Canadian Nuclear Safety Commission

Commission canadienne de sûreté nucléaire

Public Hearings

Audiences publiques

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Salle d'audiences publiques
14e étage
280, rue Slater
Ottawa (Ontario)

Commission Members present

Ms. Linda J. Keen
Dr. Moyra McDill
Mr. Alan Graham
Dr. Christopher Barnes
Mr. James Dosman
Mr. André Harvey

Commissaires présents

Mme Linda J. Keen
Dr. Moyra McDill
M. Alan Graham
Dr. Christopher Barnes
M. James Dosman
M. André Harvey

Secretary: Mr. Marc A. Leblanc

General Counsel : Jacques Lavoie

Secrétaire: M. Marc A. Leblanc

Conseiller général : Jacques Lavoie

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Ottawa, Ontario

--- Upon commencing at 8:30 a.m.

Opening Remarks

MR. LEBLANC: Bonjour Mesdames et messieurs. Bienvenue à cette audience de la Commission Canadienne de la sûreté nucléaire.

The Canadian Nuclear Safety Commission will continue its public hearings with one hearing today. The Commission Meeting will begin at eleven.

During today's business we have simultaneous translation. Les appareils de traduction sont disponibles à la réception. La version française est au poste huit (8) And the English version is on channel seven.

If you would please keep the pace of speech relatively slow so that the translators have a chance of keeping up.

The transcripts will be available on the Commission website early next week. To make the transcripts as meaningful as possible, we would ask everyone to identify themselves clearly before speaking.

As a courtesy to others in the room, please silence your cell phones and Blackberrys. Madame Keen, présidente et première dirigeante de la Commission, présidera l’audience d’aujourd’hui.

Madame Keen?

THE CHAIRPERSON: Good morning and welcome to the hearing of the Canadian Nuclear Safety Commission today.

I would like to begin by introducing the Members of the Commission that are with us today.

On my right are Dr. Moyra McDill and Dr. Christopher Barnes. On my left is Mr. Alan Graham, Dr. James Dosman and Mr. Andre Harvey. As well as the Secretary of the Commission, Marc LeBlanc, we also have the General Counsel and Chief Legal Advisor to the Commission with us on the podium, Jacques Lavoie.

I would like to note that the Commission is still on enhanced security status, as are many of the facilities that we regulate. As such I will take measures to ensure that security matters of a security nature are not discussed in public and I will, as necessary, take the action to ensure that we discuss these matters *in camera* and that means in the back room.

On the agenda today is Hearing Day-1 on the matter of the application by Cameco Corporation for the renewal of a Class 1B Nuclear Fuel Facility Operating Licence for its facility in Blind River.

This is Day-1 of the public hearing. The Notice of Public Hearing 2006-H-11 was published on July

31, 2006.

September 27 was the deadline for the filing of supplementary information. I note that supplementary information has been filed by Cameco Corporation.

Commission Member Document 06-H20.1A is confidential and will be discussed in closed session, if necessary, after the public portion of the hearing.

I would like to start today's hearing by calling on for the presentation from Cameco Corporation, as outlined in Commission Member Documents 06-H20.1 and 06-H20.1A and I will turn to Mr. Jerry Grandey, President and C.E.O. of Cameco Corporation, to begin, sir, if you wish. The floor is your's.

CAMECO CORPORATION: APPLICATION
BY CAMECO CORPORATION FOR RENEWAL
OF CLASS IB NUCLEAR FUEL FACILITY
OPERATING LICENCE FOR THIS FACILITY
IN BLIND RIVER, ONTARIO

06-H20.1/06-H-20.1A
Oral presentation by
Cameco Corporation

MR. GRANDEY: Madame Chair and members of the Commissioner and Staff, good morning, it's a pleasure to be back again this morning.

For the record my name is Gerry Grandey, I'm President and Chief Executive Officer of Cameco Corporation. With me today, and to my immediate left, is Bob Steane, Vice-President of Fuel Services for Cameco, and then already to my right, far right, John Jarrell, the Vice-President of Safety Health and Environment. Chris Astles to my immediate right here, Manager of the Blind River operations and Joe Degraw in the middle, Superintendent of Quality Compliance and Licencing for the Blind River facility.

So with that I'll now ask Bob Steane to continue our presentation. Thanks very much.

MR. STEANE: Thank you, Gerry. For the record I'm Bob Steane.

Madame Chair, members of the Commission and the public I'm pleased to meet with you this morning to present our application for the Blind River Refinery Licence Renewal.

The Blind River refinery which, when coupled with the Port Hope conversion facility, is one of only two uranium conversion facilities in North America. Now the Port Hope facility receives about 75 per cent of

the UO3 product from the Blind River refinery.

Recently Cameco entered into an agreement with Springfield Fuels Limited in the U.K. for Springfield to deliver 5,000 tonnes per year uranium hexafluoride that is produced from uranium trioxide, or UO3 supplied from the Blind River refinery

Now the Blind River Refinery is now supplying feed to both the Port Hope conversion facility and the Springfield's fuel facility in the U.K.

Our Blind River facility is about mid-way between Sudbury and Sault Ste. Marie, about an hour and a half drive from each city.

The town of Blind River currently has a population of about 3,400 and 80 per cent of the refinery employees lives in the Town, with the remainder in the rural area and other nearby communities.

Cameco is the largest employer in the town, next to the hospital. Prior to the refinery start-up, the surrounding area was local area mining and before forestry were the largest source of non-public sector employment.

Now Blind River is about 55 kilometers by road from Elliot Lake, which was the center of Canada's uranium mining sector before northern Saskatchewan took the forefront.

Blind River refinery is located about five

kilometers west of the Town of Blind River. The refinery is located where the Mississagi River discharges into Lake Huron. And this part of the lake is called the north channel by virtue of its off-shore islands.

The original design objective was to situate the facility with a surrounding controlled land-use zone of about 1 kilometer radius. This zone hosts a golf course, initially 9 holes, but has since expanded to 18. To the east of the refinery , the area also encompasses nature trails and cross-country ski trails in the winter time.

The actual licenced site is 28 acres in size. Including the controlled land-use zone, the site occupies 636 acres, with an additional 481 acre lease arrangement to the east or the top right portion in the picture. And that refinery has been in operation since 1983.

I'll now turn the remainder of the presentation over to Chris Astles.

MR. ASTLES: Good morning. For the record, my name is Chris Astles and I'm the Manager of the refinery in Blind River.

The process begins with uranium ore concentrate, which is the form of uranium resulting from the first stage of purification at the mine site. An

earlier common form of the concentrate, ammonium diuranate was bright yellow in colour, and commonly called yellowcake. Yellowcake is now usually calcined to black U-3-O-8 to eliminate the ammonia.

In any event, the material is weighed, sampled and blended prior to entry into the circuit.

The process consists of a dissolution of the concentrate in nitric acid in a 3-stage digestion, followed by a 3-stage solvent extraction process, followed by a 3-stage evaporation, or boil-down process prior to high temperature thermal decomposition or denitration to UO3, which is also a yellow powder. The UO3 is either shipped in tote bins to Cameco's Port Hope Conversation Facility or drummed for other customers.

Two key supplemental features are a circuit to produce a recyclable or calcined product for uranium recovery from the rejected impurities in the concentrated, call the raffinate, or aqueous phase from solvent extraction, and a nitric acid recovery circuit, which recovers nitric acid from the denitration and calcined produce production circuits.

In summary, the refinery provides the second and final stage of purification of the uranium before it is chemically converted into the forms necessary to make UO2 fuel pellets for CANDU reactors or UF6 for

eventual use in light water reactors.

The Blind River refinery is a single-product site, producing a highly purified intermediate for further chemical conversion prior to nuclear fuel production. The refinery was designed for and licenced to 18,000 tU/y, however, up until this year market conditions have not required that level of production.

The UO3 is shipped in 13.5 tonne or 13,500 kg. UO3 tote bins. These tote bins are loaded three to a truck and shipped to Port Hope using a sole-source contractor for consistency. There are typically between 350 to 450 shipments made per year.

In 2005 Cameco began shipping UO3 to Springfield Fuels Limited in 30 gallon steel drums. Early in 2005 Cameco had signed a 10 year contract with SFL to provide 5,000 tonnes of UO3 on an annual basis for the production of UF6.

Disposal and then recycle of the solvent extraction circuit raffinate stream has been the main waste management focus for the refinery.

In 1979, recycle of raffinate to uranium mills began, both to recover the uranium content of the material, and to use its sulfuric acid content. In total, concentrated liquid raffinate was recycled to five different Ontario uranium mine/mill operations over a 19

year period, recovering over half a million pounds of uranium, before the last mine closure in 1996.

The demise of this recycle program rested with the economic realities of low-grade uranium mining, and not with the technical or environmental concerns with the material.

In its place, a circuit was installed to produce an even more concentrated product, in oxide rather than purely sulfate form, with 2-6% uranium content.

The Blind River refinery currently operates in a continuous mode with an annual summer shutdown and a Christmas shutdown.

The raffinate drying circuit operates a Monday to Friday schedule. Operational changes in the last few years have allowed both the UO3 circuit and the raffinate drying circuit to operate concurrently.

This picture shows a process operator taking a sample in the solvent extraction area.

The refinery currently operates with approximately 130 employees, in addition to the security contractor who provides 24-hour coverage.

Continuous shift operations are staffed with an eight-person crew, which includes a shift supervisor.

Production rates have been 10-15 thousand

tonnes uranium per year in recent years, though this year we plan to produce 18,000 tU, which is our CNSC licenced limit.

The picture in the background of this slides shows the ammonia storage tank. The ammonia is used for pH control, since it can neutralize acid, yet thermally decomposes of the denitration process, leaving no residue in either the UO3 product or the raffinate-based calcined product.

During the current 5-year licencing period, priority has been given to developing an internal dosimetry program for both the Blind River and Port Hope Cameco sites.

Our application for dosimetry services licence was submitted to the CNSC Staff in August, 2006.

Other priority projects have included environmental initiatives such as the development and subsequent update of our ecological risk assessment report; and a sediment sampling including a delineation study, and two environmental assessments: one to upgrade the site incinerator and the other to increase licenced production capacity.

The picture in this slide shows the incinerator stack at the Blind River Refinery.

The Blind River refinery continues to be a

Cameco leader conventional safety. There have been seven lost time accidents during the current licencing period. The number of medical aids has remained unchanged, with ten or eleven reported in each of the first four years of the current licenced period. There have been four medical aids in the first six months of this year.

The number of first aids has also remained relatively stable, though there is an increasing trend in 2006, in part due to the 30 per cent increase in our workforce in the last year, but also in part to our encouraging employees to report all injuries, no matter how minor.

In 2004 the refinery developed a safety charter detailing our employee's commitment to safety. As shown in this photograph, all employees have physically signed the charter, which is posted in the front lobby of the refinery.

This graph illustrates the number of the seven lost time accidents by year during the current licencing period.

This slide shows the range of annual whole body and skin external dosimetry results for the period 2002-2005. The maximum annual result during this period for each is also shown. These results are in line with historical refinery results.

There were two action level exceedences, one in 2003 and one in 2004. In each case, Cameco carried out an investigation and took corrective actions to reduce exposure.

As noted previously, Cameco has recently applied for an internal dosimetry licence from the CNSC. The application is for both the lung counting and urinalysis program, as internal dose will be assigned based on results from both programs.

This is a relatively new program for Cameco, with the new lung counter only being in operation for a few years. Recently, it was discovered that the way in which employee dose based on lung count results was being initially determined was not the optimal approach. Therefore, we are moving to what we feel is a more accurate and robust method of determining lung dose. This has necessitated that all individual results dating back to the start of the program in 2003 be reassessed and this work is still in progress. For this reason, Cameco cannot report effective dose data for the current licencing period at this time, but we will have the data available to present to the Commission at the Day-2 hearing.

The urine dosimetry results are unaffected by the need to recalculate the lung dose data. For the three years since the urine dosimetry data has been

compiled, the annual average employee exposure has been .1 mSv or less. the maximum individual annual result over the three year period is 2.8 mSv. Urine dose data to date in 2006 is comparable to past years.

Since the start of the new internal dosimetry program there have been two reported lung count results above 10 mSv, one in 2004 and one in 2005. The 2004 investigation was with respect to a process operator and the 2005 investigation was with respect to a warehouse operator. Cameco has reviewed both incidents with the work force and corrective actions have been initiated. Again, the dose results for the two individuals are being reassessed.

As part of our ongoing commitment to continual improvement and the ALARA principle, Cameco has identified the double drum dumper as a key area for dust reduction initiatives in the refinery. Refinements to the dumper package have been ongoing since the initial upgrade to the dumper was done in 2002.

Specifically, we have installed a new drum cleaning circuit at the dumper, increased dust collection capacity, installed additional dust hoods and altered the conveyor logic to reduce potential operator exposure.

In 2005 a new spencer turbine was also in the refinery which has increased fume removal capacity in

the refinery and reduced worker exposure to airborne dust in certain processing areas.

Another significant dose reduction initiative was to reduce area operator exposure in the raffinate drying area, or what we call the DRAFF area by installing lead shielding at certain high exposure locations, such as the conveyor shown in this picture.

Work processes in this area were also adjusted to minimize operator exposure to the drummed calcined product, which has a relatively high gamma field compared to the gamma fields associated with normal uranium concentrates.

An increased emphasis on training and the principals of time, distance and shielding have also been reinforced with the employees who work in this area so that they are more aware of the hazards and can take the necessary steps to minimize their personal exposure.

As the recent CNSC Type 1 inspection of our radiation safety program indicted, there are opportunities for improvement with respect to our ALARA program and Cameco has taken advantage of these, in line with our commitment to continual improvement.

The environmental monitoring program includes sampling of air and water emissions, high-volume air sampling of ambient air, both near the refinery and in

the Town of Blind River, and both surface and groundwater monitoring.

There were three CNSC action level exceedences related to stack emissions in 2002. Since that time, Cameco has not had any. This is a result of good control on emission and effluent abatement equipment, coupled with timely and effective response to process upsets having potential effluent/emission implications.

The photo in this slide shows a high volume total suspended particulate air sampler. The filter paper collects participate typically for two weeks between changes.

During the licencing period the overall stack and water total uranium emissions have been at the lowest levels in the history of the refinery. This is due to a concerted effort to reduce and keep emissions as low as reasonably achievable, consistent with the ALARA principle.

The graph shows the total kg of uranium emitted on an annual basis from the two process stacks plus the incinerator stack. The 2006 result is the projected annual result based on emissions for the first six months of the year. As a result of various stack uranium reduction initiatives, annual uranium stack emissions have now stabilized at well under 5 kg.

Fugitive emissions, calculated based on in-plant uranium-in-air concentrations exhausted via the plant HVAC systems, remained relative stable during the licencing period.

However, this area will be a target for future emission reduction initiatives.

The refinery has always operated with a batch effluent release system, which prevents the discharge of off-specification effluent.

In addition, the refinery discharge pipeline, located about 500m off-shore, was designed with a diffuser to ensure a minimum 100-fold dilution of the refinery effluent.

This minimum 100-fold dilution was confirmed during the plume delineation monitoring carried out in 2005, when testing by an independent contractor showed that 100:1 dilution of the refinery effluent occurs within 1 meter of the diffuser.

In 2003, the Ministry of Environment allowed Cameco to use an alternate analytical procedure for analysis of total suspended solids in liquid effluent, to correct for the algae growth which occurs in our lagoons. Since this change in analytical method, Cameco meets provincial discharge limits for TSS.

The picture shows where the effluent

pipeline enters the north channel of Lake Huron.

Routine monitoring of groundwater upstream, downstream and on the licenced refinery property continued during the current licencing period. The current groundwater monitoring data has been incorporated into the recently update ecological risk assessment report for the refinery.

This map shows the location of all 23 monitoring wells around the refinery.

The groundwater flow underneath the refinery is in a west to southwesterly direction, towards the Mississagi River.

Annual soil sampling around the refinery continued to be done during the current licencing period. Average annual results within 1 km of the refinery remain in the 3-4 ppm uranium range, or roughly twice background levels, with some sample results immediately outside the perimeter fence showing slightly higher values.

The MOE conducted two soil sampling campaigns during the current licencing period as well and issued a report in 2005 that concluded that uranium emissions from Cameco are not measurable in either the Mississagi First Nation or Blind River communities. MOE soil sampling results match the results obtained by Cameco's own soil sampling program.

In 2002 Cameco initiated work on an ecological risk assessment for the Blind River refinery. This ERA report was finalized and issued in 2004. The initial report concluded that the operation of the refinery was not having a significant adverse effect on the surrounding environment. The report contained two recommendations to enhance the environmental monitoring program, both of which Cameco has implemented.

In 2006, the ERA was updated to include current refinery emissions and projected emissions at an annual production capacity of 24,000 tonnes uranium as UO3, compared to the licence limit of 18,000 tonnes U as of UO3 per year.

This was done in support of our planned application to increase licenced production capacity, which will be discussed in more detail later in the presentation.

A comprehensive sediment sampling campaign was carried out in 2005. The study, which as been submitted to CNSC Staff for review, indicates that all measured parameters in lake sediment are below guideline values.

For parameters with no guideline values, the results downstream were similar to measured concentrations upstream of the diffuser location.

During the current licencing period, Blind River has maintained a stable inventory of calcined product, which is generated circuit in the raffinate drying. The remaining historical inventory of regeneration product, an organic-based material generated in the solvent treatment process, was shipped off site for uranium recovery during the current licencing period.

A minimal inventory of this material is being maintained on site, as it is shipped as soon as a sufficient quantity has been generated to make a full transport load.

Both calcined product and regeneration product have sufficient uranium content to warrant recovery. These two materials essentially define the refinery's process-generated wastes, but both are further processed as recyclable products. The normal on-site inventory of these materials at any given time is 1500-300 drums.

The pictures in this slide show the calcined product and what it looks like. It is a free-flowing fine to coarse powder, reddish in color due to its iron content.

Cameco's current waste management priorities at the refinery are the development of an alternative outlet for calcined product and the ongoing

program of waste consolidation, including improved management of scrap drums.

Last year Cameco purchased and installed a drum cutter for cutting up empty uranium concentrate drums. The cut pieces will be decontaminated using a grit blaster, and then the drum is monitored to ensure they are no longer contaminated and then sold to a local scrap metal dealer. The grit blaster has just been ordered and we anticipate having the whole system operational in early 2007.

Cameco has just finished updating the site preliminary decommissioning plan, which is a conceptual planning document. The plan was submitted to the CNSC Staff last month. Costs associated with the plan have increased from 14.6 million dollars since the plan was last updated in 2001, primarily as a result of increased costs for labour, building demolition, equipment removal and decontamination.

Copies of the environmental sections of the CNSC quarterly reports are regularly submitted to the Blind River Area Environmental Monitoring Committee, which currently meets once or twice a year.

Quarterly reports are also provided to the Town of Blind River and the Mississagi First Nation. I have given priority to maintaining liaison with these

local government organizations, discussing the licencing process and providing updates on Cameco's activities.

Cameco continues to maintain liaison with local emergency measures groups, notably the Volunteer Fire Department and the Ontario Provincial Police.

This photo shows a gazebo which was built by Cameco employees in support of local initiatives within the community.

During the current licencing period the number of visits to our site on an annual basis has ranged from 500 to 1000 people, and shows an increasing trend. Visitors included both local and neighboring school and community groups.

In addition, local school and community initiatives such as student internship placements, support of science fairs, Cameco Cares day and support for local organizations such as the Blind River Beavers Junior A hockey team, as shown in this slide, all help to support the position that Cameco plays an integral part in the local community.

Cameco also initiated a joint partnership with Mississagi First Nation on an apprenticeship program where we would provide training support for a local member of that Mississagi First Nation and we split the wages for their apprenticeship.

During the current licencing period Cameco updated their emergency response plan, which has been reviewed and accepted by the CNSC Staff. Copies of the updated plan were also forwarded to the Town of Blind River, Mississagi First Nation, police and local hospital.

As we indicated in our CMD submission, there was a heavy emphasis on both fire and HAZMAT training for emergency response team members during the last few years. Cameco also worked pro-actively with the local volunteer fire department and arranged for their Chief and some of their firefighters to attend HAZMAT training at the refinery earlier this spring, and they are now certified to NFPA-472 Operations Level. These photos are from that exercise.

In addition, we provided support so that the town fire chief could attend a Fire Ground Leadership course a the Lambton Fire College with some of our emergency response personnel.

Also, Cameco continues to hold training exercises and drills for the employee group on a regular basis. We had an emergency drill training exercise earlier this week that was attended by the CNSC Staff.

In 2006 we have created the positions of an Emergency utilities operator and emergency response plan training coordinator. The primary duty of the emergency

utilities operator is to ensure the required fire safety and emergency response inspections and equipment checks are done as schedule, while the ERP training coordinator is responsible to ensure that all training requirements are being met.

In addition to these positions, the refinery has named a new Fire Safety Officer for the facility.

As required by the CNSC licence, annual third party reviews of the inspection requirements in the fire code have been completed, as have any third party reviews required for new installations.

CNSC Staff have proposed a number of new licence conditions, specifically with respect to fire protection. An example of this is NFPA-801 standard. Although we ensure this as an objective, we have been held to different standards in the current licence.

We want to be sure that at the time the new licence becomes effective we are not inadvertently placed into a state of non-compliance because perhaps a transition period was necessary, but has not been provided.

Therefore, we are asking for a period to first determine what the new licence conditions will require and then for a phase-in period to achieve

compliance.

Cameco believes it is appropriate in this situation to engage in further dialogue with the CNSC Staff with a view to obtaining clarification on some of the proposed licence conditions.

Earlier this year the site operations quality assurance manual was updated to meet current CNSC expectations in this area. A CNSC Type 1 inspection of the program was carried out just a few weeks ago. Cameco will be working with CNSC Staff to address issues arising from this inspection.

The Blind River refinery programs are also aligned with the Cameco Corporate quality management initiatives introduced during the current licence period.

Also during the licencing period Cameco created a training department on site, specifically to develop and implement a systematic approach to training for the refinery. The department currently consists of five people.

A CNSC Type 1 training inspection was carried out earlier this year and provided clarification on CNSC requirements and expectations in this area.

The Blind River refinery has a two environmental assessments in progress. The first EA is related to upgrading the pollution control equipment for

the incinerator to meet the new regulatory requirements for dioxins and furans.

New regulatory emissions limits with respect to dioxins and furans from all incinerators in Canada comes into effect on December 31, 2006.

Cameco needs to have the pollution control equipment installed in order to ensure we meet the new limits, and we estimate that it will take approximately three months to complete the installation.

Cameco cannot install the pollution control equipment until the EA has been approved by the CNSC.

The second environmental assessment is in support of Cameco's intention to increase licenced production capacity from our current level of 18,000 tU as UO3 to 24,00 tU as UO3 during the next licencing period.

A draft environmental assessment screening report is currently being prepared and will be submitted to the CNSC later this month. Assuming the environmental assessment screening report is accepted and approved by the CNSC, Cameco would then make a request to amend its operating licence to increase licenced production capacity.

In support of both environmental assessments, Cameco has updated the site ecological risk assessment study as noted earlier in the presentation.

The site safety report, which includes credible accident scenarios, was also updated to incorporate the planned changes to both the incinerator operation and to the process operation, as a result of the increased production capacity. The updated safety report was submitted to CNSC Staff earlier this year.

We have requested a 5-year licence renewal, largely on the basis of a good record of maintaining safe and environmentally responsible production. We have demonstrated good occupational health and safety performance, consistent, good environmental protection and have in place policies and programs to protect workers, the public and the environment.

In summary, Blind River continues to show leadership in chemical plant safety, being an industry leader in terms of conventional health and safety, demonstrates good control on radiation exposure while maintaining steady production operations; demonstrates good control on environmental emissions, both chemical and radiological, while maintaining ISO 14001 registration; shows a responsible approach to waste management; and shows a commitment to maintaining a good relationship with local neighbors.

In consideration of Cameco's ability to operate the facility in a safe and efficient manner, and

in compliance with our CNSC licence, we respectfully request renewal of the Blind River Operating License for a five year period.

This concludes our verbal presentation for this Day-1 hearing. Thank you for your attention.

THE CHAIRPERSON: Thank you very much. Before we open the floor for questions we're going to turn to the presentation by CNSC Staff, and this is outlined in CMD Document 06-H20 and I'll turn to Barclay Howden who is the responsible Director-General.

Mr. Howden, you may proceed, sir.

06-H20
Oral presentation by
CNSC staff:

MR. HOWDEN: Thank you.

Good morning, Madame Chair, members of the Commission. For the record, my name is Barclay Howden; I'm the Director-General of the Directorate Nuclear Cycle and Facilities Regulation. With me today or Mr. Henry Rabski, Director and Mr. David Werry, Project Officer, both in the Processing and Research Facilities Division, as well as the rest of the licencing team for this facility.

CNSC Staff has reviewed the operation of Cameco Corporation's Blind River Refinery Facility and the application from Cameco to renew the Blind River Class 1B nuclear fuel facility's operating licence.

Based on this review, CNSC Staff has formed a position on the application which is documented in CMD 06-H20.

The position includes a recommendation that the Commission renew the proposed processing facility licence for another five year term.

I will now turn the presentation over to Mr. Rabski first and then on to Mr. Werry who will provide you with CNSC's Staff's recommendations for licence renewal.

MR. RABSKI: Good morning, Madame Chair, Members of the Commission. For the record, my name is Henry Rabski

Our presentation we will be making this morning will include six parts. We're going to start with a brief overview of the Cameco Corporation's Blind River refinery, followed by a review of Cameco's application to renew the licence.

Then Mr. Werry will highlight the licencee's key safety programs and performance during the current licencing period.

Following that, a summary of other relevant information including decommissioning planning, financial guarantee, and the Canadian Environmental Assessment Act implications will be presented, along with the overall conclusions from the reviews performed by Staff.

Finally, the CNSC Staff recommendations to the Commission will be presented.

For the purposes of our presentation this morning, Cameco Corporation's Blind River facility will be referred to as "Cameco" or "Blind River" throughout presentation.

The Uranium refinery that Cameco operates is located in Blind River, Ontario, approximately midway between Sudbury and Sault Ste. Marie, Ontario, along the north shore of Lake Huron.

The facility receives yellowcake (milled natural uranium) from Canadian mines located in northern Saskatchewan, and from various world mines to convert the milled product to uranium trioxide.

There have been no amendments to the licence since the renewal that occurred in 2002.

The current licence for the facility expires February 28, 2007.

Cameco has applied to renew its Fuel Fabrication Operating Licence, requesting a similar

duration of five years.

The application was provided in a timely fashion and CNSC Staff's review of the application found that it met the application requirements described in the application regulations.

I will now turn the remainder of the presentation over to Mr. Werry, the Project Officer for the facility.

MR. WERRY: Good morning, Madam Chair, Members of the Commission. For the record, my name is David Werry.

Cameco was required to have various programs in place with respect to the operation of the nuclear facility.

CNSC Staff have evaluated various safety areas. The key safety areas that were focussed on during the assessment of the application are outlined on this slide, namely, "Radiation protection, environmental protection, emergency preparedness, fire protection, quality assurance, security, safeguards and international obligations and operations."

The overall assessment ratings for the various programs and implementations are that they meet requirements, with the exception of the quality management program where the Staff recently conducted a Type 1

inspection of the implementation of the program.

Please note that in the Executive Summary, a grade of "B" was given for quality assurance implementation. This should be corrected to read "not rated" as described in the text of the CMD.

Cameco has demonstrated improvements in programs and implementation in several areas during the licencing period.

The areas of improvement are radiation protection, environmental protection, quality assurance and the public information program.

Continuing on to the topic of the licencee's performance, we'll discuss radiation protection.

There are several indicators that the facility has been operated safely during the licencing period. The radiation doses to the workers and to the public, along with the radioactive emissions to the environment, are below the regulatory limits and there have been no safety significant events reported during the licencing term.

CNSC Staff concludes that the risk to the public and workers over the current licence term has been low and the overall performance of Cameco meets requirements.

This Safety Area was given a rating of "B", with a consistent trend indicator.

Environmental Protection: Cameco maintains a comprehensive environmental protection program to comply with federal and provincial requirements. Natural uranium contamination is controlled at the source by the design and operation of machinery, material handling equipment, restricting access to controlled areas and by monitoring the operation of emission control systems and levels of uranium releases.

An Ecological Risk Assessment was conducted for the facility and confirmed that risks are low.

A Type II Environmental Compliance Inspection was conducted in February of 2006. No significant issues of non-conformance were identified.

A Type I Environmental Compliance Inspection was conducted in May of 2006. No significant issues of non-conformance were identified. Staff concluded that Cameco's program and implementation meet expectations, and a "B" rating was given with a stable trend.

Emergency Preparedness and Response Plans at Cameco's Blind River facility are in place to cover both on-site and off-site emergency situations. Emergency training is provided to all employees and participate in

routine annual events to practice responses to emergency situations.

CNSC Staff specialists were on-site to observe the latest event practice in early October, 2006. CNSC Staff find that Cameco's Emergency Preparedness meets expectations, was given a "B" rating with a consistent trend indicator.

Fire Protection: In May of 2004, CNSC Staff performed an inspection of the facility. Seventeen deficiencies were found. Cameco has addressed all of these items. Cameco has a fire support agreement with the Town of Blind River to provide additional support to those already available on-site.

Training is provided by off-site specialists at Lambton College and a minimum complement of trained Staff are kept on each shift.

Based on CNSC Staff review, the Fire Program meets requirements, a "B" rating was given with a consistent trend indicator.

Quality Assurance: Cameco met the licence condition requirement in the current licence to have a Quality Assurance Program in place in 2002. Since then, the program has been revised to meet the integrated Corporate requirements for a Quality Program and its implementation.

A review of Cameco's revised Quality Assurance Program was conducted during the licence period. this met Staff's expectations, and was given a "B" rating and a consistent trend indicator.

The review of the implementation of this program was performed in September of 2006 and Staff will report on this for the Day-2 hearing.

Information on the Security Program is prescribed information, and is found in CMD 06-H20.A.

Safeguards and International Obligations: During this licence period, Blind River material came under Safeguards review. Cameco provides timely reports of the movement and location of materials as is required. Annual inspection of the site to support CNSC Staff and IAEA Inspectors is performed for verification activities and design information on plan processes and procedures.

Based on the review of Blind River submissions and annual inspections, CNSC Staff conclude that the safeguard in international obligations meet requirements. A "B" rating was assigned with a consistent trend indicator.

CNSC Staff carried a review of Blind River's performance with respect to the operation of the refinery during the current licence term. The review comprised: routine inspections that are carried out

quarterly, several additional inspections including emergency preparedness, radiation protection, quality assurance, fire protection and physical security and also review of the annual and quarterly reports.

The inspections found some minor deviations from expectations but were such to not pose an unreasonable risk to the health and safety of persons, to the environment, nor to national security.

CNSC Staff conclude that operations meets requirements and a "B" rating was assigned with a consistent trend indicator.

Other relevant information: Blind River's public information program was received and reviewed by CNSC's Strategic Communications Division. Based on Staff's assessment, the program and implementation met requirements.

The 2002 Preliminary Decommissioning Plan was accepted by Staff, and a financial guarantee is currently in place. CNSC Staff has received an updated Preliminary Decommissioning Plan. This review is currently under way. Staff plans to provide an update on this item on Hearing Day-2.

Once accepted, Cameco plans to supplement the financial guarantee to match the requirement proposed in the revised Decommissioning Plan.

Cameco is in good standing with respect to Cost Recovery and payment of fees.

Continuing on with other relevant information.

An environmental assessment under the CEAA is not required for this licence renewal before the Commission may make a decision.

Starting with the proposed changes to the licence condition, CNSC Staff recommends the following changes to the current licence:

(a) A new licence condition 3.2 is to be added current licence, condition 1.3 is to be deleted, to enhance CNSC's regulatory oversight to the licencee's operation.

Licence conditions 7.1 to 7.5 for fire protection are to be modified. Two changes are proposed to the current licence. First, the National Building Code of Canada and the National Fire Code of Canada have recently been revised and CNSC Staff recommends that the licence reference the current 2005 editions.

Secondly, consistent with other 1B fuel fabrication facilitates, CNSC Staff recommends the inclusion of NFPA-801 (2003) edition, "Standard for Fire Protection for Facilities Handling Radioactive Materials" into the licencing requirements.

With the inclusion of NFPA-801, the Fire Protection program will require revision to address additional elements currently not mandated by the National Codes.

Finally, the licence period: Cameco has requested a five year licence term, and Staff also recommends a five year licence. In order to keep the Commission informed of the licencee's performance, CNSC Staff is prepared to submit a mid-term performance report to the Commission.

Future Outlook: The following items are being presented for the information of the Commission, and are also outside of the licence renewal application.

In order to meet UO3 revised federal environmental standards effective January 1st, 2007, Cameco has undertaken to upgrade its emission pollution equipment associated with its incinerator. A Study Report of the Environmental Assessment of the Proposed Modifications to the operations of the Incinerator has been completed and a separate meeting will be scheduled in the near future seeking a decision from the Commission regarding the conclusions of the EA.

In addition, Cameco has submitted an application to increase the capacity of the refinery from its current licenced amount of 18,000 metric tonnes

annually to produce 24,000 metric tonnes of uranium trioxide.

The Environmental Assessment Study Guidelines were brought before the Commission in February of 2006 and approved.

Cameco is currently working on the draft study report. Upon completion, Staff will prepare an environmental assessment which would then be presented to the Commission for a decision.

CNSC Staff concludes that: Cameco is qualified to carry on the licenced activities that the proposed licence will authorize, and that the application for licence renewal meets regulatory requirements.

Further, Cameco has made and, in the opinion of Staff, will continue to make adequate provisions for the protection of the environment, the health and safety of persons, the maintenance of national security and measures required to implement the international obligations to which Canada has agreed.

In addition, CNSC Staff also concludes that Cameco is meeting regulatory requirements and although there is some deviation from the CNSC Staff's expectation on certain programs, these deviations do not represent an unreasonable risk to the environment, to the health and safety of persons and to National Security.

There are no CEAA triggers, and hence an Environmental Assessment is not required for this renewal.

Finally, Staff recommends that the Commission:

(a) Accept Staff's assessment that Cameco is qualified to carry on the activities that the licence will authorize and will make adequate provisions to the activities;

(b) Accept Staff's assessment that the environmental assessment pursuant to the Canadian Environmental Assessment Act is not required for the renewal of this licence; and

(c) And approve the renewal of the operating licence for a period of five years, valid to February 29, 2012.

I now turn the microphone back to Mr. Howden.

MR. HOWDEN: Thank you, Barclay Howden speaking for the record.

Madame Chair, that concludes our presentation and CNSC Staff is prepared to respond to questions. Thank you.

THE CHAIRPERSON: Thank you very much. Just to ensure that it isn't forgotten later, I just wanted to raise the issue of the requirements for fire

protection under a new licence. This is the discussion we had yesterday with regards to the transition required between the current requirements and those under the licence, page 4 of 21, Item 7.

And the comment made in this licence application by Cameco for Blind River, and which was consistent with others, my understanding is that Section 7 of the licence would have to revised, Mr. Howden, to address this or have you had other thoughts about that?

MR. HOWDEN: Barclay Howden speaking.

Our thoughts are that we will undertake further discussions with the licencee to make sure there's a full understanding of the interpretation of these conditions, and our intention is to prepare a transition condition for consideration of the Commission on Day-2.

THE CHAIRPERSON: I want to make it clear that I'm assuming that we will have, you know, a condition that Cameco moves as quickly as is appropriately possible, you know, but on the other hand to evoke this, in any of the facilities, and then have them in violation of the licence doesn't seem to make much sense to me. So we'll expect a tailored approach for the facility; is that correct?

MR. HOWDEN: That is correct.

THE CHAIRPERSON: Is that satisfactory to

Cameco?

MR. ASTLES: Yes, that is satisfactory.

THE CHAIRPERSON: Then we're going to start with questions from the Commission Members; Mr. Graham, would you like to start, please?

MEMBER GRAHAM: Thank you, Madam Chair.

Just a point of clarification to start off with; in the presentation of CNSC Staff at the very bottom of page three you talk about the tote bins being 9.5 tonne capacity, and in the overheads of Cameco this morning they talked about a 13.5 tonne capacity. Which is -- could maybe Cameco clarify which is the right capacity of those tote bins that are being used?

MR. ASTLES: Yes, the gross weight of the tote bins -- for the record, Chris Astles.

The gross rate of the tote bins is 13,500 kilograms as UO3 and 19.5 tonnes as U -- 9.5 tonnes uranium.

MEMBER GRAHAM: Thank you. That then leads me to my next question.

Three of those per -- and I know transportation, Madame Chair, is another aspect, but three of those per truck transport from there down to Port Hope -- I believe that's where most of it goes or the lighter container go to a seaport somewhere and shipped to the

U.K.

That seems like a very heavy load for the highways and bridges and so on; does that meet Ontario Transportation Standards and so on?

MR. ASTLES: For the record, Chris Astles.

Yes, they're especially designed trailers with extra axles for the load, meeting transportation requirements. We've also included an allowance for snow load through the winter transportation to make sure they are under the maximum road weight limits for Ontario roads.

MEMBER GRAHAM: Okay, thank you.

How does the material arrive from Saskatchewan? Does it arrive in the same type of tote, by transport or is it by rail or how does it arrive?

MR. ASTLES: The concentrates arrive in Blind River by van/truck or a transport truck in 45 gallon drums.

MEMBER GRAHAM: And those are the drums you referred to that are disposed -- decontaminated and sold to a scrap metal dealer? They're not returned back for use then to Saskatchewan or sometimes they are?

MR. ASTLES: For the record, Chris Astles.

Yes, some of the drums from the mines, Key Lake, Gravel Lake mines, we do recycle them because of the

design of them, they're a nestable drum and after so many recycles or trips they are taken out of service. And the intention is we will be cutting them up and decontaminating them as a scrap metal.

MEMBER GRAHAM: When you receive some of these drums from Saskatchewan, from the uranium mines in Saskatchewan, do you ever experience any leaks in these drums in the transports or anything -- or have you in this licenced period?

MR. ASTLES: During the licence period, yes, there has been the occasion where a drum hasn't been sealed properly and -- I'm trying to remember if there's been a spill onto the trailer itself, but there has been in the past some breach of the drum.

MEMBER GRAHAM: The question to CNSC Staff; does that constitute a significant development or how is that dealt with? How do you expect that to be dealt with, if there is a spill?

MR. WERRY: David Werry, for the record.

Cameco has reported that event to Staff and we have taken into consideration the volume of material and typically it's a few grams and not even a kilogram. It has not been reported as a reportable event due to the volume of the material.

MEMBER GRAHAM: Thank you.

To produce 18,000 tonnes of production, which is what you're looking at this year, and I won't talk about future plans because that's being dealt with in a separate way; how much concentrate has to be brought in from -- what's the ratio from concentrate to finished product? How many tonnes of concentrate are brought in to produce 18,000 tonnes of UO3?

MR. ASTLES: For the record, Chris Astles.

It would depend on the source of the concentrate, with uranium concentration or the product quality, but we'd be looking -- to produce 18,000 tonnes U, there has to be 18,000 tonnes as U3O8, but you'd be typically looking at 21 to 24,000 tonnes of actual product, of U3O8.

MEMBER GRAHAM: So the excess material, and I know it was explained, but it wasn't clear in my mind, how is the excess material from the refining and from the processing decontaminated and disposed of?

MR. ASTLES: For the record, Chris Astles.

The excess material is actually converted into what we call "calcine product." It's a brown oxide and it still contains uranium and it gets sent off to another mill where they recover the uranium as a saleable product.

MEMBER GRAHAM: If I may, Madame Chair,

just one further question, and that is with regard to the discharge into the lake, the affluent discharge -- and that is to CNSC Staff.

What type of monitoring do you do with aquatic life in the lake area?

THE CHAIRPERSON: I think actually that should go to Cameco first and then Staff to comment on.

MEMBER GRAHAM: Okay, I'm sorry. Thank you.

MR. DEGRAW: For the record, Joe Degraw.

We do sampling at the lake, go out in a boat and collect water samples at least twice a year, typically spring/fall, analyze it for various parameters. Other than that, we don't do any benthic sampling or anything. The ecological risk assessment work we've done did not indicate a need to do that. And the sediment sampling, that was done last year as well.

So primarily it's just water sampling out in the vicinity of the defuser.

MEMBER GRAHAM: I take it in the winter time it's pretty hard to get a boat out there; do you do any sampling in the winter time on the ice and so on?

MR. DEGRAW: No, we haven't. Years ago I think they tried it once, but we stick to spring and fall pretty well.

MEMBER GRAHAM: My question to CNSC Staff

is, is there any need to do further sampling -- does CNSC feel there's any need to do further sampling of aquatic life or sediment?

MR. HOWDEN: Barclay Howden speaking. I'll ask Chris Taylor to respond.

MR. TAYLOR: Yes, it's Chris Taylor, the Geosciences and Environmental Compliance Division.

As stated by Cameco the ecological risk assessment has confirmed that a more specific monitoring of those species is not necessary given the low risk, and we're satisfied by the environmental monitoring program as designed at this time.

THE CHAIRPERSON: Dr. Barnes?

MEMBER BARNES: Just to follow-up on that.

There is a note on the comprehensive sediment sampling program; the report was submitted, I guess, to Staff recently. Are we going to get some information on that on Day-2? You made a few comments, but could you flesh those out a little bit further now?

MR. DEGRAW: Joe Degraw, for the record.

If you'd like we could put a few slides together for Day-2 certainly, but to summarize, the sediment sampling was taken. We hired a contractor who specializes in this type of work. They did a proper survey in a number of locations, analyzed for a number of

parameters, trace metals, nitrates, obviously uranium and radio nuclides. Basically everything was below MOE guideline values for sediments or CCME guideline values for parameters; that didn't have guideline values which primarily, I believe, were the radio nuclides.

What they did was sample upstream of the defuser location and downstream and basically found no difference in concentrations. So that's the summary, but we could certainly put a slide or two together for Day-2 if the Commission would like.

MEMBER BARNES: Thank you.

Just turning to uranium emissions then; on page seven of Cameco's presentation, Table 5, you've given the information on 2006 to June 30th. As far as some comments yesterday, is it legitimate to essentially double those to get an indication of what the year for 2006 might represent?

MR. DEGRAW: Joe Degraw.

You could; that would probably be a slight over-estimation in our case because we traditionally shut down for a four to six week period, typically the month of July for sure, so -- you know, there's zero emissions during that period. So doubling it would be conservative. It would be slightly less than doubling.

MEMBER BARNES: But if I did double it for

the last set of figures there, 2.3, 1.3, 5.3. and 8.9, they do represent, in all cases, an increase which is contrary to your last statement on that page, that overall there is a clear downward trend in total uranium emissions for the refinery.

MR. DEGRAW: Joe Degraw.

Yes, I understand what you're saying. I think the other point to make, is we have to look at the number of operating days during the first six months of the year.

And, Chris, you can correct me if I'm wrong, but I believe we had more operating days this year in the first half of the year than last year which would account for some of that as well.

MEMBER BARNES: I wonder if I could turn to fire safety.

On pages ten and eleven of the Cameco submission, you indicated there was a full fire drill in 2002 and one that was planned for 2006, I think you've indicated that. Is that the one that just happened this week?

MR. ASTLES: Chris Astles. Yes, it happened this week.

MEMBER BARNES: I'm just wondering in fire drills, you can kind of have too many, but on the other

hand if they're not frequent enough, then people sort of forget what to do. And it did seem to me that four years is rather a long time between full fire drills, engaging all components in the community there.

I'd like both Cameco and Staff's comment on that.

Is it your expectation that four years is a normal gap between these?

MR. ASTLES: Chris Astles, for the record.

We do quarterly fire drills with our on-site response team with scenarios of accidents within the refinery itself. The full response drill that you're referring to that happened this year and four years ago, involved the local hospital and ambulance service, groups such as that.

MEMBER BARNES: I'm well aware of that. I'm still asking whether when you engage those, and there's a purpose in engaging the full spectrum of support groups, it still seems to me that four years might be a rather long time between those sorts of activities.

MR. ASTLES: We also do annual training with the local Fire Department, refresher training through the refinery. This year we did the HAZMAT training where they actually worked side-by-side with our people for a week long training session, which was under the guidance

of Lambton College.

And, as well, we do presentations to the town fire emergency committee or council which is part of the town council, itself.

MEMBER BARNES: Any comments from Staff?

MR. HOWDEN: Barclay Howden speaking. Yes, we have a comment.

I'd like Henry Rabski to speak to this point.

MR. RABSKI: Henry Rabski, for the record.

CNSC Staff observed the exercise this week, and part of our observations is to assess how the facility and associated community support services integrate in terms of responding to these types of events.

We'll be looking to Staff on their comments in terms of recommendations arising from this exercise and to see whether or not the frequency is acceptable for these types of training exercises or cooperative exercises, and evaluating whether in that particular setting, whether the frequency is acceptable.

THE CHAIRPERSON: If I could just go back to Dr. Barnes' comments about Table 5.

We had an opportunity yesterday to have some sort of chart of a trend and to do an estimate for 2006.

I think that would be helpful, if we had that for Day-2 to give a sense of your estimate based on number of working days, et cetera.

And I think it would be, because as Dr. Barnes pointed out, there is, you know, this statement "This is a clear downwards trend."

If it is based on number of working days et cetera, I think that that explanation would be helpful because this is a key chart, I think, for us.

So perhaps both projections 2006 and a more targeted explanation would be helpful for us in looking at that rather than just these overall statements; that would be helpful.

If we could go to Dr. Dosman, please.

MEMBER DOSMAN: Thank you, Madame Chair.

I have several questions relating to radiation protection, and I'd just like to ask Cameco how the internal dosimetry program is going? Obviously there is a learning curve and I wonder if we could have your comments on how you think it's working at the present time?

MR. DEGRAW: Joe Degraw, for the record.

I think I concur with your comment; it is a learning curve for us, not so much the lung counting because Cameco has been doing that and prior Eldorado had

been doing that for a number of years, but with the new lung counter which came on line in 2003, and the need to assess the dose, obviously there's different things we need to look at.

And as the first, I guess, three years of operation, I'd say have been quite beneficial and we are learning, and I think it's unfortunate that we made some recent discoveries requiring us to go back and re-assess the data, but it's also good that this opportunity has come up. And I think what we're going to get out of this, is better numbers, more representative numbers of employee exposure.

And I think the program is doing what we designed it to do and what it needs to do for employee assessment.

MEMBER DOSMAN: Madame Chair, I would just like to ask CNSC to comment on your level of confidence in the internal dosimetry program.

MR. HOWDEN: Barclay Howden speaking. I'm going to ask Cherry Gunning, our R.P. specialist to speak on -- to give your opinion on this program.

MS. GUNNING: For the record, my name is Cherry Gunning.

I would say Staff is confident in the internal dosimetry program. I would also say that Cameco

has recently applied for a licence for their internal dosimetry program, so Staff is about to begin review of that licence application, and then we'll be really going into the nuts and bolts of things, lessons learned since -- you know, over the implementation of the program. And we'll be doing a really thorough examination of that program. Probably not -- our review won't be finished before Day-2.

But that being said, the numbers that are coming out of that program, you know, we are confident in those numbers.

MEMBER DOSMAN: So may I ask Staff, are you confident that Cameco is adequately controlling the environment and the workers are being adequately monitored in the context of the dosimetry program?

MS. GUNNING: For the record, Cherry Gunning; yes, we are.

MEMBER DOSMAN: Thank you.

Madame Chair, I would like to refer to Cameco's page 6 of 14, Table 4, and also to Staff's CMD 06-H20, pages seven and eight.

And I would like to ask questions about the individual process operator. And the question is to Cameco.

As an individual process operator with an

estimated internal dose of 17.9, and that concurs with your Table 4. And then moving to page 8 of the Staff's document, the process operator of 14.8 m/s, and that also concurs, of course, with your Table 4.

And I'd just like to ask, was that the same operator?

MR. DEGRAW: Joe Degraw.

No, it was not. The individual in 2004 was a process operator, it was a different individual in 2005; it was a "warehouse", or as we call it as an "S&FP Operator."

MEMBER DOSMAN: And may I ask Cameco; are you confident that those operators have been adequately trained and protected and so on for their future employment activities?

MR. DEGRAW: Joe Degraw.

Yes, both individuals are experienced operators; they've been with Cameco for a number of years, and subsequent lung counts for both individuals have come down significantly from those numbers.

MEMBER DOSMAN: Than you, and perhaps for my information on Staff's document, page 8 a the bottom. And though it's a Staff document I would ask Cameco. What's a "DRAFF" station, "DRA-55"? It stated that it has been relocated to reduce exposure.

MR. ASTLES: Chris Astles.

The draft is actually "DRAFF"; it's drumming the "raffinate circuit ..."

MEMBER DOSMAN: And could you give me a little more explanation, please?

MR. ASTLES: The changes in the work stations, we changed where the operators were positioned when they do the weighing of the drums and put the indicator remotely -- change the sequence of the drum flow through the conveyors so they’re exiting quicker, and they're not staying in the area where the operators are present; put lead shielding up at the scale itself so that when the drum hesitates, they're to be weighed and the operators are protected. It was steps like that that we implemented.

MEMBER DOSMAN: Thank you.

I'd like to ask Cameco, have these exposures been related at all to the increased output of the plant? Is there, for example -- are you using extensive over-time and so on that might place further exposures on the workers?

MR. DEGRAW: Joe Degraw.

No, that hasn't been the case. These are not related to working over-time or increased production at all.

MEMBER DOSMAN: Madame Chair, I would like to ask Staff if you have any comment on these individual higher exposures?

MR. HOWDEN: Barclay Howden speaking. I'm going to ask Cherry Gunning to comment on that because we did follow-up on these two exposures.

MS. GUNNING: My name is Cherry Gunning.

CNSC Staff has reviewed Cameco's investigation of both these incidents and we're satisfied with the findings of their investigations and the measures that they have taken, corrective measures. We're confident that they have the processes in place to control doses to workers.

MEMBER DOSMAN: Thank you.

THE CHAIRPERSON: May I now ask Mr. Harvey if he has questions, please?

MEMBER HARVEY: Merci, Madame la Présidente.

There has been many inspections done by CNSC Staff during the licencing period, and if we were to refer to page 12 of your presentation, the Cameco presentation -- and I can read that:

> "Many of the issues raised in these various assessments have already been addressed and the remainder of the items identified for Cameco are in

progress."

How many items haven't been yet addressed and are in progress? And is there any specific scale to get those problems fixed?

MR. ASTLES: I don't have the total number of action items; it would come out of the various audits or inspections that are done.

MR. DEGRAW: Joe Degraw for the record.

As Chris, we don't have a number but some of these audits, most of them -- most of the actions are done; other ones, you know, 50 per cent are done. It depends -- you know, some of these audits occurred fairly recently and some of them were a year or so ago, so you know there are different levels being addressed. And some of the fixes, some are quick fixes and some, obviously, could be longer term fixes as well.

MEMBER HARVEY: But is there important items among these ---

THE CHAIRPERSON: The bottom line is, we need more details on this, so we expect on Day-2 that we'll have a much more comprehensive understanding by Cameco and Staff as to the results of the inspections and the triaging of the issues, and we'd like a more extensive report and not so vague.

MEMBER HARVEY: Yesterday we saw a list of

items like that saying that ten per cent of the items from the 2000 inspection haven't been solved yet. So I expect that we'll have such information.

MR. DEGRAW: Joe Degraw. Yes, we can do that for the Day-2 hearing.

MEMBER HARVEY: Thank you. I have another question related to non-nuclear incidents. It's on page four of the CMD.

> "Releases of non-nuclear incidents from the facility to the environment are controlled in accordance with requirements prescribed and a certificate of approval issued by the Ontario Ministry of Environment and the CNSC regulatory requirements."

Could you tell me the difference between the two requirements? Are they in compliance or more severe from the CNSC? What's the difference and what does happen if a requirement cannot be made by Cameco but it's MOE's requirements? Can there be an action taken by the CNSC Staff from that?

MR. HOWDEN: Sorry for the delay, Barclay Howden speaking.

In terms of the relationship between certificates of approval issued the MOE and CNSC

regulatory requirements, in many cases they're complementary together. And if there was a violation of an MOE requirement, it would be MOE that would take enforcement on that particular action.

However, there are things that occur within the plant that are of interest to both ourselves and MOE.

For example, an incinerator where there -- there's certain requirements that have to be met from an environmental standpoint and provincial standpoint, but at the same time it is part of a nuclear facility because it is incinerating nuclear materials. So there's cross-overs there, and that's where we have to work together with them on those particular ones.

But if there's one where it's clearly our's or their's, we do our own separate enforcement actions, but we do cooperate in exchanging of information. And this isn't just restricted to this facility, many other facilities where MOE would be taking an investigation, we would be a participant at their request to supply information that they would be required.

So the reason we report these together, is because we are working in as integrated a fashion as possible to minimize the overlap, but also to make sure that there's no gaps in regulations between the two.

Does that respond to your question, Mr.

Harvey?

MEMBER HARVEY: Yes, thank you.

MR. HOWDEN: Okay, thank you.

THE CHAIRPERSON: It would be interesting to know from Cameco how they feel this works on the ground.

MR. DEGRAW: Joe Degraw, for the record.

I haven't had any complaints, I guess, is a fair statement. It works -- as Mr. Howden says, the MOE has their own criteria and there is some overlap, obviously, with CNSC requirements and I guess the long and short of it is, it hasn't really been an issue for the refinery.

THE CHAIRPERSON: Thank you, Dr. McDill.

DR. McDILL: Two more questions. One with respect to the lung counting again.

When did Cameco find the non-optimal mathematics, to quote your term. And are they non-optimal conservatively or non-conservatively?

MR. DEGRAW: Joe Degraw.

This spring, I guess, is when it came up.

Really, two issues. One was because -- for Blind River basically we've been counting people on an annual basis and fuel services lung counter is normally -- it's a mobile unit, but it spends most of the year in Port

Hope, and basically Blind River is done on a campaign basis.

So they'll come up to Blind River for a three or four week period and count all our employees in a fairly short order.

And one of the issues was how the dose gets assigned? For example, if we counted everybody say in September of 2006, is it better to assign whatever dose gets calculated, to assign it for the calendar year 2006, or is it more appropriate to assign it between the 12 month interval that the lung counting occurred?

For example, three-quarters of the dose gets assigned to 2006, one quarter gets assigned to 2005. So that is one issue.

And another issue that affected the calculations was in the lung counting, when you count individuals year after year there's what we call a "residual." If you count somebody in one year and he had -- I'm just throwing out a number -- 2 mgs. of uranium in one year; you count him a year later and he still has 2 mgs. in him, well, a portion of that 2 mgs. is from the previous year. So you have to subtract off that baseline, if you want to assign the current year's numbers.

So earlier this spring we also discovered an error, if you will, in how we were doing that

substraction. And so basically you can't just correct this year's data, you have to go back and correct from 2003 going forward again. So those are really two issues, so ---

MEMBER McDILL: All that said, which way are the numbers going to go or do you know yet?

MR. DEGRAW: By and large I believe they'll go down somewhat, not significantly, but I certainly don't want to -- because we reported data in the 2005 Annual Report that we're obviously going to have to change. Now I don't want to provide any other data until it's been thoroughly vetted.

MEMBER McDILL: Does Staff have any comment on this and the source ---

MS GUNNING: For the record, my name is Cherry Gunning.

So Cameco will be changing how they distribute their numbers, but it doesn't change that there were two significant doses received by workers.

MEMBER McDILL: Is this an issue at any other chemical facility, the campaign on lung counting or is Blind River the only one?

MR. DEGRAW: Joe Degraw.

The Port Hope conversion facility and Blind River are the two sites that are doing the lung counting

in this manner.

MEMBER McDILL: Does the same number ---

MR. DEGRAW: Yes, the Port Hope numbers are being re-evaluated as well.

MEMBER McDILL: Did we get that information? I keep looking at the President because we're not ---

THE CHAIRPERSON: We're off the topic now, but you've asked the question so they'll figure that out separately, but it can't be asked in the Blind River hearing. Any further questions?

MEMBER McDILL; One more. MOE did some soil sampling and in terms of your community relations did MOE do the soil sampling at your request or at the request of concerned community citizens?

MR. DEGRAW: Joe Degraw.

Actually the MOE did it on their own schedule for Blind River. They've been coming to Blind River and doing soil samplings since the refinery started operations in the early '80s.

To our knowledge they certainly didn't come at the request of any community members. I believe they're just on their own schedule.

MEMBER McDILL: Can I ask Staff if they agree with that or if have any knowledge of it?

MR. RABSKI: Henry Rabski, for the record.

Yes, the Ministry of Environment has a program across the province of Ontario where they do sampling related to mining industries, and this is a common approach.

MEMBER McDILL: Thank you.

THE CHAIRPERSON: I appreciate the chart on page eleven which shows the ground water and soil monitoring but it's a bit small for me. So if you could make a bigger chart for -- so that we could actually see the sites, that would be appreciated for us. And I think it would be reasonable that we may have a set of questions around that for Day-2, but I think, first of all, we need to have the chart larger.

In terms of the occupational health and safety committees, I don't know if the Staff is unionized or not at Blind River. Could you give us an overview as to the Committees, what you have and who's on the Committees and the reporting relationship for the Health and Safety Committee or Committees?

MR. ASTLES: I guess the first answer is that we are non-unionized. We have been able to stay that way.

As far as -- we do have what we refer to as a "Facility Health Safety Committee" which has

representation from all groups within the refinery. All the process crews, the shift crews have a representative, the various departments have representatives like the analytical group, the lab group, the administration group, as well as there's management representation on that.

And through the Committees we discuss activities in their respective groups, follow-up to actions, any new procedures that are coming forward, all procedures have to be reviewed and approved through the FHSC so the employees are aware of the changes or any new processes that are coming forward.

THE CHAIRPERSON: Question for CNSC Staff.

Have you had any approaches by Staff of this facility indicating any concerns about the health and safety approaches or any concerns about training or particular issues?

MR. WERRY: David Werry, for the record.

No, I have not been approached individually regarding a concern, however, as part of the routine inspection program we discuss incidents, look at the safety record and where warranted, we go into detail and look at the type of incidents that have happened. For example, lost times; what's the trend? How did that happen or would they be reoccurring problem?

And Staff is satisfied that Cameco is

addressing the issues and they have a very involved program with their Staff.

THE CHAIRPERSON: But those discussions would be happening with Cameco management, they wouldn't necessarily be happening with individual Staff on the site.

MR. WERRY: David Werry, for the record. Yes, that's correct, with Staff.

However when I mentioned I had not been approached regarding a concern, one of the things I do when on site, is talk to the Staff and ask if they have any concerns. And there's been no comment with regard to that.

THE CHAIRPERSON: Thank you.

I would like to ask CNSC Safeguard Staff if they can give an overview of what has been the approach that they've had and that the IAEA have had with regards to this facility?

JIM CASTERTON: Thank you, Madame Chair.

For the record, I'm Jim Casterton, Director of International Safeguards Division, Director of Security & Safeguards.

Madame Chair, over the licencing facility period, this facility did come under safeguards for the first time. This was due to a change in an International

Atomic Energy Agency internal policy which was undertaken in recognition that certain products in the conversion process, and in the refinery process, it can be regarded as material suitable for fuel fabrication and isotopic enrichment.

With respect to Cameco Blind River, this meant that safeguards from an International Atomic Energy Agency were to be applied beginning with the addition of uranium, more concentrate to the process line, and including in process material, in stores of UO3.

So this exercise began and the initial declarations were made in the 2005 period. The inventory exercises were completed in 2005.

Cameco Blind River is now under a full safeguard regime by the International Atomic Energy Agency. Since the implementation of safeguards at this facility there have been a number of inspections undertaken by the Agency and by the CNSC Staff to ensure compliance with these obligations arising from the International commitments and the CNSC commitments.

I should add that the change in policy required extensive effort on the part of Cameco Staff and CNSC Staff in order to meet the short deadlines and timelines that were established by the IAEA.

I should also add that in response to a

previous question, that all of the inspections that had been undertaken since 2005, of which there have been several, there are no follow-up actions required on the part of Cameco Blind River.

We are awaiting the outcome of the most recent inspection which was conducted in July, 2006 by the IAEA to see if there is any follow-up in that regard.

THE CHAIRPERSON: Thank you. Are there any further question from members?

So we're going to take a 15 minute break and then we'll be back. Thank you.

--- Upon recessing at 10:03 a.m.

--- Upon resuming at 10:17 a.m.

THE CHAIRPERSON: Ladies and gentleman, if I could ask you take your seats, please.

(SHORT PAUSE)

THE CHAIRPERSON: We will now have the second round of questioning, and Dr. Barnes.

MEMBER BARNES: I just have two short questions.

I notice Cameco on page 13 of your powerpoints, the community consultation, that you distribute the environmental monitoring data quarterly, but the monitoring committee meets just once or twice a year.

Could you tell me who is on the monitoring committee? Is that strictly an internal committee? Does it have an external membership? And who decides how often it's called and whether once or twice a year is adequate?

MR. DEGRAW: Joe DeGraw, the Committee we're referring to, we call it "BRAEMC", which stands for "Blind River Air Environmental Monitoring Committee."

The committee was actually established in the early 1980s; it's actually a sub-committee of the Town

Council of Blind River, so it's a town sub-committee, it's not our's that was set up with the predecessor company, Eldorado. And it's mandate was basically to monitor the environmental performance of Eldorado's operation.

So it's a town committee and that was its strict mandate. And over the years the committees met -- in some years they've met more often; in other years less often.

The committee has very much been up and down in terms of how active it has been. That's something -- certainly from our perspective we would certainly like to meet with them on a regular basis but basically our role is to go to the meetings and make presentations on our environmental performance and answer any questions they may have.

We actually had a meeting scheduled with them last week and unfortunately they couldn't get a quorum together, so we're going to try and get together with them later this month. We were hoping to meet with them before this hearing, but that didn't happen.

So it's a town committee, so we don't sort of control how often it meets. If we haven't met in a while we'll contact the Town Clerk and say "We'd like to try and schedule a meeting" and they do it. And if the meeting happens, that's great, but unfortunately if they

can't get a quorum then we don't meet.

Now having said that, there is a committee, there's about five or six members of the public on it from Blind River and from the neighboring Township. There's a representative from each of the neighboring townships, east and west. The mayor usually sits on it and they all get the quarterly reports -- the CNSC quarterly reports that we prepare, they get -- all the committee members are on distribution for the environmental sections of the report, so they get them.

And generally what we do at those meetings, is we'll review the most quarterly report data and talk about any other environmental-related initiatives that sort of are ongoing. And like I say, we'll take any questions from them.

MEMBER BARNES: So, for example, the MOE soil data that we just heard about, would they get that automatically? And, secondly, about the comprehensive sediment sampling program report that you've just submitted, is that something that you submit ahead of time or only if they ask for it?

MR. DEGRAW: Joe Degraw.

No, those types of reports we don't send to them per se, but what we would do at the next meeting is indicate that those reports have been completed by the MOE

or us internally and we sort of go through a summary of them.

If the committee expressed interest in them, we probably would give them a copy. The MOE report is certainly public; they can have it. We don't send it to them per se, but we would certainly make them available, that it is out there and we could provide them with copies if requested.

MEMBER BARNES: My last question, and I'm not sure if it came up before or I missed it, but this refers in Cameco's submission page, Tab 1. At the top of page four, that's the safety stats. for '02 to '06.

And the figure in there which concerned me was the first aid injuries for 2006, which again it's the first half of this year but it's at 28, which is basically the same number more or less as the full year stats. for the last four years, which if I double it again would translate around 56, which would be way higher. Can someone give an explanation as to that?

MR. ASTLES: Chris Astles, for the record.

One of the changes is the number of Staff at the refinery; we're now up to about 130 employees. We've increased staffing levels by 30 people, hence the contribution to the increase in first aids.

We're also stressing more at safety

meetings through the Health Safety Nurse about reporting any minor first aid so they can be addressed -- so we can do near miss reports on them or incident reports so we can establish trends or learning initiatives so we can prevent reoccurences with other employees.

We report all first aids at the facility Health Safety Committee meeting so that the groups are aware of what's happening and how we can prevent it -- or prevent further reoccurrences.

THE CHAIRPERSON: Further questions? Yes, Mr. Graham.

MEMBER GRAHAM: I just have two questions with regard to the structure of the company and so on to Mr. Grandey.

Is this a separate company at Blind River or is this part of the whole Cameco organization?

MR. GRANDEY: Jerry Grandey, for the record.

It is part of the overall Cameco organization. There is not -- unlike Zircatec, which was a separate tier of companies, if you will, this one is just an operating division of Cameco.

MEMBER GRAHAM: My other question would be to Cameco again, and that is with regard to an Org. chart. I don't think we got one, an organizational chart, of the

Blind River facility. And if we did get one, I missed it, but I couldn't find it. And for Day-2 it might be helpful if we saw the org. chart of the flow of command and so on.

MR. GRANDEY: Jerry Grandey, for the record. We'll provide that prior to Day-2.

THE CHAIRPERSON: And that should include the committees as well, please. Further questions? Dr. Dosman.

MEMBER DOSMAN: Thank you, Madame Chair.

I'd just like to ask Cameco, with regard to the preliminary decommissioning plan and the updated plan from 14.6 million to 32 million, says:

> "Cameco will proceed to secure a new letter of credit."

And I'm just wondering if that's happened yet or if that's imminent in the context of the licencing process?

MR. ASTLES: Chris Astles, for the record.

At this time, no, it hasn't been secured yet. Once the CNSC Staff accepts the pre-decommissioning plan, then we will be securing that letter.

MEMBER DOSMAN: And may I ask Staff, will that process be completed in the context of the licencing sequence?

MR. HOWDEN: Barclay Howden speaking, for

the record.

Yes, that will occur for Day-2, the revision of the PDP, confirmation of the final estimate, that's what they require and then they can go get it.

I'd just like to highlight that they do have a current PDP, the one that's being revised, but there is a financial guarantee in place for the existing estimate, but our intention is to have all the new information before you for Day-2.

MEMBER DOSMAN: Thank you.

And to Staff, I note that on quality assurance there was no rating for a trend or implementation, and I would appreciate it, for the record, if Staff might be able to comment on why that circumstance exists.

MR. HOWDEN: Barclay Howden speaking, for the record.

With regards to quality assurance at this particular facility, the program has been recently changed and upgraded which we've assessed and determined that it meets expectations.

We just finished a Type 1 audit on September 15th, or the week of September 15th, and that was the reason we didn't rate the implementation because we wanted to complete the audit and then assess our

findings and come up with an implementation rating. And we're not quite there yet. Our intention is to have that for Day-2 for you.

MEMBER GRAHAM: Thank you.

THE CHAIRPERSON: I have a question for Cameco.

You talked on the last -- well, not the last, quite near the end about the future outlook and the environmental assessments ongoing et cetera; could you give us a sense, within this licencing period, the five-year licencing period, where would those projects be? Would they be completed during the five years or what would be your forecast?

MR. ASTLES: You're referring to the incinerator upgrade and the production increase for the upcoming licences?

THE CHAIRPERSON: Yes, what is the timeline for those two projects?

MR. ASTLES: For the record, Chris Astles.

The incinerator upgrade is very important to us right now. We have to meet the new standards by January 1st, so we have to begin the construction phase of the project so that the pollution control equipment can be installed as quickly as possible.

We will not be able to operate the

incinerator as it is post January 1st, so that one is probably at the top of our list of priorities.

And for the production increase we'd like to have it completed by late 2007. There again we have some relatively minor modifications for the refinery itself, the installation of two strip columns and three more denitration pots. There again there's a time frame in order to meet contractual commitments for the supply of UO3. So we'd like that done by the end of 2007 as well.

THE CHAIRPERSON: You say you'd like to have it done; what's your thoughts with regards to the practicality of that? What has to happen in order for that to happen?

MR. ASTLES: For the record, Chris Astles.

For the incinerators, the approval of the EA for the pollution control equipment, which the CNSC is currently working on. And for the production increase, right now it's in our hands to complete the EA for the increase to 24,000 submitted to the Staff for their review and approval and then amend the licence.

So I don't see a problem with the production increase at all in meeting next year's timeline. The incinerator one, I want to reiterate this, is the important one.

THE CHAIRPERSON: Are there any other

changes that you're planning on this facility that you could project for the five year period?

MR. ASTLES: I guess the most significant one is the Staffing level and carrying out new initiatives, recognizing succession planning at the refinery for an aging workforce, getting more professionals on site as support for the future. That, in my mind, is the biggest change we're going to be challenged with.

THE CHAIRPERSON: With this production increase that you're looking at next year, will that hit the capacity of the facility or is it possible for the facility to expand its production in the future, again within that five-year period?

You're projecting one production increase to satisfy market demand; is it possible for that facility to expand further in terms of say extra shifts or whatever?

MR. ASTLES: For the record, Chris Astles.

The biggest change we're faced with is an increase in the number of operating days. Typically we'd operate the refinery 220 days of the year to meet past production requirements. To achieve 18,000 tonnes a year is just adding more operating days.

The significance of that is, that we're not

predicting any changes to emissions or anything, our typical emissions are .1 grams and that was the stacks combined. And we're going to stay at .1 grams an hour, it's just there's more operating days to the year. Hence, there will be a marginal increase in emissions.

As far as meeting future demands, we are asking for 24,000 tonnes of production building in -- I guess we can call it a "buffer" in case of -- for future contracts that may come towards Cameco, but that is well within -- well, in excess of what we need to meet current plans with SFL and Port Hope.

THE CHAIRPERSON: But my sense is with that, the production and capacity increase that you've applied for -- this one within the next year, it doesn't really require expansion of the facility per se?

MR. STEANE: Bob Steane, for the record.

The facility, the refinery facility is currently licenced for 18,000 tonnes. The application proposal is that we go to 24,000 tonnes. The immediate demands bring us up to between supplying Springfield Fuels with their 5,000 tonnes and perhaps with a bit of room of expansion there, plus getting the Port Hope conversion facility up to its licenced capacity of 12,500, plus we have some other outside potential, that brings us to the 22,000 tonne level which is why the application for the

24,000 which we could, in the foreseeable future, with markets and opportunities, we think that will provide the opportunity.

THE CHAIRPERSON: What I'm trying to get at without getting into the commercial confidential issues, is just some sort of a sense of the prediction for the next five years. So I think that's suitable; that's fine.

MR. STEANE: Bob Steane, for the record.

We are currently -- the refinery is at 18,000 tonnes per year; we are producing at that 18,000 tonnes per year capacity and building some inventory such that we can be meeting our contractual requirements going forward and supplying.

So we have a production plan that would accommodate the environmental assessment process and then the requirement for the modifications to the plan.

THE CHAIRPERSON: Right. Understanding that if you have to come back to the Commission, you're going to come back to the Commission for whatever is necessary. Dr. Barnes?

MEMBER BARNES: I just wanted to follow-up a little bit more then on the issue of the incinerator and the EA.

So could I ask Staff when would you

anticipate the EA process being say completed or brought back to the Commission?

MR. HOWDEN: Barclay Howden speaking.

Right now the EA screening report is in the final stage of internal CNSC Staff approval. So once that is done, our intention is to get a date -- a sitting of a Panel of the Commission to hear that. So it's very soon.

MEMBER BARNES: Presumably this month, if it's not pressing too much.

MR. HOWDEN: I can't give you a date exactly, but we recognize that from Cameco's standpoint -- the incinerator upgrade is actually to reduce submissions, so this is a good thing.

So there is motivation to move this through as quickly as possible but we have to make sure that all the steps are followed. So I wouldn't say this month, but I would say within the next two months, just giving myself room, and then they can move on with it. We are having ongoing discussions with Cameco on the schedule and how we're going to speed it up as much as possible.

MEMBER BARNES: So a question to Cameco, what's -- we didn't get into this very much, but in a technical manner what's involved in upgrading the incinerator in terms of acquiring new equipment or expected times for installation et cetera, and any testing

that's necessary?

THE CHAIRPERSON: Yeah, I think just a broad overview because we will be discussing this *in camera* and I don't want to -- but a broad overview would be helpful within this context.

MR. STEANE: Bob Steane, for the record.

There is an incinerator at the Blind River facility. In Mr. Astles' presentation he showed a picture of the stack. What is involved in this project is adding some pollution abatement equipment to that exhaust stream, which is some filters, some scrubbers and that's effectively it. So it's adding pollution abatement equipment to the existing exhaust system of the incinerator prior to going up the stack.

MEMBER BARNES: I'm just trying to find out whether that was three-day piece of work or a two-month piece of work.

MR. STEANE: Bob Steane, for the record.

We think it's about a three-month piece of work to install the equipment, bring it on line, get it commissioned, go through a commissioning plan; that's the timeline we have on our -- we have all the equipment, we have all the pieces ready to install in anticipation of the approval, but that's our timing; it's two to three months to put the equipment in.

THE CHAIRPERSON: Thank you very much. Any further questions? Mr. Secretary?

MR. LEBLANC: Merçi.

This hearing is to be continued with Day-2 on December 13th, 2006 here in the CNSC offices. Please note that the Commission will be taking the necessary steps, on a best efforts basis, to broadcast the Day-2 proceedings via webcast so the community can view the hearing on December 13th.

The public is invited to participate, either by oral presentation or written submissions on hearing Day-2. Persons who wish to intervene on that day must file submissions by November 10th, 2006. The hearing is now adjourned to December 13th, 2006.

THE CHAIRPERSON: Thank you very much. This brings us to the close of the public hearings of the Canadian Nuclear Safety Commission. I would like to thank all of you for your attendance today and we will start the proceedings at eleven o'clock -- that is the Commission meeting will start at eleven. Thank you very much.

MR. GRANDEY: Madame Commissioner, we thank you and the rest of the Commission and the Staff as well for their attention to this matter. Thank you.

--- Upon recessing at 10:36 p.m.