

**Canadian Nuclear  
Safety Commission**

**Commission canadienne de  
sûreté nucléaire**

**Public meeting**

**Réunion publique**

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**Le 16 mai 2013**

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

Salle d'audiences publiques  
14<sup>e</sup> étage  
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**Commission Members present**

**Commissaires présents**

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Dr. Moyra McDill  
Mr. Dan Tolgyesi  
Ms. Rumina Velshi  
Dr. Ronald Barriault  
Mr. André Harvey

M. Michael Binder  
Mme Moyra McDill  
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**Secretary:**

**Secrétaire:**

Mr. Marc Leblanc

M. Marc Leblanc

**Senior General Counsel:**

**Avocat général principal :**

Mr. Jacques Lavoie

M. Jacques Lavoie

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Ottawa, Ontario

--- Upon commencing at 9:01 a.m.

La réunion débute à 9h01

### **Opening Remarks**

**M. LEBLANC:** Bonjour, mesdames et messieurs. Bienvenue à la continuation la réunion publique de la Commission canadienne de sûreté nucléaire.

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

Des appareils de traduction sont disponibles à la réception et la transcription sera disponible sur le site web de la Commission dès la semaine prochaine.

This proceeding is being webcast and will also the webcasts will be archived for a three-month period following presentation.

Please silence your cell phones and other electronic devices.

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

President Binder.

**THE CHAIRMAN:** Merci, Marc. And good morning and welcome to the continuation of the meeting of the Canadian Nuclear Safety Commission.

Mon nom est Michael Binder. Je suis le président de la Commission canadienne de sûreté nucléaire et je vous souhaite la bienvenue. And welcome to all of you who are joining us via the webcast.

I'd like to introduce the Members of the Commission that are here with us today.

On my left is Dr. Sandy McEwan, Ms. Rumina Velshi, Dr. Ronald Barriault and monsieur André Harvey.

On my right is Dr. Moyra McDill and monsieur Dan Tolgyesi.

We now have heard from our secretary, Marc Leblanc, and we also have with us Jacques Lavoie, Senior General Counsel to the Commission.

Marc?

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

The agenda was approved yesterday and we refer you to agenda 13-M21.A for a complete list of the items to be presented today, which is really only two items.

**THE CHAIRMAN:** Okay. So the first item on the agenda is an overview of the CNSC Package Certification Process for the transport of nuclear substance. This is outlined in CMD 13-M26 and I understand that Mr. Jammal, you will start the presentation.

Please proceed.

**5.2 Transport of Nuclear  
Substances: an Overview of the  
CNSC Package Certification  
Process**

**13-M26**

**Oral presentation by  
CNSC staff**

**M. JAMMAL:** Merci, monsieur le président.  
Bonjour, monsieur le président et membres de la  
Commission.

We are here today to present to you the licensing and certification processes at the CNSC to ensure the safe transport of nuclear substances, including nuclear fuel cycle materials in Canada.

Misinformation about this regulated

activity has been circulated in the public domain and in the media. The misinformation is based on fear mongering rather than the fact of the safety record associated with the transport of nuclear substances.

The safety record of such regulated activity speaks for itself. Millions of shipments are carried out annually in Canada and around the world. To date, no nuclear substances transport accident has caused radiological impact to the public and/or to the environment.

Donc, maintenant je cède la parole à Monsieur Faille.

**M. FAILLE:** Merci, Ramzi.

Bonjour, monsieur le président et membres de la Commission. Mon nom est Sylvain Faille et je suis le directeur de la Division des autorisations de transport et du soutien stratégique.

Je suis accompagné de monsieur Jeff Ramsay and Dr. Pirooz Mirfakhraei, who are Transport Specialists within my division; Mr. Martin Thériault and François Dagenais, who are Transport Officers also within my division; Mr. Vladimir Khotylev, Fuel Physic Specialist from the Fuel Physics Division; as well as security officers from the Nuclear Security Division.

The presentation will cover the regulatory

basis, the process involved for the preparation of shipments, the certification and licensing requirements, compliance activities undertaken by the CNSC and the ongoing work related to the CNSC's regulatory oversight of transport.

Nuclear substances, or simply radioactive material, are being safely and routinely transported throughout the world every day in accordance with strict international regulations that all countries, including Canada, have adopted.

In addition to the shipment of nuclear fuel cycle products, such as uranium ore, fuel bundles and uranium hexafluoride, the transport of nuclear substances involve the carriage of nuclear substances for industrial use, medical use, research as part of -- and as part of radioactive waste management.

While a small number of packages may be involved in accidents every year, the overall safety record of the transport of nuclear substances in Canada has historically been excellent.

There have never been any serious injuries, fatality or environmental consequences related to the radioactive nature of such material being transported or being involved in a transport accident.

Throughout the world, the nuclear transport

industry operates within a complex regulatory system in which national, international and model regulations overlap.

All industrialized countries use the IAEA Regulations for the safe transport of radioactive material as the basis to regulate the packaging and transport of radioactive materials worldwide.

This slide presents an overview of the various international recommendations and regulations related to the transport of radioactive material, as well as how those are incorporated into Canadian regulations.

All of these regulations follow the same approach and include three main elements: safety by specifying design requirements purpose; communication through labels, placards and transport documents; as well as training.

As it can be seen, the IAEA Regulations are incorporated into the United Nation, UN, recommendations for all dangerous goods, and those are then incorporated into the International Maritime Dangerous Goods Code by the International Maritime Dangerous Organization and the International Civil Aviation Organization Technical Instructions.

In Canada, those are referred to in Transport Canada's Transportation of Dangerous Goods

Regulations and the CNSC Packaging and Transport of Nuclear Substances Regulations.

The current Packaging and Transport of Nuclear Substances Regulations are based on the 1996 edition of the IAEA Regulations.

However, in June 2012, the Commission Tribunal directed CNSC staff to apply, as a matter of principle, the IAEA document TS-R-1, Regulations for the Safe Transport of Radioactive Material, 2009 Edition, to the extent that doing so does not create conflicts with the current Packaging and Transport of Nuclear Substances Regulations.

This was the result of a recommendation made by the International Regulatory Review Service follow-up mission of the IAEA in 2011.

In this follow-up mission, the IAEA looked at the Packaging and Transport Program of the CNSC and concluded that the program was sound and in compliance with international practices, but noted that the CNSC should consider revising its regulations to refer to the current edition of the IAEA Transport Regulations.

At the international level, Canada has actively participated in the development of the IAEA Regulations since 1960. As an IAEA member state, Canada generally follows the requirements of the IAEA regulations

with few deviations to take into account transport condition that are specific to Canada.

The *Nuclear Safety and Control Act* provides for Canada to achieve conformity with measures of controls and international obligations to which Canada has agreed. These include measures and obligations relating to the safe packaging, transport and disposal of nuclear substances.

In Canada, the responsibility to ensure safe transport of nuclear substances is jointly shared between Transport Canada and the CNSC.

While Transport Canada's Transportation of Dangerous Goods or TDG Regulations deals with the transport of all classes of dangerous goods, the CNSC packaging and transport of nuclear substances, (PTNS regulations), are primarily concerned with health, safety, security and protection of the environment related to the special characteristics of the radioactive material; identified as Class 7 dangerous goods.

Both the TDG and the PTNSR regulations apply to all persons who package, offer for transport, transport, and receives radioactive material, whether the persons are licensed by the CNSC or not.

A Memorandum of Understanding has been in place since 1981, between Transport Canada and the CNSC,

and it was last revised in December 2012.

This MoU coordinates the activities of each agency to facilitate the exchange of information, implement cooperation and/or eliminate duplication and overlap.

Into transport: There are millions of different dangerous goods being transported regularly around the world. In order to ensure that first responders receive the appropriate information when responding to an accident involving dangerous goods, the United Nations has established a classification system.

Under this system, there are nine classes of dangerous goods, and each one represents a separate hazard. Note that the class of dangerous goods is not related to the level of danger relative to each other. All are considered equally as dangerous goods.

As it can be seen, Class 7 refers to radioactive material, which is the subject of this presentation.

There are over 10 million packages containing radioactive material, safely transported worldwide each year. This represents about 3 percent of all the dangerous good being transported.

Excepted packages represent approximately 30 percent of all packages being transported.

Canada is a major producer and user of nuclear substances or radioactive material, and those are used in medical and industrial application, and in academia settings; and consequently each year, more than a million packages are transported in Canada.

There is also approximately 3 million packages being transported in the United States, and 2.5 million in Europe.

The objective of the IEA regulations is to establish requirements that must be satisfied world-wide, to ensure safety and to protect persons, property, and the environment from the effect of radiation in transport of nuclear substances.

The protection is achieved by requiring containment of the radioactive contents, control of external radiation levels, prevention of criticality, and prevention of damage caused by heat.

These requirements are satisfied by applying a graded approach to limiting the radioactive content of the packages and to performance standards applied to those packages, depending upon the hazard of the radioactive contents.

This allows packages containing radioactive material to be transported in the normal transport stream, just like any other package containing dangerous goods.

The regulations also require the maintenance of packages, and where appropriate, approval by competent authorities such as the CNSC.

The transport of radioactive material is safe to people, and also to the environment. A comprehensive study was undertaken in the early 1970s in the United States to evaluate the risk associated with the transport of spent nuclear fuel.

This study was published in 1977 as NUREG-0170 - Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes.

This study concluded that the risk from the transport of radioactive material is quite low by any measure of comparison, and confirmed that the requirements specified in the IAEA regulations adequately protect the health and safety of persons and the environment, without the need to conduct a separate environmental assessment.

A more recent report was issued by the United States Nuclear Regulatory Commission (U.S. NRC), in May 2012 for public comments. NUREG-2125 Spent Fuel Transportation Risk Assessment, which demonstrates that the U.S. NRC regulations -- which are also based on the IAEA transport regulations -- continue to provide an adequate safety and protection of the environment and public during transport.

The study concluded that the estimated risk from the release of radioactive material in accident is approximately 5 order of magnitude less than what was reported under NUREG-0170.

This conclusion can be drawn with respect to the transportation of radioactive material in Canada; as the CNSC packaging and transport of nuclear substances regulations are also based on the IAEA regulations which prescribe the same rigorous international requirements and performance tests that transport packages must be subjected in order to be approved to the regulations or certified by the CNSC.

Although environmental assessments related to transport are not required under CEAA, the CNSC will evaluate the need to conduct an evaluation under the CNSC Act and regulations through the environmental protection assessment process.

Before going further, this slide defines some terminology used in the regulations which will help understanding the roles and responsibilities of the various stakeholders involved in the transport of radioactive material.

First, the consigner, who can be defined as the person responsible for preparing the shipment for transport, usually the consigner is a CNSC licensee.

Next, is the consignee, who is the person receiving the material. Again, in Canada, this person is usually a CNSC licensee.

Finally, the carrier, who is the person responsible for transporting the package from the consignor to the consignee, and this person is usually not a CNSC licensee. Nonetheless, he must follow the CNSC and Transport Canada's regulations.

This slide presents the transport stream over which the CNSC carries out its regulatory oversight, and in which outlines the responsibility of those involved in transport activities.

Training requirements and implementation of emergency procedures apply to all parties involved in transport; consignor, carrier, and consignee. The CNSC conducts compliance verification activities at each stage of transport, including, consignor, carrier, and consignee, to ensure compliance with regulatory requirements.

First, let's look at the responsibility of the consignor. Once a person wishes to transport nuclear substances, the first question they need to answer is, is the material exempted from the application of the regulations.

Some nuclear substances are indeed exempt

from the application of the regulations. For transport purposes, a nuclear substance is defined in terms of activity concentration and activity limit under which the material is not subjected to the regulations. These values are incorporated in a table within the IAEA regulations, and vary based on the radionuclide transported.

Other specific exemptions are also provided. For example, these include check sources and radiation devices for which no license is required for their possession and use in Canada, and consumer products, such as smoke detectors.

Other examples include nuclear substances that are component of a transport vehicle such as, depleted uranium counter-weight used in aircraft, and persons who have undergone medical treatment, including those wearing a pacemaker.

If the material to be transported is not exempt, the next question is what type of package is required for transport.

The safe transport of radioactive materials rely heavily on packaging and the preparation for transport done by consignors, and to a lesser extent, on operational controls by carriers during transport.

This ensures their safe transport

throughout normal stream, for example, on public roads. Therefore, the main responsibility for the safe transport rests with the consignor, who again, is a licensee.

When the nuclear substance transport does not fall into any exemptions and whether or not its transport requires a license, the substance needs to be transported within one of the package types defined in the PTNS regulations.

A package type is selected based on the nature and the quantity or activity of the material being transported. There are general design requirements which apply to all package types to ensure that they can be handled safely and easily, secured properly, and are able to withstand routine conditions of transport.

The next question is to determine if the package requires certification by the CNSC or not. As mentioned previously, a packaged type is selected based on the nature and the quantity or activity of the substance to be transported.

The regulations specify general design requirements which apply to all package types, again to ensure that they can be handled safely and easily, secured properly and are able to withstand routine condition of transport.

Each type of package must meet specific

design requirements, and be subjected to performance tests based on the nature and amount of radioactive material contained in it.

This slide summarizes the performance or testing requirements applicable to the various types of packages described in the regulations.

The design requirements are related to the amount of radioactive material allowed in the various types of package, ranging from general design requirements for packages containing very small amount of radioactive material, up to severe impact and thermal tests for packages containing very large amounts of radioactive material.

Additional information and example of the testing done on the various types of packages will be presented later.

Now, going back to the various types of packages.

The lowest category of packages under the regulations is the excepted packages, which may contain very small amount of nuclear substances, and these packages are designed to withstand routine or incident-free transport. These are followed by industrial packages and type A packages.

Industrial and type A packages do not

require CNSC approval. These are sometimes referred to as pre-approved packages, meaning that the responsibility for meeting the regulations rest with the consignor, who is the user of the package, who must be able to provide written demonstration that the package meets the regulatory performance requirements set out in the regulations. Normal condition of transport includes minor mishaps.

This picture shows an excepted package. Example of their use includes the transport of iodine-125 seeds used in medical applications. Empty packages being returned may also be identified as excepted packages.

Industrial packages are designed for the transport of low specific activity material and surface contaminated objects, such as uranium ore and concentrate or contaminated pumps and tools from nuclear power plants.

Type A packages are commonly used to transport radioactive medical isotopes, such as molybdenum-99 generators from which technetium-99m is extracted, and other medical isotopes.

They are also often used to transport radiation devices such as gauge containing radioactive material used in road construction measurements and testing. Examples are also presented on a table.

I'm going to start first with the -- the

device used on the construction roads which is a moisture density gauge. Those are type A packages. So that's the -- the yellow box is the package along with the device which is sitting on -- over on the front. And those are designed to meet the normal condition of transport.

The next one will be -- oh.

**MR. JAMMAL:** Actually I'll help you demonstrate.

**MR. FAILLE:** Okay. The ---

**MR. JAMMAL:** So I'll demonstrate how this goes in the box.

(SHORT PAUSE/COURTE PAUSE)

**MR. FAILLE:** once the device is put into the box, which is a plastic box, the -- this becomes the type A package. It's not just the box; it's both together as the device also provides shielding during transport and the box provides additional protection and both together are a type A package.

**THE CHAIRMAN:** So it has to be -- the actual device box has to be shielded and a box to shield the device itself?

**MR. FAILLE:** It depends on the model. In this case, the device itself provides the shielding for the box. The requirements are both together. The package has to provide some shielding but the box itself doesn't

provide that. So it's the combination of both that covers the type A package in this case.

And the -- just to enforce what Mr. Dagenais said, it's just -- it's the inner device plus the outer box which is the packing that provides the containment and every -- all the requirements.

**MEMBER McDILL:** So for example the box provides the water protection? Sorry ---

**MR. LEBLANC:** Dr. McDill, your mic. It's just people in webcast won't be able to hear if you don't have your mic on.

**MEMBER McDILL:** Sorry. So the -- the gasket and the box provide the required water -- protection from water, for example?

**MR. FAILLE:** It does for other components that are inside the box as well.

**MEMBER McDILL:** Yes.

**MR. FAILLE:** Yes.

**MEMBER McDILL:** That's why the two are required.

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

Sorry to intervene into the presentation but I'd like to raise a couple points to you.

It's reinforced plastic. It's not just

regular plastic. So it really can withstand damages.

And this type of device, when you hear or you see on our website notifications of missing devices or devices being run over by tractors or trucks, so the design of the device itself, the certification that Sylvain will talk about later, takes all the accident scenario in place, that are taking place and to date.

These things were -- went over rollers but did not impact in any way, shape or form the safety associated with the source.

But that's the -- one of the tools being used to measure densities of the highways, thickness of asphalt.

**MR. FAILLE:** Okay. Moving on to the next one, the steel drum that you see is another example of industrial package. This one can be used to transport various samples of material that would qualify as low specific activity material or surface contaminated object.

The next one is the cardboard box in yellow. The yellow cardboard box, this one is used for the transport of medical isotopes. And as you can see from the presentation, you'll see that the box itself provides the outer containment and then there's some additional protection inside in the form of a Styrofoam insert. And within that insert there's a lead component

that provides shielding to the radioactive material contained inside that little shielding pot.

The material in this case would be in a glass vial and there would be some absorbent material at the bottom. So for some reason if the vial was to break, the material would still be contained within that leak proof insert.

**THE CHAIRMAN:** So again, just so -- I'm trying to understand. So the box itself, is there anything special about the box besides its being yellow and -- and there's a symbol on it? What's special about the box?

**MR. FAILLE:** Yes, there are some additional requirements. This one is kind of plastified to -- because it has to be subjected to the water spray test, which is one of the tests for type A packages that we'll cover later.

And so the box needs to maintain its integrity after being left in the rain for a certain period of time and then be subjected to some additional testing. And it's much stronger than regular cardboard box.

**THE CHAIRMAN:** But it's designed basically for the transportation. This is not for the shielding purposes?

**MR. FAILLE:** No, that's correct. The shielding is offered by the yellow lead pot.

**THE CHAIRMAN:** Okay.

**MR. FAILLE:** In this case.

**MEMBER TOLGYESI:** Sorry, the empty drum what you have there, are you using that to transport also concentrate uranium or concentrate?

**MR. FAILLE:** Yes, it is used for that as well because it's considered low specific activity material.

**MEMBER TOLGYESI:** M'hm.

**MR. FAILLE:** Which is more on the fuel cycle for the basic components for making the fuel and at that stage it's still considered low specific activity under the regulations, same as uranium ore. And those types of packages are used for transport of -- for the transport of that kind of material.

**MEMBER TOLGYESI:** And you remember there was a shipment which was going to Japan on a ship and it go through -- it did go through weather storm and came back to B.C. somewhere ---

**THE CHAIRMAN:** You'll see it later on in the presentation.

**MEMBER TOLGYESI:** Yes?

**THE CHAIRMAN:** You actually see a picture

of it.

**MEMBER TOLGYESI:** (Off microphone).

**MR. FAILLE:** Similar but much bigger, yes.  
Similar concept but much bigger.

**MEMBER MCEWAN:** (Off microphone) Is there a specific thickness to the wall of these barrels?

**MR. FAILLE:** It's not specified directly in the regulation but they have to meet the performance tests that are specified. So therefore, in some cases, they need some thicker material. Yes.

**MEMBER MCEWAN:** (Off microphone) It's based on the weight of the material.

**MR. FAILLE:** Okay, the next example is the molybdenum generator. Again, it's a type A package.

In this case, you have the generator, which is the centre piece. And this one is located again inside a Styrofoam insert. And that insert goes inside a cardboard box which meets the similar requirements of the previous one.

Again that -- the component -- the generator plus the outer box and all the inner components forms the type A package.

And finally, just another example, there's a bigger lead pot that is on the side of -- which is green. This one is similar to the yellow one that is

sitting on top but, as you can see, it's much bigger and it contains either more -- more material or one of stronger field. So the shielding needs to be bigger but it's the same concept and this is how most of the medical isotopes are transported.

Now, we're going to be going back to the presentation.

If the quantity of nuclear substances to be transported exceeds the limit for a Type A package, then a Type B package is required for transport. Type B packages needs to be certified by the CNSC before they can be used to transport nuclear substances in Canada.

These packages contain very large quantities of radioactive material and are required to undergo more stringent testing to simulate both normal and hypothetical accident condition of transport since their content can give rise to severe consequences if they were to be released at any time during transport.

For example, these packages are designed to withstand cumulative effects of a free drop test from a height of 9 metres, a puncture test and a 30-minute fire test at 800 degrees Celsius.

Other types of packages that require certification by the CNSC includes Type C packages, which are designed for the transport of very large quantity of

radioactive material by air; Type H packages, which are designed for the transport of natural uranium hexafluoride, and packages designed for the transport of fissile material such as enriched uranium and plutonium.

These pictures show packages that are designed and certified for the transport of natural uranium hexafluoride. Those are Type H packages being loaded onboard a marine vessel.

These pictures show Type B packages. The package on the left is designed for the transport of cobalt-60, for example, used in large irradiators, and the one on the right is designed for the transport of tritiated heavy water to be sent for processing at the tritium removal facility.

The amount of heavy water contained in this package is approximately 5,000 kilogram and the activity can reach up to 20,000 terabecquerel of tritium.

On this slide the package shown on the left is used for the transport of large quantity of medical isotope, up to 555 terabecquerel of molybdenum-99, or 111 terabecquerel of iodine-131.

And on the right, the package shown on the right is designed for the transport of various isotopes, including up to 1,700 terabecquerel of iridium-192 used in industrial applications.

This slide provides an overview of the typical construction of a certified package. First is the cavity that contains the radioactive material. This cavity is surrounded by shielding material and a lid closes the cavity.

The shielding material is contained within the outer shell. The shell is protected by impact and thermal protection material, in this case heat dissipating fins and thermal insulation.

And finally, there is a shipping skid attached to the bottom of the package for ease of transport.

This picture shows a package design for the transport of fissile material. In this case, the content is uranium hexafluoride enriched to five weight percent.

Let's now look more closely at the process used by the CNSC to certify packages. Type H, Type B, Type C, and packages designed for the transport of fissile material, all require certification by the CNSC before they can be used in Canada.

The application typically contains information on the structural design, thermal and shielding analysis and containment of the radioactive material in the package, the functional characteristics of the package, the maintenance requirements and the quality

assurance followed for the design, manufacture and maintenance of the package.

Transport specialists within the CNSC transport licensing and strategic support division, who must be accredited as professional engineers as part of their job requirements, carry out the technical review of the information and applicable results submitted by the Applicant to ensure that the package design meets all regulatory requirements.

For packages designed to contain fissile material, the application must contain an analysis demonstrating that the package remains subcritical following the test and is reviewed by the CNSC fuel physics division.

The transport regulations do not prescribe any specific standards to be followed for the design of packages but requires that demonstration of compliance be done by conducting life tests on specimens or scale model, by computer simulation, or by engineering calculations and reasoned arguments using national or international industry standards, or through reference to similar design previously certified.

Guidance documents, including international guidance, are used by CNSC specialists in ensuring that all requirements specified in the regulations are met for

each certified package.

A CNSC internal quality assurance program is in place in the form of a peer review by another transport specialist for the review of all new certified design and those where significant change has been made to the design.

The director of the transport licensing strategic support division, who is a designated officer authorized by the Commission, issues the certificate on behalf of the Commission based on the recommendation of the transport specialist and when he's satisfied that the design fully complies with the requirements of the regulations.

For packages approved in other countries, a Canadian revalidation is required prior to their use in Canada. This process requires the submission of a full application for certification by the CNSC, along with a copy of the package design certificate issued by the country of origin.

This process ensures that the package design meets all Canadian requirements. This information will also assist the CNSC staff, who may be asked to assist first responders in case of an accident.

In order to facilitate the revalidation process between Canada and the United States, the CNSC,

the United States Nuclear Regulatory Commission and the United States Department of Transportation produce a CNSC regulatory document entitled "RD-364, Joint Canada U.S. Guide for Approval of Type B(U) and Fissile Material Transport Packages" also known as NUREG-1886.

Once the package is selected and approved for use, if needed, the next step is to prepare the package for transport. In preparing a package for transport, the consignor, i.e. the licensee, is responsible to ensure that the package meets all of the requirements specified in the regulations.

Each package, other than excepted packages, is to be categorized and labelled using one of the following categories; one white, two yellow or three yellow, based on the radiation level at the surface of the package and the transport index.

The transport index is defined as the maximum radiation level at one metre from any surface of the package in millisievert per hour multiplied by 100.

The transport index is used to limit the number of packages on board a transport vehicle and to segregate packages from persons and other goods.

The category of label and the transport index are also used by first responders in identifying the expected radiation exposure around a package.

The consignor is also responsible for preparing the transport document which contains a description of the package being transported, the shipping name, the UN number, the isotope, the maximum activity, the category of the label and the transport index.

This document is a requirement for all dangerous goods and is included in all international and national regulations.

The label on the package and the transport document are part of the communication tools available that are particularly useful for first responders to determine the presence and the nature of the material in the event of an accident.

Let's now look at the licensing requirement. The question here is is a transport licence required for the shipment.

Although transport activities are generally exempt from licensing by the CNSC, since carriers are only required to follow regulations, most of the shipments originate or ends at the CNSC licence site in Canada.

Under the Packaging and Transport of Nuclear Substances Regulations there are three specific circumstances under which a transport licence is required.

The first one is for the transit of large quantity of nuclear substances transported in packages

requiring certification, such as Type B, Type H, or in a package designed to contain fissile material, where the shipment originates outside of Canada and is destined outside of Canada.

The second case is for cases where it's not possible to comply with all provisions of the regulations; for example, if an object to be transported cannot fit into a pre-approved package where there are compensatory measures in place to ensure the safety of the shipment and, finally, for the transport of enriched uranium and plutonium above certain quantity, in those cases the Transport Security Plan is required and must be approved by the Nuclear Security Division in order -- before the shipment can occur.

Transport licences are also issued by the designated officer, the Director of the Transport Licensing and Strategic Support Division, on behalf of the Commission.

In 1972, the IAEA developed security recommendations, INFCIRC 225, "Nuclear Security Recommendation on Physical Protection of Nuclear Material and Nuclear Facilities", that described the international best practices related to physical protection for Category I, II and III nuclear material.

This document describes the requirement for

the protection of sensitive information related to transportation of Category I, II and III nuclear material such as the route, schedule, means of transport, means of communication, escort, response forces and security plan.

These recommendations are followed within Canada and included in CNSC Regulatory Guide G-208, "Transportation Plan for Category I, II and III Nuclear Material".

The packaging and transport of nuclear substances regulations require that the licence be issued for the transport of enriched uranium and plutonium if the quantities are above the one defines under the Nuclear Security Regulations.

The application must include a Transport Security Plan which contains details about the transport routes selected in Canada.

Before issuing this type of licence, a CNSC specialist will conduct a technical assessment of the Security Plan provided. This assessment may include the examination of primary and secondary route proposed, a threat assessment, security measures for the conveyance, security systems and procedures, communication arrangements, contingency plan and arrangements made by licensees and applicable response forces along the route.

The CNSC transport licence will only be

issued by the CNSC designated officer if the transport package is certified by the CNSC and if the CNSC specialists are satisfied that the proposed Transport Security Plan meets CNSC expectation.

Note that the CNSC regulations prohibit disclosure of the information to the public as that is considered prescribed information.

For cases where it's not possible to fully comply with all provision of the regulations -- for example, if an object to be transported doesn't fit in a pre-approved package -- an applicant may request a licence to transport.

Under these circumstances, the application must contain information regarding the condition as to why the shipment cannot be made in accordance with the regulations -- for example, a pre-approved package cannot be used -- and must demonstrate that the overall level of safety in transport is at least equivalent to that which would be provided if all the applicable requirements -- for example, using a pre-approved package -- had been met.

The evaluation of such application is similar to the one followed for packages that require certification by the CNSC. An example of such request includes the transport of large objects such as steam generators from nuclear power plants which cannot be

inserted in pre-approved packages.

Now, moving to the responsibilities of carriers. The question here is: Is the carrier qualified to transport radioactive material?

It's important to note that every person who handles or transports dangerous goods in Canada must comply with the *Transportation of Dangerous Goods Act and Regulations* administered by Transport Canada and must be adequately trained to perform the required regulatory obligation. Similar requirements also exist in international regulations.

The majority of carriers who transport radioactive material -- Class 7 Dangerous Goods -- are not required to be licensed by the CNSC. However, they are required to comply with the *Packaging and Transport of Nuclear Substances Regulations*, for example, by having a Radiation Protection Program in place and maintaining work procedures to ensure compliance with these regulations.

The responsibilities of the carriers include the proper securing of the package while it is in transport and the carrier must also ensure that the labels remain visible on the package and they are also responsible for displaying the placards on the vehicle as required by the regulations.

Carriers are also responsible to ensure

that a copy of the transport document is available and located in a defined location at time of transport to ensure that first responder can access the information easily in the event of an accident for cases where the driver is not available.

The placard, labels and other markings on the package along with transport documents communicate to the first responder the hazard involved in the incident.

Now, the last part of the transport stream, the consignee. The question to ask here is: What are the obligations of the consignee?

The person receiving a shipment of nuclear substances -- who is also referred to as the "consignee" -- is usually a CNSC licensee. Under the *Packaging and Transport of Nuclear Substances Regulations*, the consignee is required to ensure that the package containing the nuclear substance was not damaged or has not been tampered with during transport. If this is the case, the consignee has to report this to the CNSC immediately.

These pictures show damaged packages that have been received by consignee who have informed the CNSC upon their receipt. We see an excepted package on the left and a Type A package on the right. In both cases, the consignee reported the event and proper follow-up was made. There was no release of radioactive material from

either packages.

For compliance, CNSC inspectors conduct compliance verification to ensure that licensees and carriers comply with the *PTNS Regulations* and the *TDG Regulations*.

Compliance verification at carrier facilities follows a risk-informed approach similar to the one used for CNSC licensee. The risk depends on the potential for the carrier's worker to receive a radiation dose above the CNSC annual public dose limit of 1 millisievert per year.

The inspection focussed on the verification of compliance with respect to the requirements regarding the implementation of the Radiation Protection Program for the transport of nuclear substances.

The CNSC applies a graduated enforcement approach for the implementation of corrective measures by licensees and carriers in response to non-compliance items found during compliance inspection.

Although the carriers are usually not licensed by the CNSC, they are required to follow the regulations and there could be strong enforcement measures, such as orders, taken against them to rectify non-compliance situations.

These slides provide an overview of the

test requirements applicable to Type A packages. These packages are designed for normal condition of transport which includes minor mishaps. These tests include a water spray test simulating the package being left outside in the rain; a drop test from a height of up to 1.2 metre to simulate a drop test -- a drop from a vehicle upon loading or unloading; a stacking test to simulate stacking of packages during transport or during storage and, finally, a penetration test to prevent puncture of the inner container by a small solid object. Note that the water spray test is to be done prior to any of the test describes.

The following is a video from Germany that provides a summary of the testing done on packages, the evaluation done as part of the certification of packages under the Regulations as well as research being done on packages.

The process and verification explained in this video are very similar if not identical to the activity done in Canada and other countries for the certification of transport packages.

**(VIDEO PRESENTATION/PRÉSENTATION VIDÉO)**

**THE CHAIRMAN:** I haven't seen this before.

That's a very interesting video, going to raise a lot of questions, I'm sure.

**MR. RAMZI JAMMAL:** Well, we're not done yet.

**MR. FAILLE:** Again, just before we proceed with the next slide, it's just to again remember, the process shown in the video is very similar to the process followed here at the CNSC for the certification -- for the review of application for certification of transport packages and that the -- a test facility still exists in Canada and it's located at AECL Chalk River, and many of the tests from Canadian packages have been done at that facility by the Applicants.

We have another short video and this video shows a drop test from 9 metre, conducted on the type B package designed for the transport of spent fuel. This is one of the test requirements to simulate an accident during transport.

**(VIDEO PRESENTATION/PRÉSENTATION VIDÉO)**

**MR. FAILLE:** As you can see from the video, the package is very robust and only sustained minor damage. In this example, only the impact limiters installed at both ends of the package and designed to absorb the shock produced by the physical impact were damaged.

The next video shows the cumulative effect of three of the tests specified in the regulations to simulate accident condition of transport. The tests are done on another kind of a spent fuel package.

**(VIDEO PRESENTATION/PRÉSENTATION VIDÉO)**

**MR. FAILLE:** Again, it can be seen that the package are not -- is not damaged except for the impact limiter that are designed specifically for this purpose.

**THE CHAIRMAN:** So the thing that came out of it, you have to explain, what came out of it? It wasn't radioactive material.

**MR. FAILLE:** No, in this case, the -- as you can see, before even the drop test, there was a cut out on one of the impact limiter because they had looked at the inside of the impact limiter which is made of wood to see the extent of the damage before submitting it to the final test.

And what we saw coming out was part of the -- a little bit of wood, it was still in that location. So it wasn't related to the radioactive material inside, no.

And the other aspect is by cutting out the opening, you can see how far the -- the pin could go inside if it was to put to protrude inside the -- the impact limiter.

In terms of emergency response, although the transport of nuclear substances is safe and routine activity, accident can happen. Under the regulations, the consignor is always the entity responsible for the safety of the package.

In addition, under Transport Canada's regulations, consignor of certain low specific activity material and fissile material are required to have an approved emergency response plan in place in the event of an emergency involving the transport of their radioactive material.

The TDG regulations also require the consignor to display a 24-hour emergency telephone number on all shipping documents that the company a consignment of dangerous goods, including those in Class 7, radioactive material. The purpose of those requirements is to ensure that appropriate technical information and assistance is immediately available to emergency first responder.

All emergency vehicles, police, fire and ambulance, in Canada received the emergency response guidebook noted on the slide that is produced by Transport Canada, the U.S. Department of Transport and the Secretariat of Transport and Communication from Mexico.

This guidebook provides information and

guidance to first responders in quickly identifying the specific or generic hazard associated with the material involved in the incident and protecting themselves and the general public during initial response -- in the initial response phase.

With the information provided on the transport document, first responder can easily find the proper, immediate response within the guidebook.

Also, first responders in Canada received some basic HAZMAT training which also includes radioactive material emergency management training. The CNSC also provides training for Class 7 radioactive material to specialized HAZMAT first responder teams.

When an incident involving radioactive material is reported to the CNSC, a transport officer or a transport specialist follow up on the incident. Their role is to provide technical information and advice to the person in the field who are responding to the incident. CNSC staff can be deployed on site if needed to assist in managing the situation.

This slide shows a picture taken from a major road accident that occurred in 2001 in Northern Ontario. The truck, which is seen here completely destroyed, was carrying two certified type B transport package which were involved in a very long fire following

the initial impact.

The picture on the right shows one of the packages recovered. Upon verification by the manufacturer, the package sustained only external damage and the source inside the package were undamaged.

The CNSC is always looking at ways to improve its regulatory framework and is in the process of amending the Packaging and Transport of Nuclear Substances Regulations to incorporate the most recent version of the IAEA Regulations, namely the 2012 Edition SS-R-6, and to harmonize the requirements with Transport Canada's Transportation of Dangerous Goods Regulations and other CNSC regulations.

Since the last PTNS Regulations amendment in 2003, staff have also identified a number of improvements that will be included as part of this proposed amendment, such as clarification on the requirements for radiation protection program for carriers, requirements for the transport of large objects and requirements for shipment containing unidentified radioactive material.

It's expected that the draft of the new PTNS Regulations will be pre-published in Canada Gazette Part 1 this fall. The final publication and coming into force of the new regulations is expected to be done in

2014.

In summary, the Canadian regulations are based on the International regulations, IAEA, which is similar in all countries. The regulations take into account the health and safety of persons and the environment and the design requirements for packages and the CNSC will evaluate the need to conduct an evaluation under the CNSC Act and Regulations through the EPA process.

Millions of shipments of radioactive material are being safely and routinely transported in the world every year with the impressive record that there has never been any serious injury, fatality or environmental consequences related to the radioactive nature of such material being transported or being involved in a transport accident since the establishment of the IAEA Transport Regulations in 1960, so over 50 years ago.

This is no doubt largely attributed to the rugged design and quality manufacturing of transport packages, to the application of stringent regulations and through rigorous regulatory review and certification process.

This concludes the presentation. CNSC Staff are available to answer any questions you may have.

**THE CHAIRMAN:** Thank you.

You sure gave us a lot of material here to absorb but I think this is really important and very topical for us to have a discussion. Sorry?

**MR. LEBLANC:** I thought there was another video.

**THE CHAIRMAN:** You don't have the video for the U.K.

**MR. FAILLE:** We do have the video if you want to look at it. We have another video that we can show as well.

**THE CHAIRMAN:** Well, you promised it in the deck; so now you got to deliver it.

( LAUGHTER/RIRES )

( VIDEO PRESENTATION/PRÉSENTATION VIDÉO )

**THE CHAIRMAN:** In Germany, in Japan maybe, all over Europe, if you're going to start decommissioning, you've got to transport the stuff. I think, more than ever, one would like to see an update of this.

Anyhow, any other goodies you got?

Okay, why don't we open up for questions? And I have a list here: Mr. Tolgyesi?

**MEMBER TOLGYESI:** Merci.

I hope that, you know, when you try a car

crash, it will be so resistant.

One of the questions: On page 11 of your presentation, you are saying that:

"... we are seeking a kind of re-validation process between Canada and United States, where it will be recognized, the certification."

What we saw in -- it's done in Germany and Great Britain and you were saying that similar tests were done also in other countries.

Is there an opportunity to consider similar agreements with other countries where it will be recognized?

The certification will be granted?

**MR. FAILLE:** Yes, actually, with regards to the process itself, the -- what is the requirement is not to do additional testing, it's really to review the application itself based on the tests that were done in other countries. So, for that part, we have an agreement with the United States.

And there's an international working group that's going to be established this year to start looking at an international guideline that would be used by all countries to have a similar approval for each -- countries where, if a package is approved in one country, it could

be used in all the other countries.

So this is ongoing and there's a working group that's been formed at the international level to develop a guide for the international community.

**MR. JAMMAL:** For the record, Ramzi Jammal.

I'd like to add one thing, Mr. Tolgyesi: It's even though Sylvain spoke about the certification process itself and its verification, what you saw in Germany or even in Canada or the rest of the world, everyone follows the IAEA requirements.

So the testing is a verification in accordance with the IAEA requirements.

So from regulatory perspective, that commonality does exist. There is what the president refers to the "regulatory sovereignty" that still exists in place; so where the certification is being verified individually.

The EU has gone into a -- even though the proposed EU directive to have a common certification, each member states of the EU itself wants to verify.

And, actually, Canada and the U.S. were the first two member states under the IAEA to have such an agreement where taking into consideration certification done in Canada or in the U.S. but there are still Canadian requirements that we will look at for the basis of the

certification.

One of them is the cold weather transport under cold weather.

**THE CHAIRMAN:** So I just want to bring you back on.

So you're developing now the new regulatory document -- 214, I think it's called now in the new scheme of regulatory document.

In this new packaging and transportation, are we going to put in one place all the documents that you need to follow?

So, for example, if you want -- it's very topical, so I really would like to say: For example, if you had to do the HEU between Canada and the U.S., will one be able to look at our packaging document and know exactly what to do? What needs to be done?

**MR. FAILLE:** Yes, we -- to answer this question, it's going to come this way.

Right now, they would have to -- there's already a document that exists that they would have to follow for that. There's the RD/GD-364 which is mentioned that covers all of the fissile packages. So that would be the design for the package itself.

And currently, we have the other guidance which is G-208 for the Transport Security Plan. And in

the future it will be -- all of those documents will be combined into one once they're going to be revised and they will need to be revised based on the new *PTNS Regulations*.

So that's going to be upcoming right after the publication of the new regulations.

**THE CHAIRMAN:** Thank you.

Mr. Tolgyesi?

**MEMBER TOLGYESI:** I have one last: Is what we saw safe?

Other one: What we we're talking about, you know, is the transportation of -- ore concentrate; you know?

If although we are saying that it's low impact, low radiation and the public perception it's -- the public is seeing that a little bit different way. And in spite of all these techniques to check and all these measurements, I think that the great challenge will be the public or social acceptability.

That's what we were facing, you know, when we try to transport to Sweden our -- how do you call -- steam generators. And that's what I think that, in the perception of public also, the transportation of ore or ore concentrate it looks like standard normal barrel, you know, 40-gallon barrel or something like that. And the

public perception is that how it could be -- it should be dangerous because it's nuclear; you know?

Although we see that protection is there for packaging and also because of content is not necessarily so highly radioactive.

So I think that will be the -- that's the challenge also.

**MR. JAMMAL:** Ramzi Jammal for the record.

We fully agree with your comment is the public perception and that's why we are before the Commission to go on the record to say that there are testing that are being done.

The outreach and our staff has been involved and engaged with NWMO or other stakeholders in order to put assurances to the public that the CNSC exists to ensure safety.

As you know, you're going to have the three groups of the people: Ones who are on the fence, ones who will never believe you and then the ones who will come on board with you and accept the fact.

So what we're trying to target now is the public who is on the fence to give them assurances and to ensure that the CNSC exists for their protection and that's who we serve.

And the public tend to be -- again, as I

mentioned in my opening, the fear mongering is very easy to do, unfortunately, it's very tough to undo. And there is the belief of that minority who will use the fear mongering and, at times, the media does not help us.

We had to go through a lot of the discussions when the Dalhousie -- in fact, you know, some of the media reports say: "Well it was secretly shipped under the cover of night." when, in fact, as you can see, it was an approved package, safely transported.

So there are some campaigns to raise funds, those we cannot change their ideas but we are aiming for the general public to repeat and resend the message over and over that safety is paramount and that's why safety does exist.

So we have a lot of work to do yet. We're -- we have to do it in a language that it's clear and the public will understand.

**THE CHAIRMAN:** Monsieur Tolgyesi?

**MEMBER TOLGYESI:** Yes.

**THE CHAIRMAN:** Okay.

Dr. McEwan?

**MEMBER MCEWAN:** Thank you.

That was a really interesting presentation. Just a couple of questions.

When the generators are transported by air

from site to site, that's the packaging that's used?

**MR. FAILLE:** That is correct, yes.

**MEMBER MCEWAN:** And the -- actually, I would suggest, Mr. President, that the Commission Members may actually want to look at the generator and just see how robust and how the protection is within it.

I think that would be helpful.

**THE CHAIRMAN:** I've seen it, but why don't you take -- why don't you take it and pass it around?

**MEMBER MCEWAN:** Pass it around, yeah.

**MR. JAMMAL:** It's not light.

**MEMBER MCEWAN:** It's not light.

**THE CHAIRMAN:** Non, I know.

**MR. JAMMAL:** It's full of lead so the generator (off mic)...

**THE CHAIRMAN:** What are you looking for?

**MR. JAMMAL:** (off mic) I'm looking for a ...

**(OFF MIC DISCUSSION/DISCUSSION SANS MICRO)**

**MEMBER MCEWAN:** It's about that big.

**MR. JAMMAL:** (Still off mic) It's this big.

**MEMBER MCEWAN:** It's about this big.

**MR. JAMMAL:** (Still off mic) Okay.

So it's this big, it fits inside and then there are two (inaudible) here. One is (inaudible) "collection file" so that's your (inaudible) rather than

it's a vacuum file and this one has a saline file. This is so old I can't even get it out.

(Mic on) Anyway, so you put the water in it, it's a column inside this. So the vacuum sucks the saline that puts the (inaudible) and it's not light.

**THE CHAIRMAN:** Talk to us a little bit about -- there are lots of shipments by air of this stuff; right?

Are we still in the position that each airline has its own policies about whether they'll carry it or not?

**MR. FAILLE:** Yes, there is that -- but in Canada, we have -- Air Canada does transport the medical isotope by air on a regular basis.

And there's also courier companies like Federal Express and Purolator that offer the service as well. As well as some other smaller aircrafts that are shipping some medical isotope from Canada directly to the U.S. on their private airplanes.

**THE CHAIRMAN:** And you do periodic compliance inspection to make sure that -- they have programs in place?

**MR. FAILLE:** Yes, we do.

**THE CHAIRMAN:** Dr. McEwan?

(OFF MIC DISCUSSION/DISCUSSION SANS MICRO)

**THE CHAIRMAN:** M'hm. Unfortunately I saw it in action many times in hospitals. Yeah.

**MEMBER McDILL:** I think the public concern about chargers and generators is not nearly the same as it is concerning ---

**THE CHAIRMAN:** In fact, ---

**MEMBER McDILL:** --- what's perceived to be more hazardous shipments.

**THE CHAIRMAN:** In fact, the surveys I've seen, they don't even connect medical isotopes with nuclear. It's not in the same mindset, so this is good, nuclear is bad.

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

Sir, it's very important to put the fact in place that we are facing some cities who are at times challenging and we have to go personally -- some of them are even considering the transport of medical isotope radioactive material to be challenged and not to be accepted.

So on multiple occasions, we have to go back and tell a municipality: "These are for medical purposes and we are the regulator that ensures the safe transport." because some of the cities declaring to be nuclear-free to include medical isotopes.

**THE CHAIRMAN:** You should bring some of the practitioner nuclear medicine doctors to the council and explain to them what it is they don't understand.

**MR. JAMMAL:** It's Ramzi for the record.

We have attempted but some of them are too busy to come with us.

**MEMBER VELSHI:** I see on this container it says it's "non-reusable".

This container says it's "non-reusable", so is it just a one-time use and then it gets discarded?

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

The non-reusable is for medical purposes and for other reasons because the -- sorry, I'm going to go a bit technical on you.

What happens in the column itself is, as they are removing the moly and produce technetium, there is always a verification on the -- what we call a "breakthrough of moly and technetium" because what you inject into the patient you need to have a -- Dr. McEwan will even carry on with the answer if needs to be -- anything that goes into the patient is called "radio pharmaceutical" and that must be done in accordance with Health Canada requirement.

So it's once the moly decays to a level

where the -- what we call the "mother/daughter decay" or technetium moly ratios, are not the ratio that is approved by Health Canada so you cannot use that generator.

So it's a single use, you're correct. It's usually sent back to the manufacturers where they repack and then reinstall.

So it's a single use for two purposes: mainly medical purpose, decay purpose and, then, it's sent back to the manufacturer.

**THE CHAIRMAN:** Dr. McEwan?

**MEMBER MCEWAN:** No questions.

**THE CHAIRMAN:** Okay.

Monsieur Harvey?

**MEMBER HARVEY:** Yes.

You mentioned in your presentation -- you mentioned that it must remain sub-critical. I mean -- so how do you measure that when you perform those tests?

I tried with the table -- page 11 with the required test.

We saw in the movie that they took the pressure after that but how do you measure that?

I suppose there's no nuclear material in the -- when you perform the test but how do you measure that?

**MR. FAILLE:** Yes, Sylvain Faille.

This only applies when there's fissile material. So it's only if a minor amount of material -- of those kinds of packages that used in Canada. There's a little bit more in other countries and there's many parameters that have to be looked into for that one.

And there's the -- one of them is the water coming into the package which is one of the -- and then it's the internal configuration of the material itself.

But if you need further information, I can ask Mr. Vladimir Khotylev who is a physics specialist and can give a little bit more information on what are the parameters that he's looking at during the evaluation of criticality analysis for transport packages.

**MR. KHOTYLEV:** Vladimir Khotylev for the record, Physics and Fuel Division, CNSC.

In order to ensure sub-criticality of packages, developers, designers and regulators have to follow about hundred -- a few hundreds of pages of national, international standards and guidelines.

According to those standards, hypothetical conditions of accidents have to be considered and a significant margin of sub-criticality have -- has to be ensured under those conditions.

Of course, measurements are not done from a criticality point of view on the real package after it was

damaged.

Assessments of sub-criticality are done according to international and national standards using various methods. Usually, measurements are done on so-called "benchmark experiments". There are hundreds of benchmark experiments which are included into the international handbook on criticality safety experiments.

So scientists, developers, regulators around the world can calibrate their calculation of tools using hundreds of relevant measurements, hundreds of experiments which are documented by international community.

After the tools are calibrated -- or we call it "validated" -- using real measurements, these tools, according to international standards and according to international understanding by scientists, these tool can be applied in order to assess sub-criticality of packages under normal, accidental and other conditions with confidence that calculations using this calculation of (inaudible) tools, will give us a level answer as to what sub-levels -- sub-criticality can be maintained under accidental conditions.

So, in summary, measurements are not done on those packages which are damaged. Measurements are done using hundreds -- in case of criticality safety,

measurements are done during international experiments, international benchmarks. This -- the results of those measurements are used to calibrate and validate calculational methods which are used for assessment of criticality safety during transportation and that's how this process is arranged around the world.

An important aspect to mention is that, because international standards exist, national regulators review the package using identical or very similar processes. And also, they use identical or very similar calculational validation basis. So, in fact, each package is reviewed independently around the globe a number of times.

Therefore, results of such independent review bring more confidence and preclude errors which can be sometimes made by a single reviewer. Thank you.

**MR. JAMMAL:** Ramzi Jammal for the record.

Just to add -- to complement the answer, at the end, criticality is a very well-known phenomenon that takes into consideration the heat dissipation, the physical geometrical positions in the package itself. So it was mentioned by our specialist, all these are taken into consideration in the modelling.

In addition to it, the package itself will have a conservative safety margin so that maintained with

respect to the type of the fuel, how it's being transported and the physical geometry positions.

So, overall, the safety takes into consideration from the heat dissipation, the type of the fuel, the enrichments and everything else but built in conservative values in order to ensure ---

**THE CHAIRMAN:** You guys make life so complicated. Let me try to summarize this.

We know the type of fuel being proposed. We know the quantity. We know when it will be become critical. Period. End of story.

Isn't that true?

You're going to put HEU in this container. You know how much HEU. You know the characteristics of the HEU so you know when and if it will ever become critical. So you limit the volume. You limit the thing according to some benchmark.

We got to keep this very simple so the public can understand what you're talking about. Please.

Monsieur Harvey.

**MEMBRE HARVEY:** Une dernière question, c'est: Sur la quantité de un million de transports qu'il peut y avoir au Canada par année, combien de ces transports-là demandent une licence?

Parce que, dans certaines circonstances, il

y a une licence à demander ou à recevoir.

**M. FAILLE:** Oui, Sylvain Faille.

Pour les envois qui sont uniquement au Canada même, il y a seulement quelques permis qui sont émis par année.

La plupart des permis qu'on émet sont émis pour les envois qui sont en transit au Canada; donc, ceux qui viennent pas directement au Canada mais qui arrêtent dans un port canadien pour la plupart des cas.

En tout, on émet environ 200 permis par année, incluant ceux pour le transit qui représentent peut-être 95 pourcent des permis et puis le 5 autre pourcent c'est pour les envois qui sont à l'intérieur du Canada.

Donc, il y a très peu d'envois au Canada qui requièrent un permis.

**MEMBRE HARVEY:** Merci.

**THE CHAIRMAN:** Thank you.

Dr. Barriault?

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

Just one brief question really. We licensed the containers which is what you're today or looking at that licensing. We licensed the shipper and a receiver but we do not licence the transport and I don't understand.

Who's responsible for the transport system, be it trucks or airplanes or whatever?

**MR. FAILLE:** Yes, Sylvain Faille.

The way that we regulate the transport operation is very similar to how it's being done by other agency like Transport Canada where every carrier has to comply with the regulations.

And we can enforce the regulations but we don't issue them a licence for that activity.

**MEMBER BARRIALULT:** But who controls this if you don't license them?

**MR. FAILLE:** The province that controls the road transport.

Usually, it's done through the provincial regulations. They have inspectors that would enforce their regulations that are based on Transport Canada's and CNSC regulations and then Transport Canada is responsible for the air shipments and marine shipments and rail shipments.

So those are done with Transport Canada and, in terms of compliance verification, we -- CNSC will participate in inspection jointly with Transport Canada or the province to conduct some compliance verification of carriers.

**MEMBER BARRIAULT:** So do we assure

ourselves that the provinces are critical enough in their inspections of the transport system?

And I'm saying that because, you know, we've got these transports out there on the highway hauling material that is closely controlled but, having said that, during that period when they're on the road, who is responsible?

And what you're telling me, really, is that it's the provincial responsibility in the case of trucking.

**MR. FAILLE:** The responsibility is for -- in terms of the regulations but in terms of -- if there was an accident occurring, the licensee or the consigner is always the person responsible in case of accident, it's not the province.

The province is mostly related to the inspectors who do the compliance verification on shipments.

And in terms of the interrelation that we have with the province, we are sitting in a committee that is organized by Transport Canada that involves all the provinces and we're part of that committee so we can share and they can share experience with us on transport of radioactive material across the country.

**MEMBER BARRIAULT:** So with -- this is

concerning hazardous good. With the transport of hazardous good, some provinces require their truckers to take special examination, special training but some other provinces do not.

And I guess what I'm questioning is, who's controlling this and who is making sure that we're applying standards that are pretty well universal across the country?

**THE CHAIRMAN:** Okay. Can I jump in? We've gone through this many, many times. It's the licensee. So Nordion, who produces a lot of the isotopes, get into contracts ---

**MEMBER BARRIAULT:** M'hmm.

**THE CHAIRMAN:** --- with suppliers.

**MEMBER BARRIAULT:** Yeah.

**THE CHAIRMAN:** So while they are in there, there's an arrangement thou shalt deliver and you will comply with all the regulation, et cetera.

**MEMBER BARRIAULT:** I agree.

**THE CHAIRMAN:** And we can cause a lot of difficulties if they don't comply.

**MEMBER BARRIAULT:** I'm asking that question simply because last year, if you remember, we had this incident whereby a trucking company out of Western Canada was hauling a source -- radiation source that was open.

And whoever was hauling this got exposed.

Who was controlling that? Who was making sure that this was done properly? So I'm just wondering how rigid we are in enforcing that portion.

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

As was mentioned by the President, when the issue was discovered and the licensee is the one who actually came before the Commission, I believe, or we issued an order to verify. Because the licensee is responsible for regulatory oversight and regulatory control, not just the oversight, the control of the package from its source to its end.

So the packaging must be done in accordance with the requirements.

**MEMBER BARRIALT:** M'hmm.

**MR. JAMMAL:** The carrier is the licensee's responsibility to ensure the carrier is -- has in place the proper arrangements. And in that case where the shutter was not properly closed, the packer and the licensee were the ones responsible for -- to ensure that is being done accordingly because if they did it properly, then the package itself would have provided adequate safety measures. So ---

**MEMBER BARRIAULT:** Go ahead, I'm sorry.

Just a concern I have really is that ---

**MR. JAMMAL:** It's a valid concern and it always comes up is the licensee is responsible until the end where it is taken over by another licensed entity.

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

**THE CHAIRMAN:** Thank you.

Dr. McDill?

**MEMBER MCDILL:** Thank you. I enjoyed the entire presentation.

With respect to the pictures on page 15 in the slide deck, you mentioned that, for example, the type B package involved in the TransCanada accident was intact, but it's not in the CMD.

And I think it's important for when the public looks at such things that that information is there as well, that the -- because, you know, obviously it's been burned and it looks -- I think it would be really good to have in brackets underneath, "package intact".

And with respect to the shipping incident underneath, anyone looking at it will see that the human people are wearing just white overalls and, you know, basically conventional health and safety, probably some gloves. But it would be good to draw that to the attention of the reading public. I know what it means.

**MR. JAMMAL:** Ramzi Jammal, for the record. Excellent observation. Thank you very much.

**MEMBER McDILL:** Thank you, Mr. President.

**MEMBER VELSHI:** Thank you, Mr. President.

A few questions just so that I understand why the Canadian requirements are different or why we do our own independent assessment. You mentioned weather being one of the unique conditions in Canada. Give me some other examples that would allow us or require us to have different requirements, please.

**MR. FAILLE:** Yes. Sylvain Faille.

I would say in general, our requirements are identical to the one in the IAEA. Where we are a little bit different would be in the case of uranium ore, for example, where the IAEA Regulations are based on a grade of ore which is around two percent. And in Canada, in some places, the mining operations are extracting some ores that are up to 35 percent.

So we don't believe that the regulations would be sufficient in those cases. So that's why our regulations are a little bit different and more stringent when the ore is higher than what is the basis for the IAEA.

**MEMBER VELSHI:** Thank you.

I know in response to Monsieur Harvey's question you said there are about 200 licences issued each year. But how many different packages are certified by the CNSC?

**MR. FAILLE:** Yes, Sylvain Faille.

I think currently there is approximately 90 certificates issued for different package type. So there is about 90 certificates for 90 different models of packages. Those are the ones that are certified and there's many of those on the -- that are transported on a regular basis.

**MEMBER VELSHI:** And are these manufactured mostly in Canada or could be anywhere?

**MR. FAILLE:** Sylvain Faille.

It could be anywhere. There's a certain amount that are owned by Canadian companies but some also use foreign companies, like they're using devices or packages from the United States or other countries. In Canada, it's mostly United States, United Kingdom and a little bit of package coming from France. Those are the main ones.

**MEMBER VELSHI:** And in your certification process, do you look at the manufacturing process at all and their quality assurance?

**MR. FAILLE:** Sylvain Faille.

Yes, we look at that as part of the review of the application and based on the recommendation from the IRRS mission, we have also developed a new procedure to do inspections of manufacturers that we can exercise for the packages that are built here in Canada.

**MEMBER VELSHI:** And similarly for the testing facilities, are these accredited? I mean, do they have a stamp of a champ from somewhere?

**MR. FAILLE:** I'm not certain about the qualification. I know that there's a couple that have been around for many years that have been used by many companies. And that's always part of the assessment of an application where we would look at all the test parameters that were used for conducting those tests.

And in Canada in our regulations, any person who wants to do testing has to inform the CNSC before doing those tests so we can go and have a look at the test facility and also be present during testing. That's a requirement of the regulations that they have to inform us before they do any testing.

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

Just to add to complement to what Mr. Sylvain Faille has said, as we review the certification of other countries, other countries review the certification

originating from Canada on the evaluated testing. So you have another third-party independent review of our certification process.

And to date, none of our certification have been rejected.

And the testing of the facility itself at Chalk River, I have to look it up if it's accredited or not, but they do have the testing facility but the people conducting the testing and the design, just like our staff, are professional engineers because they are responsible for the design of the package itself.

**MEMBER VELSHI:** And the other way around, have there been packages accredited by other countries that the CNSC has rejected?

**MR. FAILLE:** Sylvain Faille, for the record.

I think there might have been one or two where some changes were required after verification, but not necessarily an outright rejection. It was more additional testing or some minor modification had to be made to the package following the review from a -- or revalidation from Canada.

And that's just because of the nature of the international communities. Some countries have more experience than others and it really depends from where

the original package came from.

**MEMBER VELSHI:** And my last question is on the HEU requirements and potential shipments and the need for us to be proactive in disseminating objective information.

And, Mr. Jammal, you mentioned there's three categories of people. So not the group that no factual information; we'll just confuse them. So leaving them aside, but people on the fence, is there something in the works by the CNSC staff on doing some proactive education and communication around that to -- like, you know, unnecessary concerns?

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

To answer your question shortly, the answer is yes, we are doing quite a bit of efforts. We have -- we conduct sessions called CNSC 101 where we go out; staff go out to the community itself. And to date we've conducted multiple visits where we publish that the CNSC is coming and talk to them about the regulatory requirements to include the transport.

The communication we have to continue to transmit and to engage. And I'm not sure if we have our communication director general here but they were going and reaching out to schools. We're reaching out to the

communities. We're reaching out to interested party with respect to the information.

So we're not going by invitation only. So we're pushing ourselves out in the public domain. And whenever we have a chance, we will correct the fact as they appear in the media.

So that's the continuous challenge we're facing. We have to be a bit more proactive rather than reactive because the story of the steam generators, even though we went out, we spoke to the municipalities, we spoke to the politicians, I personally was part of the team, you leave them convinced, they accepted, but for whatever reason another group comes in and then everybody becomes activists to protect the public, ignoring the facts that were presented.

So that's the challenge we're facing. So at multiple level we -- as we go through this process we will update the Commission on communication with respect to the transport and what we're doing. But there's quite a bit of resources being spent currently at the CNSC and activities taking place in order to disseminate the information according to the safety and the record that we've got.

**MEMBER VELSHI:** Right, though that's more general. I meant specifically with highly enriched

uranium shipments.

Because what I have seen in the media is, you know, all this horrible stuff is going to go through and the response from the CNSC has been well there's been no licence application and that's kind of the end of it, as opposed to going out proactively just around this, and there's wonderful videos that we have seen to say you don't need to be worried about this going through your backyard because this is safe.

You also mention in your presentation that there are disclosure restrictions around the shipment. It just seems that our partner in the U.S. seemed to be a lot more forthcoming in providing information around this and I just wondered if their requirements were any different.

But just in this particular one, and given the steam generator experience, I just wondered if you were going to be doing proactive communication, specifically around this.

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

The answer is yes, we should be doing a lot more outreach activity in order to reassure and continue to represent the safety aspect.

On the HEU stories, our response, there is no application for the Commission because some -- some of

the things being presented in the media are not factual. And let's -- we do not want to give the perception that it is -- what is being said is "true" but we will be going out to the community.

As a matter of fact, we already had contacted certain politicians of the area as part of the meeting with the councils of the regions that we're going out and explaining to them the safety of the HEU.

Point well taken, and that we will be as much as we can proactive at that front.

**MEMBER VELSHI:** Thank you. Thank you.

**THE CHAIRMAN:** Anybody else?

Well, I'd like to keep on this line of questioning. I think we need to do a lot more on the HEU. So, for example, the American did put on their web the actual application, right. I don't know what we're doing in that particular process because we've got to certify ourselves. So we've got to deal with some of the security differences here and issue in our processes.

But I think that we have, in our transportation of radioactive material, we have a real issue here; we have not dealt with the environmental assessment. And we need to find a way to explain how we -- the environmental assessment process is embedded in all the analysis that you do. It's in there.

I mean, you have a slide here that shows the package equals safety. I think the package is when you start looking at the probability of a release, the probability of damage and the mitigation and all the emergency.

Just saying, you are talking almost the same thing of an accident in a nuclear power plant. The language is different but you're doing still an environmental assessment that include the -- all the questions about what will happen in case of an accident, what will be at the mitigation against that, and what is the -- even in a doomsday scenario if there's a little bit of a release what will happen.

You're doing all those. They are embedded in the calculation. We have not found a way to do that or to explain that.

And the other thing is the American have done the environmental assessment a long, long time, and the question is is it transferrable over here. And there's two dimensions to the environmental assessment; it's the packaging, but the routes -- you know, the 1,800 -- is it 1,800 -- kilometres to go to the Savannah facility, the question always is well aren't you concerned.

So the route issue and if you're going to

have an accident amongst -- in one of those routes, what will be the consequences?

We have answers to all of this we just haven't been able to put it together in a package.

And the other thing is I don't know if all those videos and this deck is now on our web. If not it should be and we should start pushing this thing and explaining the transportation. And I assume that this particular deck or something like that eventually will get its way to our web.

**MR. JAMMAL:** Ramzi Jammal, for the record.

Yes, the intent is to take your comments based on the presentations, as Dr. McDill gave us some modifications on the wording and the titling, both for the CMD and the deck itself.

With respect to the EPA (environmental process assessment) under the *Nuclear Safety and Control Act*, yes you're correct; our messaging is mute on the environmental aspect because it's being evaluated as an integral part of the package.

So we are -- based on the changes that occurred, moved away from the CEAA process. We will be enhancing the message with respect to the assessment being done by the CNSC at the time of the application for certification and the application of the transport itself.

Now, with respect to the U.S., they've done a global EA based on the design of the package. And that's what Mr. Faille has mentioned, is the results of the study that re-evaluated the accident scenario and confirmed that the original assessments or impact assessments were in the order of five times higher than actually what the knowledge we currently have and what the impact would be.

**THE CHAIRMAN:** I know, but that's not the question. The question is what does it mean to Canada?

**MR. JAMMAL:** It means to Canada it's because the certification of the design itself of the package that we apply the same principle of the certification of the package itself, taking into consideration the IAEA regulations, taking into consideration the same requirements that we have in place from a regulatory perspective, one to one, it's transferable.

And with confidence we say that the same studies, based on the packages itself, based on the design of the package is adequate. But regardless, under the NSCA we will be evaluating the requirements with respect to the environmental protection process.

**THE CHAIRMAN:** But I think that's what Ms. Velshi is arguing, that we should be a lot more proactive

and deal with already what came out from the U.S. and we really did not. Our bottom line, and it's correct, has been that we have no obligation here.

But we do have obligation for certification and therefore that could trigger some explanation, but what are we going to do with it and how are we going to manage should an application come to us. And we should start doing this proactively before the application actually comes in.

**MR. JAMMAL:** We agree.

**THE CHAIRMAN:** Anybody want to piggyback on that?

Anyhow, thank you for this presentation. I think it goes a long way to explain it. I think we should take some material from this and find out how much of it is available on our web. And particular, the videos, those are old, old videos. I don't know if I log onto the YouTube will I find the U.K. material and the German.

**MR. FAILLE:** Actually, the one from the U.K. is on the YouTube, and the one from Germany are available on the BAM website.

**THE CHAIRMAN:** We should hotlink it to a place -- to the American facility.

**MR. FAILLE:** They have some testing facility, not the same as the one in Germany but I can

find out. There's a few places where they do some testing.

**THE CHAIRMAN:** So hotlink them and put some story line behind how we -- the international community is actually using benchmarking with other countries.

All right. Thank you. Thank you very much.

Ten (10) minutes; we'll reconvene at 11:10, according to this clock.

--- Upon recessing at 11:10 a.m./

L'audience est suspendue à 11h10

--- Upon resuming at 11:23 a.m./

L'audience est reprise à 11h23

**THE CHAIRMAN:** Okay, we are back and you cleared the room pretty well.

**(LAUGHTER/RIRES)**

**THE CHAIRMAN:** I don't know why, this is an exciting topic, a very important topic.

So we are now talking about a 2012-13 regulatory framework program and I'll turn the floor to Mr. Mark Dallaire for his presentation as outlined in CMD 13-M-25.

Mr. Dallaire, the floor is yours.

### 5.3 2012-13 Regulatory Framework

#### Program Update

13-M25

Oral presentation by

CNSC staff

**MR. DALLAIRE:** Thank you, Mr. President.

For the record, my name is Mark Dallaire; I'm the Director General of the Regulatory Policy Directorate. And with me today, on my immediate left, is Ms. Lynn Forrest who is the Director of the CNSC's Regulatory Policy Analysis Division and on her left, Mr. Colin Moses, Director of the Regulatory Framework Division.

In today's presentation, I'll open up with some -- some initial remarks and then turn it over to the other two.

We are pleased to present to you today, the CNSC's 2012-13 Annual Report on the Regulatory Framework Program. Our report will cover -- and the presentation is no longer on the screen, okay.

Our report will cover the following key issues: An overview of the program and its objective; a quick recap of the regulatory policy cycle, with an

overview of where in this cycle you, as Commission Members, are involved, as well as where we engage with Canadians; a summary of what we have accomplished in this past year, with a particular focus on priorities.

You will recall that in previous presentations over the past year, we discussed where we had landed with respect to a more coherent structure to the CNSC's library of regulatory documents, and our plans to move to a new nomenclature and numbering system aligned with that structure.

We've taken this work and our ongoing efforts to consolidate and integrate requirements, guidance and process information wherever practical and have landed on what we view as a comprehensive view of the CNSC's regulatory framework that supports licensing and compliance and is more easily accessible to all stakeholders.

We'll review this end result of this effort to modernize the CNSC's document framework for you as part of today's presentation.

Finally, we will review CNSC's ongoing improvements in engaging and communicating with stakeholders. And today I'm pleased to let you know that after a long period of gestation, we have a revamped regulatory Web site that will go live today, be pushed out

to all stakeholders today, and we will provide you with a demo -- a demonstration of how that site works.

When we speak of the CNSC's regulatory framework, we're talking about the collection of legislation, regulations, and other tools that the CNSC uses to regulate the nuclear industry.

Obviously, Parliament passes enabling legislation for the CNSC, a principal piece of legislation is the *Nuclear Safety and Control Act*. In accordance with the Act, Commission makes, with Governor in Council approval, regulations. You also issue licences with various licence conditions, certificates and orders.

CNSC also develops a variety of regulatory documents to support the program. So this is what we're talking about when we speak of the regulatory framework.

You can go on to the next slide.

So at the highest level, the CNSC's regulatory framework program, the objective is to develop clear, documented and easily accessible regulatory requirements and guidance in support of the CNSC's licensing and compliance activities. This information, of course, is also the same information that licensees and other Applicants need to have access to.

So our key activities in this program can be broken down into three large areas. First is the

development and publication of regulations and regulatory documents.

Second is implementing any Government of Canada regulatory reform initiatives, arising from the responsible resource development initiative and the red-tape reduction action plan published by the government last year, and finally, engaging and communicating with stakeholders.

So at this point, I will now turn the presentation over to Ms. Forrest to review the key steps in the development of regulations and regulatory documents and our key accomplishments for this past year.

**MS. FORREST:** Thank you, Mark.

As Mark mentioned, the CNSC has implemented a lifecycle approach to managing the regulatory framework. That approach takes us from identification of a new issue to analysis of how best to address the issue, development and implementation of regulatory expectations and finally, through to regulatory -- regulatory review of our expectations to ensure they remain current. This review is on a five-year cycle generally, or as needed.

This slide shows the role of the Commission Tribunal. The Commission Tribunal oversees the work of the CNSC staff through each phase of this lifecycle.

Staff involves the Commission in early

policy discussions on new approaches or regulatory amendments in advance of publishing discussion papers.

In addition, the Commission approves all regulatory documents that purport to impose new requirements. And the Commission issues licence amendments when they -- which reference new documents as appropriate.

Finally, when documents are revised, staff will propose revisions of any existing requirements to the Commission for approval.

Regulations are also managed according to this lifecycle. The Commission has authority for making regulations under the NSCA working through the government's regulation-making process. In order to ensure that the Commission is kept abreast of the progress of our activities related to the regulatory framework, CNSC staff provide annual updates to the Commission, such as the one we are presenting today.

Our processes also ensure that our stakeholders are engaged at each stage of the lifecycle.

We have recently implemented the use of discussion papers which allow us to consult early with stakeholders as we develop new or different regulatory approaches or are considering amendments to our regulations.

The results of these consultations inform work as we move from regulatory policy analysis on to the development of regulatory expectations. Once we have developed our expectations, we again consult with our stakeholders to ensure that these expectations are clear and to identify areas where we may need to further refine our expectations.

Following consultations, CNSC staff then post all comments received to allow stakeholders to review and provide feedback on the comments.

Finally, as we prepare to publish our expectations, we provide final drafts and information on how comments received were addressed to stakeholders who participated in our consultations in order to allow them to consider and understand the results of their input.

All consultations are posted on our Web site as well as on the -- the CNSC Facebook page, and are sent to stakeholders through our subscription service which now includes over 2,200 subscribers from all stakeholder groups.

In addition, we use the Government of Canada's Consulting with Canadians service -- it's a Web site -- to ensure our consultations reach the broadest audience possible.

So the next few slides will describe in

greater detail the outcomes achieved in 2012 as outlined in this slide.

At the end of last year, we committed to the following regulatory initiatives: implementing regulatory reform initiatives of the Government of Canada as they pertain to the CNSC; enhancing early analysis of regulatory issues; reviewing regulations under the *Nuclear Safety and Control Act*, the NSCA; and moving forward on amendments and new regulations as required; and implementing the regulatory framework improvements identified as part of the Fukushima Action Plan.

In addition to these commitments, we took stock of the CNSC's inventory of published regulatory documents and developed a logical structure for organizing -- or rather, should I say, reorganizing the regulatory information in a way that provides greater clarity and improved accessibility. Mark referred to that earlier and Colin will show you more about that later.

Finally, this was a year of continued focus on engaging stakeholders early and often, and adjusting course as appropriate, in order to ensure that CNSC requirements and guidance, while ensuring safety and security of Canadians in the environment are also as practical as appropriate.

With respect to our specific

accomplishments over the past year, the CNSC made significant progress on some key deliverables relating to the Government of Canada's Responsible Resource Development initiative.

In January of this year, the CNSC published amendments to the *Class I Nuclear Facilities Regulations* and to the *Uranium Mines and Mills Regulations* to require issuance of a decision on the first licence applications for all major new nuclear projects within 24 months of receipt of an application. The Commission will probably recall that initiative.

The development of these regulations was informed by the input received from stakeholders during a period of pre-consultation in the summer of 2012 through a discussion paper.

Now, this particular initiative implemented a Government of Canada commitment to providing proponents of major resource projects with predictability of timelines for regulatory reviews.

In addition, the CNSC has moved forward to develop regulations under the *Nuclear Safety and Control Act* to implement an administrative monetary penalty system affectionately known as AMPS.

You'll recall that Parliament amended the NSCA in 2012 to provide the CNSC with the authority to

make regulations implementing AMPS. This authority was also given to the National Energy Board and to the Canadian Environmental Assessment Agency.

Once that legislation passed, the CNSC developed a proposal for an AMP system and issued a discussion paper for pre-consultation with stakeholders, then comments were taken into consideration in developing the first draft of the AMPS regulations.

These were posted in the *Canada Gazette I* in February of 2013 for a 30-day consultation period. This is, of course, the Treasury Board's standard practice for making regulations.

CNSC staff then embarked on an unprecedented outreach strategy to increase awareness and encourage stakeholders to comment on the proposed regulations. In fact, workshops were held in Vancouver, Calgary, Edmonton, Winnipeg, Toronto, Montreal, Ottawa and Halifax. And in addition, we put on seven webinars. In total, close to 600 people participated.

Comments were received up until March the 20<sup>th</sup>, 2013. The CNSC has considered all feedback and continues to move forward on this project.

The CNSC also sought early input on key regulatory proposals through three particular discussion papers in 2012-13 on safety culture, proposals for

strengthening alcohol and drug policy programs and testing, and a proposal to amend the *Packaging and Transport of Nuclear Substances Regulations*.

The CNSC remains focused on providing the necessary tools and guidance to licensees to ensure continued compliance with our regulatory requirements. In fiscal year 2012-13, we published amendments to existing regulatory documents that outlined our requirements for maintenance programs and reliability programs.

These amendments incorporated additional regulatory guidance for licensees on the recommended approaches to meet our requirements. In addition, to support the licensees' compliance with the CNSC's *Nuclear Security Regulations*, we issued a REGDOC that provides regulatory guidance for granting, denying or revoking a site access security clearance at high security sites.

This regulatory document was the first document published with the CNSC's new nomenclature, the numbering system, which we said will be discussed later.

In addition - Or, finally, with a focus on ensuring stakeholders remain informed of our process and application expectations, the CNSC published a regulatory document that outlines its approach to providing pre-licensing reviews of vendor reactor designs, a service performed by CNSC staff to provide increased regulatory

certainty for potential suppliers of new reactors.

An amendment to an existing licence application guide was also published to outline our expectations for licence applications for industrial and research accelerators used to produce isotopes.

So you can see that we're addressing emerging issues.

In 2012, if we talk about regulatory reform, it was an exciting year. We cleared the room? No.

**( LAUGHTER/RIRES )**

**MS. FORREST:** The Government of Canada launched its Responsible Resource Development, we'll call it RRD, initiative, with its spring budget legislation. This initiative is a blend of legislation; regulations and policy changes, foremost of which was the replacement of the *Canadian Environmental Assessment Act* with the new CEAA 2012.

This new legislation provided for the CNSC to take sole responsibility for undertaking environmental assessments for projects that are regulated under the NSCA. This provided clarity of the process and reduces duplication.

The RRD legislation also included amendments to this NSCA, including authority for AMPS,

which I discussed earlier, and some minor clean up amendments to allow the CNSC to transfer licences from one party to another, if appropriate, and to lengthen the term for temporary Commission Members from six months to three years to better reflect the duration of major project reviews.

The second major Government of Canada initiative of 2012 was the release of the Red Tape Reduction Action Plan, which I'll refer to as the Action Plan, an initiative that is aimed at achieving a more efficient and effective regulatory regime that minimizes burden on businesses.

Implementation of the plan is being led by the Treasury Board Secretariat, who have required regulators to post an Acts and Regulations webpage that has a standard layout for all regulators.

The CNSC has posted this page, which includes, as required, its plan for making or amending regulations for the next two years and service standards for issuance of nuclear substance licences, which are currently our highest volume licences.

I should note that in 2012, the CNSC actually posted the entire regulatory framework plan on the website and this is updated regularly.

The Action Plan also includes a one-for-one

system and a small business lens. Now, the one-for-one means that when introducing in regulations any new administrative burden on business, regulators must remove an equal amount of administrative burden from the system. Sounds simple.

The small business lens requires that when imposing regulatory requirements on small businesses, regulators research alternative ways of compliance from those of larger businesses. So the CNSC is taking these factors into account in its current regulatory amendment projects.

Finally, the Action Plan included a number of department-specific initiatives. The CNSC put forward its annual compliance reporting initiative, which is a project that has simplified annual compliance reporting for certain types of nuclear substance licences and has provided for electronic filing.

An announcement on the launch of this initiative will be made shortly on our Web site. We will also, though, announce the transfer of licences initiative that was part of the RRD as part of a red-tape reduction accomplishment.

Analysis: The CNSC now takes a very strategic look at regulatory issues, analyzing the regulatory possibilities at a programmatic level.

For example, we've looked at potential improvements to the way in which waste management and decommissioning activities and also environmental protection are regulated and could be regulated in the future in order to clarify requirements, and in particular, address emerging issues in these fields.

Once the objective is clear, the strategy is to determine the appropriate mix of regulatory instruments to put in place, including new regulations, regulatory amendments and some more supporting REGDOCs.

With this broader approach, consideration is also given to leveraging existing or future standards which are often referenced in licenses. That includes such things as standards of the Canadian Standards Association.

In 2013-14, the CNSC expects to issue a discussion paper on its proposed approach to regulating waste management and decommissioning activities in the future, and you'll be kept informed of that initiative for sure.

The Regulatory Policy Directorate is facilitating technical staff every day in early planning and analysis of options so that a whole-of-CNSC approach is taken to selecting and implementing regulatory instruments.

Now, moving to regulations. A critical element of our program this year includes the regulatory review and assessment of our regulations. Like all regulatory documents, regulations established under the NSCA are scheduled for regular reviews every five years.

At the conclusion of each review, staff determine whether amendments to regulations are needed or whether the current set of requirements are sufficient to ensure the continued safety of regulated facilities and activities.

Over the course of this past year, staff completed reviews of the *Class 1 Nuclear Facilities Regulations*, the *Uranium Mines and Mills Regulations* and *CNSC Cost Recovery Fees Regulations*. Although some potential improvements were identified, our review this year concluded there's no immediate need to amend these regulations. We do, however, capture all of the analysis and put it in a parking lot for resurrecting at the appropriate time.

CNSC staff are also managing several projects which will help to ensure that our regulations continue to reflect modern best practices and developments in international guidance.

You heard earlier this morning about the CNSC's robust oversight of the transport of nuclear

substances. The key element of this regime is the *Packaging and Transport of Nuclear Substances Regulations*.

We're currently proceeding with amendments to reflect developments in international best practice relating to this activity.

The draft regulations are set to go to public consultation in *Canada Gazette 1 Part 1* in the fall of this year. Once published, these regulations will not only incorporate the latest editions of the International Atomic Energy Agency's transport regulations but establish an ambulatory reference to these regulations to ensure they continue to remain current over the long-term.

In addition, CNSC staff has been analyzing the Radiation Protection Regulations and will be proposing potential amendments to these via a discussion paper that's scheduled to be published later in this quarter.

These improvements will reflect the latest developments in international guidance and implement recommendations resulting from the lessons learned in working with these regulations over the past 13 years.

The proposed amendments will also address recommendations from the Fukushima Task Force to improve the clarity of radiation protection regs relating to emergency situations.

Staff are also proceeding with the analysis

of other potential improvements to our regulations, focusing on requirements relating to emergency preparedness.

As we proceed with regular reviews of individual regulations, we are also exploring potential improvements to our management of regulation-making projects.

Informed by the outcomes of our reviews that I discussed earlier, staff are reviewing opportunities for omnibus amendments to several regulations which would address a number of minor improvements that we have identified as useful but not urgent.

Our work to identify and track the administrative burden imbedded in our regulations may also identify potential opportunities to reduce burden on the regulatory community while ensuring the continued safety and security of our regulated facilities and activities.

Despite finding the CNSC's regulatory framework is robust and comprehensive, CNSC staff remains focussed on implementing all identified improvements identified in the CNSC's Fukushima Action Plan -- sorry -- the Fukushima Task Force as per the commitments in the Action Plan.

We'll be coming to you this summer

requesting approval to publish revisions to a number of key regulatory documents, including documents for deterministic and probabilistic safety analysis, environmental protection and severe accident management.

These improvements were shared with stakeholders over the summer of the last year through a focussed consultation period. For the most part, these changes codify the improvements already being implemented at Canadian nuclear power plants.

At the same time, we'll also be requesting approval to publish revisions to the CNSC's nuclear power plant design requirements which, amongst other improvements, address lessons learned from the Fukushima Daiichi accident applicable to new facilities.

To supplement improvements to existing documents, CNSC staff have made significant progress on analyzing potential updates to CNSC regulations, as I discussed earlier, and on developing regulatory documents relating to accident management and nuclear emergency preparedness and response. We expect these documents to be issued for public consultation within the next month.

CNSC staff are also actively engaged with the Canadian Standards Association group's nuclear standards program and their efforts to implement any identified improvements as a result of the Fukushima

Daiichi accident that apply to CSA standards.

So now, with that, I'll turn over -- turn the presentation over to Colin Moses, Director of the Regulatory Framework Division.

**MR. MOSES:** Thank you.

Clarity of requirements has been and continues to be a priority for the CNSC. Our work to document our regulatory expectations through the development of regulatory documents has been key to our delivering on this priority.

As we progressed through this work, however, and we saw the inventory of published documents growing, it became evident that we also needed to improve the transparency and the accessibility of these documents in order to allow stakeholders to easily identify and review regulatory requirements and guidance relevant to the activity at hand.

With the objective of developing a better understanding of the suite of documents needed to make up a complete library of regulatory documents, CNSC staff have developed a comprehensive and sustainable regulatory document framework structure that reflects the CNSC's approach to regulating the nuclear industry.

The new structure presents all existing documents and document projects in a clear and logical

manner according to three categories: regulated facilities and activities, safety and control areas and other regulatory areas.

Regulated facilities and activities are organized according to the type of activity. They provide guidance to applicants on the information required for licence application and to licensees on the requirements for conducting the licence activity. They also point to relevant expectations in the safety and control areas, where appropriate.

Safety and control areas are the technical topics used by the CNSC to assess, review, verify and report on regulatory requirements and performance across all regulated facilities and activities. We have used this as a logical collation of our technical regulatory expectations.

Other regulatory areas include topics such as reporting requirements, public and Aboriginal engagement, financial guarantees for licensed activities, cost recovery, Commission tribunal proceedings and information dissemination.

Collating existing and planned documents according to this structure allowed CNSC staff to review the full regulatory document library holistically and identify not only gaps but also opportunities to

consolidate and integrate existing documents, thus minimizing potential areas of overlap or duplication.

On this slide, you can see the full list of 25 document series. CNSC staff have reviewed each series and have developed a proposed list of a total of 57 REGDOCKS, each focusing on a specific technical area.

Appendix A included in CMD 13-M25 provides the full list of proposed REGDOCS. This suite of documents has been informed by the existing set of published and planned regulatory documents as well as the specific areas related to each safety and control area.

We expect to realize some key benefits from this work. Most notably, we expect this will improve stakeholder access to our regulatory requirements and guidance. Having a logical structure for our documents and collating and numbering our documents accordingly will allow stakeholders to more easily find and access regulatory documents relevant to the activity they intend to undertake.

In addition, this provides us with a long-term vision for the framework so that we develop -- that as we develop individual regulatory documents, we can do so with an understanding how each piece fits into the bigger picture.

This understanding also helps to easily

identify potential areas of overlap between documents so that they can be developed in a way that prevents any duplication or conflicting requirements.

With our commitment to regularly review each element of our framework, the long-term investments in the program are also managed by managing the full inventory of documents subject to this regular review.

Finally, by having a sustainable document -- sustainable document numbers and titles, cross-referencing documents both in licences and licence conditions handbooks, as well as in other related regulatory documents, becomes straightforward.

The development of these REGDOCS will be done in a measured way, addressing the contents of existing documents as they are scheduled for review.

Where the list of REGDOCS provide us with a vision for the CNSC's regulatory framework, the CNSC's regulatory framework plan, which spans out to 2019, outlines the strategy to realize this vision.

All elements in our regulatory framework are subject to regular reviews, at least every five years. At the time of review, we will analyze current best practice and the latest developments in operating experience and international guidance.

We also look at recent developments in the

CNSC's own regulatory framework. At the conclusion of the review, we will determine whether the document in question needs revision or whether it should be replaced by a new regulatory document.

In some cases, we may also identify documents that can be archived as they are no longer relevant or necessary in the current regulatory environment.

In this fiscal year, we have reviewed and identified six documents that can be archived. Four of these documents were some of the first regulatory documents issued by this organization back when we were the Atomic Energy Control Board and were key elements in our nuclear safety philosophy for CANDU nuclear power plants.

Since their publication, we have evolved our regulatory design requirements in a new regulatory document and we have worked to integrate key technical requirements into CSA nuclear standards. Given these developments, we have concluded that these documents can be archived from active use.

In addition, a review of licensee application of the requirements in the *Nuclear Security Regulations*, most recently amended in 2006, confirmed that the guidance provided in the existing document G-205 is no

longer necessary.

Finally, Regulatory Document P-325, Nuclear Emergency Management, was published in 2006. This document is directed at CNSC staff and provides guiding principles with respect to our own activities for nuclear emergency management.

Since 2006, government's practices and policies for emergency management have significantly evolved and the CNSC has developed strategic emergency management plans, which outline our emergency management practices and principles, that are integrated with broader government plans, such as the Federal Nuclear Emergency Plan.

In this context, it was determined that the principles outlined in P-325 are redundant and are no longer a necessary element of our regulatory framework.

Through all the activities we have described to you today, we remain focused on ensuring the continued transparency of our regulatory framework activities. A critical component of ensuring our regulatory expectations are reasonable and appropriate is the feedback received from stakeholders.

You've already heard of the rigour of our formal public consultations making use of a variety of vehicles to ensure we reach all affected and interested

stakeholders. But we also remain responsive to the needs of our stakeholders.

Over the past few years, we have been using discussion papers to garner early feedback when we were considering regulating in new or different ways.

And this year we introduced "what we heard" reports. These reports outline the key themes that came out of our consultations to provide stakeholders with a clear indication that we have received and are reviewing their comments.

In addition, we have, on several occasions, extended our consultation periods where stakeholders requested additional time to review our proposals.

On top of that, when the feedback from initial consultations shows that substantive changes to our documents are needed, we have made use of additional rounds of consultation to ensure our requirements and guidance are as clear as possible.

To supplement formal consultations, CNSC staff have had workshops or information sessions to ensure our proposals are well understood. A key example of that is the recent consultation that Ms. Forrest mentioned on the AMPS Regulations.

We also published the CNSC's Regulatory Framework Plan on our Web site to ensure stakeholders are

aware of our forward plans. Given this document is evergreen, we update it quarterly on our Web site.

Finally, to facilitate access to our regulatory documents and provide additional information on the regulatory and legislative context for nuclear in Canada, we have substantively updated our external Web site.

These improvements were released -- will be released today and we will use this opportunity to highlight some key improvements at the end of this presentation.

To conclude, fiscal year 2012/13 was another busy year for the regulatory framework where we implemented many improvements to the plan and to the management of the overall program.

CNSC remains connected and in line with government regulatory improvement initiatives and have implemented a number of improvements with a particular focus on meeting the needs of our stakeholders.

We have continued to modernize the framework through the development of new regulatory documents and regulatory amendments to ensure CNSC's framework continues to reflect the latest developments in domestic and international lessons learned and guidance.

This year also saw the development of a

long-term vision for the program which will guide our work on the framework over the next five years and beyond. Throughout all these activities and as we continue to develop and modernize our framework, we have remained focussed on the transparency of our work, actively seeking opportunities to engage and consult with our stakeholders.

The CNSC's regulatory framework plan outlines this year's activities and looks forward over the next years to develop and maintain a long-term plan for our regulatory framework.

This work plan will remain flexible and adaptable to the latest developments in federal and nuclear regulation. This program continues to deliver on the CNSC's commitment to the clarity of our requirements.

Finally, CNSC Staff recommend that the Commission endorse the proposed path forward to modernize our framework according to the CNSC's Regulatory Framework Plan.

Secondly, CNSC Staff recommend that the Commission approve the withdrawal of the following regulatory documents: R-7, *Requirements for Containment Systems for CANDU Nuclear Power Plants*; R-9, *Requirements for Emergency Core Cooling Systems for CANDU Nuclear Power Plants*; G-205, *Entry into Protected and Inner Areas*; P-325, *Nuclear Emergency Management*.

In addition, following the publication of the upcoming new addition to CSA Nuclear Standard N-290.1, *General Requirements for Safety Systems of Nuclear Power Plants*, we ask that you also approve the withdrawal of R-8, *Requirements for Shutdown Systems for CANDU Nuclear Power Plants*, and R10, *The Use of Two Shutdown Systems in Reactors*.

Should you accept this recommendation, a notice will be sent to stakeholders informing them of the withdrawal of these documents and they will be removed from our Web site. We will maintain copies of these documents in our records for reference or historical purposes.

This completes the CNSC staff's annual report to the Commission on the activities of the CNSC's Regulatory Framework Program.

Before we conclude however, I would like to take this opportunity to show you some of the recent improvements we have made to the Acts and Regulations portion of our Web site.

As mentioned earlier, we have reworked this portion of our Web site with a particular focus on making our Web site a useful resource for our stakeholders. We have added short and easy to understand descriptions to the NSCA, as well as for each regulation established under

the Act.

To make our Web site a central resource for the regulated community, we have also included a list and descriptions of other related federal legislation that may be applicable to nuclear activities.

All this information is accessible from the main Acts and Regulations Webpage, which is what you see on the screen right now.

I would like to highlight two of the key improvements. Firstly, as you can see here, we have consolidated all public consultations such that they are accessible from a single page.

Previously, we had separate pages if the consultation was for a discussion paper, regulatory document or guidance document.

Shown here are the two documents that we currently have out for consultation on personnel training and personnel certification of radiation safety officers.

In addition, we have consolidated all regulatory documents into a single page and structured the listing according to our regulatory framework structure. These lists had previously been chronological according to publication date and spread out over several pages.

So, for example, if I'm a radiation device operator, I can access our Web site, click on series 1.6,

Nuclear Substance and Radiation Devices, and here, I can find the CNSC's licence application guide for that activity.

We believe that these improvements will go a long way towards facilitating stakeholder access to our regulatory expectations, as well as the transparency of our activities relating to the regulatory framework.

This concludes our presentation and we remain available to answer any questions you may have.

**THE CHAIRMAN:** Thank you.

We've come a long way and, as you can see, we're trying to introduce technology into this organization in a way that you can actually easily find all the documents you need by one or two clicks, whether they're trying to navigate a very complicated system.

So I invite you to all go in there and try it out at your break and see how it works and feed in comments.

So -- but before we start, I'd like to know what regulatory requirement you found that the Commission has to approve you archiving these old documents?

**MR. MOSES:** Colin Moses, for the record.

As a matter of principle, generally the body that approves these regulatory documents should also approve the withdrawal of those regulatory documents.

And so all these documents were, over the past many years, presented to the Commission or the Atomic Energy Control Board at that time for approval to publish.

**THE CHAIRMAN:** Well, I like principles but there was another principle that when we approve the replacement, I thought at that time you told us those documents will be archived.

**MR. MOSES:** That's correct. In general, most regulatory documents are either revised and updated or issued as a new regulatory document. These six examples here, we don't intend to replace with another form of regulatory document. So the ---

**THE CHAIRMAN:** But I mean they're surpassed by another -- I mean we have a nuclear emergency new document; right?

**MR. MOSES:** That's correct. This specific policy applies to the internal workings of our nuclear emergency management and so it would be developed through our management system and our emergency management plans.

**THE CHAIRMAN:** Anyhow, okay.

It's open for discussion. Go ahead.

**MEMBER McDILL:** I think it's good to archive documents in principle if they are no longer used. But hypothetically speaking -- and this is a big hypothetical -- is there any way they can be brought back

into force if they need to be?

So I'm going to throw something out which is, you know, right at the edge of the imagination.

Someone decides that we should reboot Gentilly-1, and of course it's one of the oldest out there and some of these -- for example, on shutdown systems would have been the applicable document.

So in a case like that, which is not sort of normal everyday operations, can archived documents be brought back into effect? Or should -- I mean presumably new -- the new document should apply wherever they can but they ---

**MR. DALLAIRE:** So my response, Dr. McDill, is yes, new documents should apply wherever possible.

However, when we say that the document is going to be archived, we do not mean that it's going to be lost.

It will be retained. The copy will be retained for historical reference if necessary but if, in your example, there's a need for that document to come back into force, there's nothing to preclude us from bringing it back into our regulatory framework and for the Commission to use that document to set its expectations. So we can accommodate that situation.

**MEMBER MCDILL:** Thank you.

The other question I have is how do you -- prevent isn't quite the right word. How do you get the companies and the proponents who have these documents to also archive them in their own facilities? You know, they're going to be sitting on people's desk and on USB sticks and wherever they are.

**MR. MOSES:** As I mentioned, when we do archive these documents, we will be sending out a notice to all subscribers that reaches all the major licensees who would be using these documents.

In addition, one of the things that we were waiting for, for some of these older documents, is to ensure that the licensing basis for the existing facilities no longer includes these documents.

And so with the publication of the new CSA Standards, those replace some of the R documents that we talked about.

With respect to the guidance document G-205, that's not referenced in any licensing basis. It's there for guidance purposes. And with respect to the Policy for Nuclear Emergency Management, as I mentioned, it's internally focused. So it's not really -- it's not -- it's for information to our stakeholders but it's not used by any of our licensees.

**THE CHAIRMAN:** But doesn't the -- the LCH

now should facilitate -- most of the references are in the LCH and normally should be relatively easy to amend?

**MR. DALLAIRE:** Mark Dallaire, for the record.

Yes, relatively easy to amend but still we want to -- we would do our due diligence to ensure that a replacement for those requirements is published and available so that when our staff, working with the licensees, work to amend the Licence Condition Handbook, there's no loss of regulatory oversight, that there's a correct reference. Take the old one away but substitute a new reference.

**MEMBER HARVEY:** Just one question. On page 6, when you're talking of One-for-One Rule, could you give us some example of success in that exercise?

**MS. FORREST:** Yeah. Lynn Forrest, for the record.

With respect to the One-for-One rule, we haven't actually had any regulations or regulatory amendments put forward yet that have actually imposed burden. So I can't give you an example of a success but I can clarify a little further.

We have coming forward the *Packaging and Transport of Nuclear Substances Regulations* and the staff have analyzed that to determine if there's any incremental

administrative burden in those regulations.

At this point, we're negotiating with the Treasury Board because it's new for them as well. So this is very new, to land on what the definition is of administrative burden.

Administrative burden, for the most part, includes the submission of an application, the submission of a report. It does not include the time spent to prepare the report. They have to draw a line between compliance and administrative burden.

So what we will do in this case is, if there's administrative burden, we will have to determine approximately what -- how many licensees are burdened by this increased responsibility, what the cost -- sorry -- what the effort is that's involved and what the cost is, and come with the cost to the Canadian economy of that particular administrative burden.

Then it's incumbent on the regulator -- actually it's at the ministerial level. We can go ahead with that regulation. We can implement it, but within two years of it being implemented, Treasury Board will track our minister. The minister at the NRCan level withdraws an equal amount of administrative burden from another regulation in the system.

So it's very new. The only other piece I

can ---

**MEMBER HARVEY:** So it's not necessarily for the same people, the same companies?

**MS. FORREST:** Not the same regulation and not necessarily the same agency. So what we are doing is we're calculating. We've got a project to look for all administrative burden items that are in our current existing regulations and potentially cost -- cost those out and keep an inventory so we're ready whenever we need it.

We'll keep that with ourselves but it does apply to the portfolio as a whole. So the National Energy Board, NRCan has some regulations in explosives and other areas.

**MEMBER HARVEY:** Okay. Just another question about the Canadian standard.

If you look at it from the -- maybe from the public, you see you need to have the CSA Standard and our regulation. So what is the need to develop more and more CSA Standard?

**MR. DALLAIRE:** So Mark Dallaire again, for the record.

We do not reference any CSA standards in regulations. In fact, in our regulations themselves we only reference two standards, and that's in the *Nuclear*

*Substance and Radiation Devices Regulations.* Where we reference CSA standards of course is in licences, particularly licence conditions handbooks.

There is obviously a lot of expertise within industry on how licensees could go about meeting the CNSC's regulatory requirements. So it's quite clear, we set the requirements but industry has that expertise to flesh out how best they might meet those requirements.

They develop a number of standards according to the various technical committees that they have in place in their nuclear program. Right now they have about 40 to 45 standards that are published and they have approximately another half dozen which are new and being developed at this time.

I can tell you that CNSC has been discussing recently with the CSA how the public may be given access to those standards for those occasions when there's a licence or a licence amendment that's being proposed. And I think within the next couple of months we will have a solution and those standards will be publicly available.

It's up to the technical committees at the CSA to determine the content of any one standard. So it's up to those committees also to say "You know what, we feel that we need a separate standard so as to not confuse the

content, not to overlap or duplicate the content". This is a management issue within the CSA itself.

So we input as we're on the Nuclear Strategic Steering Committee and of course our Director Generals and Directors are on the Technical Committees that vote on those standards to make sure that they align with our regulatory needs and our staff participates on all of the standards development activities, so we're fully covered there.

The use of those standards in licences is then -- a final determination by our licensing and compliance staff in Regulatory Operations Branch, they have to be satisfied that the standard or part of the standard is in fact useful for regulatory purposes.

I hope I've answered your question.

**MEMBER HARVEY:** No, that's okay. Merci.

**THE CHAIRMAN:** Mr. Tolgyesi?

**MEMBER TOLGYESI:** Just one short; is you're talking about additional administration -- administrative burden could be asked or requested by another section of the same department. That means that without changing anything somebody could ask the CNSC to reduce its burden and what -- what you expect to do then?

**MS. FORREST:** Lynn Forrest.

Actually let me clarify that, nobody will

actually ask. Basically we -- if one of the agencies under the portfolio puts forward a new administrative burden, within two years the portfolio needs to identify an out. We call it an "equal amount coming out".

I don't really see it as being as -- I never thought of it as us being particularly asked to take administrative burden out perhaps on -- because the explosives folks introduced new administrative burden, I think we would be working together to do that.

In the case of the CNSC, we -- if we implement administrative burden nobody will ask us to take it out, we will try to find it within our own inventory of regulations. And I guess if we don't find an equal out within our inventory, we would probably go to the portfolio and see if anybody -- if there's anything in the other regulations under the portfolio.

I don't foresee us ever being, I guess, told to take administrative burden out, but I hope that answers your question, maybe not quite.

**MEMBER TOLGYESI:** Yeah, it's -- what I'm saying that a withdrawal of what you are proposing, R7, 8, 9 and 10 ---

**MS. FORREST:** Oh.

**MEMBER TOLGYESI:** --- we could keep them in the bank so ---

**MS. FORREST:** Oh.

**MEMBER TOLGYESI:** --- you know.

**MS. FORREST:** Let me clarify that.

**THE CHAIRMAN:** We are.

**MS. FORREST:** Actually let me clarify this.

**THE CHAIRMAN:** They're archived, they're not destroyed.

**MS. FORREST:** The one for one actually only applies to regulations and let me be very clear about that.

So we do have a lot of expectations clarified through our regulatory documents, but it's clear the line is drawn at any must, shall or wording such as that, that adds administrative burden in the regulations only.

**THE CHAIRMAN:** Okay. Merci.

Ms. Velshi, please.

**MEMBER VELSHI:** As you came up with this modernized framework, did you get input from the stakeholders or were there any peer reviews done to get some endorsement of it?

And the reason why I ask is I don't know if you heard the discussion we had yesterday on the SLOWPOKE licensees and the concerns they expressed on the high burden of the regulatory requirements.

**MR. DALLAIRE:** So we have -- Mark Dallaire, for the record.

So we have spoken with, primarily our contacts at the CSA, that's my set of contacts, on our long-term goal to consolidate, rationalize our regulatory requirements and we've also explained to them very clearly our need to have a manageable size or collection of documents and that has been heard.

Colin and I were at the Canadian Standards Association earlier this week for a meeting of the Nuclear Strategic Steering Committee. We vetted, we showed the participants in that meeting what our plans were. In fact we provided them with a copy of the CMD that you have.

My takeaway is that industry does not have any significant issue with this. The one question that we did get was a desire for clarification on the numbering scheme, you know, why 2.5.2. So I think we can manage those type of questions.

But certainly there's an appreciation for our need to have a manageable framework and no push back on the -- on what we have proposed.

**THE CHAIRMAN:** When somebody asked you that question, did you push back why G3 or 5 or something that has absolutely no logic, beside that they memorize them?

**MR. DALLAIRE:** We did have a brief

discussion on the collection of document types that have accumulated over the last several years and the need to land on something that's useful for everybody.

**THE CHAIRMAN:** Some of you may remember that when I arrived and I asked in one of the meetings -- I asked how many regulatory documents we have in this organization.

It took them I think three years to come up with the answer because nobody really actually counted them, you know, and tried to figure out which one was information, which one was regulation, et cetera.

**MR. MOSES:** Sir, if I could just add too -- with respect to your reference to SLOWPOKES, this is really a collation scheme or a way of gathering our expectations and structuring logically so we can look holistically.

But with all regulation -- regulatory documents that we do develop, we do look at the impacts on the stakeholders and are sensitive to their needs in addressing the different levels of risk associated with different types of facilities.

So just to add that we do consider that regardless of how we structure and bundle the expectations.

**THE CHAIRMAN:** But would you consider for

example that they should not be non-nuclear, 1B or whatever the classification is, will that come into that discussion or that's a different policy discussion? Where will that be discussed?

**MR. MOSES:** Well, I mean the structure -- the classification of nuclear facilities as Class IA, Class IB, Class II is established in the regulations. But as we open the regulations we do look at issues like that to look holistically at the way we regulate these facilities and identify improvements.

So we do give consideration to that but it is laid out in the regulations.

**THE CHAIRMAN:** Ms. Velshi?

**MEMBER VELSHI:** So getting then to the framework again and how rational it is and given that you're asking for our endorsement of that, as I look at public and Aboriginal engagement, and you've got REGDOC 3.2.1 under there on the public information and disclosure, that makes sense.

But then you have information dissemination, where I thought that probably belonged, but you've got the AMPS under information dissemination and I wondered what the logic would be to have that as an information dissemination reg.

**MR. MOSES:** Colin Moses, for the record.

That last structure is really to inform our stakeholders of our processes and our practices. So you'll see the four REGDOCs that are outlined there include our licensing processes, our compliance and enforcement approaches and our regulatory approaches at large.

And so those documents, including the AMPS, would be explaining how we intend to administer the AMPS to our stakeholders. Through those documents, we wouldn't be imposing any requirements on the stakeholders and so that AMPS document would explain how the CNSC would administer the program.

**MEMBER VELSHI:** It's my fault, when I heard "information dissemination", I thought that was part of the CNSC's mandate of objective scientific information and how are we doing that with the public disclosure or the public information program, whatever come in. Okay.

And my last question is -- and there's probably a memory loss here, but if you look at slide 9 on the new REGDOCs that were issued this year, 210,98 and 2.12.2, I just don't remember seeing any of those.

So would those have come to the Commission for endorsement first?

**MR. MOSES:** Colin Moses, for the record. The standard that we apply is, if we're

issuing documents that are intended to apply new regulatory requirements to licensees, they are always presented at the Commission for approval.

The documents that you mention there are pure guidance to just inform our understanding and how we expect licensees to meet the existing requirements.

And so those are published and approved internally.

**MEMBER VELSHI:** Got it, thank you.

**THE CHAIRMAN:** Dr. McEwan?

**MEMBER MCEWAN:** So I wonder if we could talk about the small business lens, again, which to me is almost as opaque a definition as your definition of administrative burden.

The majority of the licensees of CNSC are effectively small businesses. And whether it's the SLOWPOKES, users of medical isotopes, users of research isotopes, how have you addressed that element of small business burden in that context as you've reviewed the regulations?

**MS. FORREST:** Yes, it's Lynn Forrest here.

We haven't had any experience yet with it. We're looking at it with respect to the packaging and transport regs and the other initiatives that we're doing right now.

But I can clarify for you that what the small business lens is.

It's when we do put in place a requirement that's generally required -- requirements for businesses of various sizes, we will have to prove to the Treasury Board that we have looked at alternative ways for the small business to meet the outcome that we're trying to achieve with the particular requirement in a less burdensome way.

We are required to analyze that and whether we adopt it or not is up to us to determine but, at least, we will have demonstrated that we looked at different ways that small businesses can comply.

The issue I'm with right now, as with the previous question on One-for-one, is we don't have any experience with it yet. The small business lens is compliance burden, not administrative burden.

I remain open for follow-up questions.

**MEMBER MCEWAN:** Could you very simplistically define for me, for the end user, the difference between "administrative burden" and "compliance burden"?

**MS. FORREST:** Yes, I can.

The "administrative burden" is the filing of a report. The "compliance burden" is putting in place

the appropriate safety measures that are required.

Perhaps you can help me with an example, Colin?

**MR. MOSES:** Thank you, Colin Moses.

So, for example, in our Nuclear Security Regulations, we have a requirement that they establish robust fences with certain specifications around high security nuclear facilities.

And so the installation of that fence could cost several million dollars. That's compliance burden.

If we were to require through the regulations for them to submit a report outlining how they've installed the fence and exactly how -- demonstrating how they meet our requirements, that's administrative burden.

So that when you're handling paper and moving paper, that's administrative burden. When you're implementing and meeting requirements, that's compliance burden.

**MEMBER MCEWAN:** So again, going forward in the context of the small business review that you're doing, is that only prospective or is it also retrospective?

**MS. FORREST:** It's only prospective.

Everything that we've got in place right

now is seen as a baseline. And it's only when you're introducing new compliance burden.

**THE CHAIRMAN:** Again, just to remind everybody, it's with regulations ---

**MS. FORREST:** Regulations only.

**THE CHAIRMAN:** --- which we do very rarely change regulations.

So the transportation regulations now is hitting a lot of the small, you know, operations. So that's why they are -- the review is triggered, because of the regulation.

We didn't have any other kind of regulation right now that demands it, but you ask a good question, where we should go back and take a look whether we can actually reduce some of the burden.

The only counter to that is this is nuclear. And just as a sideline, this all started from the small business CFIB, and the minister for small businesses from Industry Canada got a team. And to be absolutely honest about this, the focus was on Stats Canada, CRA, and all the enormous amount of material that they have to file, et cetera.

But they put the lens across all departments and we're all now caught with this. And it just will give us another screen and another due diligence

when we come up that we should always keep our eyes on this.

And I think that SLOWPOKE is a good example where we should go back to the drawing board and say: Are we over-conservative in our requirement here?

But that's not because of that. That is on our own.

You have the floor.

**MEMBER MCEWAN:** I'm finished, thank you.

**THE CHAIRMAN:** Dr. Barriault?

**MEMBER BARRIAULT:** My only question dealt with burdens, really, and it's been answered. So thank you.

I appreciate your presentation, by the way.

**(SHORT PAUSE/COURTE PAUSE)**

**THE CHAIRMAN:** Marc told me that it's on, it's live, so your timing is good.

But we will now have to go and check it out. So thank you. Thank you for this presentation. Well done.

This concludes the public meeting of the Commission. Thank you all for attendance and participation.

--- Upon adjourning at 12:30 p.m.

La séance est suspendue à 12h30