Canadian Nuclear Safety Commission

Commission canadienne de sûreté nucléaire

Public meeting

Réunion publique

September 22nd, 2016

Le 22 septembre 2016

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

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

Commission Members present

Dr. Michael Binder
Mr. Dan Tolgyesi
Dr. Sandy McEwan
Ms Rumina Velshi
Mr. André Harvey

Commissaires présents

M. Michael Binder
M. Dan Tolgyesi
Dr Sandy McEwan
Mme Rumina Velshi
M. André Harvey

Secretary:

Mr. Marc Leblanc

Secrétaire:

M. Marc Leblanc

General Counsel:

Ms Lisa Thiele

Avocate générale :

Me Lisa Thiele

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Ottawa, Ontario / Ottawa (Ontario)

--- Upon resuming on Thursday, September 22, 2016
at 9:02 a.m. / La réunion reprend le jeudi
22 septembre 2016 à 9 h 02

CMD 16-M53

Opening Remarks

M. LEBLANC : Bonjour, Mesdames et Messieurs. Bienvenue à la continuation de la réunion publique de la Commission canadienne de sûreté nucléaire.

We have this morning simultaneous interpretation. Please keep the pace of speech relatively slow so that the interpreters have a chance to keep up.

Des appareils pour l'interprétation sont disponibles à la réception. La version française est au poste 2 and the English version is on channel 1.

Please identify yourself before speaking so that the transcripts are as complete and clear as possible.

La transcription sera disponible sur le site Web de la Commission vers la fin de la semaine prochaine.

I would also like to note that this proceeding is being video webcast live and that archives of

these proceedings will be available on our website for a three-month period after the closure of the proceedings.

We would ask you to 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...?

LE PRÉSIDENT : Merci, Marc.

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.

Je vous souhaite la bienvenue and welcome to all of you who are joining us via webcast.

I would like to start by introducing the Members of the Commission.

On my right is Monsieur Dan Tolgyesi; on my left are Dr. Sandy McEwan, Ms Rumina Velshi and Monsieur André Harvey.

We already heard from our Secretary, Marc Leblanc.

We also have with us here today Ms Lisa Thiele, Senior General Counsel to the Commission.

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

The agenda was approved yesterday. Please refer to Agenda CMD 16-M39.B for the complete list of items to be presented today, which numbers one, which is the next item.

Mr. President...?

CMD 16-M37/16-M37.A

Oral presentation by CNSC staff

THE PRESIDENT: So the first item on the Agenda for today is an information item with a 2015 Regulatory Oversight Report on the Use of Nuclear Substances in Canada, as outlined in CMD 16-M37 and 16-M37.A.

The public was invited to comment in writing and the Commission received one submission from the Canadian Radiation Protection Association, who are here with us in attendance, so we are going to hear from them later on. We will also provide them with an opportunity to make a short presentation.

So over to CNSC staff, and I understand, Mr. Moses, you will make the presentation. Over to you.

M. MOSES : Merci, Monsieur le Président, Membres de la Commission.

Je m'appelle Colin Moses et je suis le directeur général responsable de la réglementation des substances nucléaires.

Je vous présente mes collègues :

- M. Sylvain Faille, directeur des Autorisations de transport et du soutien stratégique;

- Mme Jacinthe Plante, directrice par intérim de la Division des installations de catégorie II et des accélérateurs;

- Mr. Henry Rabski, Director of Operations Inspection; and

- Mr. Peter Fundarek, Director of the Nuclear Substances and Radiation Device Licensing Division.

On est également joint par d'autres membres du personnel de la CCSN qui sont présents dans la salle en appui à l'équipe.

Nous vous présentons aujourd'hui le Rapport annuel de surveillance réglementaire sur l'utilisation des substances nucléaires au Canada pour l'année 2015. Ce rapport constitue le sixième rapport produit jusqu'à maintenant par la CCSN, le précédent rapport vous ayant été présenté en septembre 2015.

Production of this Regulatory Oversight

Report continues to be an achievement for the Canadian Nuclear Safety Commission and a mark of best practice internationally. The CNSC continues to be the only nuclear regulator in the world to be producing such a comprehensive report on regulatory oversight of the use of nuclear substances and equipment in industrial, medical, commercial, and research and academic settings.

Following the presentation today, the report will be finalized and published on the CNSC external website.

Before getting into the presentation, I would just like to note two small corrections to the report.

First of all, in the Appendix -- and you don't need to turn there -- but just to note that one event was reported twice in the list because it was reported to us both by the consignor and the consignee. So the total number of events in 2015 is actually 155 as opposed to 156.

And the second is a minor editorial correction. On page 39 at the top of the report in the English version -- again no need to turn there -- it reads currently that:

> "No other NEW [nuclear energy worker] or members of the public were exposed to radiation"

And we should complete that sentence with:

"in excess of regulatory limits."

The CNSC regulates the nuclear industry in Canada through a comprehensive program of licensing, certification, compliance verification and enforcement. The safe use of nuclear substances in Canada is a reflection of licensees' compliance with the *Nuclear Safety and Control Act* as well as its associated regulations and specific conditions set out in CNSC licences.

The *Nuclear Safety and Control Act*, its regulations and the licence require that licensees implement and maintain appropriate programs to ensure the safety of nuclear activities, minimize doses to workers and the public, and minimize any potential consequences of events. Licensees are always responsible for the safety of their operations and activities.

For each nuclear industry sector described in this report, CNSC staff conduct inspections, assessments and reviews to evaluate each licensee's programs, processes and safety performance.

Pursuant to the CNSC's mandate for the dissemination of objective regulatory information, and consistent with our commitment to transparency in all our activities, the CNSC publishes a series of annual regulatory oversight reports covering all main sectors of

CNSC-regulated activities.

You have already heard about the CNSC's regulation of nuclear power plants and today we will be presenting the CNSC's Regulatory Oversight Report on the Use of Nuclear Substances in Canada.

On this slide you will see an overview of the presentation, providing an introduction of the CNSC's regulatory approach to regulating nuclear substances in Canada and going on to present on the performance of each sector. We will continue the presentation highlighting our progress on certain key initiatives underway in 2016.

Moving on to the introduction, in 2015, the nuclear substances industry in Canada continues to operate safely. CNSC oversight activities, including licensing reviews, technical assessments and inspections confirm that licensees in the sector have appropriate safety programs in place in order to protect the health and safety of Canadians and the environment. Further, CNSC staff verify that licensees continue to maintain adequate measures to implement Canada's international obligations.

Of the 155 reported events in 2015, one resulted in a worker exceeding regulatory dose limits for extremities, and we will discuss this event later in the presentation.

The results of our review documented in

the 2015 Regulatory Oversight Report on the Use of Nuclear Substances in Canada confirmed that the use of nuclear substances in Canada is safe.

For this year the report includes more detailed information on CNSC activities related to the regulatory oversight of the nuclear substances industry, most notably the inclusion of reporting on performance of the results in the management system safety and control area and the inclusion of basic information on all events reported to the CNSC for this industry.

In addition, the CNSC remains committed to improvement and we discuss our continued efforts to simplify licensing through the consolidation of licences for licensees holding multiple licences as well as providing additional information on the CNSC's certification of exposure device operators.

Finally, as our reporting on industry performance across all regulatory sectors continues to expand, we have now transferred performance information on the two Class 1B accelerator facilities to the 2015 Nuclear Processing, Small Nuclear Research and Class 1B Accelerator Facilities report, where it is presented with other similarly classed facilities.

For the second year, the CNSC posted our draft report for comment prior to presenting the report to

the Commission.

The report was posted on the CNSC's website and pushed out to subscribers through the CNSC's subscription service. In 2015, we updated this list to proactively add all DNSR licensees in order to ensure that they are being informed of regulatory developments at the CNSC. We regularly maintain this list to reflect any changes in the licensee population.

In addition, we promoted the publication of the report for comment on the CNSC social media channels.

The report was available on the CNSC website for a 30-day comment period during the month of August 2016.

New for this year, the CNSC also made participant funding available to support the review of the report. One application for funding was received, which was granted by the CNSC Funding Review Committee to the Canadian Radiation Protection Association.

The submission by the CRPA was the only one received on this report. While we would like to take this as a testament to the many improvements we have brought to the report over the years as well as their comprehensive outreach program, we are somewhat disappointed that we did not receive additional input from

licensees and other stakeholders.

Submissions on a report have served as useful feedback to support the continuous improvement of our regulatory program and as a result we will be looking at ways next year to promote engagement on this report.

This slide and the next highlight the specific comments that were raised, and you will be hearing more about these directly from the CRPA.

As noted, CNSC staff appreciate feedback on our regulatory program. This helps us assess the effectiveness and the efficiency of our regulatory processes and informs the prioritization of our improvement initiatives.

In that regard, I will note that many of the suggestions from CRPA are areas that we already had plans in place to assess. For example, with respect to reportable events, the Annex included for the first time in this year's report is a first step in sharing operating experience across the industry so that licensees can learn and improve from each other's experience.

We fully support initiatives underway in the industry to share this kind of information proactively, such as the share initiative which is highlighted in CRPA's submission.

CNSC staff appreciate the comments from

the CRPA as well as the other feedback that we received from the stakeholders through the many outreach activities that we hold throughout the year. This is an important piece of our goal of maintaining a modern, effective and efficient regulatory program.

I will now turn the presentation over to Mr. Peter Fundarek.

MR. FUNDAREK: Mr. President, Members of the Commission, my name is Peter Fundarek and I am Director of Nuclear Substances and Radiation Devices Licensing Division.

In my part of the presentation, we will provide an overview of the four main sectors that are covered by the report. In this presentation, detailed information will only be presented on the overall performance of the four main sectors. Further information on the performance of these sectors and the subsectors within each is available within the Regulatory Operations Report.

The uses of nuclear substances and nuclear technology in Canada are broad and diverse. For reporting purposes, we have structured the report to cover the four main sectors of the applications of nuclear substances as follows:

- the medical sector, covering the uses of

nuclear substances or technology for both diagnostic and therapeutic purposes;

- the industrial sector, addressing industrial uses of nuclear substances or technology in fabrication and production facilities or as part of field work or construction activities;

- the academic and research sector, including the uses of nuclear substances or technology for research and teaching purposes; and

- the commercial sector, which includes licensees that produce, process, store or distribute nuclear substances or offer other services for radiation devices.

The medical sector consists of 494 licences, which is approximately 21 percent of all the licences issued. There are 10,704 total workers, which represent 20 percent of all workers involved in these nuclear activities. Approximately 70 percent of the nuclear workers in this sector are nuclear energy workers.

There are three specific subsectors reviewed in the full report:

- diagnostic and therapeutic nuclear medicine, where nuclear substances are inhaled, ingested or injected into patients, including for diagnosis, treatment and research on humans;

- radiotherapy, where radiation from nuclear substances internal or external to the body is used to treat disease; and

- veterinary nuclear medicine, where nuclear substances are used in a similar manner, but for animals, for diagnosis and treatment of disease.

This sector does not include information regarding administration of nuclear substances to animals for research activities. Research activities involving the administration of nuclear substances to animals is covered in the academic research sector which will be discussed later.

The industrial sector comprises 1,349 licences, which is approximately 59 percent of all the licences issued by the CNSC in this Directorate. This also includes 32,323 workers, which represents approximately 60 percent of the workers using nuclear substances and prescribed equipment.

Nuclear energy workers in this sector represent only 32 percent of all the workers in this sector. Many industrial applications do not require that all workers are considered as nuclear energy workers, only those with the potential to receive significant exposure.

Safety performance results are provided in the full report for all licensees included in the

industrial sector. The following four subsectors are highlighted in further detail:

- portable nuclear gauges which use gamma- and neutron-emitting sealed sources in smaller radiation devices to measure parameters most often associated with civil engineering, including density, compaction, thickness and moisture content;

- fixed nuclear gauges where sealed sources and radiation devices monitor process flow in a pipe, storage tank levels or the density or thickness of material being manufactured;

- industrial radiography which uses gamma-emitting sealed sources in specialized radiation devices to provide field identification of welding defects, structural anomalies and voids in cast material; and

- oil well logging which lowers specialized gamma- and neutron-emitting sealed sources contained in robust radiation devices into a drilled hole to map out the subsurface geological structures and characteristics.

The academic and research sector involves the use of nuclear substances and prescribed equipment in teaching and research applications. Much of the work conducted by licensees in this sector involves biomedical teaching and research but it also includes licensees who

provide training services to other persons. As noted previously, administration of nuclear substances to animals for research purposes is included in this sector.

The academic and research sector includes 207 licences, representing 9 percent of all the licences issued by the Directorate of Nuclear Substance Regulation. The total number of workers in this sector is 8,137, which represents 15 percent of all the workers using nuclear substances and prescribed equipment, and just over 35 percent of these workers are considered as nuclear energy workers.

The subsectors in this group include:

- laboratory studies which primarily involve the use of unsealed nuclear substances, mostly for academic and biomedical research;

- also included are consolidated uses of nuclear substances, which are complex licensees at institutions such as hospitals and universities where the licensee has a substantial program in place and administers an internal system of permit approvals.

The commercial sector includes 246 licences, which represents approximately 11 percent of the licences issued. In this sector there are a total of 2,536 workers, which represents only 5 percent of the workers involved in the use of nuclear substances and prescribed

equipment. Of these workers, almost 74 percent are considered nuclear energy workers.

Safety performance results are provided for all licensees included in the commercial sector and the following five subsectors are highlighted in further detail:

- production of short-lived medical isotopes in accelerators and cyclotrons, and the processing of those supplies for distribution to other licensed locations;

- the processing of nuclear substances typically for nuclear medicine to match demand for medical isotopes more closely to the supply;

- distribution of nuclear substances and prescribed equipment generally for manufacturers and suppliers outside of Canada or within Canada;

- servicing of prescribed equipment following specific CNSC-approved procedures to ensure safety for all persons; and

- the calibration of radiation-detection equipment where the possession of the equipment to conduct the calibration requires CNSC authorization.

As illustrated in this slide, our oversight of the safe use of nuclear substances covers activities across all provinces and territories of Canada.

This includes all major hospitals in Canada, most Canadian universities and research institutions, a wide variety of industrial manufacturing and production facilities, and all locations that store, produce, service nuclear substances and radiation devices.

In addition, our regulatory oversight extends to field uses of nuclear devices, and our compliance approach, which we will be outlining later, includes field inspections to ensure that nuclear devices are being used in a safe and secure manner across the country.

As of December 31st, 2015, there were 2,295 active CNSC licences held by 1,599 licensees. The extent of activities in these areas remains relatively stable and despite normal variations in individual businesses, the total number of licensees has remained relatively stable over the past five years.

You will note, however, a small decrease in the number of individual licences from last year as compared to 2014, where there were 2,411 active licences held by 1,702 licensees. This was primarily driven by the development of a licence consolidation strategy aimed at reducing administrative burden on organizations that hold multiple licences for various licensed activities, such as hospitals and universities.

Consolidation of Class II nuclear facility licences has allowed for example the CNSC to authorize a hospital with a medical linear accelerator to operate and service the accelerator under one licence instead of two.

In addition, many provincial medical institutions are amalgamating under larger regional groupings as part of a provincial health care restructuring plan.

As can be seen from this slide, the majority of workers involved in the use of nuclear substances and prescribed equipment arise in the industrial sector, which represents 60 percent of all workers. The smallest proportion of workers, at just 5 percent, is in the commercial sector. The medical sector represents 20 percent of all workers, while the academic and research sector contributes approximately 15 percent of the workers. As noted, this represents all workers monitored for radiation doses in the four sectors.

Pursuant to the *Nuclear Safety and Control Act*, doses are monitored for all workers involved in activities authorized by the Commission.

In 2015, there were a total of 53,700 persons working in the fields covered by this report, approximately 60 percent of those working in the industrial sector, consistent with the relative distribution of our

licensees. Of the total number of workers, 41.5 percent were designated as nuclear energy workers.

Nuclear energy workers are those who, in the course of their business or occupation in connection with a nuclear substance or nuclear facility, perform duties in circumstances which may result in receiving a dose of radiation greater than one millisievert per year.

The CNSC staff effort related to licensing and certification and compliance verification represents just over 13,000 person-days. The majority of the staff involved in licensing, certification and compliance verification are located in Ottawa although, as noted, some licensing and most compliance verification staff are located in regional offices.

The amount of CNSC staff effort includes administrative support and other CNSC specialists that are necessary to ensure an effective and efficient regulatory program.

CNSC staff in regional offices conducted 1,144 inspections in 2015, while the remaining 424 inspections were conducted by staff from the main office in Ottawa.

Designated officers in the CNSC Directorate of Nuclear Substance Regulation and the Directorate of Safety Management made a total of 2,579

licensing and certification decisions in 2015, over 80 percent of these being licensing decisions.

Designated officer decisions are based on a comprehensive evaluation of licensing requests by CNSC staff which are then peer reviewed to ensure that the recommendation is well supported and that all regulatory requirements have been met. The designated officer makes a decision on each decision -- on each licensing action to ensure that it meets the requirements of the *Nuclear Safety Control Act* and the Regulations.

CNSC staff continue to meet all business standards for processing of licence applications. In addition, licensing requests that involve patient care are immediately flagged as a priority and are completed within 24 hours, usually within the same day.

I will now turn to the presentation over to Mr. Henry Rabski.

MR. RABSKI: Henry Rabski, for the record, Director of Operations Inspection Division.

To ensure comprehensive regulatory oversight and reporting, compliance requirements have been categorized into a well-established set of 14 technical areas that have proven effective in evaluating licensee performance. These are known as Safety and Control Areas, or SCAs. For the purposes of this report, licensee

performance in the four nuclear sectors are measured by examining the licensee's regulatory compliance in four selected SCAs, those being management system, operating performance, radiation protection, and security.

CNSC staff routinely review applications and perform technical assessments to take licensing actions or for the certification of radiation devices and prescribed equipment. The purposes of these reviews and technical assessments is to determine if the applicant is able to meet all applicable CNSC regulatory requirements and has put adequate measures into place to ensure the protection of the environment and the health and safety and security of persons.

The accelerators in Class II facilities, along with nuclear substances and radiation devices licensing divisions, have developed a licence consolidation strategy to reduce the administrative burden on organizations which hold multiple licences for CNSC-regulated activities.

Approximately one million packages containing nuclear substances are safely transported each year across Canada. The packages -- the packaging and transport of nuclear substances is jointly regulated by the CNSC and Transport Canada.

Packages that are used for the transport

of nuclear substance must comply with the CNSC packaging and transport of nuclear substance regulations, Transport Canada's Transportation of Dangerous Goods Regulation and the International Atomic Energy Agency's Regulations for the Safe Transport of Radioactive Material.

In June 2015, the Packaging and Transport of Nuclear Substance Regulations 2015 were published in the Canada Gazette Part 2. These revisions -- these revised regulations align to the IAEA regulations and ensure continued alignment by including an ambulatory reference.

The new regulations provide additional clarity in the areas of radiation protection program requirements, reporting requirements, the transportation of large objects and the discovery of material containing unidentified nuclear substances.

In addition, a new CNSC document, RegDoc 214.1, Packaging and Transport, was published in February 2016, which links the provisions of the Packaging and Transport of Nuclear Substance Regulations to specific relevant content in IAEA regulations, the *Nuclear Safety and Control Act*, and other CNSC regulations.

In 2015, CNSC staff conducted 1,568 inspections across the four sectors. These inspections verified compliance with all applicable Safety Control Areas. A risk informed decision process was used for the

planning and conducting our compliance activities commensurate with the risk associated with the various uses of nuclear substances within those sectors and facilities.

CNSC staff also verified compliance through desktop reviews of licensee annual compliance reports, licence applications and licensee program documents.

CNSC staff require licensees that have failed to meet regulatory requirements to take corrective measures to address non-compliances identified during inspections. Any non-compliances identified are systematically tracked by the CNSC staff to ensure that licensees have taken satisfactory corrective measures.

Inspections are conducted by CNSC inspectors at defined frequencies, determined by the risk of the licensed activities. Activities which have been evaluated as being high risk are inspected more frequently than those which have been evaluated at a lower risk.

Inspection planning is conducted on an annual basis, and takes into account the inspection frequency as well as the licensee’s compliance history. Inspection plans are reviewed throughout the year and adjusted as necessary to take into account poor licensee performance or new information such as events that have occurred and/or changes reported by the licensee to the

CNSC staff.

Inspections which are planned but may not be performed are systematically tracked to be included in future inspection plans.

When CNSC staff identifies that a licensee is in non-compliance with a regulatory requirement, a graded approach is applied to encourage and bring the licensee back into compliance as well as to deter future non-compliances. The risk and safety significance of each non-compliance is considered when determining the appropriate enforcement action to be taken. As the risk and safety significance of the non-compliance increases, the chosen enforcement action will become more escalated.

Examples of enforcement actions used by -- used to address non-compliances range from written notices requiring corrective measures to be implemented to inspector orders ceasing unsafe activities that put workers and the public at risk.

A key component of each licensee’s radiation safety program is the radiation safety Officer, or RSO for short. The RSO has the primary responsibility for the licensee’s radiation safety program to ensure that the licensed activities are conducted safely and that all regulatory expectations are met.

More specifically, they’re required to

maintain management oversight over the radiation safety program and implement things such as personal qualification and training programs, control of occupational and public exposure to radiation, planning for unusual situation and emergencies, measures to prevent workers from receiving doses of radiation higher than the dose limits prescribed in the regulations

All licensees that operate Class II nuclear facilities or that service Class II prescribed equipment must have a certified Radiation Safety Officer and a qualified temporary replacement. If the candidate is able to clearly demonstrate through an interview to the CNSC their knowledge -- CNSC knowledge as it relates to the position within their organization, the Commissioner or designated officer authorized by the Commission may certify the candidate in the position of the Radiation Safety Officer.

In 2015, the CNSC certified 17 Class II RSOs.

The appointment of Radiation Safety Officers for other licensees does not involve a certification process. However, for high-risk activities, CNSC staff interview prospective RSOs during a pre-licensing visit to verify their knowledge of the company’s radiation safety program and to confirm their

understanding of their obligations as a licensee.

RSOs for new, low and medium risk licences are expected to attend third party Radiation Safety Officer training to ensure these individuals understand the additional responsibilities placed on that position.

In any case, if it is deemed that the appointed RSO does not have adequate knowledge, the licensing decision may be delayed until the appointment of a suitable representative can be made.

Industrial radiography involves the use of nuclear substances and exposure devices for the non-destructive examination of materials. Licensees are required under the Nuclear Substances and Radiation Devices Regulation to only permit CNSC certified personnel and supervised trainees to use exposure devices.

As of September 1st, 2016, there were 2,429 certified exposure device operators in Canada in position -- in possession of a valid certificate with an expiry date.

The CNSC exposure device operator certification program is designed to ensure the continued competency of the operator and maintaining the safety and security of persons and devices when working with exposure devices.

Since implementation of the Canadian

Standards Association certification -- Certified Exposure Device Operator personnel certification guide, and we call that the CSA PCP 09 for short, in 2015, the CNSC now requires certified exposure device operators to renew their certification every five years.

This requirement to renew their certification ensures that every exposure device operator maintains the knowledge and skills required to safely operate an exposure device.

In 2015, the CNSC certified 141 new exposure device operators and renewed the certification of 240.

The CNSC may take regulatory action up to decertification or prosecution if the exposure device operator is found to be operating contrary to safety protocols.

Stakeholder engagement in the form of outreach remains integral to the CNSC’s objectives. CNSC staff believe that increased awareness and better understanding of the regulatory requirements by licensees and other persons regulated by the CNSC leads to increased safety in the workplace.

Improvements in workplace safety have been observed in sub-sectors that the CNSC staff have targeted with focused stakeholder engagement activities.

Since 2009, the CNSC has conducted a formal outreach program for licensees that use nuclear substances. This program of presentations by CNSC staff and open discussions groups inform stakeholders on upcoming and recent regulatory changes and provides education regarding the CNSC's expectation for licensing and compliance requirements.

In 2015, the CNSC continued to create more opportunities for licensees and other person to interact with the CNSC staff outside the scope of routine inspections and licensing activities, these including the portable gauge industry within the industrial sector.

The CNSC introduced a financial guarantee program for all nuclear substance licensees in 2015. The purpose of this new program is to ensure that sufficient financial resources are available to safely terminate licensee's activities should they become unable to do so.

This is the first time that a financial guarantee program for nuclear substance has been implemented.

The requirement for licensees to maintain a financial guarantee came into effect on April 1st, 2015, and all licensees were in compliance for the year 2015.

The CNSC introduced new regulatory requirements contained within REGDOC 212.3 for licensees in

possession of high risk Category I and II sealed sources in May 2015. Following this implementation date, CNSC inspectors began conducting enhanced security inspections to verify compliance with these new regulatory requirements.

Compliance with new security requirements for licensees with high risk sealed sources was satisfactory in 2015.

Of the 250 inspected licensees, 168, or 77.4 percent, were found to be compliant with these new requirements.

CNSC staff ensured that the 49 instances of non-compliances identified were adequately corrected by licensees. The majority of non-compliances identified were related to administrated requirements, such as record keeping, which did not directly impact the security of the sealed sources.

The new regulatory requirements within REGDOC 212.3 will become applicable to licensees with medium and low risk Category III, IV and V sealed sources in May 2018. These new requirements are in addition to current regulatory requirements.

CNSC staff are developing a strategy to promote these new regulatory requirements to these licensees in advance of the implementation date.

At this time, I would now like to turn the presentation over to Sylvain Faille, Director of Transport Licensing and Strategic Support Division.

MR. FAILLE: Merci, Henry. Bonjour, monsieur le président et membres de la Commission.

Through the following slides, I will be providing an overview of the safety performance of nuclear substances licensees for 2015.

Overall, licensees continue to demonstrate adequate performance within the Safety and Control Areas. The majority of inspected licensees in 2015 were found to be compliant in the four SCAs covered in this report, namely, management system, operating performance, radiation protection, and security.

More details on these four Safety and Control Areas is provided in the following slides.

The reporting on the safety performance of licensees with regards to management system is new for 2015. Management systems, which covers the framework that establishes the processes and program required to ensure that an organization achieves its safety objectives, continuously monitors its performance against those objectives, and foster healthy safety culture.

Overall, 96.2 percent of all inspected licensees showed a satisfactory rating for this Safety and

Control Area.

The majority of non-compliances included conducting the activities contrary to a licence, failure to comply with regulatory requirements related to having records at work locations, and failure to notify the CNSC of changes in contact for licensed activity.

For licensees such as hospitals that holds multiple licences for various activities, non-compliances observed during inspections mostly related to inadequate management oversight of their radiation protection program.

In all cases, licensees addressed these non-compliances to the satisfaction of the CNSC.

Moving forward, the results from subsequent years will be added and trending will be monitored as part of the report, similar to the other Safety and Control Areas.

Moving now to operating performance, which refers to the licensee’s ability to performed licensed activities in accordance with pertinent operational and safety requirements defined in the *Nuclear Safety and Control Act*, its associated Regulations and licence conditions.

Licensees are expected to demonstrate that they comply with operational and safety requirements by providing workers with appropriate procedures for the safe

use of nuclear substances and prescribed equipment, by ensuring that workers follow procedures, and by maintaining records that demonstrate compliance.

All sectors continued to demonstrate adequate performance in 2015, with 90.6 percent of inspected licensees found to be in compliance with regulatory requirements.

The majority of non-compliances in this Safety and Control Area included failure to comply with regulatory requirements related to retention of records, workers' obligations, and sealed source leak testing.

In all cases, licensees addressed these non-compliances to the satisfaction of the CNSC.

As shown in the table, two inspections conducted within the industrial sector resulted in an unacceptable rating for this Safety and Control Area in 2015. In both cases, an order was issued to ensure that corrective actions were taken immediately.

Despite stability in the overall industry, the academic and research sector rating in this Safety and Control Area has been trending downward since 2013. In response to this trend, CNSC staff modified a component of their outreach strategy to increase the focus on this industry sector in 2016.

Moving now to radiation protection, which

requires licensees to establish programs to ensure that contamination levels and radiation doses received by workers are monitored, controlled and maintained below regulatory dose limits and kept at levels As Low as Reasonable Achievable, social and economic factors being taken into account.

Licensees are expected to monitor worker dose, post radiation warning signs, plan appropriately for radiological emergencies, manage oversights of operational activities, institute effective workplace practices that emphasize the use of time, distance and shielding to minimize exposures to radiation, and use appropriate protective equipment.

All sectors demonstrated a good performance within this Safety and Control Area, with 88.7 percent of inspected licensees who received a satisfactory rating.

The majority of non-compliances included survey meters not being calibrated, inadequate implementation of measures to ensure that doses are kept ALARA, and improper posting of signs at boundaries and point of access.

In all cases, licensees addressed these non-compliances to the satisfaction of CNSC.

As it can be seen, this Safety and Control

Area has remained relatively stable over the years, and showing a small increase in the overall compliance rating since 2013.

And finally, security, which requires licensees to have in place physical security measures, practices and programs to prevent the loss, illegal use, illegal possession or illegal removal of nuclear substances during the entire life cycle, including while they are in storage or during transport.

The extent of security measures required depends on the type of nuclear substances used and activities performed by each licensee.

All sectors showed satisfactory rating for the Safety and Control Area in 2015, with 95 percent of inspected licensees found to be compliant with regulatory requirements.

Two inspections were given an unacceptable rating and resulted in the issuance of an order to each licensees to ensure that corrective actions were taken immediately.

Licensees addressed and corrected all non-compliances identified during inspection to the satisfaction of CNSC.

The performance in this Safety and Control Area remains stable in comparison to last year, which was

the first year where the safety performance of licensees for the safety and control area was incorporated into the report.

To address non-compliances, CNSC staff use a variety of enforcement actions. These range from notifications of non-compliances up to requiring corrective actions through the issuance of inspector orders or imposing administrative monetary penalties.

The nature of the enforcement action is based on the seriousness of the non-compliance as well as case-specific circumstances. Depending on the severity of the non-compliance, more than one enforcement action could be needed.

In 2015 the CNSC escalated compliance enforcement action in 21 instances for licensees in the medical, industrial, academic, research and commercial sectors. In 15 instances the CNSC staff issued orders which required licensees to take immediate corrective measures.

In each case, the licensee immediately complied with the order. Once the CNSC was satisfied that the licensee had addressed the order's terms and conditions, the order was closed. As well, CNSC designated officers issued six administrative monetary penalties in 2015, and all administrative monetary penalties issued in

2015 have been paid.

Although not shown on this slide, the CNSC decertified one exposure device operator in 2015. This stemmed from an inspection in 2014 that identified non-compliances relating to the use of survey metres and supervision of exposure device operator trainee.

Licensees are required to have programs in place for the management of unplanned events and accidents. The situations that warrant mandatory reporting and the content of the reports are set out in legislation, regulations, and conditions of their licence.

CSNC staff review, assess and track all events reported by licensees. For the second time this year, reported events have been ranked using the International Nuclear and Radiological Event Scale, INES, a tool for communicating the safety significance of nuclear and radiological events to the public.

As described last year, this tool allows the establishment of a prospective of an event safety significance. This scale has been used to classify events at nuclear power plants since 1990 and has been extended over the years to apply to all nuclear industry installations.

By 2006 it had been adapted to all events associated with the transport, storage and use of

radioactive sources and nuclear substances.

Note that the scale is not a tool to compare safety performance amongst facilities or organizations, but to effectively communicate the safety significance of events. In 2015 there were 155 events related to nuclear substances reported to the CNSC by licensees in the sectors covered in this report.

Events involving missing or found sealed sources are also incorporated into a report that is available on the CNSC website and updated on a regular basis.

Of the 155 events 147 were raked as Level 0 or of no safety significance under the INES scale. Six were ranked as Level 1 or anomaly on the INES scale due to the quantity of nuclear substances involved and the type of event reported.

Finally, one ranked as Level 2 or incident under the INES scale. More information on these events which obtained an INES reading above 0 is provided in the next slides.

There were six events reported that received a Level 1 rating under the INES scale. Of these events, five involved the loss of portable gauges containing low-risk Category 4 sealed sources.

The figure on the right side of the slide

demonstrates that the above-noted event corresponds to a Level 1 on the INES scale. An event where portable gauges have not been recovered continue to be tracked by CNSC staff.

The remaining event involved a nuclear medicine worker who self-administered iodine 123 for thyroid procedures on two occasions. This event was reported by the licensee in 2015 when they became aware that these events occurred in previous years.

The Level 2 event occurred when a nuclear energy worker from the commercial sector received an extremity dose above the regulatory limit of 500 millisieverts for the hands. The worker in question was processing fluorine-18 in a hot cell, handled a large quantity of this radioisotope without shielding. As a result, the worker was exposed to a relatively high extremity dose.

The dose to the worker's left hand was conservatively estimated by CNSC staff to be 1.7 sieverts, which is above the annual regulatory limit for extremities, but below the threshold for deterministic effects. The effective dose to the worker was estimated to be 15 millisieverts as a result of this event.

No other nuclear energy worker or members of the public were exposed to radiation. Under the INES

scale this event is ranked as Level 2, or incident, since the exposure to the worker exceeded 10 millisieverts. Such doses are well below the regulatory dose limits for nuclear energy workers and would not be expected to result in adverse health effects to the exposed person.

In response to this situation, the licensee removed the worker from duties associated with nuclear substances in accordance with the Radiation Protection Regulations. CNSC staff conducted an inspection as part of the review and assessment of the event.

As a result of the inspection, the CNSC issued an order to the licensee. This event was presented at the June 2015 Commission meeting and is considered closed.

Overall, doses received by nuclear energy workers remained low in 2015. While the regulatory does limit is 50 millisieverts per year, the majority of workers received a dose below 1 millisievert, which is the dose limit for members of the public.

In 2015 no nuclear energy workers exceeded the one or five-year dose limit of 50 millisieverts and 100 millisieverts respectively.

I will now turn the presentation over to Mr. Colin Moses.

MR. MOSES: Thank you.

Before staff conclude the presentation, we would like to provide an update on some of the industry trends that we continue to monitor and to highlight some of the work that we currently have underway in 2016.

As is evidence by this report, the nuclear substances industry is a diverse and ever-changing community. As a result, CNSC staff monitor trends and developments in order to ensure that we maintain a program that is suitable and effective and reflects the current state of the industry.

In recent years a number of sectors have been trending towards consolidated operations. For example, in the medical sector some provinces, including Alberta and Quebec, are revising provincial authorities to amalgamate hospitals by regions.

Similarly, in the industrial sector we are seeing larger pan-national companies acquiring smaller local companies. The recent downturn in the oil and gas sector has also had a significant impact on the industrial sector, particularly for the radiography and well logging industries which serve the sector.

In addition, the nuclear industry is seeing an increased pace of change, particularly in the medical sector. Innovations in isotope production technologies are leading to a more diversified and

decentralized supply of medical isotopes.

CNSC staff are closely monitoring these trends to ensure we continue to have the necessary tools, requirements and resource to effectively oversee the nuclear substances industry.

As necessary, we adapt our regulatory oversight strategies to ensure that licensees continue to maintain a high level of safety across all their operations. Some of the specific initiatives we have underway are discussed in the following slides.

As I mentioned, staff are committed to maintaining a modern, responsive, effective and efficient program. To that end, we are continuously seeking ways to improve, based on feedback from our stakeholders, in response to trends identified in the industry or as a result of lessons-learned exercises that we perform following every major initiative.

In 2016 we conducted a lean assessment of the nuclear substances and radiation devices licensing process. This three-day workshop brought together experts of all groups involved in the activity using a methodology that was originally developed for process improvement in the manufacturing sector. The workshop identified a number of opportunities to improve our internal processes which we are in the process of implementing.

Similarly to simplify licensing and reduce administrative burden for licensees, we continue on our drive to offer consolidated licenses. We have made good progress for Class II
Facilities and are now turning our attention to nuclear substance and radiation device licenses, which will include a review of the licence structure and processes to pave the way for this improvement for all licensees.

With respect to radiation safety officers, we are undertaking an assessment of our oversight approach for those responsible for nuclear substances and radiation devices in order to assess potential improvements to our program to ensure that they provide effective oversight of their radiation safety programs.

Continuing to leverage best practices for compliance, we are increasingly making use of performance-based inspections so that we verify compliance with procedures while the devices are in use in the field.

This is an important component of our portable gauge strategy which drove significant improvement in the subsector over the past couple years.

Finally, to ensure that we continue to have a robust, indefensible and efficient program, CNSC staff transferred the compliance oversight of the import and export of sealed sources to the Directorate of Nuclear

Substances Regulation, leveraging our directorate's existing compliance activities.

As you heard yesterday, CNSC staff are also working on developing a number of regulatory documents that are relevant to this sector, including developing guidance on reporting expectations as well as working on a REGDOC that provides information on safety culture.

This latter document outlines elements of a healthy safety culture and will serve as useful guidance for nuclear substance licensees. Coincident with this document, CNSC staff is developing a methodology to assess the maturity of a licensee's safety culture and will be piloting this approach in the isotope production sector in the near future.

In conclusion, both as a result of our rigorous licensing and certification reviews and our comprehensive and risk-informed compliance approach, and as evidenced by the continued low levels of exposure across the industry, CNSC staff conclude that the use of nuclear substances is safe with adequate protection for the health and safety of persons and due consideration to the security of nuclear substances and prescribed equipment.

Thank you for the opportunity to present this report. We remain available to answer any questions you may have.

THE PRESIDENT: Thank you. I understand that the Canadian Radiation Protection Association has a presentation. I also am informed that Ms Leah Shuparski-Miller, who is a member of the board of directors for CRPA, will make this presentation. Please proceed.

CMD 16-M37.1/16-M37.1A
Oral presentation from
Canadian Radiation Protection Association

MS SHUPARSKI-MILLER: Good morning, bonjour. I'm Leah Shuparski-Miller. With me today is Jeff Dovyak, as well as Ali Shoushtarian, Brandon Hardy, Tanya Neretljak, and Stéphane Jean-François from the Canadian Radiation Protection Association.

Our presentation today will focus on only certain written comments from our submission 16-M37.19. However, we are happy to discuss any aspect of our written submission if there are any questions or clarifications requested.

The Canadian Radiation Protection Association is a not-for-profit professional organization. Our mission is to ensure the safe use of radiation by providing scientific knowledge, education, expertise, and policy guidance for radiation protection. Our members

represent licensees covered in all four sectors of this annual report.

The 2015 Regulatory Oversight Report on the use of nuclear substances in Canada provides an excellent summary of incidents, such as malfunctioning or damaged devices, spills, or contamination.

CRPA members appreciate such a listing of reports. They are used for training purposes. However, many would find the listing even more useful by including INES Level 0 incidents and providing additional incident details.

Level 0 events, by definition, have no safety significance. However, these events can be caused or exacerbated by poor practices, which could result in an event with reportable safety significance had circumstances been different. The CRPA's position is that these events are worth discussing in someway.

In this vein, last year CNSC staff challenged the CRPA to create an operational experience forum where members can share details on events at their facilities whether or not they are CNSC reportable.

Over the course of the year, the CRPA has worked on this project and the result is the CRPA stakeholder hub for crude reported events or CRPA share. This platform is just in its infancy.

With CNSC support, such as promoting CRPA share through social media, or the DNSR newsletter, we are confident it will grow into a comprehensive database that will serve to provide lessons learned throughout the licensed community. This would, in turn, lead to a stronger radiation safety culture across Canada.

MR. DOVYAK: It's Jeff Dovyak.

Many of our members find the DNSR newsletter very useful in keeping up with information from the CNSC. When the newsletter first started there were several editions published every year, however, it seems since 2014 there's been an annual edition and then a second edition with a special focus on a particular area.

We feel that there would be enough interest and information to justify increasing the frequency of the DNSR newsletter. Not only would a more frequent and regular newsletter provide more information to the licensees, but it might also help keep the profile of the CNSC more prevalent within the licence community during the year.

Along those same lines, we would welcome more CNSC contributions or articles in our CRPA bulletin publication. The Accelerators and Class II Facilities Division has contributed articles to the COMP organization journal on a regular basis now for several years. Those

articles have been well-received by COMP members.

So similar contributions from DNSR to the CRPA bulletin would be just as well-received and would provide an additional outreach path from the CNSC to its stakeholders.

MS SHUPARSKI-MILLER: General inspection compliance with the security safety control area was quite high, at 95 per cent. However, only 77.4 per cent of licensees that underwent an enhanced security inspection were found to be compliant. It is likely that this result is at least partly due to the requirements having come into effect as recently as May 2015.

While the 2016 Special Edition of the DNSR newsletter did focus on security issues, we would recommend providing even more information on security issues, providing clear guidance or examples based on realistic scenarios, whether they are added to existing documentation or new documents are created.

While we are aware of the sensitive nature of some of this information, any opportunity for licensees to make use of lessons learned from other facilities would increase compliance and make future security inspections smoother for both the licensee and CNSC staff.

Across all sectors 88.7 per cent of licensees were found to be compliant with Radiation

Protection Safety Control Area. The majority of non-compliances involved in adequate implementation of measures to ensure that doses are kept ALARA.

Aside from one nuclear energy worker who exceeded the extremity dose limit, there were no other comments in the report regarding high worker doses. The executive summary stated that exposures to radiation continue to be very low for workers in 2015, consistent with previous reporting years.

Additional comments on potential causes or influences on the lower worker doses, despite an 11.3 per cent non-compliance rate regarding ALARA programs would be of interest to our members. Were licensees in a particular sector misinterpreting a particular ALARA requirement? Did CNSC inspectors flag ALARA program concerns before they could translate into increased worker dose?

Having very low worker doses is a common goal of the CRPA and the CNSC. However, further details on the link between ALARA program compliance and worker dose would provide radiation safety professional with reassurance that ALARA requirements are in line with the risks involved in a particular licensed activity.

MR. DOVYAK: It's Jeff Dovyak again.

There is currently no published official approval process for RSOs on NSRD licenses. Rather, it

seems that the CNSC reviews the qualifications of the proposed RSO, including education, training and hands-on experience.

Since 2005 the CRPA has had a formal process in place to designate qualified members as registered radiation safety professionals through the CRPA(R) designation. This designation is the highest level of competency recognized by the CRPA at the Canadian level, and it is granted based on academic achievement, experience in the field, and successful completion of an exam. As of last week, there was 44 of us in Canada with that designation.

In addition to the competencies that closely mirror the safety and control areas, the CRPA(R) program has an ongoing competency maintenance requirement to encourage continuous learning. Credits are awarded for professional practice, professional development, publications, continuing education, CRPA association work, and other professional memberships.

The qualifications necessary to obtain the CRPA(R) designation seem to be well-aligned with CNSC expectations for RSOs. The CRPA strongly encourages the CNSC to consider formally recognizing the CRPA(R) designation as a pathway towards the RSO appointment process. This would ensure licensees have an RSO who's

competent in the field of radiation protection and can properly manage their radiation safety program.

The CRPA is very pleased with several of the initiatives listed in the regulatory focus section of the staff report. This includes clarifying expectations for reportable events, especially for skin contamination and the continuing consolidation of licences. Any initiatives that reduce both the administrative burden and the number of licences held by an institution are always welcome by your membership.

The outreach program and sessions offered by the CNSC since 2009 are an excellent resource for the licence community and have been extremely well-received by our members.

The CRPA-CNSC Working Group that was established in 2014 has been well-received by the CRPA board and the membership, and has become a shining example of the cooperative spirit between our two organizations.

As a recent example, a CNSC representative to the working group encouraged CRPA members to review REGDOC 2.9.1, which was regarding environmental protection. Participation by CRPA(R) members led to changes in that draft document which helped minimize the impact on the NSRD licensees while still remaining acceptable to the Commission.

Currently, the working group is working through challenges affecting the licensee and hopes to share both the regulator and licensee perspectives on common obstacles. We believe this partnership to be very beneficial to the radiation protection community and welcome continued support by the CNSC and by the Commission.

MS SHUPARSKI-MILLER: It's Leah Shupraski-Miller, for the record.

In conclusion, the CRPA would like to thank the CNSC and, in particular, the Participant Funding Program for this opportunity to present our comments on the 2015 Regulatory Oversight Report on the use of nuclear substances in Canada and for its continued support of our association.

CNSC attendance at our annual conference is much appreciated. Our members greatly benefit from the open forums and presentations given by CNSC staff, and this can only lead to safer facilities.

Thank you, merci.

THE PRESIDENT: Thank you.

I, for one, found your submission very very useful. And it's been our common practice -- why don't we focus on their submission before opening it up for the actual staff presentation?

So who wants to go first?

Monsieur Harvey?

MEMBER HARVEY: I will start by asking the staff about the CRPA recommendation or request that CNSC to consider formally recognizing the CRPA(R) designation as part of the RSO appointment process. So could you comment about that? Is it something envisageable, possible?

MR. MOSES: Colin Moses, for the record.

We certainly support any form of industry regulation. I think the fact that the industry has taken on an initiative to develop a designation like this that takes that extra step of ensuring and supporting the qualification of members is excellent and we welcome that initiative.

We do have to look at the entire population of the industry that we regulate to determine really the most appropriate tool to oversee these. So while the designation is very useful for, for example, in the medical and the academic settings where industrial or where RSOs are responsible for complex and diverse programs, in other areas that we regulate, for example in the industrial sector where RSOs are responsible for radiation programs around the safety of a certain fixed gauge or portable gauges in the -- in field use that sort of designation might not necessarily be the most

appropriate way of ensuring that they have the qualifications.

So as I mentioned, recognizing the important role that the RSOs do play, although we already have a rigorous assessment through our licensing process and follow-up through our compliance inspections, we are undertaking a review to determine what the appropriate mix of tools or the appropriate expectations we should have in place to ensure that RSOs not only have the appropriate qualifications when they are designated but also maintain those qualifications over the longer term.

So I wouldn't want to prejudge the outcome of that assessment, but I'm sure we could provide certainly additional details on sort of what we are doing right now if you're interested.

MEMBER HARVEY: Do you want to add something to that, a comment?

MR. DOVYAK: I don't have a comment at this time.

MEMBER HARVEY: Thank you.

THE PRESIDENT: But just so I understand, you are now considering this as part of an overall review because if you will accept their part of the sector, if you like, it'll become the place to go to get certification, if you will accept that.

So I just want to understand. Are you going do a review and then report on that? What's the next step in this recommendation?

MR. MOSES: Colin Moses, for the record.

As I said, I wouldn't want to prejudge the outcome and I think it may be unlikely that we would formally require that designation but that doesn't mean that we don't credit that designation when we review the qualifications and expertise of the RSOs. So if an RSO has gone through that program that's recognized as a strong program to ensure that they have the knowledge and capabilities.

And so the next step in the process is to determine the appropriate mix of regulatory instruments that we need to have in place to ensure the qualification of RSOs. And, yes, we intend to report on the progress of that initiative both through our regulatory oversight report and as well as through other vehicles as well as engaging with the community that we regulate to ensure what we conclude is a good mix, is an appropriate mix.

THE PRESIDENT: You want to jump on this?

MEMBER McEWAN: I will wait for my turn.

THE PRESIDENT: Okay, go ahead. One question per -- there will be as many rounds as we need. We will do one question per round.

MEMBER McEWAN: So Mr. Moses -- so again, CRPA, thank you. This was an excellent summary of your views, so thank you very much for that.

So Mr. Moses, you had me excited there for a minute because I thought as I worked my way through the words that you had said you were actually going to look seriously at the medical and university sectors and I agree with you. I think there are two quite separate populations of licensees there and the complexity is probably determinable by the complexity of the organization in which the individual works.

But then you rather spoiled it because you said, "It is unlikely that we will actually implement this". That is not acceptable. You prejudged your review with that statement.

So let me -- as I look through REGDOC -- is it 1.6.1 -- the licensing guide and as I look through the Act, we actually have very, very little mandated for RSOs. In these large complex organizations they are arguably the most important people who are responsible for radiation safety and I do not believe that we are fulfilling our responsibilities if we do not require them to have a formal training and formal, more importantly, designation with CRPA with COMP, I think, would be the other organization where you would perhaps look for this

level of expertise.

Many of these individuals are responsible for multiple sites. Many of these individuals are responsible for multiple different functions; diagnostic, therapeutic. Indeed, within the university sector you will have people who are responsible for everything from a Class II facility right all the way through to a teaching source. So these are complex organizations.

So I'm, quite frankly, very disappointed that you would say it is unlikely that you will be doing it before the review.

MR. MOSES: Colin Moses, for the record.

Just to clarify my statement by "unlikely" what I was meaning to imply and I apologize if I didn't, is that it is unlikely that we would require this designation or any designation necessarily across the entire sector that we regulate.

I will note too that we have reviewed the roles of RSOs and we did recently introduce regulatory changes in a Class II field to require that certification and that designation, recognizing the complexity of the facilities that they regulate.

And I also would argue that we do have a very rigorous process in place to review the qualifications of the RSOs, as well as to ensure that they continue to

maintain that qualification throughout the licence activity.

I'll turn the presentation back to Mr. Peter Fundarek to explain sort of what we are doing right now

MR. FUNDAREK: Peter Fundarek, for the record.

When we receive an application from a licensee we do look for the radiation safety officer. That's one of the critical positions that we evaluate in the licence assessment process.

We look at three things; the education and training of the person. We look at their relevant experience. We make sure that they have experience in the licence activity for which they are going to undertake the radiation safety officer function. And we look at their skills, the skillsets that they have; their ability to carry out their functions.

One of the other things that we do is we get a commitment from the applicant authority that they will ensure that there are sufficient personnel, time and financial resources available for the radiation safety officer so that they recognize the responsibility of the licensee to provide these resources to the radiation safety officer so that they can carry out their duties.

We have a comprehensive list of what we expect to see as the duties of the radiation safety officer in Appendix C of the Regulatory Guide 1.6.1.

We evaluate the suitability of the radiation safety officer at the time of licence application as well as at the time of licence renewals. All new high-risk licence applications receive a pre-licensing visit by a member of my senior staff to ensure that the radiation safety officer knows that what they are supposed to be doing; has the knowledge, skills and experience applicable and required for the job. So we do verify that for all new licence applications for high risk.

We can also do that kind of pre-licensing visit for any licensee application that comes in for a new licence application where we have doubts about the capability of the radiation safety officer.

So we do -- for all the other licence applications and for all renewals, we do evaluate the suitability of the radiation safety officer according to the type of work that's going to be conducted and the combination of their knowledge, experience and skill that the RSO displays during the assessment process because we do have a lot of interaction with the RSO during the licence assessment process.

We monitor the suitability of the

radiation safety officer on an ongoing basis through a compliance inspection which includes or compliance performance which includes submission of annual compliance reports, their management of events that they report, their reporting requirements and their adherence to their regulatory requirements, their performance on inspections and the general interactions we have with these with these radiation safety officers on an almost daily basis.

Where we do identify issues with radiation safety officers, we discuss this with the radiation safety officer to determine if there is a lack of management support including time and financial resources. If we cannot resolve the issue with the radiation safety officer or the radiation safety officer presents further challenges to us, we will escalate the matter to the applicant authority to ensure that we have the commitment of the licensee to resolve any outstanding issues and to address any deficiencies that have been noted.

So we do have a comprehensive program in place for evaluating and continually monitoring the performance of radiation safety officers across the country.

And I will just turn the microphone over to Mr. Ramzi Jammal for additional comments.

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

record.

I think we repeat this question every year every time we have an annual report from the Directorate of Nuclear Substance Regulations.

There are two things. There is the responsibility of the licensee to ensure safety and there is the responsibility of the licensee to ensure that they have the qualified personnel to carry out their activity and to oversee and supervise the licensed activity.

I hear the complexity. I fully understand the complexity with respect to the radiation safety officer and their role. Just like, if I may give the same analogy, the CRPA is a professional association just like the College of Physician and Surgeons. The CNSC, in my opinion, cannot tell the hospital who they can employ as a physician or if they are certified or qualified by the fellowship program or anything else. So the hospital delegate as its own entity, because they are responsible for the wellbeing of the patient and so they are responsible for the safety.

And that's the dilemma we are facing between the CRPA as a professional association versus a designation required by the regulator. I think we have been going through this on a yearly basis and I think it's time for us to look at this at two levels; the RSOs and

work with the CRPA for us to determine is there a need for certification of the RSO, and based on risk informed decision making, the complex institutions? Right now we are talking about consolidation of licenses where the licensees are becoming more or the RSO is overseeing activities for the whole province.

So my recommendation would be is, let us regroup and talk to the CRPA as a professional group representing the majority of the universities and hospitals, for us to come up with an analysis of some sort and determine where the gaps are. For us to be an informed regulator instead of just trying to build this thing on the fly. And I think in my opinion, that would be the best progress to take place right now with the association.

And I will extend my offer to the CRPA because we've got the officers here of the CRPA, for us to come back to you, the Commission, based on a systematic approach and analysis to determine what -- the problem we need to fix.

But the ultimate responsibility still lies with the hospital, the institution who will have to have the proper adequate personnel to carry out their activity. And as Mr. Fundarek mentioned, the management support to the RSO is a must and the CNSC cannot be at every hospital, every institution.

So we will look at the analysis and determine that the responsibility always lies with the licensee.

THE PRESIDENT: I think -- I'm glad to see that you are talking about the regrouping. I think you need to do some formal evaluation, program evaluation of these particular programs because what's at stake here is a lot, a lot more than just complexity.

It's the governance model. You have got to have a very large institution with a distributed -- if you look at Ottawa here, we've got three or four hospitals. I have no idea who is the ultimate responsibility but I have got to tell you, we have a responsibility to make sure that the RSO in every institution is the authority and never mind the qualification. They can have the best qualification but if they don't have the authority they are not affected.

So I'm not sure how this is -- you know, the trending in this consolidation because you are helping by issuing less licenses. So I can see huge, huge institutions with one licence but they require more than one RSO. In fact they probably are required in every sub-institution, another RSO.

I think you have to take a fundamental look at this before you come to a conclusion on how to deal

with this, and I believe we have -- I believe we have the mandate. Let somebody argue with us that we don't have the mandate about making sure that the RSO have the qualification and the authority to operate those facilities.

So I don't know if you agree with that outburst but I interrupted you here.

MR. JAMMAL: Well, if you'll allow me then I will never -- it's Ramzi Jammal for the record. I never disputed the mandate. What I am talking about is, for us to go have a systematic approach so that it will be presented to the Commission with respect to where the gaps are, because the end-point is the leaders of the RSO; in other words, the employer of the RSO must recognize the importance of that job, so it's not being layered under six or seven layers. So that's why we want do a systematic and then we will be prescriptive in our mandate with respect to the requirement. And that's where I am going with it.

THE PRESIDENT: Dr. McEwan, go ahead.

MEMBER McEWAN: Thank you, Mr. President.

Mr. Jammal, thank you. I think that's an important step.

Could I suggest it may be helpful, if you are going to do this on a sort of a structured basis, also to include COMP and maybe CAMRT, and CARO? I think it

might be valuable to have the whole community actually talking about this.

And I would also like to reiterate the President. I think that the mandate of the RSO and the ability of the RSO to carry out his or her job in these large complex organizations like big hospital regions or big universities perhaps needs a little more prescription and definition as well, perhaps in terms of expectation of reporting relationship, expectation of resources. Again, if I quote from 1.6.1, the RSO must be at the site of the licensed activity or reasonably able to attend the site of the licensed activity as required.

So if an RSO is responsible -- for example, my geography is lousy, but supposed to attend -- is the RSO for a hospital in Cambridge and in Toronto that seems to me would be failing the intent of that statement because they can't reasonably attend.

So I think we really do need to make sure that as these organizations grow and as the complexity of what they do grows, our regulatory approach is prescriptive enough to ensure that that individual can actually perform his or her job within that administrative environment.

So my addition to the President's comments.

I think it would be very, very helpful

also if we could get perhaps quarterly updates on where this is going and some estimate of a timeline. Would we be looking at six months for this process, two months for this process, five years for this process?

MR. MOSES: Colin Moses, for the record.

We would be happy to provide regular updates to the Commission. I will note that with the regulatory analysis should we choose to move to certification for example that requires regulatory changes and you heard the timelines that associate with that.

And I will also just like to comment that we fully recognize the complexity of the jobs of some of these RSOs. A number of RSOs are not alone in their job. They are supported by teams of local RSOs that are responsible for the safety of individual locations, whereas the overall program oversight is provided by the corporate RSO.

And we are also adapting our compliance approach for some of these more complex licensees, use leveraging; more common Type 1 inspections to look at the overall program oversight because these programs -- they are not simply managing the safety at one single location, they are establishing programs that in some cases are used across the country.

And so we are fully aware of those trends

and have started to move strides in that direction. But just to give you an idea of timelines if we do end with specific changes to regulations then we are sort of constrained by those timelines which are generally not on a -- necessarily a quarterly basis.

THE PRESIDENT: Yeah, but before we get too excited about speed here, you know, if you are going to do a systematic evaluation it's not done by them. It is an independent body that will look into this just to define the problem and take -- and possible recommendation for solution before we are going to start actually implementing the solution. So it's going to be -- it's not going to be done in -- it's not going to be five years but it's not going to be -- I am looking at kind of a year time horizon to getting a pretty good handle about what needs to be done and starting the process.

MEMBER McEWAN: And we were assured yesterday that REGDOCs now are relatively easy to change.

MR. MOSES: Yes, absolutely. REGDOCs are very flexible and, in fact, on you referenced REGDOC 1.6.1. We are in the process of implementing some changes that we identified through the LEAN process. If we do move to a certification just that requires regulatory change which is changing the regulations and that is a very different process.

THE PRESIDENT: Okay. Other questions. Ms Velshi...?

MEMBER VELSHI: So switching gears, I want to talk about event reporting and tying in with the CRPA's recommendation on more detailed reporting on Level Zero events in its rating.

So the objective of disseminating this information besides the -- in this rating communicating the safety significance, I think a more important reason is what can we learn from these events? And I am not sure whether our reporting requirements require the licensees to report near misses as well. As I looked at the appendix of events those look like actual incidents as opposed to near misses, so if you can comment on are near misses included?

The second one is, I don't see NPPs using the same level of rating for their events and have you looked at their maximum reasonable potential for harm rating system and how those compare?

And the third one was also it wasn't clear to me whether this rating system looks at conventional incidents or whether it's just nuclear incidents and presumably it does, but if you could talk about that. So that's the third one.

And the last one would also be very helpful if any OPEX incidents happened elsewhere that we

can learn from, were also included in this, in this appendix.

So did you get the four? Okay, good.

THE PRESIDENT: And I would like to add, I don't know, if it's the fifth, I never like to be told that the U.S. are doing something better than we do, which is right on page 4.

MR. MOSES: Colin Moses, for the record.

Maybe I'll address point number five first.

In this area the U.S. has a very different system but they have essentially an automated system update. So as soon as a report comes in, it gets posted up on their website. So in that respect they are better than us in that area. I will note in Canada we have certain restrictions around official languages and such that may make a system solution a bit more complex which is why we are looking at adopting tools like the regulatory oversight report where for the very first time this year we included the list of all reported events.

And so -- and fully recognize that the whole purpose behind this, while absolutely committed to transparency is really about providing information to the licensees. In our regulated community we are dealing with licensees who operate in oil and gas sector, the

construction sector, the bottling -- bottling plants, the food sector, all using very similar types of devices. So really the only common factor across those industries is the regulator which is why I think it's really, as opposed to in the nuclear power sector for example in imposing requirements that they speak to each other and share that operating experience. That really puts it incumbent on the regulator to share that kind of information. And we welcome the feedback from CRPA to continue to enhance in this area.

I will note too that we also leverage other tools and this is simply a listing but we trend these events. We monitor. We look at common factors. When we identify sort of near misses, for example, in the industrial radiography sector they put up barriers to prevent access to when they are conducting radiography operations and in some there has been instances where clients or workers sort of in a facility cross those barriers; doses all very low, so near misses but still a trend that we want to identify and react to. And so we have been working with the industrial radiography sector through a working group. We have established to share that kind of operating experience and develop tools that will help them mitigate the consequences. So we never arrive at a more serious incident.

With respect to the INES scale, the scale is an international scale. It was developed for communication purposes about sort of communicating the severity of an event or an occurrence and it was originally developed for the nuclear power industry, and so there's a whole number of criterion-specific events.

But if you look at the description of the scale in the nuclear power industry, it is at a very different level than it is for the nuclear substances industry, which is why it would be an extremely severe occurrence of, you know, an INES 1 or 2 in that industry, whereas in ours, not to belittle the events, they are very significant events, it is not uncommon to see a Level 1 or 2 in nuclear substances.

So that is why we adopted this scale to sort of communicate those types of events, but it's not a perfect tool and it's not a universal tool and it really is focused on radiological and nuclear events and it is not intended to address industrial events.

I believe I touched on all your points, but feel free to ask for clarification.

MEMBER VELSHI: Right. So I think you have just reinforced my concerns that this is a tool with a lot of limitations and I really don't know how helpful it is if near misses and learnings from that don't get

disseminated in a systematic way, if nuclear accidents don't, if this rating really doesn't lend itself to the kind of risk that this particular part has, that perhaps it needs something a bit different, more customized. Something for consideration.

MR. MOSES: And we fully take that feedback. I mean, as I mentioned, the INES scale is one of those tools, but it does not determine our approach, it does not limit us in any way and we look at many other ways of communicating those types of events.

MEMBER VELSHI: Right.

And my other one was -- and I don't know whether you touched on that -- was OPEX from outside Canada and how is that pulled together. And I think it would be helpful even in the annual report if there was as summary of, you know, here were some key incidents that happened elsewhere that have a bearing on how we conduct business here.

MR. MOSES: Thank you. Colin Moses for the record.

Canada is engaged across the board in international activities. We participate in International Atomic Energy Agency and a number of specific bilateral arrangements with countries, for example in the United States, in areas that are particularly cross-border, for

example in the transport area where we to look internationally at all sorts of events.

We do monitor through the INES network that is facilitated by the IAEA events that occur in different sectors that we regulate. For example, there have been a few events related to the industrial radiography sector in Mexico and other areas and so we do have access to those networks that share that information.

And I take your feedback, if we can provide a summary or an indication of sort of internationally. I think last year we did include an indication of the number of INES events that were reported internationally, so we can look at doing something like that in the future.

THE PRESIDENT: But I just want to understand, though. The CRPA is proposing that -- I think they have developed this CRPA SHARE and if you deposit some of your events in their thing, then it's only you avoid this need to publish some stuff, right? So you can share the OPEX, if you like, across the whole industry and whoever wants a bilingual version, you can then do it on a case-by-case basis. I'm trying to find a way to allow you to quickly match the American speed here without making it too complicated. What's the matter with that?

MR. MOSES: Absolutely. And this kind of

an issue, as was noted in the CRPA, is something that we have certainly been encouraging the industry to develop and we welcome that. I believe it is important too for us to ensure that that reaches across the entire industry and I'm not sure whether the system right now is open beyond the CRPA membership, but that doesn't mean it's not an excellent tool for that community to share operating experience and it's a tool that we should be using.

THE PRESIDENT: If you started depositing your stuff in it, everybody will start looking at it, I predict.

Monsieur Tolgyesi...?

MEMBER TOLGYESI: I believe that a good vehicle would be through this CRPA SHARE because you're talking about to develop a newsletter where CNSC will publish that.

My question was: Up to now, before you had this -- before you started the SHARE, what kind of vehicles did CRPA use to share experiences, improve performance, communicate, exchange information?

MS SHUPARSKI-MILLER: Leah Shuparski-Miller for the record.

So if I understand your question correctly, you want to hear about other ways, especially prior to CRPA SHARE, that we were sharing incident learning

information.

A lot of it centres -- we have a few email groups. So someone sends an email out to a LISTSERV and so everyone that is on the LISTSERV can hear about the event, the near miss, the difficulties they have had with a particular product or area.

We also do a lot of informal information-sharing at the annual conference. So that's our chance to see and catch up with colleagues from across the country that you may not have a chance to have face time with and those informal conversations are extremely valuable, both between licensees and between licensees and the CNSC. So that face time with regulators who attend our conferences is very valuable. It allows us to kind of hear about other problems that facilities may be having to help us kind of learn informally.

MS NERETLJAK: Tanya Neretljak for the record.

So just to add onto that, we also have a regular newsletter that we call our Bulletin and there we invite any type of articles from across the Association so people can share incidents, especially lessons learned. We encourage that, and that goes out now three times a year.

MEMBER TOLGYESI: Because I think as a professional association, you should also have some kind of

a formal diffusion of experience, risks. And also, you are talking about certification, to recognize your certification as RSO, so you should demonstrate also that you have kind of formal structures and diffusion and a process of certification, et cetera, because as a professional association you should have that. Like I don't compare you necessarily to engineers or medical doctors, but you are a professional organization, so you should have all those structures.

MS SHUPARSKI-MILLER: Leah Shuparski-Miller for the record.

Your feedback is well taken. This is our first year of CRPA SHARE. The intent is -- we are publishing stats as we go so members can access it at anytime and see the breakdown of events and read the summaries, and the intent is to publish sort of formally a summary of events and any trends that we may see as we collect more information. We intend to continue to do that and we will keep you informed.

MS NERETLJAK: Tanya Neretljak for the record.

Just to comment, and it actually goes back to some comments from CNSC staff earlier.

The intention of CRPA SHARE started internally just with CRPA members, because what we find is

people who are already engaged in CRPA and members of the CRPA are the RSOs that take full responsibility for managing the programs. Now, as you see with the numbers of licensees, if you take 1,600 licensees and you remove about 50 percent for industrial radiographers and you are left with the other three sectors, we don't represent nearly 800 of those people if you say one licence represents one RSO.

But the RSOs that are part of the CRPA Association do engage and a lot of those people are the ones that -- for example, just around the table here, the CRPA members are the ones that are helping the CNSC with stakeholder engagement, we are the ones organizing these events. So there is value add there.

With CRPA SHARE, we think that it's again the registered members, the ones that are engaged, the ones that have maintenance to maintain this level of professionalism, they are the ones that are inputting these events and we are really trying to reach out to the rest of the Association to say please share with us. If we can get them on board with CRPA SHARE, we would love to open it up to all the licensees, which is one of our main challenges, just to get them to even say, hey, why don't you be part of this great organization. Because what we find with budgetary constraints, particularly in the public sector, it's harder and harder for people to justify not only being

part of the Association but coming and becoming a registered member.

And with the registration process -- I wasn't able to get this comment in earlier -- there was a full intention that the registration process would move to a certification process and the step 2 part of the process would then look at examinations which are industry-specific. So once you did the basic registration and you have this maintenance of professionalism, then if you had a specialty, for example if you worked in the medical industry or in the research industry, you would have a secondary certification and then that examination would be at a heightened level, kind of like a two-step process that the Americans do with the CHP. So we had that full intention, but our numbers were never strong enough that we were not able to fully implement that second certification process.

So if the CNSC staff is willing to look at what processes we do have in place, kind of like an audit of what we do right now at the registration level, we would definitely be open to that type of communication and to work with them, because right now you have the members of the committee that actually vet all the CRPA(R) registrations and the maintenance.

So the three of us are here today to

represent that and say how important we think that process is, particularly just to let the other licensees know that there is benefit to having a CRPA(R) and that your radiation safety program -- you may not necessarily need it, but what we found is people who are part of the Association that have this are the ones who are really fully -- doing really well with their radiation safety programs across the country.

THE PRESIDENT: Thank you.

Other questions?

Monsieur Harvey...?

MEMBRE HARVEY : Merci.

On page 9 of the CRPA's presentation, your request there:

> "Additional analysis on the disconnect between ... non-compliance on inspected licensee radiation protection programs and very low workers (sic) exposures is requested"

Well, I don't know if it's scientifically possible.

You mention that:

> "Further details would provide assurance that ALARA requirements are in line with the risks involved"

Could you comment on that?

MR. MOSES: Colin Moses for the record.

Maybe I will turn it back to Mr. Rabski after to speak to some of the findings related to this safety and control area to give you an idea of that.

But we do in the Regulatory Oversight Report highlight sort of some of the common areas of failures in these -- in each SCA and the types of findings for those non-compliances to try and encourage licensees to recognize those areas where they need to particularly focus.

And I will also add that it's not necessarily a direct one-to-one relationship between poor ALARA and high doses. There are a number of barriers that are in place to protect workers and the public for these operations, and so in some cases the non-compliances represent erosions of those barriers, which wouldn't necessarily result in any significant dose to an individual but does impact the level of protection.

Maybe I will turn it back to Mr. Rabski to provide some additional details.

MR. RABSKI: Henry Rabski for the record.

Yes, as inspectors perform their inspections at these various facilities, they are citing the non-compliances against the requirements to maintain

doses as low as reasonably achievable through management control of the program, the radiation protection program in particular. There may be non-compliances with these items even if workers who don't have elevated doses have indicated that they are low.

But we are also encouraging the principle of ALARA and also in the spirit that organizations demonstrate healthy safety culture and that is to strive to improve deficiencies in programs or weaknesses or things -- indicators, and this all in the spirit of limiting dose to workers and keeping them extremely low.

This also, as pointed out by Mr. Moses, could be a precursor, an indicator that could avoid a more significant event or overexposure in the future. So as part of our efforts in this area, we continue to strive for the ALARA principle and strong RP measures in all programs even when activities are reasonably low or low exposure to workers.

MEMBER HARVEY : Merci.

THE PRESIDENT: Any other questions? Questions?

MEMBER McEWAN: All right. One more for CRPA.

THE PRESIDENT: Dr. McEwan...?

MEMBER McEWAN: Your comment 4, we sort of

touched on this in the last round, but are your members finding that these large university and large hospital consolidations are making their life more difficult to actually perform their job? Do they have clear lines of reporting that flow through that that remain as clear as they would have done in a single institution? Do they feel that they have the necessary administrative and small "p" political support to answer that?

MR. HARDY: Brandon Hardy for the record.

Where I come from back out East, we are still in the infancy phase of actually developing the provincial system. So regarding administrative support, we can only go as fast as administration allows us.

Other than that, the CNSC has been great with helping us with the timeline and setting up for the program itself. I think where the challenges come in, with merging all the licences, again and I think Mr. McEwan you touched on this earlier, and Mr. Moses, just the complexity of the RSO job itself and how the actual system setup will actually occur. So, you know, do you have one corporate RSO, do you have multiple RSOs, how are they going to meet, how are the radiation safety committees going to meet.

So I think right now, where we are still in the infancy phases, it would be really helpful -- and, you know, there are other places that are currently doing

something similar -- just start some data collection on what works and what doesn't work to actually help people in the future to actually ease this process a little bit more better.

MEMBER McEWAN: So I guess for staff, do we actually have a prescribed or mandated or suggested requirement for an organizational structure in these large, complex organizations so there is, for example, a clearly defined expectation of reporting relationships, a clearly defined expectation of infrastructure support to enable them to do an increasingly complex job?

THE PRESIDENT: I would recommend that we will await the answer because one thing I know is how governments operate and I have to tell you, if you want to tell me that -- if you seek staff telling you that they have a good governance model about what works, what doesn't work, I'm very sceptical. So I think we need now a third-party to look at this, particularly given our mandate that can be in conflict of some organization development HR people, and those kind of different type of objectives should be reviewed by some external body to take a look at this. Do you want to agree or disagree?

MR. MOSES: We would welcome any review. As I mentioned, whenever you undertake any regulatory analysis of different options, the more views that you get

and the more data and the more information that you get increases the robustness and the usefulness of the end product.

I will note, as was mentioned, in the East they are in the process of looking at these consolidations and there has been strong and ongoing dialogue between the CNSC and them as they implement those structures and I think that is really the right approach to take there.

Certainly, we see in the field what works, what doesn't, where the challenges, where the difficulties are, and we can provide very constructive advice to licensees to ensure that the programs that they set up are capable of handling that very different approach and also how to effectively manage the transitions from programs that may not be identical across multiple hospitals that are then brought under the umbrella of one single program that integrates those other individual programs. So it is a process that needs to be managed very carefully.

THE PRESIDENT: But, you see, using the key as advice, whereas I think that there may be a prescription eventually that we will have to come for. I don't know what the answer is, but just advice to a government body, you know, how it can be taken. So I'm not sure that advice will do it here if there is no actual prescribed requirement. I am giving you my personal

opinion, but I would like some third party to provide some real analysis on this.

MR. DOVYAK: Can I comment? It's Jeff Dovyak.

I am a corporate RSO. We have had healthcare regions in Manitoba for some time now. There used to be maybe 12 or 15, now we are down to five. So as more hospitals in my Health Region have, as the saying goes, thrown in the keys and the Board of Directors disappears and the Health Region effectively is the owner of that hospital, what has gone on in Winnipeg is that typically that hospital will become an operating division of the Health Region.

So we have maintained separate CNSC licences in each hospital. We have maintained those RSOs. So effectively, they become the site RSO. So I don't have to necessarily divide myself five or six or seven different ways. We have an RSO in each hospital.

In our most complex hospital, we probably have three or four, because we have nuclear medicine with three licences, we have a radio pharmacy with two licences, we have a pet cyclotron. We have separate RSOs for each of those departments.

But 20 years ago, we set up a regional radiation safety policy and even the hospitals that weren't

formally part of the Health Region follow our regional radiation protection program. So I know that there seems to be a desire for some prescription, but I guess my take-home advice was don't be overly prescriptive because different solutions may work in different provinces. What might work really well down East maybe won't work in the Prairies.

Because I think my Health Region has a pretty good radiation protection program. You could ask your staff, I will stick my neck out, but we are organized differently than many of the Eastern hospitals are and I think it's just a region-by-region thing that has led to that.

Sure we have had supportive CNSC staff, but it has really been on our Health Region to decide how do we want to organize it and how are we going to run it. So it's not just me, you know. I have this team of side RSOs and I think that's what makes our program effective, that we have an RSO in each department every day.

THE PRESIDENT: Well, maybe you got the model right. I just want to make sure that it is not by chance that you got it right, that everybody else -- if that's the model everybody kind of apply to something like a bottom minimum requirement.

We are not going to resolve it here. I

don't want to spend more time on this, so we need to move because we have a whole report also. So I still want to deal with any outstanding issue associated with the intervenor.

MEMBER McEWAN: I just have one final very simple --

THE PRESIDENT: Go ahead.

MEMBER McEWAN: What is your regional membership distribution across the country?

MR. DOVYAK: It's Jeff Dovyak while Leah is looking.

It sort of parallels the licensee distribution. So there are more CRPA members in Alberta than in Manitoba, there are more CRPA members in Ontario and Quebec than Manitoba.

THE PRESIDENT: Okay. Anything else?

I have one very minor question. I have seen a lot of the presentation that DNSR makes in outreach. I was under the assumption that they are all available, all you have to do is pick up the phone and phone them, so I was surprised that you stated that if they can make it more available. What is behind this?

MS SHUPARSKI-MILLER: Leah Shuparski-Miller for the record.

I think it's just the more, the better.

The more our relationship cannot just be inspectors marching in one day and talking to us in a meeting, the more it can be an ongoing conversation, the more we can make incremental improvements to our programs so that it's not just big changes as a result of one thing or another. I think -- I mean they can disagree, but I think the more contact, the more we understand each other, the better it can be for both of us.

THE PRESIDENT: But I just want to focus, because I know they do a lot of outreach --

MS SHUPARSKI-MILLER: They do.

THE PRESIDENT: -- and I have seen some of the decks explaining, you know, Regulation 101, and all of these are available, all you have to do is just ask. So am I missing something here? And in terms of posting, you know, I have encouraged staff to publish more thoughtful pieces, articles, anywhere on any vehicle you can get to, so I assume that will be done in the future.

MR. FUNDAREK: Peter Fundarek for the record.

We do provide copies of all of our presentations. When we conduct our outreach, we do provide copies of our presentations to all those persons who did attend the outreach so that they do have copies of them and they are available from us. If anybody else would like to

have a copy of them, we do provide them freely.

We do provide copies of our presentation to CRPA when we do our annual meetings -- when we participate in their annual meeting, so they do have that function.

We also have at the CRPA Annual Convention an open forum where CNSC staff participate in a panel discussion and field unscripted questions from licensees, whatever questions they have, and this usually goes on for about an hour and a half. So there is a significant amount of time that's available for licensees to ask questions from us.

And we have contributed articles to the CRPA Bulletin in the past and we would certainly be open to providing more. Perhaps it might be useful if CRPA could provide us with a list of topics in which they are interested and then we could address those issues.

THE PRESIDENT: Okay, thank you.

Any last thoughts from CRPA?

MS NERETLJAK: Tanya Neretljak for the record.

I just had a comment based on the earlier presentation where the CNSC staff said that they were kind of disappointed with the commenting period, that they only got one, and if there are some suggestions.

I can tell you even pulling this together from our Association, August is a very bad time for us. This is the time when most of us are all taking vacation, as probably you are as well, and that 30-day time period left it very very late in the game even to have a presentation for today.

So my recommendation is, I know it's hard to pull all the stats but if you can do it outside of the summer season, that would be much appreciated and give us a lot more time to review. That is why maybe you don't see some of our other sister organizations here today. Thank you.

THE PRESIDENT: Okay.

Before we take a short break, any other final comments?

MR. DOVYAK: It's Jeff Dovyak. I have two.

RSO credentialing. I hate to give you the impression that I'm kind of this one-dimensional person but I seem to spend a lot of time on RSO credentialing. There is a working group meeting this afternoon, a CRPA/CNSC working group. We have seven things on the agenda. Three of the seven agenda items deal with RSO oversight, RSO evaluation, enhancing the oversight of RSOs. So certainly, the working group is already talking about RSO issues.

But more broadly in terms of RSO credentialing, when I try to encourage people to come into the registered radiation safety professional program, they say, well, CRPA doesn't -- CNSC doesn't require it, so my employer won't support it. We have had people drop their designation, the CRPA(R), because they said their employer isn't really supportive because the CNSC has not formally recognized the CRPA(R) designation and the CNSC, aside from Class II, doesn't have any formal requirements for what an RSO designation needs to be. So since the employer isn't being supportive, the person has let their designation slide and that's too bad.

I am very lucky that my employer is very supportive of radiation protection in our Health Region. I am not here on a holiday day, but not all RSOs across the country have that support from their employers and I think formal recognition of (R) designation may go a long way to RSOs getting more support from their employer or from the licensee.

THE PRESIDENT: Okay. Thank you. Again, thank you for your submission.

We will take 10 minutes -- 11:15. Thank you.

--- Upon recessing at 11:05 a.m. /
Suspension à 11 h 05
--- Upon resuming at 11:17 a.m. /
Reprise à 11 h 17

THE PRESIDENT: Okay. We now open the floor for general questions on this report by staff. Let me start with Monsieur Harvey.

MEMBRE HARVEY : Merci, Monsieur le Président.

On page 18 of your presentation you show the distribution of licences and you mentioned that there is a consolidation and you want to reduce the number of licences. What is the potential? Do you have an idea of the importance the reduction is going to have?

MR. MOSES: Colin Moses for the record.

Just so I'm clear on the question -- I will pass it back to Mr. Fundarek for an answer -- but sort of if we were to consolidate all licences held by individual licensees, what would be the total number? Is that where you are going with the question?

MEMBER HARVEY: Yes.

MR. MOSES: I'm not sure if we can give an exact answer, but maybe Mr. Fundarek can give us some precision.

MEMBER HARVEY: Just an idea of the target.

MR. FUNDAREK: There is no definitive answer in terms of the numbers that could be reduced by consolidation because there's different types of consolidation that could happen.

For example, you have one licensee that has several use types, such as a hospital or even industrial application. In industrial radiography they typically also have a low risk X-ray fluorescence device, so those would currently require two licences. We are looking at changing our business model for licence use type requirements and we could consolidate those into one.

The other ones that could happen is where one licensee has several licences for the same type of operation based on geographical locations because they don't want to have them all under one.

An example of this licensee would be Gerdau Ameristeel. They have four operations across the country. They have four licences for fixed gauge uses. So we would look at consolidating those down to one so that the locations would be listed on one licence. But then again, there are challenges for that because each regional location may have slightly different operations. But our licensing system is flexible enough that we can accommodate

the licensee to specify exactly how they are going to do that.

So there is a number of different approaches that can be taken to consolidation and we are currently looking at how we can do that and developing the business rules and the programs in place to allow for that to happen.

MR. MOSES: Colin Moses for the record.

Not to go too far down, but I would like to refer you to page 10 of the Regulatory Oversight Report.

MEMBER HARVEY: Of the report itself?

MR. MOSES: Of the report itself, yes.

--- Pause

MEMBER HARVEY: Okay.

M. MOSES : Je pense que c'est page 12 de la version française aussi, si vous l'avez.

MEMBRE HARVEY : Page 12?

M. MOSES : Page 12, oui.

MEMBRE HARVEY : En anglais, c'est page 10. O.K. Merci.

MR. MOSES: So I just wanted to point to you that we did include a figure this year that gives the relative distribution of licensees with multiple licences. And so referring to Figure 2 on that page, the number of licensees across all sectors that have two to three

licences is about 16 percent. So that gives you an idea if we were to sort of consolidates all of those --

MEMBER HARVEY: Yes, that's right.

MR. MOSES: -- we would get reductions in the order of a few hundred licensees.

MEMBER HARVEY: Are the licensees in favour of the reduction of the licences? Would they prefer to have only one licence? Like in the example of (indiscernible) it was four licences.

MR. MOSES: Colin Moses for the record, and maybe I will turn it back to Ms Plante to give some details on our progress we have made in the Class II field.

But just to say that no, not necessarily across the board. Some licensees prefer to manage their operations through different licensees -- through different licences as opposed to having one single consolidated licence. My perspective is that we need to make that option available to licensees, but we haven't gotten to the point yet of mandating or requiring that consolidation.

Maybe Ms Plante can provide some additional details.

MS PLANTE: Jacinthe Plante for the record. I am the Acting Director for Accelerator and Class II Division.

This is true, we have offered to all our

licensees who are able to consolidate their licence to consolidate licences to have only one licence, and some prefer to keep their existing licence and have two or three instead of one.

To give you some indication for the numbers that Mr. Peter Fundarek was trying to show, in our Class II facilities we have around 200 facilities and we were able to consolidate up to 65-70 licences.

MEMBRE HARVEY : Merci.

THE PRESIDENT: So again, we should be careful that -- you know, I was a fan of consolidation to get some efficiency, but we should be very careful not to give up on the safety. Because if you listen to what they have done in Winnipeg for example, I wouldn't mind consolidation if locally in every hospital you had absolutely a requirement, a regulatory prescribed requirement to make sure there is somebody in charge on the nuclear safety issue, because they are using the full licences to ensure the safety and the authority but there are different ways of doing it. You can maybe consolidate the licence, but you have to make sure that some local regulatory tsar, if I can use that language, will make sure that he has all the authority to manage. So we have to be careful that we don't give up in consolidation some of the authority to oversee radioactive material.

MR. MOSES: Colin Moses for the record.

Absolutely. I will turn it back to Mr. Fundarek, but in the course of our review we require the licensees to submit to programs that they are proposing to put in place to oversee the operations and that includes the structures and the mechanisms to oversee that.

I will let Mr. Fundarek provide some specific details.

MR. FUNDAREK: Peter Fundarek for the record.

During our licence assessment process we do look to ensure that each location does have somebody responsible for radiation safety, and that is actually included in our REGDOC on Licence Application Guide, REGDOC-1.6.1. Under Part C.1 Management Structure, we do say that if the applicant has more than one location, the organization chart should name workers at each location who report to the Radiation Safety Officer on radiation safety matters. So we do look for that level of control at each location.

For institutions, where they are conducting complex activities, we are not looking just for a person who reports to the RSO for radiation protection matters but we are looking for an alternate or site Radiation Safety Officer to carry on the functions at that

location. So our expectation is that for each location there is going to be somebody responsible for radiation safety.

That includes as well the industrial sector. For industrial radiography for example, where they have a number of locations across the country, they will have one corporate Radiation Safety Officer, but each location will also have a person responsible for radiation safety to ensure that the radiation protection program is carried out effectively.

I will just pass the microphone over to Ms Plante for further comment.

MS PLANTE: Not all licensees available can be consolidated. In addition to having a site RSO, we are also looking that they have the same radiation safety program. So if they have the same program we can consolidate, but if they don't have the same program we are not pushing for a consolidation.

THE PRESIDENT: You know, again, I think we will have to wait for the evaluation to actually understand, because I don't know what the meaning of the local report to the RSO that can be located far away, what does that mean? What authority does the local have?

It reminds me of the fact that in certain NPPs we had to make sure that the operator onsite does not

have to phone headquarters to shut down a machine. It's that kind of authority which is uncontested and it does not require to get authority from your corporate RSO to do whatever you need to do immediately.

Those are the kind of things that will define what does it mean to have a local authority and that is the thing that I think we should re-examine whether we have a prescription for that.

MR. MOSES: Colin Moses for the record.

Absolutely, and that is our expectation now. And maybe Mr. Rabski can speak to when we do our compliance inspections how we verify that.

MR. RABSKI: Henry Rabski for the record.

Yes, what Colin is saying is correct, that the local RSOs would have that ultimate authority, and in that structure in a management system that is the role of the corporate RSO, is to guide that, but they need to have that authority onsite to make those decisions and the inspectors verify that as part of their inspections at the facilities.

THE PRESIDENT: Thank you.

Dr. McEwan...?

MEMBER McEWAN: So just to follow that, is there an expectation as to whom within an organizational structure the RSO would report?

MR. FUNDAREK: Peter Fundarek for the record.

When we conduct our licence assessment, we do look at the management structure. It is one of the things that we are looking for. We actually ask for a copy of the organizational chart showing those persons who are responsible for radiation safety and one of the things that we look for as an expectation is to make sure that there is a direct reporting line between the Radiation Safety Officer and the applicant authority, and since the applicant authority is a member of senior management who has the ability to designate and delegate human and financial resources, we consider that that is a sufficiently strong relationship there.

MEMBER McEWAN: What do you mean by direct reporting line?

MR. FUNDAREK: Peter Fundarek for the record.

We look to see that the Radiation Safety Officer has the ability to talk to the applicant authority on radiation safety matters without having to go through any other person.

MEMBER McEWAN: Thank you.

So a couple of just pedantic comments, if I may.

In fact, this sort of hit me during Mr. Fundarek's presentation, Slide 12 of your presentation. In your description of the four sectors, "Medical, Use of nuclear substances for diagnostic and therapeutic purposes," a large section of therapeutic practice does not involve the use of nuclear substances. Linear accelerators for external beam radiotherapy are not nuclear substances.

MR. MOSES: That is a very fair comment and you are correct, medical does include for example the accelerators and cyclotrons that we regulate as well.

MEMBER McEWAN: Just a simple correction perhaps.

Second generic comment. If I look at page 41, Sector overview, you describe the radioisotopes that are used. Particularly for the therapeutic ones, I think it would be very helpful if you, in that list, listed those isotopes that were used -- and I guess for the diagnostics as well -- for which there were NOCs from Health Canada or for which there were actually clinical trials ongoing. I think that way the document remains current, it remains a living document and one which reflects current practices rather than some of the examples you have given, which would be used hardly at all now.

MR. MOSES: Colin Moses for the record.

I take that feedback. I know we do sort

of look at the most common uses and those are the ones that we typically list and there is research going in in a number of areas that are using very innovative isotopes and so certainly in our licensing assessment we impose requirements to ensure that licensees are authorized to possess those. We don't necessarily track the developments of medical research and new isotopes unless they impact the safety programs that need to be in place, but providing that kind of information I agree is good to give some context.

MEMBER McEWAN: But I think in a public document that type of context would be helpful for the public.

And I guess the third just general question that I have at this stage is: In the academic and research area, what are your oversight responsibilities for human research protocols using medical isotopes?

MR. FUNDAREK: Peter Fundarek for the record.

Human research is actually conducted under the medical sector. It is included in that use type -- or that sector of the report.

For a human research licence, we do require that there is an ethical review of any proposed procedures that are going to be conducted. CNSC staff

review the procedures that are going to be conducted under the human research licence and ensure that there is sufficient protection there, but that is one of the areas that we are looking at currently just to make sure that there is sufficient protection for those persons who are participating in human research trials. We do have a lot of oversight over it. There are not that many of those licensees and we do conduct significant oversight.

MEMBER McEWAN: So how do you actually get to see the protocols to review them?

MR. FUNDAREK: Peter Fundarek for the record.

Those protocols are sent to us when they are at the clinical stage. They are sent to us for inclusion as part of the licence and so CNSC staff will conduct a review of those protocols at that time.

MEMBER McEWAN: So for each new clinical protocol, who would send that to you, the Ethics Committee?

MR. FUNDAREK: Peter Fundarek for the record.

As I said, these are for the ones that are at the clinical stage and they would be sent to us by the Radiation Safety Officer because that person would have to be aware of the activities that are being conducted under that licence.

MEMBER McEWAN: So would he be required to send every new protocol using the same radiopharmaceutical or just the first time that radiopharmaceutical is used?

MR. FUNDAREK: Peter Fundarek for the record.

It depends on the way that they have scoped the previous procedures and policies. If previous procedures that they are proposing to use included a variety of isotopes or that isotope in different ways, then once we have accepted that protocol, it could be used for differing levels. It is defined by the licensee in terms of how they want to structure their program. So it provides them with the flexibility but it also ensures that we maintain sufficient control. If the protocol is restrictive or limited and restricts the use of the isotope in a specific way, then if they wanted to change that way, then they would have to submit a revised protocol.

MEMBER McEWAN: All right. Last question down there. Is there a broad guidance document for the research community that will provide clarity on expectations on them?

MR. FUNDAREK: Peter Fundarek for the record.

We don't have a specific REGDOC on human research, but we do have more information on requirements

for issuing a licence for human research in our REGDOC-1.6.1.

MEMBER McEWAN: Now, final, final question. Can you break out for your report next year the number of clinical research protocols that are extant that are using radiopharmaceuticals in a research setting?

MR. FUNDAREK: Peter Fundarek for the record.

That is something we could look to including in the future. Just looking at the information that I have right here, we currently have 24 licensees to perform human research, so we should be able to provide that information.

THE PRESIDENT: Okay, thank you.

Monsieur Tolgyesi.

MEMBER TOLGYESI: Merci, monsieur le président.

I'm looking at page 59 and 60 of your report, and these are regarding academic research and the research sector operating performances. And at page 60 under Figure 34, it demonstrates that one performance dropped from 90 in 2013 to about 77 last year, and the number of inspections dropped from 385 to 140, which is about 65 percent drop.

Now, I don’t say that there’s a

correlation, but one will expect that when you see these kind of down trending that instead of decreasing your inspection, you will increase it.

Can you comment? It's -- why the number of inspections was decreasing since two years?

MR. MOSES: Colin Moses, for the record.

I'll let Mr. Rabski maybe speak to our risk informed inspection program and how we do our inspection planning on an annual basis, and that decrease may not be a consequence of the number of licensee inspections; it may just be the timing of inspections.

In addition, in developing our annual plans, we target specific communities. And as we noted in this report, we did note in the regulatory oversight report that downward trend in that sector and we'll be looking at not only perhaps targeted inspections, but also improved outreach to that community to ensure that we can bring that performance.

And now I'll turn the answer over to Mr. Rabski.

MR. RABSKI: Henry Rabski, for the record.

You're quite right in pointing out that there has been a drop in inspections performed in academic and research sector. The reason for that dates back to our risk assessment review that we undertook in 2014 where it

looked and assessed the performance at that time in that sector, and also the risk ranking.

At that time, the risk ranking was reviewed and determined that this particular use type was no longer considered high risk. So in high risk classification, our expectation is to inspect on an annual basis.

So there was a decision based on the performance, on the evaluation of what was actually occurring and what isotopes were currently being used to downgrade that to a medium risk licence classification and to reduce the frequency of inspections that were being conducted.

We didn’t just -- so the frequency was going to go to every two years. So there is going to be a drop in that particular sector.

At the same time, we also instituted a desktop assessment, so in between, every year, we were looking at all institutions to do an evaluation of their program and still maintain their strong oversight of their program, so we combined less inspections with also desktop assessments. And there were assessments being done simultaneously.

So what you’re seeing there now and reflecting in the downgrade is consolidation for the

lesser -- the large institutions, the large consolidated facilities that we're going every second year to and visiting and supplementing with this desktop review, a shrinkage. So the focus now becomes the small lab inspections that we -- facilities or licensees that we're going to normally go and see.

So they're now a greater proportion of what we're seeing, and there is an issue there for them in terms of non-compliances that have brought the overall rating down.

So to put it in short, we've changed our focus in terms of the importance and the frequency, and that's adjusted that. And we're keeping a close eye on those particular non-compliances and working on reinforcing those deficiencies with the individual licensees and the sector as a whole.

MEMBER TOLGYESI: This operating performance of 77.9 percent reflects -- because you have nuclear energy workers and non-nuclear energy workers. So my question is that, first, if it reflects both of them. And second, is -- you are saying that non-compliance is found, it involves workers not following procedures, so it involves more nuclear energy workers or non-nuclear energy workers? Because there could be the risk evaluation also.

MR. RABSKI: Henry Rabski, for the record.

There is a mix of workers in this sector that are designated nuclear energy workers and non, so for the specific what's being seen in the field on actual workers and their exposure, I would ask the inspectors that are conducting those to provide that additional detail.

And I'd like to push that question to Lucie Simoneau to talk about the actual worker description that you're asking for.

M. LEBLANC : Bonjour, Lucie. C'est Marc Leblanc. On vous entend à peine. Peut-être il faudrait parler plus près du micro, s'il vous plaît.

MME SIMONEAU : Oui. Je disais, est-ce que j'ai bien compris, vous voulez avoir s'il y a une différence dans la catégorie entre les travailleurs du secteur nucléaire et les non-travailleurs du secteur nucléaire au niveau du non-respect des procédures? Is that it?

MEMBRE TOLGYESI : Effectivement. Un, si cette performance reflète l'ensemble, tant les nuclear energy workers comme les non-travailleurs, et après, est-ce que cette non-compliance implique davantage un ou l'autre groupe?

MME SIMONEAU : Je vous dirais que non. On inspecte... Peu importe la catégorie, le type d'utilisation qu'on inspecte, on a à la fois des

travailleurs du secteur nucléaire et des non-travailleurs du secteur nucléaire. Donc, quand on conduit l'inspection, on ne fait pas de différence. S'il y a un non-suivi des procédures, on va les citer que ce soit un ou l'autre des catégories.

MEMBRE TOLGYESI : Parce que vous avez mentionné la question de risque, c'est pour ça que vous avez déclassé ce secteur, que vous n'êtes pas obligés de le faire à tous les...

MME SIMONEAU : Oui. Mais je vous dirais que la majorité des travailleurs maintenant, au niveau des académiques, sont considérés comme étant des travailleurs du public, justement du fait que le nombre de... On a diminué le risque de cette catégorie là justement parce que l'utilisation des substances nucléaires dans certains cas a beaucoup diminué, et je vous dirais que la majorité des travailleurs au niveau des permis consolidés académiques sont des travailleurs, des membres du public, ce ne sont plus des travailleurs du secteur nucléaire.

LE PRÉSIDENT : Merci beaucoup.

Ms Velshi.

MEMBER VELSHI: Thank you, Mr. President.

I just want to follow up on this last conversation, that it isn’t just the academic and research sector, but even for oil well, logging on page 52 and

processing of nuclear substances on page 58 where the number of inspections have gone down in the last couple of years, as has the percent of compliance. And it could be risk or just lower business, but you may want to just take a step back in saying is there a correlation between how often we inspect and the level of compliance we get. But that was just a data point.

I want to start off with just some editing comments before I get to my question.

So one, I think you should put a “draft” on this particular report so it doesn’t get mistaken for the final report.

Second, a big news item in this annual report is the extremity dose exceedance of the annual limit. And neither the Executive Summary nor the conclusion mentions that or -- actually, it mentions it, but it doesn’t provide details on exactly what the dose was and how it compares to the annual limit, and I think that would be helpful. In fact, I don’t think anywhere in the report do you say what the annual limit for extremity dose is except that the 1.7 sieverts is higher than that.

So I think you need to consider adding that.

Page 31 of the report, Figure 11, the title is covered up.

Page 34 -- let me just see what page 34. Right.

So these are the summary of events, and there are a number of events that have been closed. If I look at the bottom of the page -- oh, no, not that one. Sorry. Yeah, 2463, May 19th, source not recovered. Event closed.

There are quite a few of those where sources have not been recovered, event closed. I think just a small statement that you don't expect -- that there is no risk associated with that would be helpful although, as I look at it, I think you have it in the event summary.

But have a look and make sure that it says we've closed it because we're not concerned about the risk to the public on that.

I think there was one more. Oh, page 64, Figure 39.

I think you may want to consider using a log scale for that because as you get to the higher doses -- I think for many of these, it's hard to see it. It all looks like zero, but we actually do have quite a number up there.

And the last one's on page 70, and just an editing thing.

On page 70, in conclusion, the paragraph

on effective doses to workers where you say, “Despite this event” -- it’s not really despite this event; it’s other than this event.

Okay. So now to you.

MR. MOSES: Colin Moses. Thank you for those comments.

We do do a final QC on the report, and we --

THE PRESIDENT: Well, since we're doing editorial, I’d like to jump on a couple of remarks since --

MR. MOSES: I will also note that we have identified a few of those, and I highlighted the relevant one.

THE PRESIDENT: I just want to make sure I got the one on 60.

On 74, that the Safety and Control Area inspection report for safety analysis and physical design are the same? Are they the same?

Just for my own education here. They’re both dealing with facility shielding design. Is that it?

You look at the table in Appendix B.

MR. MOSES: Colin Moses, for the record.

Yes, that's correct. When we look at the inspections, we’ll look at sort of the different aspects, and so physical safety analysis would assess the adequacy

of the design.

THE PRESIDENT: I just want to make sure it's not a typo, okay.

MR. MOSES: We'll double check on that.

THE PRESIDENT: Just check on that. And also, on page -- on your Appendix -- what is this? This is page 103.

I really didn’t understand the title of those report, “Inspection Work Sheet Not Recorded in the Licensing and Compliance System”. What does that mean?

MR. MOSES: Colin Moses, for the record.

I'll ask Madam Lucie Simoneau to provide some details on those as she is intimately familiar with these work sheets.

MME SIMONEAU : Lucie Simoneau pour l'enregistrement.

C'est que dans les rapports d'inspection qui sont produits dans LOUIS, on utilise encore la notation A, B, C, D, E, et non pleinement satisfaisant, satisfaisant, sous les attentes ou non acceptable. C'est pour ça qu'on ne voit pas ce type de nomenclature là dans les rapports que nous émettons.

LE PRÉSIDENT : Moi, je ne comprends pas. Alors, qu'est-ce qu'on...

MR. MOSES: Help me out here. You're on

page 103?

THE PRESIDENT: One oh three (103), why do you have this -- what are you trying to convey in this table?

MR. MOSES: So thank you for that broader question. Colin Moses, for the record.

THE PRESIDENT: Well, because of the title, I don’t understand --

MR. MOSES: The intent of these two tables is just to provide examples of the work sheets that we use in the conduct of our inspections. And so on page 103, that specific work sheet is used for the inspection of Class II nuclear facilities.

And then above the work sheet included from page 90 --

THE PRESIDENT: Anyway, you may want to reconsider what kind of a title you have in there.

MR. MOSES: Yeah, I think that's good feedback. This was related to a discussion we had last year around providing a bit more context about how we conduct our inspections and how we arrive at our ratings, and so sort of that is definitely -- we need to be more explicit.

THE PRESIDENT: Okay. Take a look at that.

Ms Velshi.

Go ahead.

MEMBER McEWAN: So on the table on page 74, Fitness for Service, you've got entrance monitors, but not exit monitors. I mean, those are really more important.

Page 74 under Fitness for Service, entrance monitors, alarms, fault indicators. Nothing about exit monitors.

THE PRESIDENT: Ms Velshi.

MEMBER VELSHI: So of your over 2,000 licensees, what didn't come across is what percentage of those had satisfactory inspections in all four areas, so you show it by each of the four Safety areas -- Safety and Control Areas, but not the aggregate. So I think that would be helpful, is someone non-compliant in one usually also non-compliant in another area, and that's missing.

MR. MOSES: Colin Moses, for the record.

Yeah, I think that's a -- I can appreciate that that could provide a good view, and we do, when we conduct our inspections, not only rank the specific performance in each Safety and Control Area that's evaluated; we also do an overall compliance assessment for that inspection.

And so I think we should be able to

extract that data.

MEMBER VELSHI: And I know you mentioned, you know, your desktop reviews and your Type 1 investigations and so on. And how do those results get factored in to the overall assessment and in this annual report?

MR. RABSKI: Henry Rabski, for the record.

The Type 1 inspections are included in the data on performance, so in a Type 1 inspection, if the focus was on management systems, that ranking would have been included in that particular sector.

You know, we can tell you how many Type 1 inspections we performed and their combination across the medical sector and the consolidated and larger licensees, but those results will be incorporated inside.

The desktops are part of -- excuse me. Desktop reviews take on many faces within DNSR, so some of them will be a very formal one like I discussed earlier where we were targeting a consolidated licence -- licensee, and we have a very specific number of questions that we're covering.

Essentially, we're doing like -- almost like a pre-visit desktop review because we're not essentially going to go there unless we find issues, so there's those.

Normally, inspectors as well prior to embarking on an inspection, they will do a desktop, so the desktop would be going through all the performance data, looking at events, looking at previous inspections and also the ACR, and do that review. And they consider that their desktop before they advance and do the actual field or site visit inspection.

There's also the ACR review, so the annual report is also assessed by staff in DNSR, and they review and look for information, any inconsistencies, and that follow-up is followed through.

So all that to say is all those desktop reviews are not included as part of the inspection evaluation. They're the precursor that then we base those inspections on or any other type of regulatory action that they may trigger.

So we can tell you the number. I think it's in the report. And while we're discussing, we can give you the overall number of those type of inspection -- desktop reviews, including ACR reviews, desktops and pre-licensing inspections, that number that staff perform.

MEMBER VELSHI: Thank you.

No, I wasn't interested in a number. I just wondered how it complemented the inspections, and you've done that.

Thank you.

THE PRESIDENT: But on that aspect, on slide 21, there's -- you know, you actually -- in Calgary, you list the three inspectors and two licensing specialists, and then there's no other licensing specialist to be seen in this particular chart.

Again, I don't want to give the impression -- I know you have more than two licensing specialists. Where are they?

They're not on this particular map, okay, so either you include them all, or you -- because I don't know why Calgary was highlighted here.

MR. MOSES: Colin Moses, for the record.

I can speak to that. We only have regional licensing officers in the Calgary office, and that's to ensure coverage through the full business hours across the country for inspections and such.

THE PRESIDENT: Okay. So -- but you have Ottawa and --

MR. MOSES: So we definitely looked, and we do have the -- we could provide the numbers of the distribution, but the other licensing officers are located in Ottawa. And Peter Fundarek can give you the exact numbers.

THE PRESIDENT: Yeah. So how many -- so

under Ottawa, you should put the rest of the licensing specialists.

MR. MOSES: Fair point.

THE PRESIDENT: Just so people don't think that there's only two because this is a national picture, right.

MR. MOSES: And I will also add, too, that we also have a number of inspectors located in the Ottawa region, including the entire Class II licensing division.

THE PRESIDENT: So you know --

MR. MOSES: So we will provide the complete numbers.

THE PRESIDENT: We got caught on this in the AGR report on this.

Okay. We're back to Monsieur Harvey.

MEMBER HARVEY: Merci. On the same page, 21, the CNSC staff effort went up by 60 percent in that sector. So there's -- well, about the same number of licences, maybe a little less. And why there is a 60 percent increase in the effort?

MR. MOSES: Colin Moses, for the record.

That's a fair question. In fact, the numbers are not necessarily representative. We actually, in 2014, reviewed our coding practices and time accounting, which is how we extract this data, to ensure that we're

appropriately catching the activities that are performed by all staff. So given the nature of the licensing compliance work that we do, there is a number of staff who had traditionally been viewed as administrative staff performing initial reviews of completeness of licences, entering the information, initial assessment of compliance reports, as an example. And so in reviewing their functions and duties, they're more appropriately captured as direct regulatory effort in support of those licensing activities.

And so the true numbers are generally consistent in our resources across the two years. It's just really that change in coding practices that made the system spit out a different number.

And I recognize that, you know, giving the two years provides that direct comparison, but there hasn't been a substantive change in regulatory effort.

MEMBER HARVEY: Then that shouldn't be there.

MR. MOSES: No. You're entirely correct.

MEMBER HARVEY: Okay. Thank you.

THE PRESIDENT: Or should have an asterisk explaining that you changed the codes or do something because it really jumps out of the page here.

Dr. McEwan.

MEMBER McEWAN: Thank you, Mr. President.

Page 2, the Safety and Control Areas, why did you pick the four that you have picked? Because it seems to me that certainly in the larger organizations, the university and the big health regions, human performance management becomes very important. Conventional health and safety in the hospitals, and I suspect in the industrial radiography sector, become very important.

And also, packaging and transport is where a lot of the reports issued. So what was the reason for just picking the four that you picked to look at?

MR. MOSES: Colin Moses, for the record.

First, before I actually answer your question, I will note that when we do our compliance inspections we review every applicable SCA across the spectrum. So you're entirely correct.

When we do, for example, we'd look at packaging and transport, we'd look at, as I mentioned and, as applicable, import and export of risk-significant radioactive sources and human performance when we're doing our more substantive assessments of more substantive programs. So we do review all SCAs that are applicable to the licence.

When we developed the report -- it's a difficult report to develop, because it's representing such

a broad spectrum of activities. So when we reviewed the most appropriate indicators that give us an indication of overall industry performance and also a representative of the entire industry that we're reporting on, these are the most appropriate SCAs that we extracted. They're universally applied to all.

We've been looking and reviewing that on an annual basis. So last year, for the first time, we included the security SCA. This year, again recognizing your reference, the importance of the programs and the systems that are in place to support the safety of those operations, we included data on the management systems.

I think we're arriving at the right mix of capturing just the indicators that give us a view of overall industry performance. But, as I mentioned, on an annual basis we'll be looking at the full SCA spectrum to see if there are particular trends that we need to highlight and react to.

THE PRESIDENT: Well, just to piggyback on that. Security is mentioned throughout this report and, in fact, you're talking about the enhanced security and compliance with this and all this.

So here's a safety and control area that is the factor in the report, but it's not viewed as one of the four areas that you selected.

MR. MOSES: It is, security is absolutely one of those four.

THE PRESIDENT: Oh, is it? Sorry.

MR. MOSES: So the four, just for clarity purposes, are management system, operating performance, security, and -- I missed the fourth one -- radiation protection, thank you.

THE PRESIDENT: Okay, so I take it back. So while I've got you there, so explain to me what is this enhanced security and what's new about this and why is it taking so long for becoming a requirement in transition?

MR. MOSES: Colin Moses, for the record.

The enhanced security really is in direct reference to the Regulatory Document 2.12.3, which imposed security requirements for sealed sources.

The implementation strategy that we developed when we developed the document is a phased implementation to focus initially on the high-risk sources of Category 1 and 2, and allow licensees to bring up security programs for the other risks or the Categories 3, 4, and 5, lower-risk sources, those are scheduled for implementation in May 2018.

I will speak, I think it was acknowledged in the CRPA and is certainly a focal area for us, that in these enhanced security inspections the performance is

below what we would expect as the new requirements get rolled out and those systems get improved. So we're monitoring that.

We're also looking at better awareness of those new requirements, so we issued a special DNSR newsletter last year that spoke to the security of sealed sources and highlighted some of the common occurrences of non-compliance that we were finding in the field so that licensees can proactively address those. Those are regulatory requirements, and it's just about aiding them to move forward.

We're also leveraging specific outreach activities to highlight those. So this has been a common topic at our industrial radiography annual meetings where we speak to the security of sealed sources.

THE PRESIDENT: So in the transportation events, I think there were 40 plus transportation events, are any of them involved, Category 1, 2, or 3?

MR. FAILLE: Sylvain Faille, for the record.

Yes, some of the transport events involved Category 2 sealed sources, those are the -- it's mostly related to lost and stolen radiography devices, and in all cases they've been recovered within a couple of days, if not the same day.

All the other events are related to traffic accidents or small damage to packages without any significant release or there was a release that was contained and no impact on the environment because of the short-lived isotopes that were in those packages.

THE PRESIDENT: Thank you.

Monsieur Tolgyesi.

MEMBER TOLGYESI: This is my last question. I just want to let you know.

So in 2015 the CNSC introduced a new licence condition requiring financial guarantees for this group of nuclear substances sector, this is the first time that we have, besides the Class 1 in mines and mills.

So how do you compare Canada to other jurisdictions? Do they have similar obligations, similar financial guarantees or where do they stop?

MR. MOSES: Colin Moses, for the record.

Just getting specifics on the other countries, because we just did benchmark when we developed this program.

We are unique in the world for having this kind of program. The United States does require financial guarantees for some aspects. Perhaps Mr. Fundarek can provide some specific details.

This is one of the areas where Canada has

been recognized as a world leader and a best practice.

MR. FUNDAREK: Peter Fundarek, for the record.

We did compare our proposed program to what was already in place in the United States, and that was during the development of the program.

The comprehensive program we have now is much more robust and much more all-encompassing than the one that that's currently utilized in the United States, and it includes a lot of these sources that are currently exempt from the United States from their financial guarantee. So we do have a very comprehensive program and it covers both sealed sources and unsealed sources, so we have the coverage for all the different types.

MEMBER TOLGYESI: So there is no such a program say in France or in other countries, it's specific to us and, to some extent, the United States? It was well accepted by the sector, they didn't complain?

MR. MOSES: Colin Moses, for the record.

As you may recall when we discussed this during the implementation, the initial proposal that we had put out did receive significant input from the industry and significant pushback, and they raised concerns with the potential costs, et cetera, which is why we developed this alternate insurance scheme which provides that same measure

of protection, but is a much smaller financial burden on the regulated sector.

So I think with that change the industry has accepted the introduction of this new requirement. We are looking, on an annual basis, to improve compliance. There is still a relatively significant effort on the part of CNSC staff to follow-up with licensees who haven't contributed at the appropriate time.

But largely, I think the sector has accepted this and we haven't received substantive complaints.

THE PRESIDENT: Thank you.

Ms Velshi.

MEMBER VELSHI: Thank you.

On page 31, figure 11 please. I have two questions on that. One, is that this new category, unplanned exposure that has been included for this year. The notes below says that in previous years this was covered in the section on effective doses to workers. But effective doses to workers is not an event category, so where would those events have been included?

MR. FAILLE: I'll ask Mr. Luc Jobin to answer that question.

MR. JOBIN: Luc Jobin, for the record.

Can you repeat that please?

MEMBER VELSHI: So if you look at figure 11 on page 31 for 2015, for the first time there have been 12 events under unplanned exposure. The note below says that, "Events of this type in previous years were covered in the section on effective doses to workers." But that's not a category of events, right? So if I look at, you know, all these other events, if you had an unplanned exposure, where would that have been reported?

MR. JOBIN: Maybe under the overexposure, potential overexposure.

MEMBER VELSHI: Right. So if I look at all the categories on the left-hand side, you know, the malfunctioning, spills, and so on, where is that overexposure? Like, there isn't...

MR. JOBIN: Can you answer? Yes?

MR. FUNDAREK: Peter Fundarek, for the record.

If you take a look at page 38 under section 5.7.6, there is a listing of all the 12 events that were included there. So if I look at the eight events that involve breaches of safety barriers, those would have previously been included under breach of security as a general comment.

Skin contamination of a person working with nuclear medicine, that would have previously been

included under spills, contamination or release. So they would have been classified that way.

MEMBER VELSHI: That I understand. Maybe you'll want to change your explanation here because there would not have -- I mean it says it's covered in that, it seems to imply that that's where the events would have been.

Also on that figure, the packaging and transport events have gone up significantly from in the 20s to 30, to 48. Any common causes or what's your analysis showing you?

MR. FAILLE: Sylvain Faille, for the record.

We didn't see any specific difference in terms of the type of events, it's just the frequency has been increasing, but they're not directly related to any issue with the regulations themselves. It's more reporting of accidents, for example, where there's limited control from the licensees when there's road accidents or some of those accidents of that nature. So we have seen an increase, but not necessarily related to an issue with the regulations themselves.

MEMBER VELSHI: But even with compliance to the regulation, are there any common contributing factors?

MR. FAILLE: Sylvain Faille, for the record.

Not for the types of events we see, but there are some -- there's been some changes in the regulations to increase compliance with licensees with some of the changes that we made.

For example, for shipping documentation where there was a lot of non-compliances before, and now with the changes that were made, those were all administrative and nature and we removed that administrative requirement, which was basically like a signature on a document, where it's no longer needed to be signed, but all the information is there.

So those are the changes that were made to the regulation that would probably improve the compliance in terms of the packaging and transport as the SCA. But, like I said, it doesn't really have an impact on the events that have been reported.

MEMBER VELSHI: So let me make sure I understand that. If you were reporting the packaging and transport SCA inspection compliance, you would not have seen a deterioration in that performance over the last few years?

MR. FAILLE: Sylvain Faille, for the record.

That's correct. We didn't see a decrease in the performance, and even with the introduction of the new regulations, like I mentioned. What we're probably going to see for 2016 is probably an increase in the compliance.

THE PRESIDENT: So I found this chart -- by the way, I don't recall if it's the first time you're doing it this way -- but I find it very useful.

But, as a general comment, whenever there's a big delta between previous years and this -- you may want to do a little analysis as to why all of a sudden a jump, just for the readers so we don't have to follow-up and try to figure out why all of a sudden there was a change from year over year. And of course the title, I still don't know what this chart title says.

Otherwise, I really like those kinds of charts, and there's a trend to the industry in there.

MR. MOSES: Colin Moses, for the record.

The figure 11 is reported events from 2011 to 2015, all sectors combined, is the title.

But I appreciate that feedback, and certainly it's important to us. The danger of reporting numbers is it implies trends when sometimes the trends aren't there. So while the number may have changed, if you look at the nature of the specific events, they're diverse.

You know, for example, in that sector is motor vehicle accidents of trucks carrying gages that don't impact necessarily the gage, but are required to be reported to us.

But what we are doing, and this is an aspect of that, is reviewing our overall management of events. We've revised our internal procedures this year to ensure that we're clearly capturing. We have developed consistent nomenclature to aid with trending. We've got an IT system which logs all events that are reported, so we can look at trends, look at similar occurrences and do that kind of analysis behind just the roll-up of the numbers that we provide in that report.

And certainly, the results of that analysis, I think that's a really good point, that we should be including that in this report.

THE PRESIDENT: But I think it's more dangerous not to report any numbers, going to cause us to ask you all kinds of questions.

Okay, we're back on top of the list. Monsieur Harvey?

MEMBRE HARVEY : Merci, Monsieur le Président.

Ça va être ma dernière question, mais aussi ma dernière question sur un meeting de la Commission.

Je vais la poser en français.

À la page 30 de votre présentation ce matin, vous parlez que vous devez renouveler la certification des opérateurs à tous les cinq ans, mais je vois que vous en avez renouvelé 240 cette année, plus 141 nouveaux opérateurs. Mais si vous voulez tenir le rythme, il faudrait que vous en fassiez 500 par année. Allez-vous accélérer cette chose-là ou c'est impossible de le faire?

M. MOSES : Colin Moses pour les besoins de la transcription.

Je demanderai à madame Corinne Françoise, qui gère ce programme, de donner des détails.

Mais ça, c'est la première année qu'on a vu les renouvellements qui viennent en place. Ça fait que c'est sûr que ces numéros, au fil des années, ça va continuer à accroître. Puis je pense que la proportion qu'on voit là-dedans, les ressources vont encore être mises sur les renouvellements au lieu des nouveaux.

Mais je vais laisser madame Françoise...

MEMBRE HARVEY : Avant d'aller à madame Françoise.

Les 141 nouveaux opérateurs, est-ce qu'ils prennent la place de... est-ce qu'il y en a le même nombre qui sont partis ou ça s'additionne?

M. MOSES : Bien, je peux parler peut-être

des tendances dans l'industrie comme telle, qui va nous donner une indication d'où vient ce monde-là. Puis c'est sûr, surtout en 2016, on a vu une baisse dans le nombre des compagnies de radiographie industrielle, largement due à la baisse dans l'industrie du secteur d'énergie, surtout dans l'Ouest. Ça fait que j'imagine que ça va réduire les montants.

Mais ce qu'on a plutôt vu, c'est que les petites compagnies qui se tenaient debout quand l'industrie était bonne, bien, elles commencent à être intégrées dans les plus grosses compagnies qui ont des opérations à travers la nation.

Mais pour les numéros des CEDO en opération, je vais référer la question à madame Françoise.

MME FRANÇOISE : Oui, bonjour. Alors, Corinne Françoise. Je suis la directrice de la Division d'accréditation du personnel.

Effectivement, le nombre d'applications que nous devons regarder a augmenté de façon assez significative dans la dernière année, et nous avons augmenté les effectifs afin de pouvoir rencontrer ce nouveau volume. Alors, d'ici l'année prochaine, on va être -- si je peux utiliser un terme en anglais -- assez steady state à partir de 2017, et nous sommes en mesure de pouvoir procéder à la revue de ces applications.

En termes de chiffres, en fait, je ne suis pas certaine si monsieur Moses a répondu à votre question par rapport aux 141 nouveaux opérateurs d'appareils d'exposition, mais, effectivement, ils n'ont pas pris la place des opérateurs d'appareils d'exposition dans le passé, c'est vraiment des nouvelles applications.

Je ne sais pas si j'ai répondu à votre question.

MEMBRE HARVEY : C'est bien. Merci.

THE PRESIDENT: Dr. McEwan.

MEMBER McEWAN: Thank you, Mr. President.

Just one comment on the enhanced security. I'm not convinced that you shouldn't look at the unsealed source list, because I suspect that there may be some isotopes in there that would warrant enhanced security as well, not just the sealed sources.

So on page 25, this is the table -- figure 6 on operating performance. From 2011 to 2015 you give below-expectation numbers, they're broadly unchanged over those five years. How many of those are repeat offenders and how many of them are new people entering the below-performance category?

So, for example, within the 120 in 215 how many of those have actually been on that list since 2011? Because if we are seeing a significant number of people

staying at that below-expectations, then I think that requires some form of intervention.

MR. MOSES: Colin Moses, for the record.

I'm quite certain I cannot provide you the exact numbers of those that have stayed and maintained, but it is something that we monitor. When we do the initial inspection planning we'll review the results of the previous inspections, that will help indentify the particular areas of focus.

Also when we're reviewing potential compliance enforcement or graduated enforcement, we'll review that performance of that licensee and previous occurrences to ensure that there isn't any consistency.

I will add that any identified non-compliances are immediately fixed, but that doesn't mean that we aren't looking at their performance from inspection to inspection. There have been cases where we've decided to intervene more proactively in the operations of the licensee.

Most recently, I won't name the specific licensees, but we've brought them into Ottawa to speak to our concerns with the overall trend of the performance of their program across multiple locations or their overall oversight.

In other cases, we spent a lot of time

this morning speaking about the radiation safety officers when we have concerns with the capabilities of those radiation safety officers. Then we'll bring the licensees in and the appropriate authorities in to ensure that they develop an appropriate plan of action to correct that trend in performance.

MEMBER McEWAN: So, again, I think it would be very helpful to have it identified, annually, the people who are the consistent and persistent repeat offenders, and a plan for them. Because it's not acceptable to simply accept that somebody's going -- even with the interventions, is continuing on that level.

MR. MOSES: Colin Moses, for the record.

I completely agree, it is unacceptable. Certainly, in the course of our licensing reviews we'll look at that performance and that trend as well, and the licences are reviewed.

I can't guarantee that we can actually leverage our systems to subtract that kind of data in a way that's meaningful for this report, but that's something we'll absolutely take back and look at.

MEMBER McEWAN: I think my only other suggestion sort of goes back to the conversation we've had throughout. If you look at the medical and university sectors, they are structurally becoming more complex. I

think that it may be helpful in the fullness of time to look at a way of separating out the large organizations from the single-site clinics or things like that. Because I do think the expectation's on them will be different, I think some of the reports that we'd expect from them will be different.

A question that has occurred to me, you have the commercial sector which are the -- cyclotron is producing radioisotopes, medical isotopes as an example. Many of those will exist within the university sector or the hospital sector. Are they reported under that or are they reported under the commercial sector if they belong to the same hospital licence?

MR. MOSES: Colin Moses, for the record.

They're reported separately. So those isotope production accelerators may sometimes be co-located, but are generally operated as separate organizations. So I think we do report those specific use types separately.

Maybe Madam Plante can explain exactly how that works.

MS PLANTE: As mentioned in the -- Jocelyn Plante, for the record.

As mentioned in the past, they have a separate radiation safety program compared to the

hospitals, to universities. So they are a separate licence and they are reported separately.

THE PRESIDENT: Thank you.

M. Tolgyesi...? Okay. Ms. Velshi...?

MEMBER VELSHI: Thank you.

On page 15 on the mobile inspection kit project, I was intrigued to read about that and I wondered if you had any results from your pilot phase that you wanted to share. Is this working really well and it's going to make life really easy and help with trending and all that good stuff?

MR. MOSES: Colin Moses, for the record.

I'll turn that back to our Program Manager, Mike Heimann, who has developed this tool. We are just coming out of the pilot process and we are -- we have rolled out these tools for all inspectors, but it's about ensuring that those tools are available in both official languages with all the components.

So I'll let Mr. Heimann speak to the usefulness of the tool.

MR. HEIMANN: Mike Heimann, for the record.

So the tablets were distributed to DNSR inspectors about a year ago. It was in July of 2015 and we have been using them quite a bit, especially the operations

inspection division. They are most useful in Type II inspections because Type I inspections you usually go with a large team and these tablets are not inspected to each other, so they are limited a little bit in that. But on the Type II inspections they have been useful.

We do -- in terms of getting numbers for an increase in productivity or efficiency it's a little early for that still. We have -- the inspection community has noted a number of enhancements that could be made to the tool that would greatly increase its usability and its efficiency in the field. So we are waiting on those to be implemented before we do any kind of a net report on efficiency because what we are using right now, as Mr. Miller has mentioned, is a pilot still. So the items that we found in the pilot still need to be addressed and once they are, I think that will give us a better indication of the change in efficiency.

MEMBER VELSHI: Thank you. And is it just the DNCFR inspectors using it or is it all CNSC inspectors using these tablets?

MR. HEIMANN: Mike Heimann, for the record.

Right now, the DNSR is using -- every inspector in DNSR has a tablet and they do use them for the Type II inspections. In DPRR, I believe there are

inspectors that are using tablets. They don't have the same customized app that we have in ours because ours had to work and interact with the LOUIS licensing database which is what we also use for our compliance planning and results. So the tablet for us was a little bit more complicated because it had to interact with LOUIS.

With DPRR they, I think, just used Microsoft Office products to take their notes and I think DNCFR just recently requested tablets and I think they are just getting them probably this fall.

MEMBER VELSHI: Thank you.

THE PRESIDENT: So still on technology, I will take the opportunity to ask two other questions. First of all, the licence application that you mention in page 21, this is for REGDOC 1.6.1 licence application, so can it be filled online?

MR. FUNDAREK: Peter Fundarek, for the record.

Yes, the current application forms that are available on the CNSC website can be filled in. They are, as we call fillable PDFs, and so the licensees can fill them in, can save them during the course of completing the documents. So they can save them and come back again without having lost any work and then they can send them electronically to us.

THE PRESIDENT: Sounds good. So on page 2 you have this map of Canada that shows all the isotope producers, all the sectors. So I don't know if this map is available on our website and if it is, it would be nice if we can click on one of those dots and get all the little local data about where they are; the institutional data. Is that something you guys are considering?

MR. MOSES: Colin Moses, for the record.

That's something we've had on the website for many, many years. Developed a Google-based map, Google Maps-based system which identified the locations of licensees and you can provide --

THE PRESIDENT: So you can click on this and get the institution and, you know, what they do and, et cetera --

MR. MOSES: Yes.

THE PRESIDENT: -- some boiler plate information?

MR. MOSES: Yes.

THE PRESIDENT: Good. Thank you.

Back to the top. M. Harvey...? Dr. McEwan...? Ms Velshi...?

MEMBER VELSHI: A couple of last questions and comments.

On slide 50, your regulatory focus in

2016, you talk about increasing the focus on performance-based inspections. Excellent. I just wondered, would that in any way make it more difficult to compare your year-over-year results of inspection if now you are focusing your inspections when, you know, certain stuff is happening or so?

MR. MOSES: Colin Moses, for the record.

Whenever you make any change to your practices which we do on a very regular basis, it does impact sort of the type of information that you are collecting. But with that said, we are still categorizing them in the same way that we have always categorized them according to the safety control areas. And so that is consistent.

But I will let Mr. Rabski add some more details. But those types of inspection have proven much more effective to assess procedural adherence in the field and how they are actually using those devices as opposed to our traditional inspections which look more at the programs and records and compliance that way.

MR. RABSKI: Henry Rabski, for the record.

We have been focusing over the last several years on increasing that performance component of inspections and I am pleased also to inform the Commission too that, you know, we are going to continue to ramp that

up because the most important thing is are people working safely in the field with these devices? And a lot of times they are working under very limited supervision and under very difficult conditions. So we want to ensure that they are working safely and also that the public is safe.

So to answer your question about performance inspections, we are just -- just in the midst of rolling out a new template for what we are actually inspecting in the field. So as you can see by our worksheets, they are very elaborate because they are very comprehensive. But when you are going in the field you are very focused on probably 10 or 12 items that you really want to see the operator doing and performing or the person handling the device.

So we have these -- we have these prototype worksheets that we are going to use into the field and we can then even do a subset of the performance in the field down the road. We are not there yet but that is -- that is one aspect.

So we will track them the conventional way but we will also be able to draw them out and just maybe at some point in the years to come, to actually focus on what that performance looks like and what we are seeing in the field and share that information. It's also good for the industry and we'll share that with them too in terms of

where they can look at improving worker performance and where they should be auditing people in the field and what they should be looking for in comparison to what the inspector is finding.

MR. MOSES: Yeah, Colin Moses for the record too.

I will just add to that too, the effectiveness of these. So you may recall in previous editions we spoke about our portage gauge strategies so we notice a general downward trend in performance of that sector. And so a big component of that strategy is this transition to field inspections or performance-based inspections.

And as a result of that increased focus as well as increased outreach to that particular subsector, we have seen significant improvements in their performance in recent years. And it's a very distinct uptick when we launch that strategy. So I think these -- that really does prove that these are effective.

THE PRESIDENT: Thank you.

Any other final questions?

So look, we may sound like we are giving you a rough time but I think this is a good report, lots of information and it's improving every year. You know, you guys should not be afraid to give us more numbers and more

data but the analysis going behind them, it's a little bit more interesting to explain the data.

And I can't resist. On slide 3, Marc, I want this in every presentation to the Commission that will be continuously updated so everybody knows all the time when all our regulatory oversight reports are coming up. This is very useful so everybody knows when the next one will be.

So thank you. We will now break for lunch and come back -- oh, okay. I need to follow procedures here.

This concludes the meeting and we will break for lunch and then we will start the public hearing. So we will come back at 1:15.

Thank you.

--- Whereupon the meeting concluded at 12:34 p.m. /
La réunion s'est terminée à 12 h 34