire:

M. Marc Leblanc

General Counsel :

Ms. Lisa Thiele

Conseillère générale:

Mme Lisa Thiele

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

MR. LEBLANC: So this is Day One of the public hearing for the Blind River Refinery. The Notice of Public Hearing 2011-H10 was published on August 24th, 2011.

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

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

written submission is December 19th.

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

Mr. President?

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

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

11-H18.1 / 11-H18.1A

Oral presentation by

Cameco Corporation

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

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

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

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

Headquarters located in Port Hope.

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

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

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

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

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

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

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

Chris?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

succeed in the organization.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

licensed contractor.

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

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

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

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

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

Our hazard recognition program is a key

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

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

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

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

Installation of the NO_x analyzer for monitoring emissions and the installation of a refrigeration circuit to improve the absorber NO_x abatement process.

The installation of the incinerator air

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

the site.

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

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

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

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

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

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

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

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

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

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

Thank you.

THE CHAIRMAN: Thank you.

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

11-H18
Oral presentation by
CNSC staff

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

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

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

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

lessons learned from events.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

An environmental assessment completed in

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

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

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

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

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

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

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

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

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

Number 3, assessments of Cameco’s proposed corrective actions to address deficiencies found during the compliance inspection.

And, number 4, verification of Cameco’s effective and timely completion of corrective actions.

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

We now present staff’s assessment of

licensee’s overall performance in safety and control areas.

Cameco’s Blind River facility maintains comprehensive and mature programs in all safety and control areas.

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

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

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

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

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

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

radiation protection.

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

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

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

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

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

We start with the radiation protection.

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

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

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

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

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

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

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

annual effective doses to workers.

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

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

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

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

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

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

Cameco’s Blind River refinery has three

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

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

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

This figure shows annual average uranium emission rates from the facility during 2007 to 2011. The 2011 data is as of June 30th.

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

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

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

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

This figure shows the annual average uranium releases from the facility through liquid effluence during 2007 to 2011. The 2011 data is as of June 30th.

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

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

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

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

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

For the next licence period, CNSC staff are

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

purpose.

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

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

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

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

MR. ELDER: Thank you.

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

requirements.

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

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

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

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

MEMBER HARVEY: Merci monsieur le président.

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

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

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

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

You've got the sentence?

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

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

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

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

clarification.

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

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

MR. ASTLES: For the record, Chris Astles.

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

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

MR. THORNE: Andy Thorne, for the record.

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

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

MEMBER HARVEY: It's independent?

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

MEMBER HARVEY: Okay, thank you.

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

MR. ASTLES: For the record, Chris Astles.

Yes, the 10-year plan is more of a strategic strategy of what we believe the markets could support for production in the future. So we are simply wishing to position ourselves so that if the markets do significantly improve, we'll be in a position to make that material or that production.

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

MR. ASTLES: For the record, Chris Astles.

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

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

THE CHAIRMAN: Thank you. Monsieur Harvey.

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

> "The waste management and the waste reduction strategies will be a main focus during the next licensing period."

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

MR. ASTLES: For the record, Chris Astles.

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

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

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

MR. ASTLES: For the record, Chris Astles.

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

MEMBER HARVEY: Okay. On page 5,

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

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

MR. DeGRAW: Joe DeGraw, for the record.

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

very, very soon.

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

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

MR. DeGRAW: Joe DeGraw for the record.

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

MEMBER HARVEY: Page 6 or 7, I should say 7, talking of reported events, you mention, for example,

> "In 2007, there were 111 events reported where 393 events reported in 2010."

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

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

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

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

MR. ELDER: Peter Elder, for the record.

They are applying a system that is very similar that's been used in other facilities. Actually, it's based somewhat on what is used in nuclear power plants. And in these ones the number of events is actually usually an indicator of how -- of your safety culture in the low level events, and you actually want a large number of low-level events reported. When they say events, this could be, "I used this procedure and it wasn't very clear. It needs to be rewritten so someone doesn't do something wrong."

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

employees constantly looking for minor improvements.

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

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

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

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

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

MR. ASTLES: Chris Astles, for the record.

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

investigations and follow-ups.

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

MR. ASTLES: Chris Astles, for the record.

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

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

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

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

THE CHAIRMAN: Okay. Thank you.

Dr. Barriault?

MEMBER BARRIAULT: Thank you, Mr. Chairman.

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

MR. ASTLES: For the record, Chris Astles.

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

MEMBER BARRIAULT: M'hm.

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

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

MR. ASTLES: Chris Astles, for the record.

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

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

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

MR. ASTLES: Yes. Chris Astles, for the record.

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

MEMBER BARRIAULT: Thank you.

Does CNSC staff want to comment on this?

MR. RAVISHANKAR: Ravishankar, for the record.

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

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

MR. ELDER: Peter Elder, for the record.

In terms of -- you notice that we had them

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

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

MEMBER BARRIAULT: When you get there.

Go ahead.

THE CHAIRMAN: Can I piggyback on this?

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

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

MR. RAVISHANKAR: Ravishankar, for the record.

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

THE CHAIRMAN: So the licence will prohibit

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

MR. RAVISHANKAR: That's correct.

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

MR. RAVISHANKAR: Ravishankar, for the record.

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

THE CHAIRMAN: Thank you.

Dr. Barriault?

MEMBER BARRIAULT: Thank you.

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

That's your waste management 3.5.

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

MEMBER BARRIAULT: Yes.

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

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

THE REGISTRAR: Yes.

MEMBER BARRIAULT: --- because it's satisfactory.

MR. ELDER: Peter Elder, for the record.

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

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

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

MEMBER BARRIAULT: Thank you.

I guess my next question is to Cameco. You

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

MR. ASTLES: For the record, Chris Astles.

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

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

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

MR. ASTLES: For the record, Chris Astles.

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

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

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

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

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

MEMBER BARRIAULT: Okay. The actual numbers ofwork-related injuries.

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

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

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

MEMBER BARRIAULT: Okay.

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

MEMBER BARRIAULT: And you break ---

MR. ASTLES: And this is typical.

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

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

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

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

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

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

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

Division to speak to this.

MEMBER BARRIAULT: Thank you.

MR. RINKER: Mike Rinker for the record.

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

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

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

MR. ELDER: Peter Elder for the record.

This is the approach that we've taken for

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

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

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

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

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

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

THE CHAIRMAN: Thank you. Dr. McDill.

MEMBER McDILL: Thank you.

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

MR. ASTLES: Chris Astles for the record.

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

MEMBER McDILL: So it doesn't go through the Montreal lock system? Just curious. Maybe staff knows?

UNIDENTIFIED SPEAKER: No.

MEMBER McDILL: No.

UNIDENTIFIED SPEAKER: Go by train.

MEMBER McDILL: Rail to Montreal then out, but where out in Montreal?

MR. ELDER: Peter Elder for the

record.

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

MEMBER McDILL: Great, thank you.

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

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

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

MR. ASTLES: That's correct, yes.

MEMBER McDILL: All right, okay.

MR. ASTLES: For the process.

MEMBER McDILL: Thank you.

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

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

MR. DeGRAW: Joe DeGraw for the record.

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

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

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

MR. RINKER: Mike Rinker for the record.

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

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

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

MEMBER McDILL: Thank you.

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

MR. DeGRAW: Joe DeGraw for the record.

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

another on that.

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

MR. RAVISHANKAR: Ravishankar, for the record.

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

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

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

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

THE CHAIRMAN: What we don't want to have happen is to get caught between Environment Canada and MOE ---

MR. ELDER: And ---

THE CHAIRMAN: --- in terms of standards, so let's make sure that whatever the plan is ---

MR. ELDER: Yes.

THE CHAIRMAN: --- it's consistent with the regulatory limit setting by either agencies.

MR. ELDER: We'll confirm on this one. We have confirmed where we knew, with Ontario having moved to a new uranium air standard, that the facility could easily meet that standard and that our licence limits are appropriate to that as well.

THE CHAIRMAN: Thank you.

Dr. McDill?

MEMBER McDILL: Thank you.

My next question involves two pages, page 27 for Cameco and 41 for staff, and I think it's straightforward, but in Cameco's presentation it's said that uranium emissions from each individual process area ventilation system are determined through calculation, and, of course, staff on page 41 refers to large volume samplers.

How are the two sets of number cross-

checked?

MR. DeGRAW: Joe DeGraw, for the record.

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

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

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

MR. DeGRAW: Joe Degraw, for the record.

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

MR. JAFERI: Jafir Jaferi, for the record.

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

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

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

MEMBER McDILL: Have you seen this report that Cameco is referring to, or the documentation that they're referring to?

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

MEMBER McDILL: My concern is principally in the calculated values because we've had a couple of --

yes, please.

MR. RINKER: Mike Rinker, for the record.

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

MEMBER McDILL: Thank you.

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

MR. ASTLES: Chris Astles, for the record.

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

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

MEMBER McDILL: And staff is satisfied that that is being carried out appropriately?

MR. JAFERI: Jafir Jaferi, for the record.

Yes.

MEMBER McDILL: Very succinct, thank you.

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

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

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

MEMBER McDILL: So everything is inside, there's nothing -- okay.

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

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

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

MR. ASTLES: For the record, Chris Astles.

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

lifetime in Blind River.

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

(LAUGHTER/RIRES)

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

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

MR. ASTLES: For the record, Christ Astles.

We hired a consultant to come in and do a flood analysis for the potential of, you know, high winds, wave action, as well as the possibility of dam failure further upstream. And the owners of the dams that are up the Mississauga River their emergency response plans indicates that there’s a potential for flooding on the property.

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

MEMBER McDILL: Does staff want to comment?

MR. RAVISHANKAR: Ravishankar, for the record.

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

Further details on the flooding component are the historical aspects.

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

MR. LEI: Shizhong Lei, for the record.

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

CNSC staff reviewed the report and approved their action plan.

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

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

MEMBER McDILL: Because presumably they

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

MR. ASTLES: For the record, yes.

MEMBER McDILL: And my last question ---

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

MR. ASTLES: Yes.

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

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

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

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

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

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

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

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

particular case the concern that one might have?

MR. THORNE: Sir, Andy Thorne for the record.

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

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

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

THE CHAIRMAN: Thank you. Dr. McDill.

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

MR. JAFERI: Jafir Jaferi for the record.

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

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

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

MR. ASTLES: For the record, Chris Astles.

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

MEMBER McDILL: Thank you.

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

MR. ASTLES: For the record, Chris Astles.

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

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

MR. JAFERI: Jaferi Jafir for the record.

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

MEMBER McDILL: Thank you, Mr. Chair.

THE CHAIRMAN: Thank you. Monsieur Tolgyesi.

MEMBER TOLGYESI: Merci Monsieur President.

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

MR. ELDER: Peter Elder for the record.

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

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

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

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

MR. ELDER: Peter Elder for the record.

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

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

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

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

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

MR. ASTLES: For the record, Chris Astles.

The amount of uranium we get from Canada itself it does vary year to year. It could range anywhere from 40 to 60 percent of our annual production.

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

MR. ASTLES: For the record, Chris Astles.

I don't believe we can answer that at this

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

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

MR. ASTLES: Chris Astles, for the record.

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

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

MR. THORNE: Andy Thorne, for the record.

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

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

MR. ASTLES: For the record, Chris Astles.

The Blind River Refinery has a lot of redundancy built into the design allowing for the increased daily rates. The specific changes -- there are two major changes to the refinery we need to do, is the installation of two additional strip columns which are required to remove the uranium from the solvent through

the solvent extraction process, and then the other area is the denitration area where you dry the uranyl nitrate hexahydrate to a dry powder, the UO3.

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

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

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

MR. ASTLES: For the record, Chris Astles.

The installation of the strip columns will require a shutdown but we would do the work through a summer shutdown, which is typically anywhere from four to six weeks long, mainly because we'd have to purge the area of the solvent before we're doing any welding in the area just as a safety precaution. So there would be no extended shutdown to do the alterations.

MEMBER TOLGYESI: What's the maximum range

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

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

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

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

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

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

There is no actual limit as to the number

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

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

MR. JAFERI: Jafir Jaferi, for the record.

Yes, we agree. This is the largest refinery which brings yellowcake all over the world and we don't think it's productive to put any limit on the storage of uranium compound on site.

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

MR. JAFERI: Jafir Jaferi again.

The storage is done safely. We make sure that things are not left in the open. Everything is in containment and properly stored so that doses to workers, you know, are going to be increased if it's not properly controlled and contained.

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

MR. ASTLES: The communications with the

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

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

MR. DeGRAW: Joe DeGraw, for the record.

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

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

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

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

MR. DeGRAW: That is correct.

THE CHAIRMAN: Why not?

MR. DeGRAW: Joe DeGraw, for the record.

The short answer is nobody's asked for it. And the other thing, if -- and if we choose to, you know, that decision could be made. We certainly do share our -- what our significant risks are. That information would be shared because one of the things you do is identify what your significant risks are. But again, that --- you know, nobody has asked -- specifically asked us for that information. If they did we would consider that request.

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

MR. DeGRAW: Joe DeGraw, for the record.

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

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

THE CHAIRMAN: Okay.

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

MR. DeGRAW: Joe DeGraw, for the record.

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

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

MEMBER TOLGYESI: I have two last

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

MR. ASTLES: For the record, Chris Astles.

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

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

MEMBER TOLGYESI: So they are not really significant?

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

MEMBER TOLGYESI: You don't have any

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

MR. ASTLES: Chris Astles, for the record.

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

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

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

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

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

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

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

MR. ASTLES: Chris Astles, for the record.

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

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

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

THE CHAIRMAN: Okay. Anymore? Monsieur Harvey?

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

> "Air emissions remained well below the licence limits. Liquid effluent remained well below the licensed limit."

And to that point that you are lowering the limits.

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

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

MR. ELDER: Peter Elder, for the record.

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

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

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

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

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

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

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

THE CHAIRMAN: Dr. Barriault?

MEMBER BARRIAULT: Thank you, Mr. Chairman.

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

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

MR. ASTLES: Chris Astles, for the record.

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

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

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

MEMBER BARRIAULT: Thank you.

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

MR. RAVISHANKAR: Ravishankar, for the record.

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

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

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

MR. ELDER: Peter Elder, for the record.

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

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

MEMBER BARRIAULT: Thank you, that's fine.

Thank you, Mr. Chair.

THE CHAIRMAN: Thank you.

Anybody else? Any other?

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

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

You know, it would be nice to see if there

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

MR. ASTLES: For the record, Chris Astles.

The direct answer is, yes, we will be updating it.

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

MR. THORNE: Andy Thorne, for the record.

Just to comment on the other facilities. These surveys are actually out of sequence. We don't do them all at the same time at each facility.

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

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

THE CHAIRMAN: Thank you.

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

MR. ASTLES: Chris Astles, for the record.

Currently, the incinerator is used to

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

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

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

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

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

THE CHAIRMAN: M'hm.

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

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

MR. RAVISHANKAR: Ravishankar, for the

record.

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

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

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

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

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

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

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

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

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

will receive two to four visits depending on ---

THE CHAIRMAN: That's what I mean.

MR. BURTON: --- how ---

THE CHAIRMAN: that's what I mean.

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

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

THE CHAIRMAN: Cameco, you want to comment?

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

MR. ASTLES: For the record, Chris Astles.

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

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

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

(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

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

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

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

MR. DeGRAW: Joe DeGraw for the record.

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

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

MS. PURVIS: Yeah. Caroline Purvis for the record.

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

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

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

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

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

THE CHAIRMAN: You said 17?

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

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

We're going to take a break.

THE REGISTRAR: I'm going to close it?

THE CHAIRMAN: Go ahead.

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

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

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

THE CHAIRMAN: Thank you.

--- Upon recessing