



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

# KEEPING NUCLEAR SAFE— LOOKING BACK AND BEYOND

CANADIAN NUCLEAR SAFETY COMMISSION  
ANNUAL REPORT 2010-11

**65<sup>TH</sup> ANNIVERSARY**

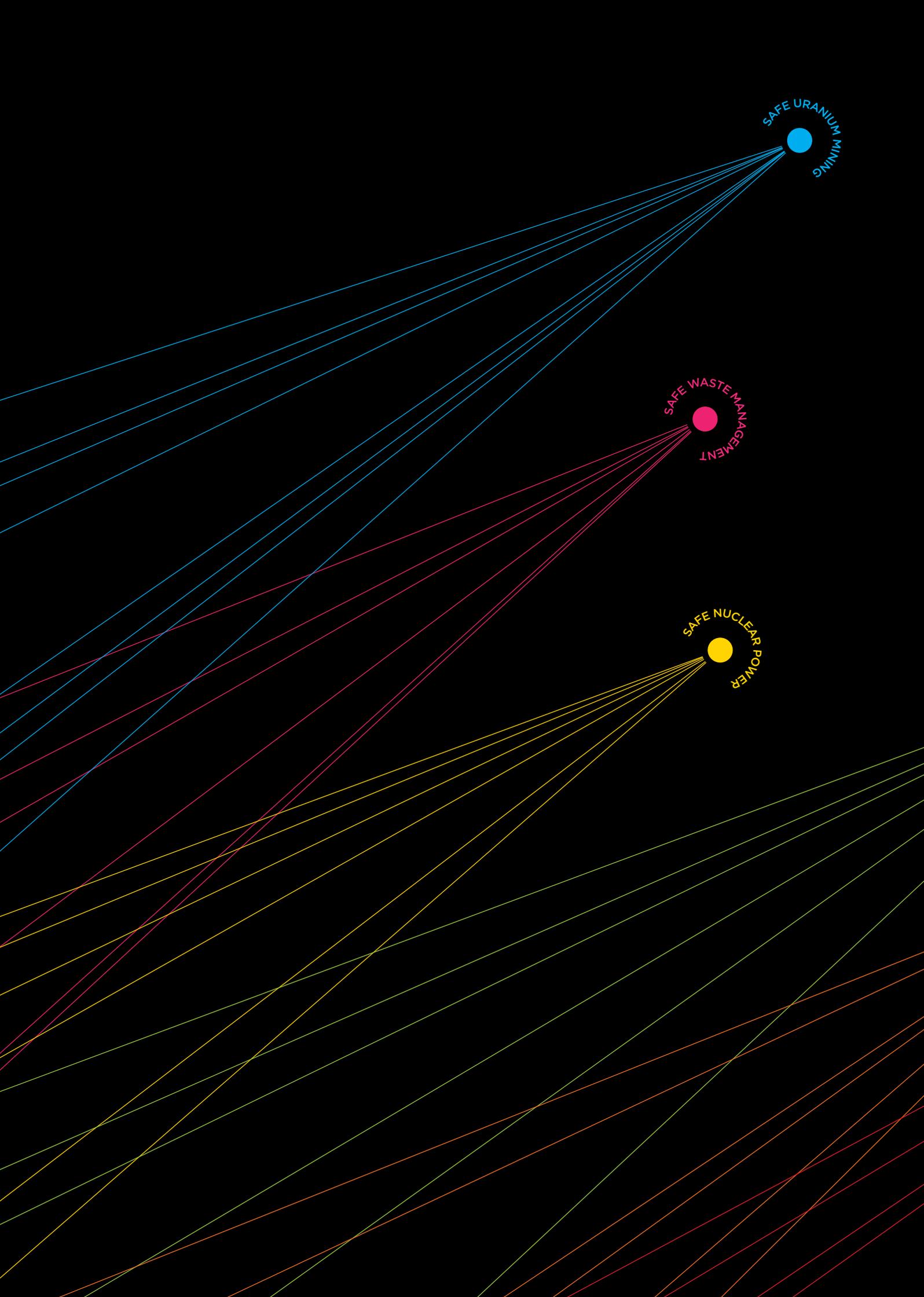


Canada

SAFE URANIUM MINING

SAFE WASTE MANAGEMENT

SAFE NUCLEAR POWER



**A**FTER 65 YEARS OF NUCLEAR REGULATION IN CANADA, our country's nuclear safety record is second to none. Over time at the CNSC we have learned the value of looking back and looking beyond to guide our process of continuous evolution. Following recent events in Japan, the nuclear industry is in the spotlight more than ever. Reflecting on our history and achievements while keeping a close eye on current events in the nuclear sector has readied us to meet future challenges. As Canada's nuclear industry continues to evolve, so will we. But our core commitment to Canadians will not change: **we will never compromise safety.**



# Letter to the Minister

The Honourable Joe Oliver  
Minister of Natural Resources Canada  
Ottawa, Ontario

Sir:

I have the honour of presenting to you the *Annual Report of the Canadian Nuclear Safety Commission for the fiscal year ending March 31, 2011*. The report has been prepared and is submitted in accordance with Section 72 of the *Nuclear Safety and Control Act*.

**Michael Binder**

President and Chief Executive Officer  
Canadian Nuclear Safety Commission

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# Message from the President

As the Canadian Nuclear Safety Commission (CNSC) celebrates 65 years as Canada's independent nuclear regulator, I'm inspired to reflect on the many milestones we have achieved. This annual report celebrates our past, offering a historical perspective amid this year's activities. Canada's nuclear activities have grown significantly since 1946 and, as a mature nuclear nation, we have much to be proud of: above all, steady progress over time toward a peaceful and productive nuclear regime, and a safety record second to none in the world. All of the work we do gets us closer to our vision to be the best nuclear regulator in the world.

Last year presented some unexpected challenges, during which our staff responded swiftly, effectively and with transparency. As examples, throughout the first month of the Japan crisis and the concurrent three-week long Darlington Joint Review Panel hearing, all of my colleagues at the CNSC worked tirelessly and often around the clock. Amid these challenges, our team of 850 dedicated employees embraced the CNSC's role to protect the health, safety and security of people and the environment, and to implement Canada's international obligations for the peaceful use of nuclear energy. Meanwhile, staff ensured the safe operation of all nuclear-related facilities and activities in Canada.

This annual report highlights just a few of our most important achievements. Above all, each and every one of our licensed facilities continue to operate safely and in compliance with our regulatory requirements.

Some achievements include the authorizing Atomic Energy of Canada Limited to resume medical isotope production at Chalk River after 15 months of repairs. We established the Participant Funding Program, which provides members of the public, Aboriginal groups and other stakeholders with financial assistance so they can more fully participate in our regulatory decision-making process. We participated in the Darlington Joint Review Panel, Canada's first JRP for a new nuclear power plant.

The public is focused on the CNSC these days. Our ability to provide up-to-the-minute information to our stakeholders and federal colleagues has made us the go-to organization for information on nuclear and nuclear safety. More than that, our successes last year cemented the CNSC's reputation as a world class regulator. We are more respected than ever by our peers in government, our international counterparts and nuclear industry stakeholders.

Even as we reflect on our history and achievements, we are determined to meet the regulatory challenges of the future. As Canada's nuclear industry evolves, we will continue to evolve alongside it. And our core commitment to Canadians will not change: we will never compromise safety.

With respect,

A handwritten signature in black ink that reads "M. Binder". The signature is written in a cursive, flowing style.

Michael Binder

# Our Vision, Mission and Mandate

## VISION

To be the best nuclear regulator in the world.

## MISSION

Regulating nuclear activities to protect the health, safety and security of Canadians and the environment, and to implement Canada's international commitments on the peaceful use of nuclear energy.

## MANDATE

Under the *Nuclear Safety and Control Act* (NSCA), the CNSC achieves its mission by:

- regulating the development, production and use of nuclear energy in Canada, as well as the possession, use and transport of nuclear substances
- implementing measures, to which Canada has agreed, on the non-proliferation of nuclear weapons and nuclear explosive devices
- providing objective scientific, technical and regulatory information about the effects of nuclear activities on the environment, health, safety and security of people

Other key acts, regulations, directives and treaty obligations:

- The CNSC complies with the Government of Canada's December 2007 *Directive to the Canadian Nuclear Safety Commission Regarding the Health of Canadians*. This directive requires the CNSC, when regulating the production, possession and use of nuclear substances, to consider the health of Canadians who—for medical purposes—depend on nuclear substances produced by nuclear reactors.
- The CNSC administers the *Nuclear Liability Act* and, as a responsible authority under the *Canadian Environmental Assessment Act*, carries out environmental assessments for nuclear projects in accordance with this legislation.
- The CNSC is the Canadian authority responsible for ensuring that Canada is in compliance with its obligations arising from the Agreement Between the Government of Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the *Treaty on the Non-Proliferation of Nuclear Weapons* and the Additional Protocol to this agreement.

### LOOKING BACK

In 1946, Canada's Parliament passed the *Atomic Energy Control Act*, creating the Atomic Energy Control Board (AECB) and giving it the power to regulate and license the development and use of atomic energy. The *Nuclear Safety and Control Act* (NSCA) came into effect in May 2000, establishing the CNSC as the AECB's successor. The CNSC is an independent quasi-judicial administrative tribunal with jurisdictional regulatory authority over nuclear-related activities in Canada.

Over 65 years, Canada's nuclear sector has evolved tremendously, the laws and regulations that govern it continue to progress, to keep pace with a changing industry. This year, we celebrate the steady evolution of legislation and policy that has established Canada as having one of the world's most comprehensive nuclear safety regimes.

# CNSC Overview

## **A LICENSING, REGULATORY AND OVERSIGHT ROLE**

Under the NSCA, the CNSC licenses, regulates, and establishes technical requirements for all nuclear-related activities in Canada. All those wishing to carry out nuclear-related activities—including activities related to the design, construction, operation, decommissioning and abandonment of nuclear facilities and the production, possession and use of nuclear substances—must first obtain a licence from the CNSC. We provide guidance to applicants and licensees about the regulatory requirements that apply to them.

Our staff conduct independent evaluation and research to support our requirements and decisions. We also participate in international initiatives to advance our knowledge and improve our safety and regulatory regimes for such issues as new nuclear reactor designs, aging facilities, decommissioning practices, and the effects of radiation on people and the environment. The Commission Tribunal—the central decision-making body of the CNSC—in addition to making licensing decisions for all major nuclear facilities in Canada, requires periodic reports on the safety of nuclear facilities and regularly reviews key information on events and incidents that occur.

The CNSC's Audit Committee with three external and two internal members reinforces the effectiveness of internal audits. It oversees key areas and processes such as values and ethics, risk management, management control and accountability reporting.

## **A MANDATE TO ENSURE SAFETY**

The CNSC uses risk-informed regulatory approaches to inform our licensing and compliance activities. This means that we assess the probability of a nuclear-related event occurring, the impacts it would have on normal operations and the resulting consequences if the event occur. We also ensure that mitigation measures are in place to prevent such occurrences.

For facilities or activities where accidents or malfunctions could have severe consequences, the CNSC requires licensees to implement operating procedures that include multiple layers of defence. This defence-in-depth approach helps secure critical areas such as nuclear fuel components to protect workers, public and the environment. Each of the facilities have specific safety programs, which provide additional lines of defence. That way, if a safety system or program fails, others are in place to keep the facility and workers safe, limit potential emissions and provide enough time to correct the original problem.

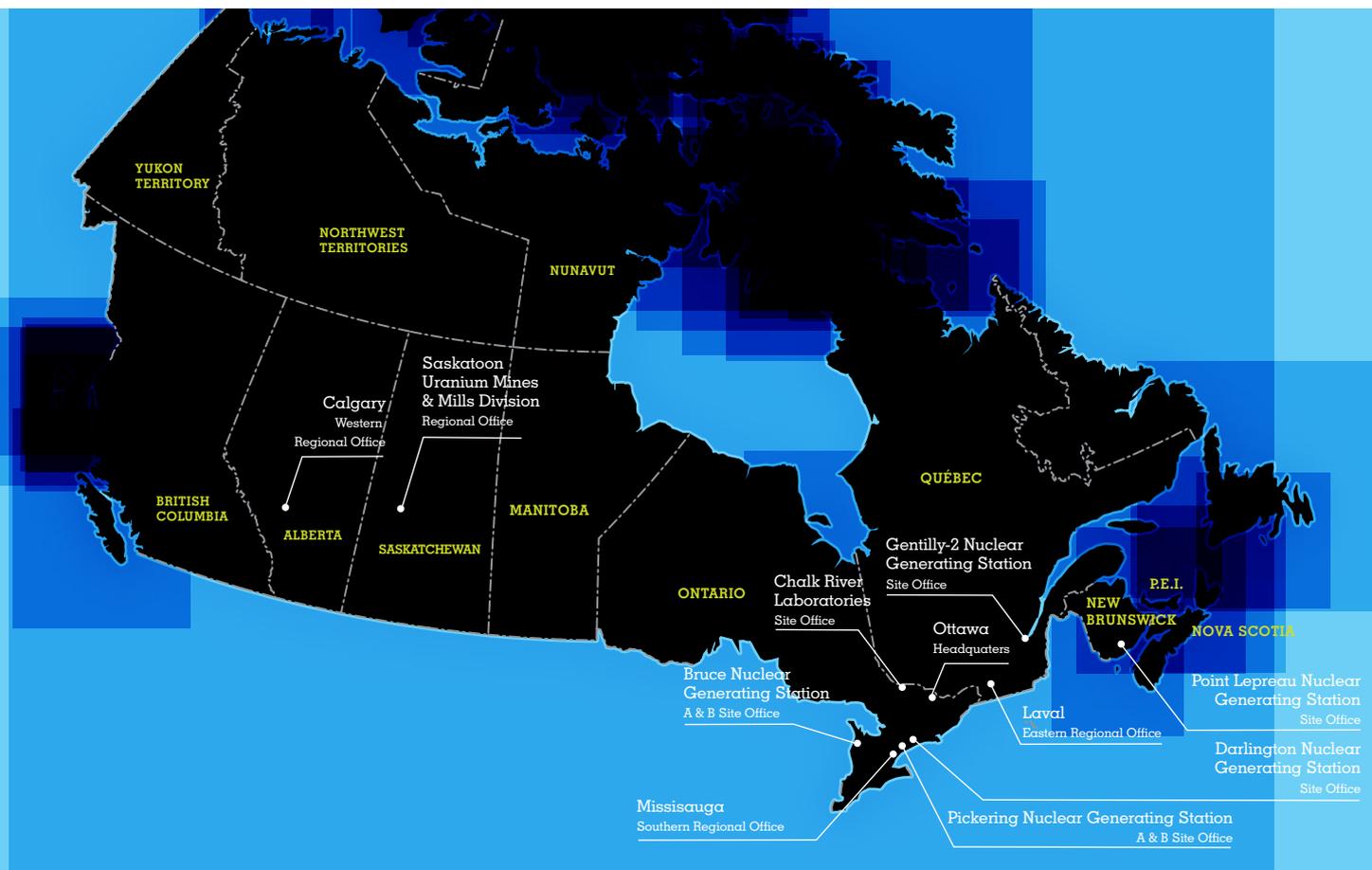
The CNSC conducts regular inspections to ensure licensees are adhering to their licence requirements.

## **A FOCUS ON SAFETY AND PREPAREDNESS**

All licensees are required by the NSCA to demonstrate to the CNSC that their nuclear energy workers are fully trained to carry out their duties with competence. We also require all nuclear facilities to have comprehensive emergency preparedness programs. We work with nuclear operators, municipal, provincial and federal government agencies, first responders and international organizations so that we are ready to respond to a nuclear emergency at any time.



Our duty officer, available 24 hours a day, receives reports of actual or potential incidents and initiates prompt regulatory responses to ensure all appropriate measures are taken to protect people and the environment. In the event of an emergency involving a nuclear facility or radioactive materials, the public and licensees can phone the CNSC duty officer's emergency telephone line at 613-995-0479.



## A skilled and committed staff

We are able to fulfill our mandate because of the work of dedicated and skilled employees. This includes individuals at our Ottawa headquarters, offices at each of Canada's five power reactor sites, a site office at Chalk River Laboratories and four regional offices across the country. Roughly half of our technical staff at the CNSC have doctorate or master's degrees in fields covering nuclear engineering, chemistry, physics, environmental and radiation sciences, and epidemiology.

### LOOKING BACK

From 1946 to 1960, the Atomic Energy Control Board, the CNSC's predecessor, operated with a skeleton staff of two or three supported by other departments overseeing the nuclear sector in Canada. During this period, the public did not participate in the regulatory process.

By 2011, the CNSC has grown to a staff of 850, working across the country to keep Canadians safe. Since the 1970s, the public has been increasingly participating in key steps of the regulatory process.

# A Year of Firsts

**T**he CNSC continually encounters new situations and challenges, some expected and others unplanned. Regardless, we are always ready and steadfast in our role to protect the health, safety and security of people and the environment, and to implement Canada's international obligations for the peaceful use of nuclear energy.

Last year, we proved that we could respond to unexpected matters swiftly, effectively and with transparency. Amid such challenges, we pursued a wide range of key initiatives under our core work as well as making significant headway under four targeted priorities.

## READY TO RESPOND

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Aftermath of the tsunami at the Fukushima Daiichi nuclear power plant.

### Rapid response to events in Japan

The CNSC responded with diligence and commitment to the earthquake and tsunami in Japan and the resulting damage to the Fukushima Daiichi nuclear power plant. We immediately activated our Emergency Operations Centre, engaging a multi-disciplinary team of technical experts and communications specialists to keep Canadians apprised of events and risks. For a full story of our activities, see page 17.

### Thorough review of application to transport steam generators

The CNSC considered an application from Bruce Power to transport 16 decommissioned steam generators to Sweden for recycling by ship through the Great Lakes and St. Lawrence Seaway.

In light of public concern over the transport of nuclear-related substances, the application was heard by the full Commission Tribunal—even though such low risk matters are usually handled by officers designated by the Tribunal. After considering staff recommendations and submissions from Bruce Power, as well as submissions from intervenors, the Commission Tribunal issued a transport licence and certificate to Bruce Power for the shipment.

### First conviction under the *Nuclear Safety and Control Act*

A Canadian was found guilty and sentenced to jail for the attempted export of controlled nuclear equipment to Iran without authorization from the CNSC. The individual was also convicted of eight other offences under other federal legislation, including the first conviction under the *United Nations Act* in relation to the *Regulations Implementing the United Nations Resolutions on Iran*.

## CORE WORK

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### Active Commission Tribunal

The Commission Tribunal held 9 meetings and 11 public hearings, in which 489 intervenors participated, and conducted 28 abridged hearings.

### A single process for environmental assessment and licence application review

The Darlington Joint Review Panel (JRP) hearing garnered much attention as it started on the heels of the nuclear-related events in Japan. Preparing for and participating in the JRP hearing was a huge undertaking for the CNSC. In addition to completing the review of Ontario Power Generation's (OPG) environmental impact statement and application for a licence to prepare site, the CNSC had to prepare for more than 150 hours of presentations; review more than 20,000 pages of information from OPG, federal departments and agencies and intervenors; and hear from 284 registered intervenors. These hearings included the first environmental assessment under the *Canadian Environmental Assessment Act* for a new nuclear power plant in Canada. It was

also the first time a federal panel conducted an environmental assessment and licence application review for a major nuclear project under a single process.

### Detailed pre-licensing review

The CNSC provides the optional service of a pre-licensing review in assessing a vendor's design for a nuclear power plant or small reactor. The review is intended to be undertaken by a reactor vendor before an applicant submits a licence application to the CNSC.

The following vendors are currently in various phases of pre-project design reviews:

- AECL, EC 6 (Enhanced CANDU 6)—Phase 1 has been successfully completed and Phase 2 will be completed in early 2012.
- AECL, Advanced CANDU Reactor ACR-1000—Phases 1 to 3 have been successfully completed.
- ATMEA—Phase 1 will be completed in late 2012.
- AREVA, EPR—Phase 1 is currently on hold, at the request of the vendor.

## CORE WORK



- Westinghouse, AP1000—Phase 1 has been completed.
- Babcock & Wilcox mPower—Phase 1 will be completed in 2013. It is worth noting that the CNSC is the first nuclear regulator to review this design, one of the first small modular reactor designs in the world.

### Stringent oversight

The CNSC carried out approximately 2,000 inspections and managed close to 3,300 licences in 2010–11. We also issued eight orders (usually for a licensee to cease use of a nuclear-related device until the licensee has complied with CNSC orders) to licensees using nuclear substances, issued four requests or notices to licensees, decertified two Exposure Device Operators and decertified one exposure device. The CNSC certified 25 and authorized 29 nuclear operators, and renewed the certification of 90 exposure

device operators. In addition, 441 export licences and 80 import licences were issued pursuant to the *Nuclear Non-Proliferation Import and Export Control Regulations*, while 187 export licences were issued for risk-significant radioactive sources.

### Commitment to meaningful public and Aboriginal participation



We established the Participant Funding Program, which provides members of the public, Aboriginal groups and other stakeholders with financial assistance so that they can more fully participate in our regulatory decision-making process. The CNSC announced that it was providing its first Participant Funding—allotting up to \$75,000—for the renewal of the Chalk River Laboratories operating licence.

## THE PRIORITIES: OUR 4 Cs

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### Commitment to ongoing improvements

Under the umbrella of the Harmonized Plan (a compilation of internal improvement initiatives), we have completed 26 of the 32 initiatives recommended by the International Atomic Energy Agency's Integrated Regulatory Review Service mission from 2009. The remaining six initiatives will be completed in 2011–12.

### Clarity of regulatory requirements

We published our Regulatory Instruments Index (RII) to a database that allows easier, more user-friendly searching of regulations and other documents, making it clear to applicants and licensees what regulations apply and what we expect. For a complete list of the regulatory projects completed this year, please refer to Annex B on p. 84. You can also search the RII on our Web site at [nuclearsafety.gc.ca](http://nuclearsafety.gc.ca).

### Capacity for action

The CNSC was selected as one of the top 25 employers in the National Capital Region. We are proud of this achievement and continue to implement programs and activities to ensure we retain our highly talented workforce. In particular, we invested significantly in training and development for employees during the year and implemented regular surveys to take the pulse of our employees and their work environments.

The CNSC staff also care about their community and actively participate in the Government of Canada Workplace Charitable Campaign. Last year, we raised more than \$212,000—significantly above our initial campaign goal.

## CNSC REGULATORY DOCUMENTS PROVIDE CLARITY TO OUR REGULATORY FRAMEWORK

### REQUIREMENTS

These are mandatory elements. Licensees or applicants must meet our requirements to obtain or retain a licence or certificate to use nuclear materials or operate a nuclear facility. Requirements are set out in the NSCA, regulations, licence conditions and regulatory documents.

### GUIDANCE

Guidance elements provide direction to licensees and applicants on how to meet CNSC requirements. Guidance elements are spelled out in guidance documents. For a full list of regulatory documents, please visit our Regulatory Instruments Index at [nuclearsafety.gc.ca](http://nuclearsafety.gc.ca).

## THE PRIORITIES: OUR 4 Cs

### Communications

This year marks the 65<sup>th</sup> anniversary of Canada's independent nuclear regulator. The CNSC shared related historical information, via an interactive timeline, messages, staff anecdotes and more to celebrate 65 years of nuclear safety in Canada.

We engaged in and developed a number of communications activities last year. Through our new CNSC 101 information sessions, our

participation in conferences and extensive outreach activities, we communicated with Canadians about who we are and what we do. We also covered such topics as communicating with the public, radiation risk assessment, and the future of nuclear energy during our popular speakers series. Our most essential communications this year were about the Japan earthquake and ensuing nuclear events, as well as the Darlington JRP hearings—as evidenced by a 35-percent increase in traffic on our Web site during these periods.



The CNSC created an online interactive module where you can learn about Canada's nuclear history. Visit [nuclearsafety.gc.ca](http://nuclearsafety.gc.ca) for more information.

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SAFE

ENVIRONMENT





A CNSC inspector at a proposed underground mining exploration site.

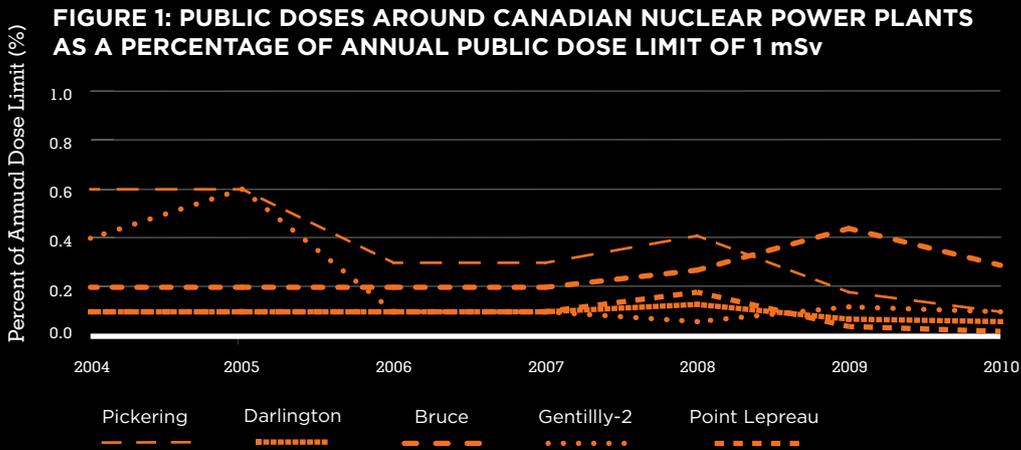
# A comprehensive, participatory approach

**A central role of the CNSC is the regulation of nuclear-related activities to protect humans and the environment from any adverse effects.**

**E**very year, the CNSC embraces a wide range of environment-related activities, including environmental assessments connected to nuclear-related projects. We also track radiation doses to the public and the environment in locations where nuclear substances or activities could have an effect. Last year, we completed 11 out of 25 active environmental assessments ensuring that proposed nuclear-related projects meet regulatory requirements before being allowed to proceed.

The design and construction of a new laboratory infrastructure was completed, allowing the CNSC to purchase and install new equipment for instrument calibration and analytical services. The CNSC will seek International Organization for Standardization (ISO) laboratory accreditation, will provide training at internal, national and international levels and will conduct research and development activities in support of its research program. Nationally, the CNSC laboratory will cooperate with Defence Research and Development Canada, universities and others and, internationally, with the Analytical Laboratories for the Measurement of Environmental Radioactivity network of the IAEA.

# Safety notes



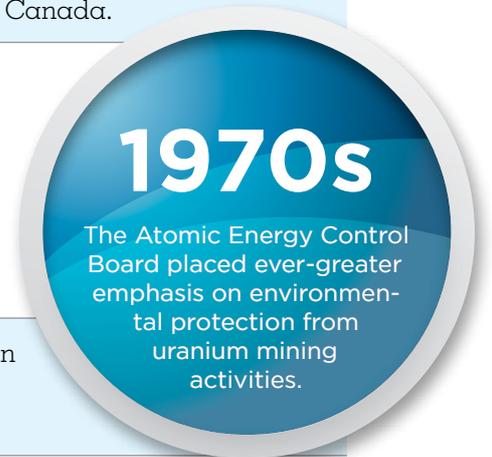
From 2004 to 2010, radiation doses to members of the public living around nuclear power plants were under one percent of regulatory dose limits.

The CNSC hosted an open house in Ottawa for members of the public and stakeholders on the results of its Tritium Studies Project. The project included research studies on tritium releases in Canada along with the evaluation of tritium processing facilities exercising the best practices around the globe. The research undertaken will enhance information used in the regulatory oversight of tritium processing and tritium releases in Canada.

In 2008, the CNSC approved a project for the protection of groundwater, and the project was completed in 2010. The final report of the project charter recommends that the CNSC develop a document that would strengthen the regulatory framework to protect the groundwater at nuclear facilities in Canada. The CNSC is developing a regulatory document that requires licensees to protect groundwater.

Staff initiated discussions with scientists from the former Soviet Union to conduct collaborative environmental research at uranium mining and legacy sites that have common characteristics.

Last year, CNSC staff contributed significantly to the International Atomic Energy Agency's (IAEA) Environmental Modelling for Radiation Safety (EMRAS II) Program by participating in several working groups. EMRAS II will improve data and models for assessing the effects of radiation on the environment.



# spotlight

## Protecting Canadians from harm *A swift response to the Japan crisis*

**O**n March 11, 2011, north-eastern Japan experienced a magnitude-9.0 earthquake and subsequent 14-metre high tsunami, which caused a serious nuclear incident at Tokyo Electric Power Company's Fukushima Daiichi nuclear power station.

Following the earthquake, the CNSC immediately activated its Emergency Operations Centre to deal with the emergency activities that eventually spanned many departments and agencies. The CNSC took swift action calling on a multi-disciplinary team of experts who worked around the clock during the crisis.

Our primary goal was to analyze information and provide advice to the Canadian Embassy and help protect the estimated 11,000 Canadians in Japan. We also analyzed the risk the disaster posed to people in Canada and the Canadian environment. We dedicated a team to provide Canadians with a continuous, complete and clear flow of reliable nuclear-related information on the situation in Fukushima.

Our Web site became a site of choice in Canada, with more than 10,000 daily visitors to the Japan section. We provided media interviews to answer questions and offer insights into the Japan situation. We deployed a nuclear expert to the International Atomic Energy Agency's Fukushima Accident Coordination Team.

We required all major nuclear facilities in Canada to review the lessons learned from the Japanese earthquake. All facilities were ordered to re-examine their safety cases (with a focus on external hazards, measures to prevent or mitigate severe accidents, and emergency preparedness), take immediate action where necessary and report on any long-term measures needed to address significant issues.

We also established an internal task force to evaluate the operational, technical and regulatory implications of the events in Japan to Canadian nuclear power plants. The task force will make both long- and short-term recommendations about any design modifications or improvements to emergency response capabilities that are needed at Canadian plants. The task force will also recommend any necessary changes to the CNSC's regulatory requirements, inspection programs and policies for existing and new nuclear power plants and will inform external task forces and working groups.



**The CNSC's Emergency Operations Centre worked around the clock during the Japan crisis.**

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SAFE

URANIUM

MINES AND MILLS



The CNSC inspected the McClean Lake uranium mining operation, which is shut down for maintenance, three times last year.

# A safe source of energy

**The CNSC conducts multiple inspections every year at Canada's uranium mines and mills, ensuring that workers and the public are protected from harmful levels of radiation and other potential hazards, and that all activities are environmentally responsible and safe. In addition, it regulates the handling and transportation of uranium in Canada.**

**D**uring 2010–11, the CNSC continued its effective regulatory oversight of Canada's uranium mines and mills by conducting inspections and taking decisive regulatory action to protect the public, workers and the environment.

Of an estimated 30,000 people working in the Canadian nuclear industry, about 4,700 work in the uranium mining sector. Occupational health and safety is an important indicator of the industry's performance. Inter-industry comparison statistics for lost-time incidents (LTIs) over the past five years show uranium mining to be among the safest industrial occupations for workers. An LTI occurs when a worker must take time off work due to an injury. See table 1 on the following page for more information.

In its oversight role last year, the CNSC conducted 26 inspections at Canadian uranium mines and mills, all of which are located in Northern Saskatchewan. The three operating

sites—Key Lake, Rabbit Lake, and McArthur River—were inspected an average of six times, while the McClean Lake Operation, shut down for maintenance, was inspected three times. Cigar Lake, currently under construction, was inspected five times. As in other years, CNSC inspectors worked closely with provincial inspectors from Saskatchewan Labour and Saskatchewan Environment to monitor licensees' occupational health and safety programs, including radiation protection. Personal dose records for operating mines and mills from 2006 to 2010 show that radiation doses to workers were safe and well below regulatory limits.

As a result of an inspection—which confirmed the deterioration of the former Gunnar mine site—the CNSC issued an order to Saskatchewan Research Council (SRC) in Saskatoon, Saskatchewan. This regulatory action ensured the ongoing safety of the Gunnar mine site

while the environmental assessment for the rehabilitation project is underway. The order required SRC to complete specific tasks to secure the site, in order to remove potential risks to persons accessing the site without authorization.

In addition, the CNSC continued to review applications from three mining companies that

have expressed interest in establishing new mining operations: Strateco Resources for the Matoush Underground Exploration project (Quebec), AREVA Resources Canada for its Midwest (Saskatchewan) and Kiggavik projects (Nunavut), and Cameco Corporation for the Millennium Mine project (Saskatchewan).

**TABLE 1: INTER-INDUSTRY COMPARISON OF LTIs\* IN SASKATCHEWAN FROM 2006 TO 2010**

Industry description	2006	2007	2008	2009	2010
Open-pit mining (includes McClean Lake)	0.68	1.08	0.93	0.50	0.69
Underground soft rock mining	1.22	1.39	2.05	1.62	1.27
Underground hard rock mining	3.17	2.79	2.38	1.36	1.17
Construction trades	7.53	7.19	6.46	5.75	4.6
Automotive service shops towing	3.87	3.72	3.31	2.91	2.36
Operation of oil wells	0.82	1.21	0.73	0.97	0.76
Servicing of oil wells	4.44	3.74	3.78	2.98	3.82
Forestry Operations	6.11	4.27	5.23	5.11	4.4
Refineries/upgrader	1.15	0.78	1.46	1.31	1.37
Machine shops	12.87	11.15	9.59	7.28	6.37
Government of Saskatchewan	3.75	3.02	3.05	3.23	3.13

Source: Saskatchewan Workers' Compensation Board—Statistical Supplement

\* An injury where an employee is compensated for a loss of wages following a work-related accident (or exposure to a noxious substance), or receives compensation for a permanent disability with or without any time lost in his or her employment (for example, hearing loss from excessive noise in the work place)

Uranium mines in Saskatchewan are categorized as underground hard rock mines, although McClean Lake is an open-pit mine.

## Safety notes

The CNSC released, for public consultation, a discussion paper on the management of uranium mine waste rock and mill tailings to be used in the development of future regulatory documents. The document sets out CNSC's expectations for the long-term management of uranium mill tailings and waste rock, resulting from the site preparation, construction, operation and decommissioning of new uranium mine or mill projects in Canada.

During the reporting period, the number of reportable events continued to fall at Canada's uranium mines and mills (from 23 in 2009, down to 20 in 2010). Licensees are required to notify the CNSC of events or situations outside normal operations, and the CNSC follows-up to ensure the licensee has a plan in place to prevent such events from reoccurring.

In 2010–11, there were no exceedances of regulatory limits of effluent discharge to the environment from uranium mining.



# spotlight

## Transport of uranium

### *Safe decontamination of Cameco uranium shipment*

**I**n January 2011, Cameco Corporation informed the CNSC that a ship transporting uranium concentrate, commonly called 'yellowcake', had encountered extremely rough seas in the Pacific. This resulted in damage to some of the shipping containers in the cargo hold. As a precaution, Cameco requested that the ship travel back to Canada for further investigation. The ship arrived in British Columbia for inspection on January 15.

Given the properties of uranium concentrate and the precautions that had been taken during transportation, the CNSC determined that the risk to the ship's crew, the response team and the vessel itself was low. All the uranium remained sealed off in one of the ship's cargo holds, protecting both the crew and the environment.

In response to this event, the CNSC sent a team to inspect the vessel and monitor Cameco's response team and clean-up activities, ensuring that the health and safety of the workers, the public and the environment continued to be protected.



Uranium concentrate shipping containers, like these, are licensed by the CNSC.

The procedure for cleaning up yellowcake is similar to that used to clean up other hazardous powders. Avoiding direct contact, inhalation and ingestion of the substance greatly reduces the health risks. Radiation levels of uranium concentrate are quite negligible at a short distance (four to five meters) from a drum.

CNSC staff conducted an independent verification and confirmed that no residual contamination of uranium concentrate remains in the cargo hold, and that all surface contamination has been removed. CNSC specialists reviewed the final survey results and were satisfied that the vessel meets the surface decontamination criterion that was approved by the CNSC. The vessel was allowed to return to its normal use.

The Commission Tribunal was fully briefed by Cameco and was satisfied by the actions taken. The CNSC further confirmed that no risk to health and safety of the crew, the public or the environment resulted from this incident.

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SAFE

NUCLEAR  
PROCESSING  
AND RESEARCH





The CNSC regularly inspects Cameco's Port Hope Conversion Facility, the only uranium conversion facility in Canada.

# Regulatory regime for vital facilities

**Our expert staff regularly inspect licensed nuclear facilities, ensuring that licensees comply with all regulations and that facilities are operated safely and securely.**

**A**s always, the CNSC's focus last year in its nuclear processing and research oversight role was to protect people who live and work near nuclear facilities, and to protect the surrounding environment. Our activities in this regard were widespread, as nuclear-related processing and research touches many aspects of Canadians' lives. It includes activities and outputs from uranium processing facilities as well as all nuclear research reactors and accelerators. The latter facilities are used for scientific research, training, materials testing and for producing radioisotopes for medical purposes.

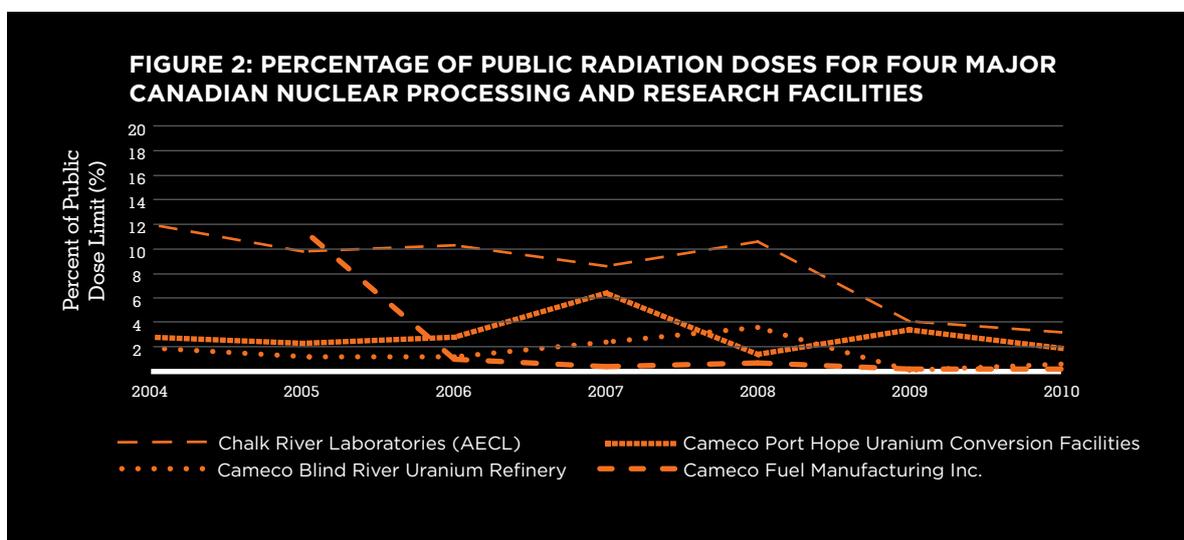
While most Canadian nuclear processing and research facilities emit small or negligible effluents to the environment, the CNSC subjects them to rigorous licensing and inspection. Highlights of our activities for 2010–11 included public hearings into SRB Technologies' application for a five-year renewal of its operating licence. We also held a licence-renewal hearing for two GE Hitachi facilities, granting a single licence for both facilities. We conducted mid-term licence reviews for Shield Source Inc. and McMaster's Nuclear Research Reactor and held public hearings that led us to authorize Atomic Energy of Canada Limited to resume operation of the National Research Universal (NRU) reactor.



Technicians lower remote cameras into the NRU reactor to inspect the exterior of the reactor vessel.

## Safety notes

The annual safe radiation dose limit for members of the public is 1 millisievert (mSv). Radiation doses to the public continued to be well below regulatory limits.



Note: The scale in the above figure only represents 20% of the 1 mSv annual public dose limit.

In 2010–11, there were no events with consequences to public health or the environment.

The National Research Universal (NRU) Reactor Long-term Management Project was the first environmental assessment (EA) to be initiated and completed through a streamlined EA process.

**1957**

The National Research Universal (NRU) reactor begins operating at Chalk River Laboratories.

# spotlight

## The National Research Universal reactor return to service

*Bringing a critical resource safely back online*

**T**he NRU reactor, located at Chalk River Laboratories, is one of several major producers of medical isotopes in the world.

In May 2009, during a planned NRU shutdown, Atomic Energy of Canada Limited (AECL) confirmed that the reactor vessel had a small leak of heavy water. AECL determined that the leak was due to corrosion of the reactor vessel. The discovery was followed by the prolonged shutdown of the NRU reactor and a 15-month vessel repair project.

CNSC staff worked diligently to determine exactly what was required to recommend a return to service for the NRU reactor. This included determining all the applicable regulatory requirements from the licence, expectations on how to meet those requirements and additional information that AECL would have to provide to demonstrate that the NRU reactor was safe for continued operations.

To add clarity and transparency to the process, the CNSC and AECL signed an NRU reactor restart protocol that contained the CNSC's requirements and expectations. In addition, a protocol was established to prepare the necessary information for the CNSC to assess the continued operation of the NRU reactor beyond the current licence period. The NRU licence expires October 31, 2011.

Following a public hearing on July 5, 2010, the Commission Tribunal authorized AECL to resume the operation of the NRU with conditions. The first batch of medical isotopes was shipped by AECL in August 2010.

To ensure NRU reactor's fitness for service, AECL is required, in addition to regularly scheduled maintenance shut downs, to inspect it at least annually, continue optimizing the corrosion mitigation measures, ensure that the condition of all systems, structures and components important to safety were acceptable, and correct the organizational causes that contributed to the event. CNSC staff have confirmed that, to date, actions are being completed in accordance with plans.



**The CNSC and AECL sign the NRU reactor restart protocol.**



SAFE

NUCLEAR POWER



The CNSC has re-licensed OPG's Pickering A NPP until June 2013.

# Stringent oversight of nuclear power plants

**Nuclear energy contributes significantly to the generation of electricity in Canada. With 20 reactors in three provinces, providing more than 12,600 megawatts of power, about 15 percent of Canada's electricity originates from this source.**

**T**he CNSC is responsible for, among other activities, regulating the operation of nuclear power plants (NPPs) by issuing licences and ensuring compliance with these licences through verification, enforcement and reporting.

In 2010–11, the CNSC issued licences for Pickering A, Gentilly-2, and Point Lepreau facilities. CNSC staff improved their licensing process for nuclear power plants by standardizing power reactor operating licences and introducing the Licence Conditions Handbook.

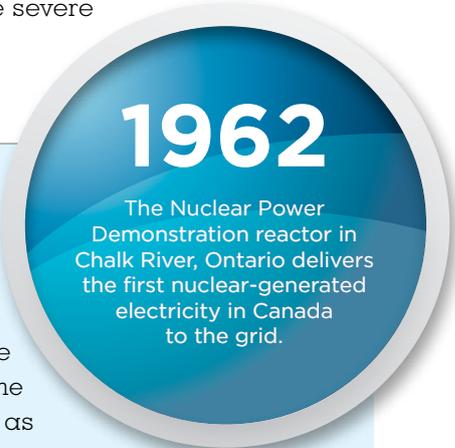
The Handbook clearly and transparently sets out the compliance verification criteria as well as any CNSC recommendations or guidance for the licensee.

To verify compliance with the regulatory requirements, the CNSC conducted numerous inspections, assessments, reviews and evaluations of licensee programs, processes and safety performance throughout the year. This work varied in complexity and length with more than 2,600 findings analyzed by CNSC staff.

## Safety notes

The CNSC required all NPP operators in Canada to review the lessons learned from the Japanese earthquake. All facilities were ordered to re-examine their safety cases (with a focus on external hazards, measures to prevent or mitigate severe accidents, and emergency preparedness), take immediate action where necessary and report on any long-term measures needed to address significant issues.

The International Nuclear and Radiological Event Scale (INES) classifies radiological events on a scale of 0 to 7 (7 being the most severe) so that people can understand the safety significance of such events (the scale is currently being reviewed post-Fukushima). An earthquake occurred in parts of Southern Ontario and Eastern Québec on the afternoon of June 23, 2010. The earthquake was rated at 5.0 on the Richter Scale and was felt at the Darlington, Pickering and Gentilly-2 nuclear power plants, as well as at the Chalk River Laboratories. All licensees' operations were not affected by the earthquake. The preliminary INES rating for this event was subsequently confirmed as 0 (below scale).



# 1962

The Nuclear Power Demonstration reactor in Chalk River, Ontario delivers the first nuclear-generated electricity in Canada to the grid.



Inspecting a turbine at Darlington NPP.

## MAJOR PROJECTS AND INITIATIVES

The Ontario Power Generation's (OPG) **Pickering A** was relicenced for three years, from July 1, 2010 to June 30, 2013.

OPG successfully completed the safe storage project for Units 2 and 3 at the Pickering A. Units 2 and 3 have been defueled, and the moderator and primary heat transport systems have been drained and dried. The containment boundary was moved to the reactor building bulkheads, containment penetrations cut and capped, and systems were electrically

de-energized. Safe storage ensures these Units are kept in a safe, non-operating, environmentally sound condition.

OPG announced that all units at **Pickering A and B** will be shut down permanently by the end of 2020. OPG intends to invest \$300 million at Pickering B to ensure continued safe and reliable operation for the remaining operating period. OPG submitted a continued operations plan, which CNSC staff reviewed before it was presented to the Commission Tribunal in March 2011. The plan is then to leave all units in a safe storage state for approximately 30 years before the decommissioning activities are started.

At **Darlington**, OPG continued the planning of its refurbishment project that is expected to start in late 2016. CNSC staff has accepted the Darlington Integrated Safety Review (ISR) Basis document. (An ISR is a comprehensive assessment of plant design, condition and operation and an ISR basis document sets out the scope and methodology for how the ISR is conducted).

**Bruce Power's** A Units 1 and 2 continue to be refurbished. To date, all 480 fuel channels have been installed in Unit 1. In Unit 2, which is the lead unit, calandria tubes, fuel channels and feeders have been installed.

Bruce Power is preparing for the refurbishment of Bruce A Units 3 and 4 and has submitted an ISR Basis document and safety factor reports which are under review by CNSC staff. As part of the refurbishment activities, Bruce Power is studying the possible replacement of the calandria shield tank assembly (CSTA). This would be the first time that the industry will replace the vessel rather than removing individual components as has been done in refurbishments projects to date. The potential safety benefits of the proposed CSTA replacement approaches, include reduction in radiation exposure to workers as well as better quality control of CSTA manufacturing.

Plans for the possible refurbishment of Bruce B Units 5 to 8 are currently under discussion.

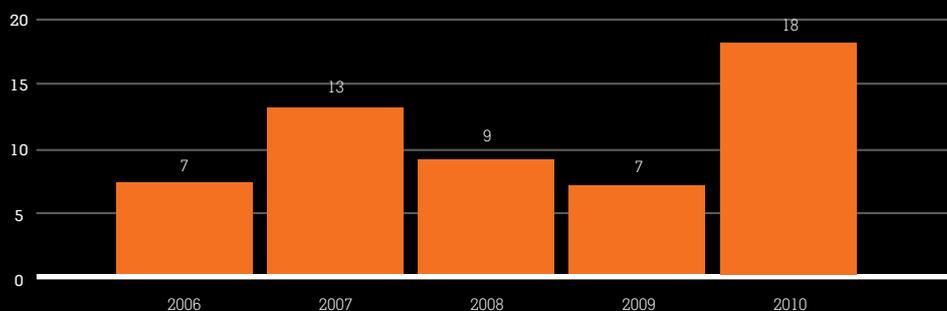
NB Power's **Point Lepreau** station remains in a refurbishment outage.

The Point Lepreau licence was renewed by Commission Tribunal until June 2012. The licence includes conditions directly related to the Point Lepreau refurbishment project. The licensee is required to provide a completion assurance report on the installation and commissioning of the refurbishment improvements and modifications listed in the operating licence. In addition, the licensee is required to obtain Commission approval before reloading fuel into the reactor core and proceeding with the reactor's restart.

Hydro-Québec formally announced postponement of the start of refurbishing work at the **Gentilly-2** facility to 2012. Subsequently, Hydro-Québec applied to renew and combine its operating licences for the Gentilly-2 nuclear reactor and for their solid radioactive waste-management facility in Bécancour, Québec. Day 1 of the Hearing was held December 10, 2010. Day 2 was held April 13-14, 2011.

As part of the Gentilly-2 refurbishment project, Hydro-Québec submitted the documents related to the ISR required to define the scope of refurbishment activities. CNSC staff accepted the ISR Basis document and has completed reviewing the 16 Gentilly-2 ISR safety factor reports.

**FIGURE 3: EARLY NOTIFICATION REPORTS FOR NUCLEAR POWER PLANTS FROM 2006 TO 2010**



Early notification reports made by NPP licensees.



# spotlight

## **A safe and effective system** *Canadian NPPs continue to operate safely in 2010–11*

**I**n 2010–11, the CNSC performed two Type I (audits) and 44 Type II NPP inspections. All issues of non-compliance received CNSC attention and follow-up, ensuring that the health and safety of Canadians was not compromised.

CNSC staff concluded that NPPs operated safely in 2010, and that licensees made adequate provisions to protect the health and safety of Canadians and the environment, as well as to ensure that Canada continued to meet its international obligations on the peaceful use of nuclear energy. The conclusions are based on the following observations:

- There were no serious process failures at any NPP.
- No members of the public received a radiation dose in excess of the regulatory limits from NPPs.
- No NPP workers were confirmed to have received a radiation dose in excess of the regulatory limits.
- All environmental emissions from the stations were below regulatory limits.
- Licensees complied with their licence conditions concerning Canada's international obligations for the peaceful use of nuclear energy.
- The overall compliance with regulatory requirements and CNSC expectations was satisfactory or higher.
- There were no events with safety significance.

Licensees are required to notify the CNSC of events or situations outside the normal operations described in their licensing documents. Such occurrences rarely, if ever, result in significant effects on the health and safety of people or the environment, in part because Canadian NPPs all have multiple layers of defence. Where the CNSC determines that an event may be noteworthy, the event or situation is reported to the Commission Tribunal through an early notification report.

A series of approximately 10 thin, parallel pink lines that originate from the top right corner and extend diagonally towards the bottom left, crossing behind the word 'SAFE'.

SAFE

WASTE  
MANAGEMENT



# Secure storage for generations

**The CNSC regulates the safe storage and monitoring of all nuclear-related waste until it poses no threat to human health or the environment—either now or in the future. It also works to keep the public informed of decisions and processes that affect nuclear waste management.**

Last year, we oversaw the management of several ongoing projects, including Ontario Power Generation's (OPG) Darlington, Pickering and Western Waste Management Facilities. In addition, we focused on some major proposed waste-related projects, including the Cameco Corporation Vision 2010 Port Hope decommissioning project, OPG's Deep Geological Repository for storing low- and intermediate-level waste, and the Nuclear Waste Management Office's (NWMO's) Adaptive Phased Management Project for managing high-level or used fuel waste.

The latter is Canada's plan for safeguarding the public and the environment during the period when used nuclear fuel must be managed. We spoke to communities interested in learning more about the regulatory

framework for the project. This followed the NWMO's release of the *Process for Selecting a Site for Canada's Deep Geological Repository for Used Nuclear Fuel*.

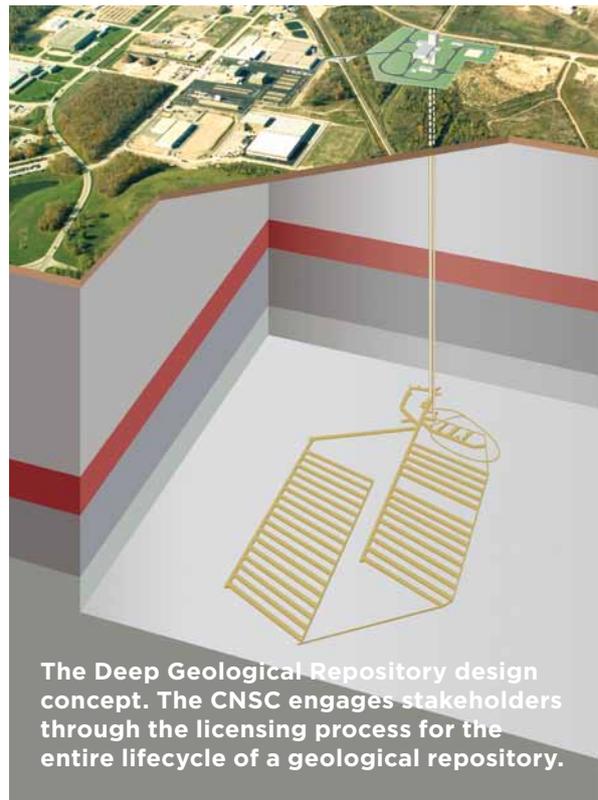
## Port Hope Area Initiative

The Port Hope Area Initiative (PHAI) is a federal project to clean up and safely provide for the management of low-level radioactive waste in the Port Hope and Clarington area. The initiative involves two separate projects, the Port Hope and Port Granby projects.

The Port Hope Project involves the cleanup of contaminated sites in the Municipality of Port Hope and the storage and management of wastes in a new waste-management facility to be located there. The Port Hope project, having earlier completed the environmental

assessment stage, was granted a waste nuclear substance licence in 2009 with conditions that must be met before construction can begin. Licensing assessments are currently underway and it is expected that a licence amendment hearing will be scheduled in early 2012 to authorize construction of the waste management facility and remediation of contaminated sites.

The Port Granby Project is a proposal for the management of wastes currently in a radioactive waste-management facility in the Municipality of Clarington. The project has completed the environmental assessment phase; licensing assessments are currently under way with a licensing hearing scheduled for September 27, 2011.



The Deep Geological Repository design concept. The CNSC engages stakeholders through the licensing process for the entire lifecycle of a geological repository.

## Safety notes

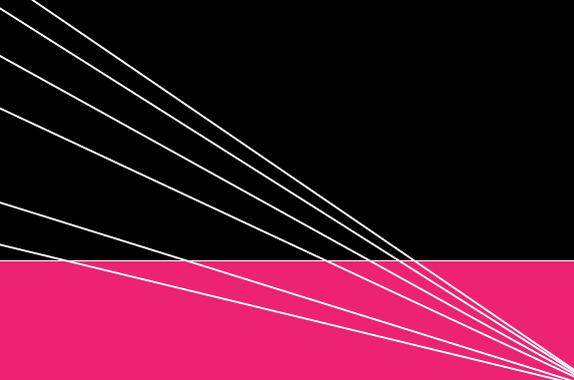
The Government of Canada's Nuclear Legacy Liabilities Program continues to provide a long-term strategy to manage legacy waste and contamination on AECL sites, including Chalk River Laboratories and Whiteshell Laboratories. The CNSC regulates all projects under this program.

The Whiteshell Laboratories facility is a former nuclear research and test establishment in Manitoba, on the east bank of the Winnipeg River. It is currently undergoing decommissioning in accordance with CNSC regulations.

The NWMO has consulted with the Canadian public to develop and implement an acceptable approach for the long-term care of Canada's used nuclear fuel. Once a site is selected, the NWMO will apply to the CNSC for a licence to construct a facility.

**1975**

The Atomic Energy Control Board grants the first waste facility operating licence to Ontario Hydro for the Bruce Nuclear Power Development Site.

A graphic consisting of several white lines radiating from a single point in the top left corner, creating a spotlight effect that illuminates the word 'spotlight' below.

# spotlight

## Digging deep *Safe storage underground*

**O**ntario Power Generation (OPG) is proposing the construction of a deep rock vault in clay-rich limestone, hundreds of metres below ground. This deep geological repository (DGR) will be a management facility for OPG's low- and intermediate-level radioactive wastes.

The proposed location for the DGR is the Bruce nuclear site in Tiverton, Ontario in the Municipality of Kincardine. In June 2007, the Minister of the Environment referred the DGR project environmental assessment to a review panel. The Environmental Impact Statement prepared by OPG was filed with the CNSC in 2011. A panel will conduct a comprehensive hearing on the environmental assessment and the first stages of licensing.

For this type of waste management, the CNSC uses a comprehensive licensing system that covers the entire lifecycle of a geological repository from site preparation to construction, operation, decommissioning (closure) and, finally, abandonment. The approach requires a separate licence at each phase, although the site preparation and site construction licences can be combined.

The CNSC is committed to operating with a high level of transparency on the DGR project, as we are with all our undertakings. We will engage with stakeholders—including Aboriginal peoples—through a variety of consultation opportunities for proposed new nuclear projects. In this way, we will ensure effective dialogue and information sharing.

In addition to considering written and oral presentations from Canadians, the CNSC webcasts its public hearings and meetings and makes all hearing documentation publicly available on our website at [nuclearsafety.gc.ca](http://nuclearsafety.gc.ca).

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SAFE

NUCLEAR  
MEDICINE



The CNSC regularly inspects health tools such as the Precise Treatment System™.

# Effective licensing and compliance to ensure safe nuclear medical applications for Canadians.

**The medical sector uses nuclear substances to diagnose diseases and provide health-related therapies. In 2010–11, the medical sector held 599 CNSC licences, a significant portion of total CNSC licences.**

**T**he use of radiation in the treatment of cancer has a long history in Canada, beginning with cobalt-60 treatments in 1951. Today, radiopharmaceuticals are used to diagnose and treat cancer and other diseases. For example, radioisotopes are used in a number of therapeutic procedures for diseases of the thyroid, for treatment of certain blood disorders and for site-specific treatment of certain cancers.

The CNSC verifies that medical licensees conform with the NSCA, as well as other regulations and licence conditions, by conducting desktop evaluations and routine on-site inspections. The CNSC is also responsible for regulating accelerators and Class II nuclear facilities and prescribed equipment in Canada.

Recently, a letter was sent to all licensees of medical accelerators certified by the CNSC as Class II prescribed equipment. Licensees were notified that, regardless of the maximum operating photon beam energy, a medical accelerator certified as Class II prescribed equipment under the *Class II Nuclear Facilities and Prescribed Equipment Regulations* is subject to CNSC licensing as a Class II nuclear facility.

A complete list of certified Class II prescribed equipment is available on the CNSC Web site, [nuclearsafety.gc.ca](http://nuclearsafety.gc.ca). All equipment included on this list is subject to CNSC regulations and must be operated under a CNSC licence.

## Safety notes

Only one CNSC order was issued to a licensee in the medical sector during the reporting period. The licensee complied with the order soon after and the CNSC confirmed that all the terms and conditions of the orders were met.

The number of reported events has declined in the medical sector, from 27 in 2008, to six in 2009 and then to 18 in 2010. None of the events reported in the medical sector resulted in a radiation dose to the public in excess of the regulatory limits.

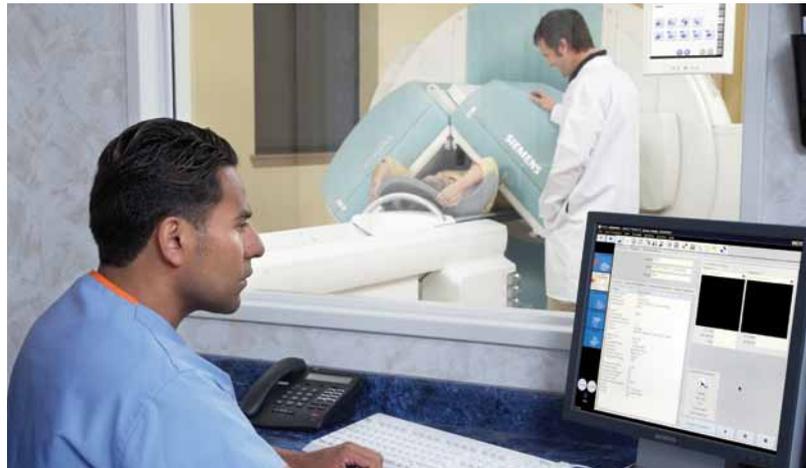
From 2008 to 2010, no breaches of security were reported from medical sector licensees.

Data from sampled annual compliance reports in the medical sector demonstrate that for 2008 and for 2009, more than 90 percent of all medical sector employees received low occupational doses—less than 0.5 millisieverts per year in both reporting years, significantly below the regulatory limit of 50mSv for nuclear energy workers.

# 1951

The world's first cancer treatment using Eldorado's cobalt-60 machine is applied in Canada.

**The CNSC regulates prescribed equipment such as this positron emission tomography (PET) machine.**





# spotlight

## Impressive safety record across all sectors

*Stringent controls and compliance verification of nuclear substances*

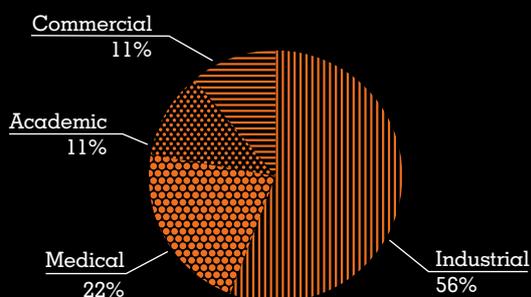
As in other years, the uses of nuclear substances across society in Canada were widespread in 2010–11. In medicine, radiation was used to diagnose illnesses and treat patients and in industry it was used to take precise measurements. Academics and researchers used nuclear substances in teaching as well as to perform pure and applied research.

Last year, CNSC designated officers made nearly 2,300 licensing decisions for the possession and use of nuclear substances, radiation devices and other prescribed equipment. The total number of active licences in 2010–11 was 2,649.

The CNSC issued 176 new licences and renewed 555 others, issuing 21 new certificates for radiation devices and conducting more than 1,700 inspections of licensed operations. We saw significant growth in the number of licences we issued last year for the construction of new radiation therapy facilities, with 10 new facilities being constructed across Canada.

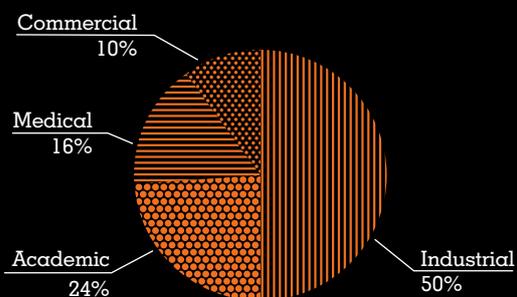
Most licensees were found to be in full compliance with their regulatory requirements.

**FIGURE 4: NUCLEAR SUBSTANCE LICENSEES BY SECTOR FOR 2010-11**



The total number of nuclear substances licences in 2010-11 was 2,649.

**FIGURE 5: NUMBER OF INSPECTIONS PER SECTOR IN 2010-11**



In 2010-11, the CNSC conducted more than 1,700 inspections of licensed facilities.

A series of approximately 10-12 thin, parallel yellow lines that originate from the top right corner and extend diagonally towards the bottom left, crossing behind the word 'SAFE'.

SAFE

NUCLEAR  
SUBSTANCES  
AND TRANSPORT



**A non-destructive testing application of industrial radiography equipment used during a pipeline inspection.**

# Diverse applications across industry and society

**From licensing the possession of nuclear substances to overseeing the safe transport of used nuclear equipment, the CNSC ensured effective regulatory oversight of all uses of nuclear-related materials in industry, academia and the commercial sector last year.**

**M**any day-to-day commodities are produced with the aid of nuclear substances licensed by the CNSC. Nuclear substances are found in devices that protect the health and safety of Canadians, including smoke detectors, emergency exit signs and emergency lighting on airplanes. While end users of these devices do not require a licence, the manufacture and distribution of the devices in Canada are licensed by the CNSC.

In academia, nuclear substances can be found in such devices as linear accelerators used primarily for teaching and applied research. Commercial uses of nuclear substances mainly involve fixed and portable gauges

and exposure devices, used to ensure the integrity of pipelines and for ground density analysis for instance. Servicing licences often include the installation and dismantling of radiation devices.

Industrial uses of nuclear substances include industrial radiography in which high-radioactivity sealed sources are used to assess the integrity of certain materials. (A sealed source is a radioactive substance that is sealed in a container.) A licence issued by the CNSC is required for an individual to possess, use or store these devices, and radiographers operating the devices must be certified by the CNSC.

The industrial sector accounted for 1,489 licences, the academic and research sector for 279 and the commercial sector 282 for 2010–11. The CNSC focuses its inspections on applications where risk is highest and where it has potential concerns about the licensee’s performance. The CNSC pays particular attention to lost or stolen nuclear substances and radiation devices.

As a significant producer of nuclear substances, Canada is also a major shipper of nuclear

substances. In a shared role with Transport Canada, the CNSC oversaw the transportation of more than a million packages containing nuclear substances. Our role was primarily concerned with protecting the health, safety and security of people, and with protecting the environment. While a small number of packages were involved in transport-related incidents that had no consequences (as is the case every year) the overall safety record was excellent, with no damage to packaging or no impact to workers or the environment.

## Safety notes

The CNSC issued 21 new certificates for radiation devices in 2010–11.

During 2010–11, the CNSC issued 58 package design certificates and special form radioactive material certificates.

In 2010–11, the CNSC managed 118 industrial radiography licences.

Data from sampled annual compliance reports in the industrial, academic and research, and commercial sectors demonstrate that, for 2008 and 2009, a vast majority of workers received less than the public dose limit 1 millisievert per year. This is significantly less than the regulatory limit of 50 millisieverts per year for nuclear energy workers.

1963

AECL builds Canada’s first irradiation plant in St. Hilaire, QC.



**Steam generators used in pressurized water reactors of NPPs that generate electricity. The CNSC ensures that any transport of nuclear material is compliant with all applicable national and international requirements.**

# spotlight

## **Getting to Sweden, safely** *Approving the shipment of steam generators*

**I**n April 2010, the CNSC received an application from Bruce Power to transport 16 steam generators to Sweden by ship through the Great Lakes and St. Lawrence Seaway. Due to the size of the steam generators, licensees need to apply for a special arrangement licence. The steam generators were to be recycled in Sweden.

Steam generators are used in the pressurized water reactors of nuclear power plants that generate electricity. Initially not radioactive, over time they become contaminated with radioactive particles. The level of contamination is low and confined to the generators' inner parts, presenting negligible risks to the public, workers or the environment. For the planned transport to Sweden, each steam generator has been welded shut and sealed.

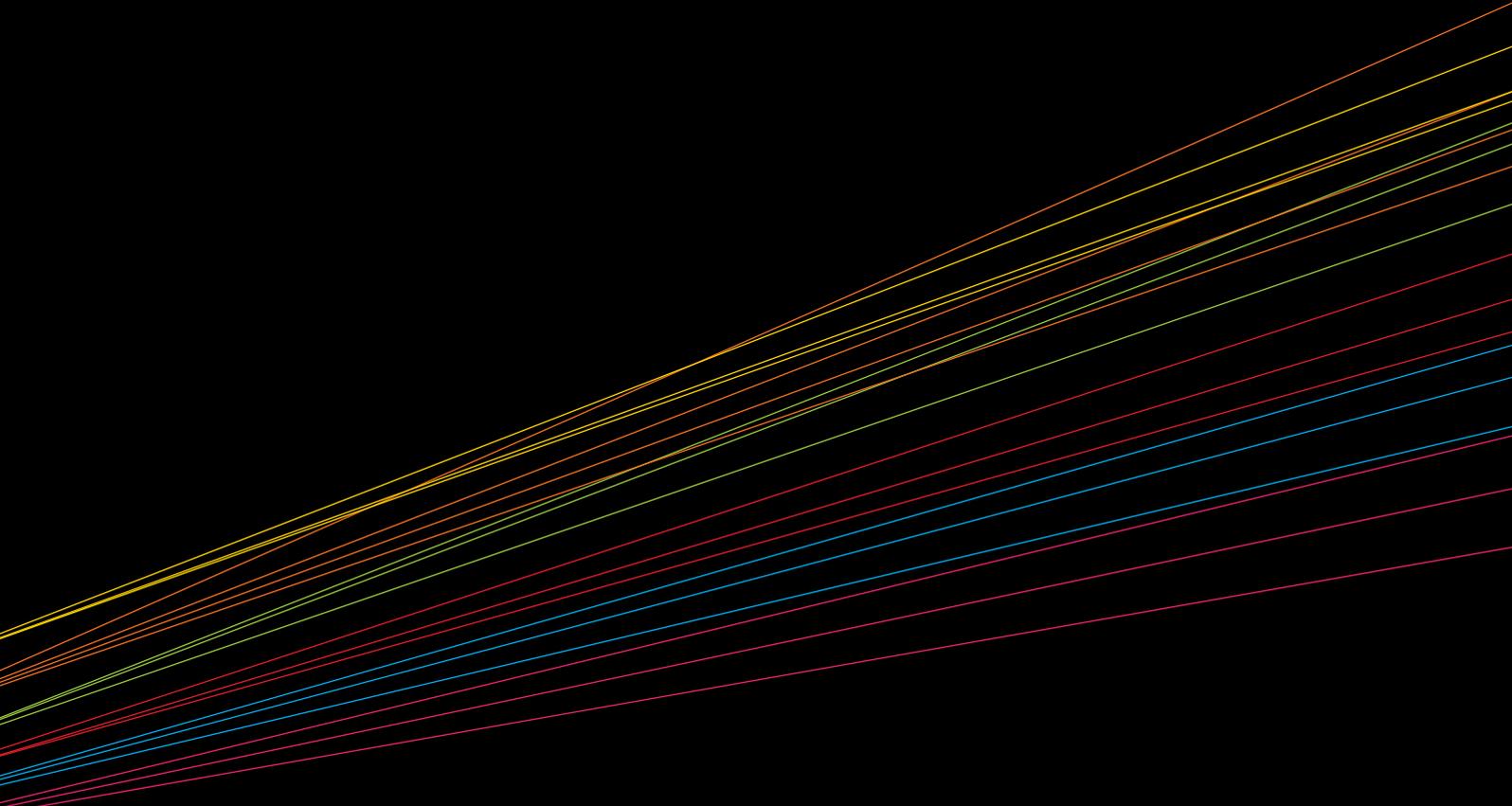
In light of public concern over the transport of nuclear-related substances—and to ensure the most transparent consideration and analysis of information relating to health, safety and risk—Bruce Power's application was heard by the full Commission Tribunal, even though such matters are usually decided by officers designated by the Tribunal.

The Commission reviewed the application in a public hearing in September 2010, considering CNSC staff recommendations and submissions from Bruce Power, as well as submissions from 77 intervenors on issues of packaging and transportation, the environmental impact of the activity, as well as the radiation protection, emergency and security measures proposed by Bruce Power.

CNSC staff concluded that there were no significant safety issues associated with the proposed shipment. In February 2011, the Commission issued a licence and certificate to Bruce Power for the transport of the steam generators to Sweden. The Commission, when rendering its decision, stated it was satisfied that:

- the transport can be completed safely and that risk to persons and the environment are negligible
- the shipment meets all Canadian and international regulations and requirements
- Bruce Power is qualified to carry out the project

In March 2011, the CNSC was made aware that the Canadian Environmental Law Association and the Sierra Club of Canada had filed applications with the Federal Court of Canada for a judicial review of the Commission's recent decision to grant Bruce Power a licence to transport the decommissioned steam generators to Sweden. Unless the Federal Court rules otherwise, the Commission's decision stands.



# INTERNATIONAL

**OBLIGATIONS  
AND UNDERTAKINGS**



# Important international presence

**The CNSC is active across borders, working with partners and stakeholders to ensure a safe, secure and peaceful international nuclear sector. We also ensure that Canadians and Canadian companies comply with Canada's international obligations on the peaceful use of nuclear materials and technology.**

**P**rominent on the international stage in 2010–11 was the significant step of moving toward a safeguards system that is fully information-driven. The CNSC strongly supports this thrust as it reflects a policy approach that Canada has long advocated. More than that, working toward an information-driven system gives Canada a unique opportunity to lead in this key area of nuclear safety. Last year, the CNSC and the International Atomic Energy Agency (IAEA) established a working group to explore new ideas in safeguards.

The *Nuclear Non-proliferation Import and Export Control Regulations (NNIECR)* enable the CNSC to impose regulatory controls on the import and export of controlled nuclear substances, equipment and technology. Substantive amendments to the NNIECR

came into force in May 2010 to update licensing information requirements and the list of controlled items. In 2010–11, the CNSC issued 521 export and import licences pursuant to the NNIECR.

From helping harmonize international nuclear standards to promoting better safeguards systems and contributing technical expertise in international fora, the CNSC continued its work in 2010–11 to make the world a safer and more secure place. Our efforts with the Multinational Design Evaluation Program led to significant progress on achieving some shared international codes and standards for nuclear regulators as they review new reactor power plant designs. Further harmonization is still in progress and will lead to greater safety worldwide as nuclear regulators increase their cooperation and, as a result, improve the design review process for reactors.



The CNSC signs a Memorandum of Understanding with France.

## Safety notes

441 export licences and 80 import licences were issued pursuant to the *Nuclear Non-Proliferation Import and Export Control Regulations* in 2010–11.

In 2010–11, 187 export licences were issued for risk-significant radioactive sources.

In 2010, Canada once again received a positive safeguards conclusion from the IAEA, providing the highest possible level of assurance that all nuclear material in Canada remained in peaceful activities. Out of 175 IAEA Member States, Canada is 1 of only 52 countries that received this result.

As of 2010–11, 28 nuclear cooperation agreements are in place between Canada and other countries—and more are on the horizon. The CNSC provides technical expertise to the Department of Foreign Affairs and International Trade in the negotiation of these agreements in conjunction with its non-proliferation export and import licensing program.

The CNSC signed 3 new regulatory cooperation Memorandums of Understanding with other countries last year, bringing our total to 11.

The CNSC participated in a wide range of international fora and initiatives last year, working with like-minded organizations to advance common goals.

In 2010–11, the CNSC signed new bilateral administrative arrangements with its counterparts in Australia and Thailand, and an amended administrative arrangement with the United States that will help implement harmonized export and import controls.

**1972**  
 Canada becomes the first country to sign a comprehensive nuclear safeguards agreement with the IAEA.



# spotlight

## A safer North America

### *Trilateral announcement on nuclear security*

**L**ast year, Canada, Mexico and the United States reached agreement to work together, along with the IAEA, to convert the fuel in Mexico's research reactor from highly-enriched uranium to low-enriched uranium.

The decision, made at the Nuclear Security Summit (NSS) in Washington, D.C. to which the CNSC provided advice to the Government of Canada, will result in the elimination of all remaining high-enriched uranium from Mexico. Eliminating excess high-enriched uranium further strengthens nuclear security in North America by reducing the risks associated with illicit trafficking of nuclear materials.

Mexico's President Felipe Calderon expressed "the strong commitment of Mexico to prevent and suppress nuclear terrorism" adding that cooperation among North American partners and the IAEA significantly reduces the risk.

The three countries acknowledged that this project also provides an important step towards replacing the research reactor in question with a new low-enriched uranium-fuelled reactor that will support Mexico's development of nuclear energy sources.

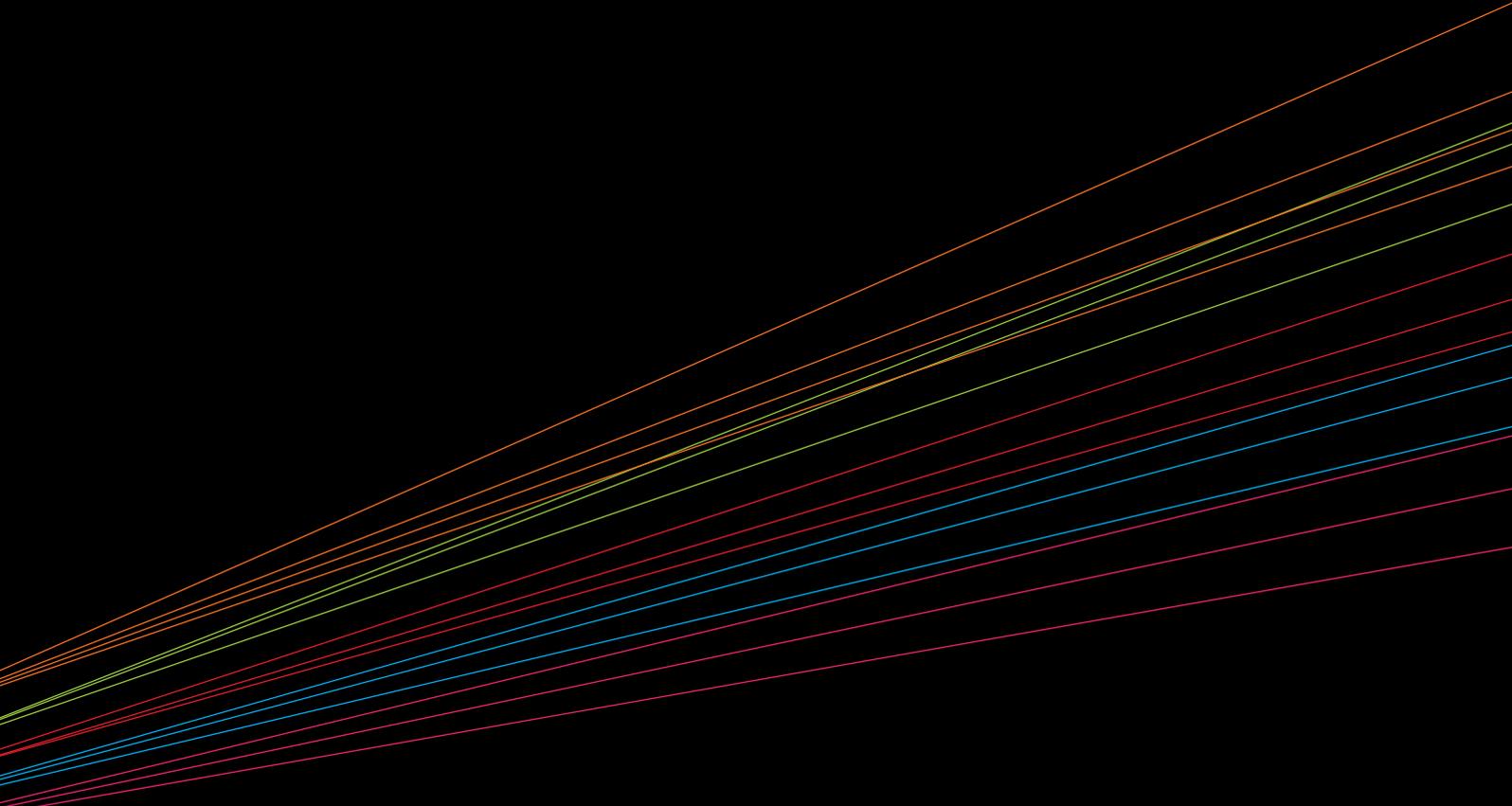
President Obama said, "I welcome this critical step forward, which is a signal of our strong trilateral partnership, and our shared commitment to nuclear security in North America."

The project, which will take place between 2010 and 2018, is part of broader international efforts promoted at the NSS to consolidate fresh and spent highly enriched uranium at a smaller number of very secure locations.

The NSS also provided Canada with an opportunity to highlight Canadian leadership on nuclear security and its cooperation with the U.S. and other partners to ensure that all nuclear materials are secure so that they do not fall in the hands of terrorists.

““ This nuclear security project demonstrates that collective action can deliver concrete results. ””

—Prime Minister Stephen Harper



# STAKEHOLDER RELATIONS



President Michael Binder speaks at the Canadian Nuclear Association conference.

# Strong connections with Canadians

**The CNSC respects and carefully considers the opinions of Canadians. Every year our experts visit communities to share information and answer questions about local nuclear facilities. We also hold frequent public hearings to ensure that each and every voice can be heard.**

**F**rom Northern Lights, Alberta to Newfoundland and Labrador, we traded ideas with Canadians last year on a variety of nuclear-related topics. Examples include public meetings and presentations in Northern Lights, Alberta about the licensing of nuclear power plants; in Owen Sound, Ontario about the transportation of steam generators from Bruce Power to Sweden; in 11 northern Saskatchewan communities to provide information about regional mines and mills and to hear the opinions of residents; in Nunavut, again to discuss uranium mining in Canada, the licensing process and health effects of mining and milling; and in four Labrador communities to describe our role in regulating uranium mining.

## Consultation with Aboriginal peoples

As an agent of the Crown under the NSCA, the CNSC ensures that all its licensing decisions and environmental assessment decisions under

the *Canadian Environmental Assessment Act* uphold the honour of the Crown and consider Aboriginal peoples' potential or established Aboriginal or treaty rights pursuant to section 35 of the *Constitution Act, 1982*.

The CNSC establishes Aboriginal consultation processes specific to individual projects that offer opportunities for CNSC staff and Aboriginal peoples to meet and discuss issues. Aboriginal people are also offered opportunities to participate in the hearing process before the Commission Tribunal. This enables the Tribunal to consider all relevant evidence in relation to Aboriginal interests, in relation to a specific project before it renders a decision. In 2010, CNSC staff participated in a variety of engagement and consultation activities with Aboriginal groups in Saskatchewan, Ontario, Nunavut and Northern Quebec in the form of community meetings, open-houses, technical workshops and site visits.



**CNSC staff attend the Canadian Federal Regulators conference.**

## Safety notes

The CNSC and the CANDU Owners Group hosted a workshop to discuss the concepts being developed to manage the extended operation of piping and vessels for CANDU reactors. The workshop was targeted to utilities, vendors, and research organizations.

The CNSC met with COMEX and COFEX (provincial and federal project review panels) about Strateco Resources' Matoush exploration project to discuss the CNSC's role and what it considers in the environmental assessment and licensing process for a new mine.

The CNSC delivered a presentation at the Canadian Association of Nuclear Medicine's annual meeting on the CNSC's roles and responsibilities in light of ongoing Technetium-99m supply issues.

The CNSC president, executive team and CNSC personnel continued to deliver presentations in such forums as the Canadian Nuclear Association, parliamentary standing committees, international delegations, the Canadian Nuclear Law Organization, and the International Nuclear Regulators Association.

During last year's earthquake, tsunami and nuclear-related events in Japan, the CNSC drew on its staff of scientific, technical and communication experts to report daily to Canadians on different aspects of radiation and the safety of nuclear power plants. The CNSC Web site became a site of choice in Canada, with more than 10,000 visitors to the Japan section.

The CNSC held meetings in Nisku, Alberta and Ottawa, Ontario with the Industrial Radiography Working Group. Presentations covered a variety of topics such as review of radiography compliance performance data, event reporting and communication, attendees expressed their appreciation for the updates and for the degree of communication displayed by the CNSC and industry.

# 2002

The CNSC launches its first Government On-Line service, enabling 300 Canadian hospitals and clinics in the nuclear medicine community to conduct business with the CNSC electronically.

# spotlight

## CNSC 101

### *Teaching Canadians about what we do*

Last year, the CNSC launched a pilot outreach program to inform interested licensees, Aboriginal peoples and members of the public about the CNSC's history, structure, mandate and operations. We presented four one-day pilot information sessions of CNSC 101 across the country and added two additional sessions in Port Hope, Ontario in response to a special request from that community.

In development since 2009, the sessions were a resounding success, attracting a broad range of interested stakeholders. In addition to providing general information about the CNSC, instructors delved into our three core processes: how we manage the CNSC's regulatory framework, our licensing and certification processes, and our responsibility to ensure that licensees comply with all regulations and specific terms of their licenses.

Feedback from participants indicated that overall satisfaction with the pilot courses was extremely high. Our Ottawa and Oshawa sessions indicated 100 percent satisfaction with the course while our Saskatoon and Quebec City sessions indicated 95 percent and 94 percent satisfaction, respectively.

While the sessions were a success, we are nevertheless working to improve them. Our experience, coupled with feedback we received from audiences, has prompted us to develop topic-specific modules that can be added or removed to the course work, depending on an audience's particular interests and concerns. In addition, we will build in more time for group discussions.

Revisions to update the CNSC 101 curriculum are under way. In addition, efforts are underway to improve the CNSC 101 Web page to include interactive elements and a wider range of information. CNSC 101 pilot session presentation material is available at [nuclearsafety.gc.ca](http://nuclearsafety.gc.ca).

# Commission Tribunal Members

## INDEPENDENT AND TRANSPARENT DECISION MAKING



**Mr. Michael Binder**  
President and Chief  
Executive Officer,  
Canadian Nuclear  
Safety Commission  
Ottawa, Ontario  
*Named as a permanent  
member on January 15, 2008*



**Dr. Ronald J. Barriault**  
Physician,  
Restigouche Regional  
Health Authority  
Charlo, New Brunswick  
*Named as a permanent  
member on December 3, 2007*



**Ms. Jocelyne Beaudet**  
Lunenburg, Nova Scotia  
*Named as a temporary  
member on October 22, 2009*



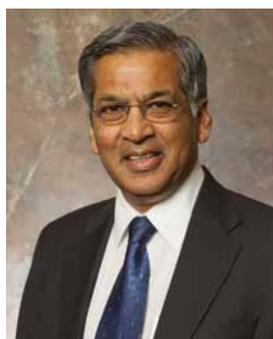
**Mr. Alan R. Graham**  
Rexton, New Brunswick  
*Named as a permanent  
member on January 1, 1999*



**Mr. André Harvey**  
Québec City, Québec  
*Named as a permanent  
member on June 2, 2006*



**Dr. J. Moyra J. McDill**  
Professor, Department  
of Mechanical  
and Aerospace  
Engineering,  
Carleton University  
Ottawa, Ontario  
*Named as a permanent  
member on May 30, 2002*



**Mr. Ken Pereira**  
Ottawa, Ontario  
*Named as a temporary  
member on October 22, 2009*



**Mr. Dan Tolgyesi**  
President of Québec  
Mining Association  
Québec City, Québec  
*Named as a permanent  
member on May 30, 2008*

**T**he CNSC's Commission Tribunal is central to the functioning of the CNSC. The Tribunal makes independent, fair and transparent decisions on the licensing of major nuclear-related activities. It also establishes legally binding regulations and sets regulatory policy direction on matters related to the protection of health, safety, security and the environment and to the implementation of international obligations respecting peaceful uses of nuclear energy.

Before the Tribunal makes decisions about whether to license nuclear-related activities, it considers applicants' proposals, recommendations from CNSC personnel, and stakeholder views. Each decision to license is based on information that demonstrates that the operation of a given facility can be carried out safely and that the environment is protected. To promote openness and transparency, the Tribunal conducts its business where possible in public hearings and meetings and, where appropriate, in communities affected by its decisions. Aboriginal people and other

# 2000

The *Nuclear Safety and Control Act* comes into force, superseding the *Atomic Energy Control Act* and marking the transition to a stronger Canadian regulatory regime. The new Act marks the first major update of Canada's nuclear regulatory regime since the AECB was established in 1946.

members of the public can participate in public hearings via written submissions and oral presentations while Tribunal hearings and meetings can also be viewed online as Web casts at [nuclearsafety.gc.ca](http://nuclearsafety.gc.ca). Transcripts of public hearings and meetings are also available.

The Tribunal has up to seven permanent members, appointed by the Governor in Council and chosen according to credentials. All are independent of political, governmental, special interest group or industry influences. Temporary members can be appointed whenever necessary. The president of the CNSC is the only full-time Tribunal member.

# Funding of Operations

The CNSC's workload, and therefore its resource requirements, is largely driven by the demand for licensing and regulatory oversight of Canada's nuclear industry and by Canada's international commitments respecting nuclear safety, security and non-proliferation.

The CNSC's regulatory activities are mainly funded through the fees collected from industry (approximately 70 percent), while the other 30 percent is funded through an annual appropriation from Parliament.

The CNSC is mainly funded from a revenue spending authority allowing the cost recovery of activities through fees collected from industry. This authority provides a sustainable and timely funding regime to address the changes in regulatory oversight workload associated with the Canadian nuclear industry.

The CNSC is also funded through an annual appropriation from Parliament. The regulations state that some licensees, such as hospitals and universities, are exempt from paying fees as these entities exist for the public good. In addition, fees are not charged for activities that result from CNSC obligations that do not provide a direct benefit to identifiable licensees. These include activities with respect to Canada's international obligations (including the non-proliferation activities), public responsibilities such as emergency management and public information programs, and updating of the NSCA and associated regulations as appropriate.

In 2010–11, \$136.2 million (\$138.4 million in 2009–10) of the total parliamentary and revenue spending authorities were used to fund the CNSC's cost of operations, leaving \$1.3 million (\$4.9 million in 2009–10) in unused authority.

The Financial Statement's note 3 in this report provides a reconciliation between the CNSC's cost of operations and use of the CNSC's parliamentary and revenue spending authorities.

## Cost of Operations

In the 2010–11 financial statements, the total cost of operations was \$146.9 million (\$143.9 million 2009–10). A total of \$100.8 million (\$97.4 million in 2009–10) in fees was recovered from fee paying licensees to offset the total cost of operations, leaving the CNSC with a net cost of operations of \$46.2 million (\$46.5 million in 2009–10).



# The CNSC's Management Team



**Michael Binder**

President and Chief  
Executive Officer



**Ramzi Jammal**

Executive Vice-President,  
and Chief Regulatory  
Operations Officer



**Terry Jamieson**

Vice-President,  
Technical Support



**Patricia McDowell\***

Vice-President,  
Regulatory Affairs



**Gordon White\***

Vice-President,  
Regulatory Affairs  
and Chief  
Communications Officer



**Michel Cavallin**

Vice-President, Corporate  
Services and Chief  
Financial Officer



**Jacques Lavoie**

Senior General  
Counsel and Director  
of Legal Services



**Marc Leblanc**

Commission Secretary

*\* Note: In April 2011, Gordon White took over the position of V.P. Regulatory Affairs.*

# FINANCIAL STATEMENTS



# CANADIAN NUCLEAR SAFETY COMMISSION

## Statement of Management Responsibility Including Internal Control Over Financial Reporting

Responsibility for the integrity and objectivity of the accompanying financial statements for the year ended March 31, 2011, and all information contained in these statements rests with the management of the Canadian Nuclear Safety Commission (CNSC). These financial statements have been prepared by management in accordance with Treasury Board accounting standards, which are consistent with Canadian generally accepted accounting principles for the public sector.

Management is responsible for the integrity and objectivity of the information in these financial statements. Some of the information in the financial statements is based on management's best estimates and judgment, and gives due consideration to materiality. To fulfil its accounting and reporting responsibilities, management maintains a set of accounts that provides a centralized record of the CNSC's financial transactions. Financial information submitted to the *Public Accounts of Canada* and included in the CNSC's *Departmental Performance Report*, is consistent with these financial statements.

Management is also responsible for maintaining an effective system of internal control over financial reporting designed to provide reasonable assurance that financial information is reliable, that assets are safeguarded and that transactions are properly authorized and recorded in accordance with the *Financial Administration Act* as well as CNSC policies, authorities and statutory requirements including the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations*.

Management seeks to ensure the objectivity and integrity of data in its financial statements through careful selection, training and development of qualified staff; through organizational arrangements that provide appropriate divisions of responsibility; through communication programs aimed at ensuring that regulations, policies, standards and managerial authorities are understood throughout the CNSC; and through conducting an annual assessment of the effectiveness of the system of internal control over financial reporting.

An assessment for the year ended March 31, 2011 was completed in accordance with the *Policy on Internal Control* and the results and action plans are summarized in the annex.

The system of internal control over financial reporting is designed to mitigate the risks to a reasonable level based on an on-going process to identify key risks, to assess effectiveness of associated key controls, and to make any necessary adjustments.

The effectiveness and adequacy of the CNSC's system of internal control is reviewed by internal audit staff, who conduct periodic audits of different areas of the CNSC's operations, and by the Audit Committee, which exercises oversight over management's responsibilities for maintaining adequate control systems and the quality of financial reporting, and which recommends the financial statements to the President.

The Office of the Auditor General, the independent auditor for the Government of Canada, has expressed an opinion on the fair presentation of the financial statements of the CNSC, which does not include an opinion on the annual assessment of the effectiveness of the CNSC's internal controls over financial reporting. The Office of the Auditor General also audited, at the specific request of the CNSC, and expressed an opinion on the CNSC's compliance with the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations*.



Michael Binder  
President

Ottawa, Canada  
July 11, 2011



Michel Cavallin  
Vice-President, Corporate Services Branch  
and Chief Financial Officer

# Auditor's Report



Auditor General of Canada  
Vérificateur général du Canada

## INDEPENDENT AUDITOR'S REPORT

To the Canadian Nuclear Safety Commission  
And The Minister of Natural Resources

### Report on the Financial Statements

I have audited the accompanying financial statements of the Canadian Nuclear Safety Commission, which comprise the statement of financial position as at 31 March 2011, and the statement of operations, statement of equity of Canada and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### *Auditor's Responsibility*

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the

reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

#### *Opinion*

In my opinion, the financial statements present fairly, in all material respects, the financial position of the Canadian Nuclear Safety Commission as at 31 March 2011, and the results of its operations and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

#### **Report on Other Legal and Regulatory Requirements**

In my opinion, the Canadian Nuclear Safety Commission has complied, in all significant respects, with the *Canadian Nuclear Safety Commission Cost Recovery Fee Regulations* pursuant to the *Nuclear Safety and Control Act*.

Clyde MacLellan, CA  
Assistant Auditor General  
for the Interim Auditor General of Canada

11 July 2011  
Ottawa, Canada

# Canadian Nuclear Safety Commission

## Statement of Financial Position

As of March 31

	2011	2010
<b>ASSETS</b>		
<b>Financial assets</b>		
Due from the Consolidated Revenue Fund	\$ 27,058,051	\$ 26,626,254
Accounts receivable (note 4)	2,011,066	6,706,861
<b>Total financial assets</b>	29,069,117	33,333,115
<b>Non-financial assets</b>		
Prepaid expenses	104,335	123,062
Tangible capital assets (note 5)	17,315,687	12,544,203
<b>Total non-financial assets</b>	17,420,022	12,667,265
<b>Total assets</b>	<b>\$ 46,489,139</b>	<b>\$46,000,380</b>
<b>LIABILITIES AND EQUITY OF CANADA</b>		
<b>Liabilities</b>		
Accounts payable and accrued liabilities (note 6)	\$ 27,058,051	\$ 26,626,254
Vacation pay and compensatory leave	5,967,777	5,405,875
Deferred revenue (note 7)	2,434,962	1,674,666
Employee future benefits (note 8b)	18,446,796	16,798,140
Asset retirement obligation (note 9)	235,133	–
	54,142,719	50,504,935
<b>Equity of Canada</b>	(7,653,580)	(4,504,555)
<b>Total liabilities and equity of Canada</b>	<b>\$ 46,489,139</b>	<b>\$46,000,380</b>

Contractual obligations (note 14) and contingent liabilities (note 13)  
The accompanying notes form an integral part of these financial statements.



Michael Binder  
President

Ottawa, Canada  
July 11, 2011



Michel Cavallin  
Vice-President, Corporate Services Branch  
and Chief Financial Officer

# Canadian Nuclear Safety Commission

## Statement of Operations

For the Year Ended March 31

	2011	2010
<b>Revenues</b>		
Licence fees	\$ 99,110,130	\$ 93,556,921
Special projects	1,626,272	3,800,786
Other	37,118	31,289
<b>Total revenues (note 11)</b>	100,773,520	97,388,996
<b>Expenses</b>		
Salaries and employee benefits	107,727,365	100,098,649
Professional and special services	14,894,368	16,612,829
Accommodation	7,997,776	7,560,212
Furniture, repairs and rentals	5,018,843	8,759,221
Travel and relocation	4,512,758	5,031,032
Amortization	2,823,939	1,180,000
Communication and information	2,234,590	2,612,164
Utilities, materials and supplies	961,988	1,014,401
Grants and contributions	694,752	847,788
Other	81,244	176,368
<b>Total expenses (note 11)</b>	146,947,623	143,892,664
<b>Net cost of operations</b>	<b>\$ 46,174,103</b>	<b>\$ 46,503,668</b>

Segmented information (note 11)

The accompanying notes form an integral part of these financial statements.

# Canadian Nuclear Safety Commission

## Statement of Equity of Canada

For the Year Ended March 31

	2011	2010
<b>Equity of Canada, beginning of year</b>	\$ (4,504,555)	\$ (8,644,180)
Net cost of operations	(46,174,103)	(46,503,668)
Services provided without charge by other government departments and agencies (note 16a)	13,520,324	13,327,907
Net cash provided by government	29,072,957	33,260,173
Change in due from the Consolidated Revenue Fund	431,797	4,055,213
<b>Equity of Canada, end of year</b>	<b>\$ (7,653,580)</b>	<b>\$ (4,504,555)</b>

The accompanying notes form an integral part of these financial statements.

# Canadian Nuclear Safety Commission

## Statement of Cash Flow

For the year ended March 31

	2011	2010
<b>Operating activities</b>		
Net cost of operations	\$ 46,174,103	\$ 46,503,668
<b>Non-cash items</b>		
Amortization of tangible capital assets (note 5)	(2,823,939)	(1,180,000)
Gain (loss) on disposal of tangible capital assets	11,498	(2,371)
Services provided without charge by other government departments and agencies (note 16a)	(13,520,324)	(13,327,907)
<b>Variations in Statement of Financial Position</b>		
Decrease in accounts receivable	(4,695,795)	(3,243,078)
Decrease in prepaid expenses	(18,727)	(174,287)
Increase in accounts payable and accrued liabilities	(431,797)	(4,055,212)
Increase in vacation pay and compensatory leave	(561,902)	(536,028)
Increase in deferred revenue	(760,296)	(8,976)
(Increase) decrease in employee future benefits	(1,648,656)	1,825,636
<b>Cash used in operating activities</b>	21,724,165	25,801,445
<b>Capital investing activities:</b>		
Acquisitions of tangible capital assets	7,382,830	7,466,517
Proceeds from disposal of tangible capital assets	(34,038)	(7,789)
<b>Cash used by capital investing activities</b>	7,348,792	7,458,728
<b>Net cash provided by Government of Canada</b>	<b>\$ 29,072,957</b>	<b>\$ 33,260,173</b>
The accompanying notes form an integral part of these financial statements.		

# Canadian Nuclear Safety Commission

## Notes to the Financial Statements

### 1. Authority and Objectives

The Canadian Nuclear Safety Commission (CNSC) was established in 1946 by the *Atomic Energy Control Act*. Prior to May 31, 2000, when the federal *Nuclear Safety and Control Act* (NSCA) came into effect, the CNSC was known as the Atomic Energy Control Board (AECB). The CNSC is a departmental corporation listed in Schedule II of the *Financial Administration Act* and reports to Parliament through the Minister of Natural Resources.

The NSCA provides comprehensive powers to the CNSC to establish and enforce national standards for nuclear energy in the areas of health, safety and environment. It establishes a basis for implementing Canadian policy and fulfilling Canada's obligations with respect to the non-proliferation of nuclear weapons. The CNSC is empowered to require financial guarantees, order remedial action in hazardous situations and require responsible parties to bear the costs of decontamination and other remedial measures.

The CNSC's objectives are to:

- regulate the development, production and use of nuclear energy and the production, possession and use of nuclear substances, prescribed equipment and information in order to: a) prevent unreasonable risk to the environment, to the health and safety of persons and to national security; and b) achieve conformity with measures of control and international obligations to which Canada has agreed; and
- disseminate scientific, technical and regulatory information concerning: a) the activities of the CNSC; b) the development, production, possession, transport and use of nuclear energy and substances; and c) the effects of nuclear energy and substances use on the environment and on the health and safety of persons.

The CNSC also administers the *Nuclear Liability Act*, including designating nuclear installations and prescribing basic insurance to be carried by the operators of such nuclear installations, and the administration of supplementary insurance coverage premiums for these installations.

Pursuant to the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations*, the CNSC recovers costs related to its regulatory activities from users licensed under the NSCA. These costs include the technical assessment of licence applications, compliance inspections and the development of licence standards.

### 2. Significant accounting policies

These financial statements have been prepared in accordance with Treasury Board accounting standards, which are based on Canadian generally accepted accounting principles for the public sector.

Management believes that the presentation and results using the stated accounting policies do not result in any significant differences from Canadian generally accepted accounting principles, except as disclosed in note 10 Net Debt Indicator.

The significant accounting policies are as follows:

#### **α) Parliamentary authorities and revenue spending authority**

The CNSC is financed by the Government of Canada through Parliamentary and statutory authorities. Included in the statutory appropriation is a spendable revenue authority which allows the CNSC to spend licence fee revenue. Financial reporting of authorities provided to the CNSC do not parallel financial reporting according to generally accepted accounting principles as authorities are primarily based on cash flow requirements. Consequently, items recognized in the Statement of Operations and the Statement of Financial Position are not necessarily the same as those provided through authorities from Parliament. Note 3 provides a high-level reconciliation between the two bases of reporting.



## **b) Net cash provided by government**

The CNSC operates within the Consolidated Revenue Fund (CRF), which is administered by the Receiver General for Canada. All cash received by the CNSC is deposited to the CRF and all cash disbursements made by the CNSC are paid from the CRF. The net cash provided by Government is the difference between all cash receipts and all cash disbursements including transactions between departments and agencies of the Government.

## **c) Due from the Consolidated Revenue Fund**

Due from the Consolidated Revenue Fund (CRF) is the result of timing differences at year-end between when a transaction affects authorities and when it is processed through the CRF. Amounts due from the CRF represents the amount of cash that the CNSC is entitled to draw from the CRF, without further authorities to discharge its liabilities.

## **d) Revenue**

Revenue is recognized in the period in which the underlying transaction or event that gave rise to the revenue takes place. Licence fee revenue is recognized on a straight-line basis over the period to which the fee payment pertains (normally three months or one year). Licence fees received for future year licence periods are recorded as deferred revenue.

On December 17, 2007, the Government of Canada conferred on the CNSC the authority to respend licence fee revenue.

Certain educational institutions, not-for-profit research institutions wholly owned by educational institutions, publicly funded health care institutions, not-for-profit emergency response organizations and federal government departments are not subject to the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations (Regulations)*. The CNSC provides licences to these organizations free of charge. The value of licences provided free of charge is calculated on the same basis as licence fees for organizations subject to the *Regulations*. The CNSC does not include the foregone revenue of these licensees provided free of charge in the Statement of Operations.

## **e) Payable to licensees**

Payable to licensees represents the calculation of the excess of collection of fees charged over the actual fees earned as at year-end.

## **f) Vacation pay and compensatory leave**

Vacation pay and compensatory leave are accrued as the benefits are earned by employees under their respective terms of employment.

## **g) Grants and contributions**

Grants are recognized in the year in which the conditions for payment are met. Contributions are recognized in the year in which the recipient has met the eligibility criteria or fulfilled the terms of a contractual transfer agreement provided that the transfer is authorized and a reasonable estimate can be made.

## **h) Services provided without charge by other government departments and agencies**

Services provided without charge by other government departments and agencies are recorded as operating expenses at their estimated cost. These include services such as accommodation provided by Public Works and Government Services Canada, contributions covering employer's share of employees' insurance premiums and costs paid by Treasury Board Secretariat, salaries and associated costs of legal services provided by Justice Canada, audit services provided by the Office of the Auditor General, and workers' compensation benefits provided by Human Resources and Skills Development Canada.

## **i) Employee future benefits**

(i) Pension benefits: Eligible employees participate in the Public Service Pension Plan, a multi-employer pension plan, administered by the Government. The CNSC's contributions to the Plan are charged to expenses in the year incurred and represent the total CNSC obligation to the Plan. Current legislation does not require the CNSC to make contributions for any actuarial deficiencies of the Plan.

(ii) Severance benefits: Employees are entitled to severance benefits under labour contracts or conditions of employment. These benefits are accrued as employees render the services necessary to earn them. The obligation relating to the benefits earned by employees is calculated using information from the Treasury Board of Canada, which is derived from the results of the actuarially determined liability for employee severance benefits for the Government as a whole.

#### **j) Accounts receivable**

Accounts receivable are stated at the lower of cost and net recoverable value; a valuation allowance is recorded for receivables where their recovery is considered uncertain.

#### **k) Contingent liabilities**

Contingent liabilities are potential liabilities that may become actual liabilities when one or more future events occur or fail to occur. To the extent that the future event is likely to occur or fail to occur, and a reasonable estimate of the loss can be made, an estimated liability is accrued and an expense recorded. If the likelihood is not determinable or an amount cannot be reasonably estimated, the contingency is disclosed in a note to the financial statements.

#### **l) Tangible capital assets**

Tangible capital assets and leasehold improvements with an initial cost of \$10,000 or more are recorded at their acquisition cost. The CNSC does not capitalize intangibles, works of art and historical treasures that have cultural, aesthetic or historical value, assets located on Indian Reserves and museum collections.

Amortization of tangible capital assets is calculated on a straight-line basis over the estimated useful life of the asset as follows:

<b>Asset class</b>	<b>Amortization period</b>
Leasehold improvements	The lesser of the useful life of the improvement or the remaining term of the lease
Buildings	20 to 30 years
Furniture and equipment	5 to 20 years
Informatics equipment and software	2 to 5 years
Motor vehicles	4 years

#### **m) Asset Retirement Obligation**

The CNSC provides for its legal obligation, under a lease agreement, to return the premises to its original state. The asset retirement obligation is recognized in the year in which the associated leasehold improvement capital asset is put into use.

The obligation is recorded at the net present value of the estimated future cost of retiring the capital asset at the expiry of the lease period. The estimated cost of retirement is added to the carrying amount and amortized over the related assets' useful life. The cost estimate is subject to periodic review and any material changes in the estimated amount or timing of the underlying future cash flow are recorded as an adjustment to the provision. Upon settlement of the liability, a gain or loss will be recorded. As the provision is recorded based on the discounted value of the projected future cash flows, it is increased annually to reflect the passage of time by removing one year's discount. The accretion is charged to the expense in the Statement of Operations. Details of the liability are provided in note 9 of these financial statements.

#### **n) Nuclear Liability Reinsurance Account**

The CNSC administers the Nuclear Liability Reinsurance Account on behalf of the federal government. The CNSC receives the premiums, paid by the operators of nuclear installations, for the supplementary insurance coverage and credits these to the Nuclear Liability Reinsurance Account in the Consolidated Revenue Fund. Since the CNSC does not have the risks and rewards of ownership, nor does it have accountability for this account, it does not include any of the associated financial activity or potential liability in its financial statements. Financial activity and liability is, however, reported in note 15 of these financial statements.

### o) Measurement uncertainty

The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses reported in the financial statements. At the time of preparation of these statements, management believes the estimates and assumptions to be reasonable. The most significant items where estimates are used are contingent liabilities, the liability for employee severance benefits and the useful life of tangible capital assets. Actual results could significantly differ from those estimated. Management's estimates are reviewed periodically and, as adjustments become necessary, they are recorded in the financial statements in the year they become known.

## 3. Parliamentary authorities

The CNSC receives its funding through Parliamentary and statutory authorities. Items recognized in the Statement of Operations and the Statement of Financial Position in one year may be funded through authorities in prior, current or future years. Accordingly, the CNSC has different net results of operations for the year on a government funding basis than on an accrual accounting basis. The differences are reconciled in the following table:

### a) Reconciliation of net cost of operations to current year authorities used

	2011	2010
Net cost of operations	\$ 46,174,103	\$ 46,503,668
Adjustments for items affecting net cost of operations but not affecting authorities:		
Amortization of tangible capital assets	(2,823,939)	(1,180,000)
Increase in vacation pay and compensatory leave	(561,902)	(536,028)
Services provided without charge by other government departments and agencies	(13,520,324)	(13,327,907)
Revenue not available for spending	22,130,492	19,296,827
Revenues pursuant to Subsection 29.1(1) of the <i>Financial Administration Act (FAA)</i>	78,643,028	78,092,168
(Decrease) Increase in employee future benefits	(1,648,656)	1,825,636
Recovery of (provision for) bad debts	3,965	(128,011)
Other expenses	477,920	513,482
	82,700,584	84,556,167
Adjustments for items not affecting net cost of operations but affecting authorities:		
Acquisition of tangible capital assets	7,382,830	7,466,517
Decrease in accountable advances	(200)	—
Decrease in prepaid expenses	(18,727)	(174,287)
	7,363,903	7,292,230
<b>Current year authorities used</b>	<b>\$ 136,238,590</b>	<b>\$ 138,352,065</b>

## b) Authorities provided and used

	2011	2010
Parliamentary authority voted:		
Vote 20—CNSC program expenditures	\$ 44,755,466	\$ 51,111,016
Statutory:		
Expenditures pursuant to Subsection 29.1(1) of the <i>FAA</i>	78,643,028	78,092,168
Contributions to employee benefit plans	14,110,389	13,977,596
	137,508,883	143,180,780
Less:		
Lapsed Vote 20—CNSC program expenditures	1,270,293	4,828,715
<b>Current year authorities used</b>	<b>\$136,238,590</b>	<b>\$138,352,065</b>

## 4. Accounts receivable

The following table presents details of accounts receivable:

	2011	2010
Licence fees	\$ 2,048,241	\$ 6,890,858
Suppliers	171,683	158,246
Other government departments	135,195	5,775
	2,355,119	7,054,879
Allowance for doubtful accounts on receivables from licence fees	(344,053)	(348,018)
	<b>\$ 2,011,066</b>	<b>\$ 6,706,861</b>

## 5. Tangible capital assets

Capital asset class	Cost					Accumulated Amortization				2011	2010
	Opening balance	Acquisitions	Disposals / Write-offs	Work in progress transfers	Closing balance	Opening balance	Amortization	Disposals / Write-offs	Closing balance	Net book value	Net book value
Buildings	\$ 47,506	\$ —	\$ —	\$ —	\$ 47,506	\$ 3,266	\$ 2,371	\$ —	\$ 5,637	\$ 41,869	\$ 44,240
Furniture and equipment	5,539,065	468,467	(330,442)	—	5,677,090	1,999,303	308,041	(330,442)	1,976,902	3,700,188	3,539,762
Informatics equipment and software	4,581,430	743,704	(171,438)	345,534	5,499,230	587,457	919,223	(161,837)	1,344,843	4,154,387	3,993,973
Leasehold improvements	4,534,464	235,133	(150,000)	6,591,400	11,210,997	676,609	1,502,509	(150,000)	2,029,118	9,181,879	3,857,855
Motor vehicles	708,808	87,893	(159,835)	—	636,866	454,603	91,795	(146,896)	399,502	237,364	254,205
Work-in-progress—software	—	345,534	—	(345,534)	—	—	—	—	—	—	—
Work-in-progress—construction	854,168	5,737,232	—	(6,591,400)	—	—	—	—	—	—	854,168
<b>Total</b>	<b>\$16,265,441</b>	<b>\$ 7,617,963</b>	<b>\$ (811,715)</b>	<b>\$ —</b>	<b>\$23,071,689</b>	<b>\$ 3,721,238</b>	<b>\$ 2,823,939</b>	<b>\$ (789,175)</b>	<b>\$ 5,756,002</b>	<b>\$ 17,315,687</b>	<b>\$12,544,203</b>

The capital costs associated with the in-house development of software and improvements to leased accommodations are recorded as work-in-progress until they are completed and they are put into use. During the year ended March 31, 2011, Work-in-progress—software in the amount of \$345,534 (2010 – \$2,437,428) and Work-in-progress—construction in the amount of \$6,591,400 (2010 – \$1,279,191) were completed and put into use. The reclassification of the value of these completed capital assets is reflected in the Work-in-progress transfers column of the Tangible capital assets table above.

## 6. Accounts payable and accrued liabilities

The following table presents details of the CNSC's accounts payable and accrued liabilities:

	2011	2010
Accounts payable to other departments and agencies	\$ 9,848,855	\$ 11,304,654
Accounts payable to external parties	11,403,112	10,504,579
Accounts payable to licensees	5,806,084	4,817,022
	<b>\$ 27,058,051</b>	<b>\$ 26,626,255</b>

## 7. Deferred Revenue

Deferred revenue represents the balance at year-end of amounts received and receivable from external parties for licence fees prior to services being performed. Revenue is recognized on a straight-line basis (normally three months or one-year) over the period in which the service is performed. Details of the transactions related to this account are as follows:

	2011	2010
Balance, beginning of year	\$ 1,674,666	\$ 1,665,690
Licence fee revenue recognized during the year	(1,659,033)	(1,638,172)
Licence fee received and receivable for future years	2,419,329	1,647,148
<b>Balance, end of year</b>	<b>\$ 2,434,962</b>	<b>\$ 1,674,666</b>

## 8. Employee future benefits

### a) Pension benefits

The CNSC's employees participate in the Public Service Pension Plan (Plan), which is sponsored and administered by the Government. Pension benefits accrue up to a maximum period of 35 years at a rate of 2 percent per year of pensionable service, times by the average of the best five consecutive years of earnings. The benefits are integrated with the Canada/Québec Pension Plans' benefits and are indexed to inflation.

Both the employees and the CNSC contribute to the cost of the Plan. The 2010–2011 expense amounts to \$9,905,493 (2009–2010—\$10,091,824), which represents approximately 1.9 times (1.9 times in 2009–2010) the contributions by employees.

The CNSC's responsibility with regard to the Plan is limited to its contributions. Actuarial surpluses or deficiencies are recognized in the financial statements of the Government of Canada, as the Plan's sponsor.

### b) Severance benefits

The CNSC provides severance benefits to its employees based on eligibility, years of service and final salary. These severance benefits are not pre-funded. Benefits will be paid from future authorities. Information about the severance benefits, measured as at March 31, is as follows:

	2011	2010
Accrued benefit obligation, beginning of year	\$ 16,798,140	\$ 18,623,776
Expense (Recovery) for the year	2,530,972	(1,259,114)
Benefits paid during the year	(882,316)	(566,522)
<b>Accrued benefit obligation, end of year</b>	<b>\$ 18,446,796</b>	<b>\$ 16,798,140</b>

## 9. Asset Retirement Obligation

The asset retirement obligation (obligation) has been recognized at the net present value, using the Government of Canada 10-year benchmark bond yield rate of 3.08%, of the estimated future cost of \$318,462, of restoring the leased premises at the expiry of the lease on March 31, 2020. The CNSC engaged a third party consultant to develop a site restoration plan and current cost estimate, which was indexed using the Bank of Canada's target inflation rate of 2% to reflect the estimated future cost of the site restoration plan. No revision in the estimate, timing or accretion has been recognized during the fiscal year as the current cost estimate of \$261,250, upon which the obligation is based, was completed subsequent to year-end. As of March 31, 2011 the CNSC has an asset retirement obligation that can be reasonably estimated as follows:

	2011	2010
Opening balances	\$ —	\$ —
Recognition of the asset retirement obligation	235,133	—
Revision in the estimate and timing of retirement expenditures	—	—
Accretion expense recognized during the year	—	—
<b>Closing balance</b>	<b>\$ 235,133</b>	<b>\$ —</b>

## 10. Net Debt Indicator

The presentation of the Net Debt Indicator and a Statement of Change in Net Debt is required under Canadian generally accepted accounting principles.

Net debt is the difference between a government's liabilities and its financial assets and is meant to provide a measure of the future revenues required to pay for past transactions and events. A statement of change in net debt would show changes during the period in components such as tangible capital assets, prepaid expenses and inventories. The CNSC is financed by the Government of Canada through appropriations and operate within the Consolidated Revenue Fund (CRF), which is administered by the Receiver General for Canada. All cash received by the CNSC is deposited to the CRF and all cash disbursements are paid from the CRF. Under this government business model, assets reflected on the CNSC's financial statements, with the exception of the Due from the Consolidated Revenue Fund, are not available to use for the purpose of discharging the existing liabilities of the CNSC. Future appropriations and spendable revenues generated by the CNSC's operations would be used to discharge existing liabilities.

	2011	2010
<b>Liabilities</b>		
Accounts payable and accrued liabilities	\$ 27,058,051	\$ 26,626,254
Vacation pay and compensatory leave	5,967,777	5,405,875
Deferred revenue	2,434,962	1,674,666
Employee future benefits	18,446,796	16,798,140
Asset Retirement Obligation	235,133	—
<b>Total Financial Liabilities</b>	<b>54,142,719</b>	<b>50,504,935</b>
<b>Financial Assets</b>		
Due from Consolidated Revenue Fund	27,058,051	26,626,254
Accounts receivable and advances	2,011,066	6,706,861
<b>Total Financial Assets</b>	<b>29,069,117</b>	<b>33,333,115</b>
<b>Net Debt Indicator</b>	<b>\$ 25,073,602</b>	<b>\$ 17,171,820</b>

## 11. Summary of segmented expenditures and revenues by cost recovery fee category

Presentation by segment is based on the Department's business lines. The presentation by segment is based on the same accounting policies as described in the Summary of significant accounting policies in note 2. The following table presents the expenses incurred and revenues generated for the main business lines. The segment results for the period are as follows:

	Revenue*	Licences Provided free of charge (note 12)	2011 total value of licences and other revenue	2010 total value of licences and other revenue	2011 cost of operations	2010 cost of operations
<b>Licensing, certification and compliance</b>						
Power reactors	\$ 66,394,371	\$ —	\$ 66,394,371	\$ 66,033,637	\$ 66,394,371	\$ 66,033,637
Non-power reactors	231,195	1,880,242	2,111,437	1,098,585	2,111,436	1,098,585
Nuclear research and test establishments	11,217,057	—	11,217,057	10,742,485	11,217,057	10,742,485
Particle accelerators	—	934,404	934,404	752,914	934,404	752,914
Uranium processing facilities	3,678,316	—	3,678,316	2,642,666	3,678,316	2,642,666
Nuclear substance processing facilities	753,098	—	753,098	520,067	753,098	520,067
Heavy water plants	25,624	—	25,624	39,887	25,624	39,887
Radioactive waste facilities	2,700,635	—	2,700,635	2,370,896	2,700,635	2,370,896
Uranium mines and mills	7,805,129	484,931	8,290,060	6,174,928	8,290,061	6,174,928
Waste nuclear substance	498,664	1,303,519	1,802,183	1,709,103	1,802,183	1,709,103
<b>Total regulatory plan activities fees</b>	<b>93,304,089</b>	<b>4,603,096</b>	<b>97,907,185</b>	<b>92,085,168</b>	<b>97,907,185</b>	<b>92,085,168</b>
Nuclear substances	4,382,743	4,303,137	8,685,880	7,704,709	11,520,907	12,739,525
Class II nuclear facilities	267,102	2,755,617	3,022,719	2,737,492	4,102,738	3,960,793
Dosimetry services	49,771	3,988	53,759	43,154	1,018,638	551,751
<b>Total formula fees</b>	<b>4,699,616</b>	<b>7,062,742</b>	<b>11,762,358</b>	<b>10,485,355</b>	<b>16,642,283</b>	<b>17,252,069</b>
Transport licences and transport package certificates	227,550	12,725	240,275	200,100	1,193,294	748,718
Radiation device and prescribed equipment certificates	85,000	4,000	89,000	86,500	404,253	353,830
Exposure device operator certificates	82,000	—	82,000	87,000	175,822	146,315
Licences to package or transport under special arrangement	711,875	8,875	720,750	36,100	634,964	65,957
<b>Total fixed fees</b>	<b>1,106,425</b>	<b>25,600</b>	<b>1,132,025</b>	<b>409,700</b>	<b>2,408,333</b>	<b>1,314,820</b>
<b>Total licensing and certification</b>	<b>99,110,130</b>	<b>11,691,438</b>	<b>110,801,568</b>	<b>102,980,223</b>	<b>116,957,801</b>	<b>110,652,057</b>
<b>Non-licensing and non-certification</b>						
Co-operative undertakings	37,118	—	37,118	31,289	15,175,513	14,979,401
Stakeholder relations	—	—	—	—	11,619,049	12,909,958
Regulatory framework	—	—	—	—	1,269,614	1,304,928
Canadian Grants and Contributions	—	—	—	—	542,575	624,055
Special projects, other revenue and related expenses	1,626,272	—	1,626,272	3,800,786	1,383,071	3,422,265
<b>Total non-licensing and non-certification</b>	<b>1,663,390</b>	<b>—</b>	<b>1,663,390</b>	<b>3,832,075</b>	<b>29,989,822</b>	<b>33,240,607</b>
<b>Total</b>	<b>\$100,773,520</b>	<b>\$ 11,691,438</b>	<b>\$112,464,958</b>	<b>\$106,812,298</b>	<b>\$146,947,623</b>	<b>\$143,892,664</b>
* Under the CNSC's Revenue Spending Authority, of the \$100,773,520 (2010 – \$97,388,996) in fees charged, \$78,643,028 (2010 – \$78,092,168) was responsible by the CNSC.						

## 12. Licences provided free of charge by the CNSC

The CNSC provides licences free of charge to educational institutions, not-for-profit research institutions wholly owned by educational institutions, publicly funded health care institutions, not-for-profit emergency response organizations, and federal government departments and agencies. The total value of these licences amounted to \$11,691,438 (2010 – \$9,423,302). The foregone revenue is not included in the Statement of Operations.

## 13. Contingent liabilities

Claims have been made against the CNSC in the normal course of operations. These claims include items with pleading amounts and others for which no amount is specified. Based on the CNSC's assessment, \$57,640,000 (2010 – \$57,640,000) were still pending at March 31, 2011. Some of these potential liabilities may become actual liabilities when one or more future events occur or fail to occur. To the extent that the future event is likely to occur or fail to occur, and a reasonable estimate of the loss can be made, an estimated liability is accrued and an expense recorded in the financial statements.

## 14. Contractual obligations

The nature of the CNSC's activities results in some multi-year contracts and obligations whereby the CNSC will be obligated to make future payments when the services and goods are received. As of March 31, 2011, the CNSC has significant contractual obligations that can be reasonably estimated. They are summarized as follows:

	2012	2013	2014	2015	2016 and thereafter	Total
Acquisitions of goods and services	\$ 6,605,456	\$ 245,635	\$ 251,127	\$ 45,164	\$ 1,380	\$ 7,148,762
Operating leases	1,748,168	1,740,618	1,735,621	1,723,749	1,072,601	8,020,757
<b>Total</b>	<b>\$ 8,353,624</b>	<b>\$ 1,986,253</b>	<b>\$ 1,986,748</b>	<b>\$ 1,768,913</b>	<b>\$ 1,073,981</b>	<b>\$ 15,169,519</b>

## 15. Nuclear Liability Reinsurance Account

Under the *Nuclear Liability Act (NLA)*, operators of designated nuclear installations are required to possess basic and supplementary insurance of \$75,000,000 per installation for specified liabilities. The federal government has designated the Nuclear Insurance Association of Canada (NIAC) as the sole provider of third-party liability insurance and property insurance for the nuclear industry in Canada. The NIAC provides insurance to nuclear operators under a standard policy.

The policy consists of two types of coverage: Coverage A and Coverage B. Coverage A includes only those risks that are accepted by the insurer; that is, bodily injury and property damage. Coverage B risks include personal injury that is not bodily, for example, psychological injury, and damage arising from normal emissions, and damage due to acts of terrorism.

The NIAC receives premiums from operators for both coverages; however, premiums for Coverage B risks are remitted to the federal government, which reinsures these risks under its reinsurance agreement with the NIAC. Through the reinsurance agreement, the federal government assumes the liability associated with the difference between the basic insurance coverage provided by the NIAC and the full \$75,000,000 of liability imposed by the *NLA*, as well as for events listed under coverage B. As of March 31, 2011, the total supplementary insurance coverage is \$584,500,000 (2010 – \$584,500,000).

All premiums paid by the operators of nuclear installations for the supplementary insurance coverage are credited to a Nuclear Liability Reinsurance Account (Account) in the Consolidated Revenue Fund. Premiums received in respect of coverage for damage due to acts of terrorism amount to \$279,835 (2010 – \$284,293). Claims against the supplementary insurance coverage are payable out of the Consolidated Revenue Fund and charged to the Account. There have been no claims against, or payments out of, the account since its creation.

As explained in note 2n, the CNSC administers the Nuclear Liability Reinsurance Account on behalf of the Government of Canada through a specified purpose account consolidated in the Public Accounts of Canada. During the year, the following activity occurred in this account:



	2011	2010
Opening balance	\$ 2,240,491	\$ 1,954,598
Receipts deposited	281,435	285,893
<b>Closing balance</b>	<b>\$ 2,521,926</b>	<b>\$ 2,240,491</b>

## 16. Related party transactions

The CNSC is related, as a result of common ownership, to all Government of Canada departments, agencies, and Crown corporations. The CNSC enters into transactions with these entities in the normal course of business and on normal trade terms.

### a) Services provided without charge

During the year, the CNSC received services without charge from certain common service organizations. These services provided without charge have been recorded in the CNSC's Statement of Operations as follows:

	2011	2010
Accommodation provided by Public Works and Government Services Canada	\$ 6,192,739	\$ 6,163,836
Contributions for employer's share of employee benefits provided by the Treasury Board Secretariat	7,171,166	6,866,789
Audit services provided by the Office of the Auditor General of Canada	93,772	150,282
Salary and associated costs of legal services provided by Justice Canada	3,816	112,000
Other	58,831	35,000
<b>Total</b>	<b>\$ 13,520,324</b>	<b>\$ 13,327,907</b>

The Government has centralized some of its administrative activities for efficiency and cost-effectiveness purposes and the economic delivery of programs to the public. As a result, the Government uses central agencies and common service organizations so that one department performs services for all other departments and agencies without charge. The costs of these services, such as the payroll and cheque issuance services provided by Public Works and Government Services Canada are not included in the CNSC's Statement of Operations.

### b) Other transactions with related parties

	2011	2010
Accounts receivable with other government departments and agencies	\$ 496,445	\$ 983,840
Accounts payable to other government departments and agencies	11,376,345	12,056,144
Expenses—Other government departments and agencies	33,268,894	32,091,533
Revenues—Other government departments and agencies	13,025,345	14,064,228

## 17. Comparative information

Comparative figures have been reclassified to conform to the current year's presentation.

Summary of the assessment of effectiveness of the systems of internal control over financial reporting and the action plan of the Canadian Nuclear Safety Commission (CNSC) for the fiscal year 2011–12

## ***Annex to the Statement of Management Responsibility Including Internal Control Over Financial Reporting***

### **Note to the Reader**

With the new Treasury Board *Policy on Internal Control*, effective April 1, 2009, departments and agencies are now required to demonstrate the measures they are taking to maintain an effective system of internal control over financial reporting (ICFR).

As part of this policy, departments and agencies are expected to conduct annual assessments of their system of ICFR, establish action plan(s) to address any gaps and to attach to their *Statement of Management Responsibility* a summary of their assessment results and action plan.

Effective systems of ICFR aim to achieve reliable financial statements and provide assurances that:

- transactions are appropriately authorized
- financial records are properly maintained
- assets are safeguarded from risks such as waste, abuse, loss, fraud and mismanagement
- applicable laws, regulations and policies are in compliance

It is important to note that the system of ICFR is not designed to eliminate all risks, but rather to mitigate risk to a reasonable level with controls that is balanced with, and proportionate to, the risks they aim to mitigate.

The maintenance of an effective system of ICFR is an ongoing process designed to identify key risks, assess and adjust the effectiveness of associated key controls, as well as to monitor their performance in support of continuous improvement. As a result, the scope, pace and status of departmental assessments of the effectiveness of their system of ICFR will vary from one organization to the other based on their risks and taking into account their unique circumstances.

## **1. Introduction**

This document is attached to the Canadian Nuclear Safety Commission's (CNSC) Statement of Management Responsibility including internal control over financial reporting for the fiscal-year 2010–2011. This document is published for the first time for the year-ended March 31, 2011 as required by the Treasury Board Policy on Internal Control and provides summary information on the measures taken by the CNSC to maintain an effective system of internal control over financial reporting (ICFR). It provides summary information on the preliminary planning and scoping conducted at the CNSC as well as information on the subsequent testing of the system. The report also includes progress, results and related action plans along with some financial highlights pertinent to understanding the control environment unique to the CNSC.

### **1.1 Authority, Mandate and Program Activities**

The Canadian Nuclear Safety Commission was established in 1946 by the *Atomic Energy Control Act*. Prior to May 31, 2000, when the *Nuclear Safety and Control Act* came into effect, the CNSC was known as the Atomic Energy Control Board (AECB). The CNSC is a departmental corporation listed in Schedule II to the *Financial Administration Act* and reports to Parliament through the Minister of Natural Resources.

The *Nuclear Safety and Control Act* (NSCA) provides comprehensive powers to the CNSC to establish and enforce national standards for nuclear energy in the areas of health, safety and environment. It establishes a basis for implementing Canadian policy and fulfilling Canada's obligations with respect to the non-proliferation of nuclear weapons. The CNSC is empowered to require financial guarantees, order remedial action in hazardous situations and compel responsible parties to bear the costs of decontamination and other remedial measures.

The CNSC's objectives are:

- regulate the development, production and use of nuclear energy and the production, possession and use of nuclear substances, prescribed equipment and information in order to: a) prevent unreasonable risk to the environment, to the health and safety of persons and to national security; and b) achieve conformity with measures of control and international obligations to which Canada has agreed; and
- disseminate scientific, technical and regulatory information concerning: a) the activities of the CNSC; b) the development, production, possession, transport and use of nuclear energy and substances; and c) the effects of nuclear energy and substances use on the environment and on the health and safety of persons.

The CNSC also administers the *Nuclear Liability Act*, including designating nuclear installations and prescribing basic insurance to be carried by the operators of such nuclear installations, and the administration of supplementary insurance coverage premiums for these installations.

Pursuant to the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations*, the CNSC recovers costs related to its regulatory activities from users licensed under the *NSCA*.

## 1.2 Financial highlights

The CNSC's Audited Financial Statements for the fiscal year 2010-2011 can be found on the CNSC's website<sup>1</sup>. Information can also be found in the Public Accounts of Canada<sup>2</sup>.

- Total expenses were \$146.9M. The majority of these expenses were comprised of salaries and benefits (73% or \$107.7M with 847 employees) followed by professional and special services (10% or \$14.9M).
- Total revenues of \$100.8M were earned primarily from licensing fees (98% or \$99.1M).
- Total assets and liabilities were \$46.5M and \$54.1M respectively. Assets primarily consisted of funds due from the consolidated revenue fund (\$27.1M), accounts receivable (\$2M) and tangible capital assets (\$17.3M). Accounts payable and accrued liabilities (\$27.1M) and accrued employee benefits (\$18.4M) comprise the majority (84%) of the liabilities.
- The finance function of the CNSC is centralized at the headquarters offices in Ottawa.
- The CNSC utilizes Freebalance as its financial accounting system and a Cognos-based enterprise planning and business intelligence system for costing and financial management and reporting (CPMRS). These systems interface with the CNSC's Licensing Operations User Interface System (LOUIS) to support the CNSC's management of its revenues.

## 1.3 Audited financial statements

The Auditor General of Canada (AG) has issued an unqualified audit opinion on the CNSC's financial statements since the CNSC's creation in 2000. The AG also audits, at the specific request of the CNSC, the CNSC's compliance with the *Canadian Nuclear Safety Commission Cost Recovery Fees Regulations (CRFR)* and has issued an unqualified opinion in this regard since the establishment of the *CRFR* in 2003.

## 1.4 Service arrangements relevant to financial statements

The CNSC relies on other organizations and their internal controls for the processing of certain transactions and for information used to calculate certain liabilities that are recorded in its financial statements:

- Public Works and Government Services Canada (PWGSC) centrally administers the payments of salaries and expenses as well as the procurement of certain goods and services.
- Treasury Board Secretariat (TBS) provides the CNSC with information used to calculate various accruals and allowances, such as the accrued severance liability.

## 1.5 Material changes in fiscal-year 2010-2011

At the beginning of the year, the CNSC implemented changes to the Regulatory Activity Plan's cost recovery methodology, which is now based on the initial planning schedule and the overall Commission's year-end expenses.

Mr. Michel Cavallin held the position of Chief Financial Officer from May 17, 2010 through March 31, 2011.

<sup>1</sup> See: (<http://www.suretenuclaire.gc.ca/eng/readingroom/reports/annual/index.cfm>)

<sup>2</sup> See: (To be published in August 2011)

The CNSC implemented an upgrade of its Freebalance financial system on February 18, 2011 and completed the implementation of CPMRS in December 2010.

## 2. CNSC's Control Environment Relevant to ICFR

The CNSC recognizes the importance of setting the tone from the top to help ensure that staff at all levels understand their roles in maintaining effective systems of ICFR and is well equipped to exercise their responsibilities effectively. The CNSC's focus is to ensure risks are well managed through a responsive and risk-based control environment that enables continuous improvement and innovation.

### 2.1 Key positions, roles and responsibilities

Below are the CNSC's key positions and committees with responsibilities for maintaining and reviewing the effectiveness of its system of ICFR.

**President** – The CNSC's president, as Accounting Officer, assumes overall responsibility and leadership for the measures taken to maintain an effective system of internal control. In this role, the President chairs the Management Committee.

**Chief financial Officer (CFO)** – The CNSC's CFO reports directly to the President and provides leadership for the coordination, coherence and focus of the design, implementation, assessment and maintenance of an effective and integrated system of ICFR.

**Vice-Presidents** – The CNSC's Vice-Presidents in charge of program delivery are responsible for maintaining and reviewing the effectiveness of the system of ICFR falling within their operational areas.

**Chief Audit Executive (CAE)** – The CNSC's CAE reports functionally to the President and provides assurance through periodic risk-based internal audits which are instrumental to the maintenance of an effective system of ICFR.

**Departmental Audit Committee (DAC)** – The DAC is an advisory committee comprised of three external and two internal members. The DAC ensures that the President has independent, objective advice, guidance and assurance on the adequacy of the CNSC's control and accountability processes. As such, it reviews the CNSC's corporate risk profile and its system of internal control, including the annual assessment and action plans relating to the system of ICFR.

**Management Committee (MC)** – As the CNSC's central decision-making body, the MC reviews, approves and monitors the corporate risk profile and the CNSC's system of internal control, including the assessment and remedial actions relating to the system of ICFR.

### 2.2 Key measures taken by the CNSC

The CNSC's control environment also includes a series of measures to equip its staff to manage risks well through raising awareness, providing appropriate knowledge and tools as well as developing skills. Key measures include:

- an Office of Audit and Ethics that manages the Values and Ethics, the Internal Disclosure and *Public Servants Disclosure Protection Act* (PSDPA), and the Conflict of Interest and Post-employment programs;
- annual senior management performance contracts with clear financial management responsibilities;
- the implementation of a Management Fundamentals training program, including security, information and human resource management and financial delegation roles and responsibilities;
- the creation of a 'Harmonized Plan for Improvement Initiatives' as a corporate improvement plan that integrates, aligns and monitors all cross-functional CNSC improvement initiatives as a single prioritized plan;
- a CFO function reporting directly to the President
  - significant and on-going investment in functional financial staff training;
  - creation of a centre of expertise on ICFR;
  - financial policies tailored to the CNSC's business and control environment;
  - regular updates of delegated financial authorities matrix;
  - establishment of a 'Quality Assurance' compliance monitoring framework;
  - documentation of all key business processes to support the management and oversight of ICFRs;

## 3. Assessment of the Canadian Nuclear Safety Commission's System of ICFR

### 3.1 Assessment objective and scope

The self-assessment is a systematic review conducted by management to provide assurance on internal control over financial reporting. The annual assessment is intended to be led and administered by the CFO and supported by the senior management team.

The assessment's objective is to ensure that the ICFR are effective in preventing material misstatements or errors in the CNSC's financial statements. In this context, an error is considered to be material if its omission or misstatement could impact the decisions of the financial statement users.

To determine the scope of the undertaking, a scoping and planning exercise was undertaken to identify business process controls, entity level controls, and general computer controls associated with key risks to financial reporting. Both quantitative and qualitative risk factors were considered during the scoping and planning. These included, but were not limited to: materiality, transactions requiring significant judgement or estimations (e.g. contingent liabilities), complexity of operations, susceptibility to fraud, Auditor General recommendations concerning the financial statements or related matters, and previous internal audit findings.

Business processes are defined as the specific processes supporting the treatment of financial transactions. The following six business processes were identified for assessment based on risks: Payroll, Purchase to Pay, Revenues, Capital Assets, Grants and Contributions and Year-end Financial Close and Statement Preparation.

Entity level controls are defined as the overarching controls of the organization that set the 'tone from the top'. The following four entity level control areas were identified: Governance and Accountability, Risk Management, Information and Communication, and Monitoring.

General computer controls, also known as information technology general controls or ITGCs, are defined as controls over the financial management and reporting systems and information technology (IT) infrastructure used across the organization. The CNSC is responsible for assessing the effectiveness of all key IT general controls for the systems that it fully manages. Where the CNSC acquires system-based services from other government departments (i.e. Regional Pay System (RPS) and Standard Payment System (SPS)), the self-assessment will be limited to components of the systems that are controlled by the CNSC.

These control areas are the baseline by which the CNSC developed its three-year self-assessment plan. This plan will be reviewed and updated on an annual basis to reflect changes in risks and findings.

### 3.2 Assessment Elements and Methodology

Whether it is to support its year-end financial statement audit or the requirements of the *Policy on Internal Control*, the objective of the CNSC's ICFR is to provide reasonable assurance that:

- Transactions are appropriately authorized;
- Financial records are properly maintained;
- Assets are safeguarded; and
- Applicable laws, regulations and policies are complied with.

This assurance will be achieved through the assessment of the **design** and **operating effectiveness** of the system of ICFR, the creation of a **management action plan** to address significant gaps in design and operating effectiveness, and the **on-going monitoring and continuous improvement** of all key elements of this system.

**Design effectiveness** means that key control points exist, are known, documented, and are aligned with the risks (i.e. controls are balanced with and proportionate to the risks they aim to mitigate). The assessment includes the mapping of key business processes and IT systems, identification of key risks and internal controls implemented to mitigate these risks, and a walk-through of the process or systems to confirm their existence.

**Operating effectiveness** means that the application of key controls is tested over a defined period, normally the fiscal year, and that they are working as intended. The assessment activities include performing a sample test of transactions to determine whether the documented procedures and internal control measures are being consistently followed and applied.

**Management action plan** – A report will be issued internally, reporting on any deficiencies identified during the tests of operating design and effectiveness. The process owner will develop a Management Action Plan, which will be included in the report, to remediate the deficiencies in a timely manner.

**On-going monitoring and continuous improvement** – Once remediated, the design and operating effectiveness of the key controls will be reassessed to ensure that the actions taken address the identified gaps. Thereafter, annual monitoring activities will ensure that the control design continues to address key risks and operating effectiveness is maintained.

#### 4. Canadian Nuclear Safety Commission Assessment Results as at March 31, 2011

As of March 2010, a project plan was developed to ensure that sufficient resources were available and that realistic timelines were established to complete the initial assessment of design and operational effectiveness of all key business processes, entity level controls, and information technology general controls as well as to accommodate the implementation and testing of remedial actions. Both internal and external reporting mechanisms were established to track progress and identify the need for senior management assistance.

The CNSC's assessment efforts during the fiscal year ended March 31, 2011 focused on the following assessment areas:

	2010-2011	2011-2012	2012-2013
<b>Business Processes</b>			
<b>Payroll</b>			
Assess design	C		
Remediate design gaps	C		
Assess operations	C		
Remediate operating gaps	C		
<b>Purchase to Pay</b>			
Assess design	I	P	
Remediate design gaps		P	
Assess operations		P	
Remediate operating gaps		P	
<b>Revenues</b>			
Assess design	I	I	
Remediate design gaps	I	I	
Assess operations		P	
Remediate operating gaps		P	
<b>Capital Assets</b>			
Assessment and remediation		P	
<b>Grants and Contributions</b>			
Assessment and remediation		P	
<b>Year-end Financial Close and Statement Preparation</b>			
Assessment and remediation		P	
<b>Entity Level Controls</b>			
<b>Governance and accountability</b>			
Assessment and remediation		P	P
<b>Risk Management</b>			
Assessment and remediation			P
<b>Information and Communication</b>			
Assessment and remediation			P

C=Completed; I=In-Progress; P=Planned

	2010-2011	2011-2012	2012-2013
<b>Monitoring</b>			
Assessment and remediation			P
<b>Information Technology General Controls</b>			
Assess design	C		
Assess operations	C		
Remediate design gaps		P	P
Remediate operating gaps		P	P

C=Completed; I=In-Progress; P=Planned

Key controls on IT regarding general computer operation, development, change, infrastructure and architecture controls relate specifically to financial systems including;

- Financial Accounting;
- Salary Management;
- Revenue Management;
- Costing;
- Business Intelligence; and
- Other peripheral systems with an impact on financial reporting.

For each of these systems and financial accounts, the CNSC completed the following steps:

- Gathered information pertaining to processes, risks and controls relevant to ICFR, including appropriate policies and procedures;
- Tested design and operating effectiveness of ICFR;
- Assessed governance and accountability and monitoring entity level control design and effectiveness.

As a result of the assessment work, and taking into account the level of risk exposure and the resources required to remediate, the CNSC identified the following actions and timelines:

#### Information Technology General Controls:

- Strengthen logical and physical access attribution practices (2011-2012);
- Standardize and document administrator and user access approval and withdrawal processes (2012-2013);
- Implement program change tracking and documentation (2012-2013);
- Strengthen infrastructure change operating procedures and documentation (2012-2013).

#### Business Process Controls:

- Introduce signature validation for human resource processes (completed);
- Implement formal approval of changes to regulatory activities with revenue implications (in progress);
- Document revenue determination and adjustment procedures, inputs, rationale and assumptions (in progress).

#### Entity Level Controls:

- Design a revenue management authority matrix (in progress);
- Implement, monitor and report to senior management key performance indicators for revenues (completed);

## 5. Canadian Nuclear Safety Commission's Action Plan for the 2011-2012 and Subsequent Fiscal Years

Building on the progress over the last year, the CNSC is positioned to meet major milestones in the assessment of its system of ICFR in the 2011-12 and 2012-2013 fiscal years. The preceding table (4.) set out planned activities.





# Annex A:

## COMMISSION TRIBUNAL HEARINGS AND OPPORTUNITIES TO BE HEARD

### HEARINGS

#### Nuclear power plants

##### **Bruce Power Inc.:**

- Decision to approve the transport licence and certificate for the transport of 16 steam generators to Sweden—Public hearing (September 28 and 29, 2010)

##### **Hydro-Québec:**

- Decision to renew for six-months the Gentilly-2 Nuclear Generating Station and radioactive waste storage facility operating licences, and for postponement of the submission of the revised safety report for that same station—Abridged hearing (December 10, 2010)

##### **New Brunswick Power Nuclear Corporation:**

- Decision to renew the operating licence for Point Lepreau Nuclear Generating Station—Public hearing (January 19, 2011)

##### **Ontario Power Generation Inc.:**

- Decision to renew the Pickering Nuclear Generating Station A operating licence—Public hearing (February 17, 2010 and May 21, 2010)
- Decision to amend the nuclear power reactor operating licence for the Darlington Nuclear Generating Station—Abridged hearing (July 10, 2010)
- Decision to amend the nuclear power reactor operating licence for the Pickering A Nuclear Generating Station—Abridged hearing (June 10, 2010)
- Decision to amend the nuclear power reactor operating licence for the Pickering B Nuclear Generating Station—Abridged hearing (June 10, 2010)
- Decision to amend the Darlington Nuclear Generating Station power reactor operating licence to reflect an update in documentation—Abridged hearing (September 10, 2010)
- Decision to amend the Pickering Nuclear Generating Station B power reactor operating licence to reflect an update in documentation—Abridged hearing (September 10, 2010)
- Decision to amend the Darlington Nuclear Generating Station nuclear power reactor operating licence—Abridged hearing (October 22, 2010)
- Decision to amend the Pickering Nuclear Generating Station A nuclear power reactor operating licence—Abridged hearing (October 22, 2010)
- Decision to amend the Pickering Nuclear Generating Station B nuclear power reactor operating licence—Abridged hearing (October 22, 2010)

- Decision to amend the Darlington Nuclear Generating Station power reactor operating licence to reflect updates in documentation—Abridged hearing (February 7, 2011)
- Decision to amend the Pickering Nuclear Generating Station B power reactor operating licence to reflect updates in documentation—Abridged hearing (February 7, 2011)
- Decision to amend the Darlington Nuclear Generating Station power reactor operating licence to reflect updates in documentation—Abridged hearing (March 28, 2011)
- Decision to amend the Pickering Nuclear Generating Station B power reactor operating licence to reflect updates in documentation—Abridged hearing (March 28, 2011)

## Uranium mines and mills

### **Cameco Corporation:**

- Decision to amend the operating licence to allow uranium production flexibility for the McArthur River Operation—Abridged hearing (May 5, 2010)
- Decision to accept the specific guidelines scoping document for the proposed Millennium Mine Project—Abridged hearing (September 20, 2010)

### **Denison Mines Inc.:**

- Decision to accept the environmental assessment screening regarding the proposed installation of berms at the outlet of the Hamilton Wetland near Elliot Lake, Ontario—Abridged hearing (September 17, 2010)
- Decision to amend the decommissioning licence for the Stanrock decommissioned mine and mill site in order to install berms at the outlet of the Halfmoon Wetland near Elliot Lake, Ontario—Abridged hearing (September 17, 2010)

### **AREVA Resources Canada Inc.:**

- Decision to accept the environmental assessment screening report for the proposed Caribou Project at McClean Lake—Abridged hearing (April 7, 2010)
- Decision to accept the project-specific guidelines scoping for the receipt and processing of McArthur River Ore at the McClean Lake Operation Project—Abridged hearing (October 21, 2010)

## Processing and research facilities

### **AECL:**

- Decision to amend the Chalk River Laboratories operating licence to permit the construction and operation of the bulk materials landfill—Abridged hearing (June 18, 2010)
- Decision to amend the Whiteshell Laboratories nuclear research and test establishment decommissioning licence—Abridged hearing (April 29, 2010)
- Decision to approve the return to service of the National Research Universal Reactor—Public hearing (July 5, 2010)

### **MDS Nordion, a Division of MDS (Canada) Inc.:**

- Decision to amend the MDS Nordion nuclear substance processing facility operating licence—Public hearing (November 18, 2010)

**Canadian Light Source Inc.:**

- Decision to amend the Class IB particle accelerator operating licence and revision of the financial guarantee for its facility in Saskatoon, Saskatchewan—Abridged hearing (December 21, 2010)

**TRIUMF Accelerators Inc.:**

- Decision to amend the Class IB particle accelerator operating licence located in Vancouver, British Columbia—Abridged hearing (July 16, 2010)
- Decision to amend the particle accelerator operating licence—Abridged hearing (March 4, 2011)

**SRB Technologies (Canada) Inc.:**

- Decision to renew the Class IB nuclear substance processing facility operating licence for the Gaseous tritium light source facility in Pembroke, Ontario—Public Hearing (February 17, 2010 and May 19, 2010)

## Waste management

**AECL:**

- Decision to accept the environmental assessment screening report regarding Atomic Energy of Canada Limited's proposed National Research Universal Reactor long-term management project at Chalk River Laboratories in Chalk River, Ontario—Abridged hearing (March 18, 2011)

**Ontario Power Generation Inc.:**

- Decision to amend the Darlington waste management facility operating licence—Abridged hearing (June 18, 2010)

## SLOWPOKE-2 Reactor

**Dalhousie University:**

- Decision to accept the environmental assessment screening regarding the proposal to decommission the Dalhousie University SLOWPOKE-2 reactor facility in Halifax, Nova Scotia—Abridged hearing (January 20, 2011)
- Decision to accept the issuance of decommissioning licence for the Dalhousie University SLOWPOKE-2 reactor facility—Abridged hearing (January 20, 2011)

## Opportunities to be heard

**Saskatchewan Research Council:**

- Decision to review the designated officer order issued on June 18, 2010 with respect to the deterioration of the Gunnar Mine site in Northern Saskatchewan—Public hearing (July 5, 2010)

# ANNEX B:

## REGULATORY FRAMEWORK PROJECTS PUBLISHED/ COMPLETED IN 2010-11

<b>Regulatory instrument</b>	<b>Published/completed</b>
<i>Control of the Export and Import of Risk-Significant Radioactive Sources (INFO-0791)</i>	April 29, 2010
<i>Design Guide for Nuclear Substance Laboratories and Nuclear Medicine Rooms (GD-52)</i>	May 18, 2010
<i>Designing and Implementing a Bioassay Program (GD-150)</i>	May 18, 2010
<i>Amendments to the Nuclear Non-proliferation Import and Export Control Regulations</i>	Published in the Canada Gazette, Part II on May 26, 2010
<i>Amendments to the Class II Nuclear Facilities and Prescribed Equipment Regulations</i>	Published in the Canada Gazette, Part II on May 26, 2010
<i>Amendments to Certain Regulations Made Under the Nuclear Safety and Control Act (Miscellaneous Program)</i>	Published in the Canada Gazette, Part II on May 26, 2010
<i>Accounting and Reporting of Nuclear Material (RD-336)</i>	June 29, 2010
<i>Guidance for Accounting and Reporting of Nuclear Material (GD-336)</i>	June 30, 2010
<i>Management of Uranium Mine Waste Rock and Mill Tailings (DIS-10-01)</i>	July 2010 (end of public consultation)
<i>Licensing Process for New Uranium Mines and Mills in Canada, Revision 1 (INFO-0759)</i>	August 16, 2010
<i>Licence Application Guide – Radiotherapy (RD/GD-120)</i>	November 8, 2010
<i>Application Guide – Certification of Radiation Devices or Class II Prescribed Equipment (RD/GD-254)</i>	December 10, 2010
<i>Nuclear Criticality Safety (RD-327)</i>	December 12, 2010
<i>Guidance for Nuclear Criticality Safety (GD-327)</i>	December 12, 2010
<i>Criteria for Explosive Substance Detection, X-ray Imaging, and Metal Detection Devices at High-Security Sites (RD-361)</i>	December 23, 2010
<i>Criteria for Physical Protection Systems and Devices at High-Security Sites (RD-321)</i>	December 23, 2010

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*Visit the CNSC's Web site for more information about the Canadian nuclear sector*

## **On the CNSC's Web site, you'll find:**

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- information about nuclear facilities in Canadian communities
- news releases and updates on important issues affecting the nuclear sector
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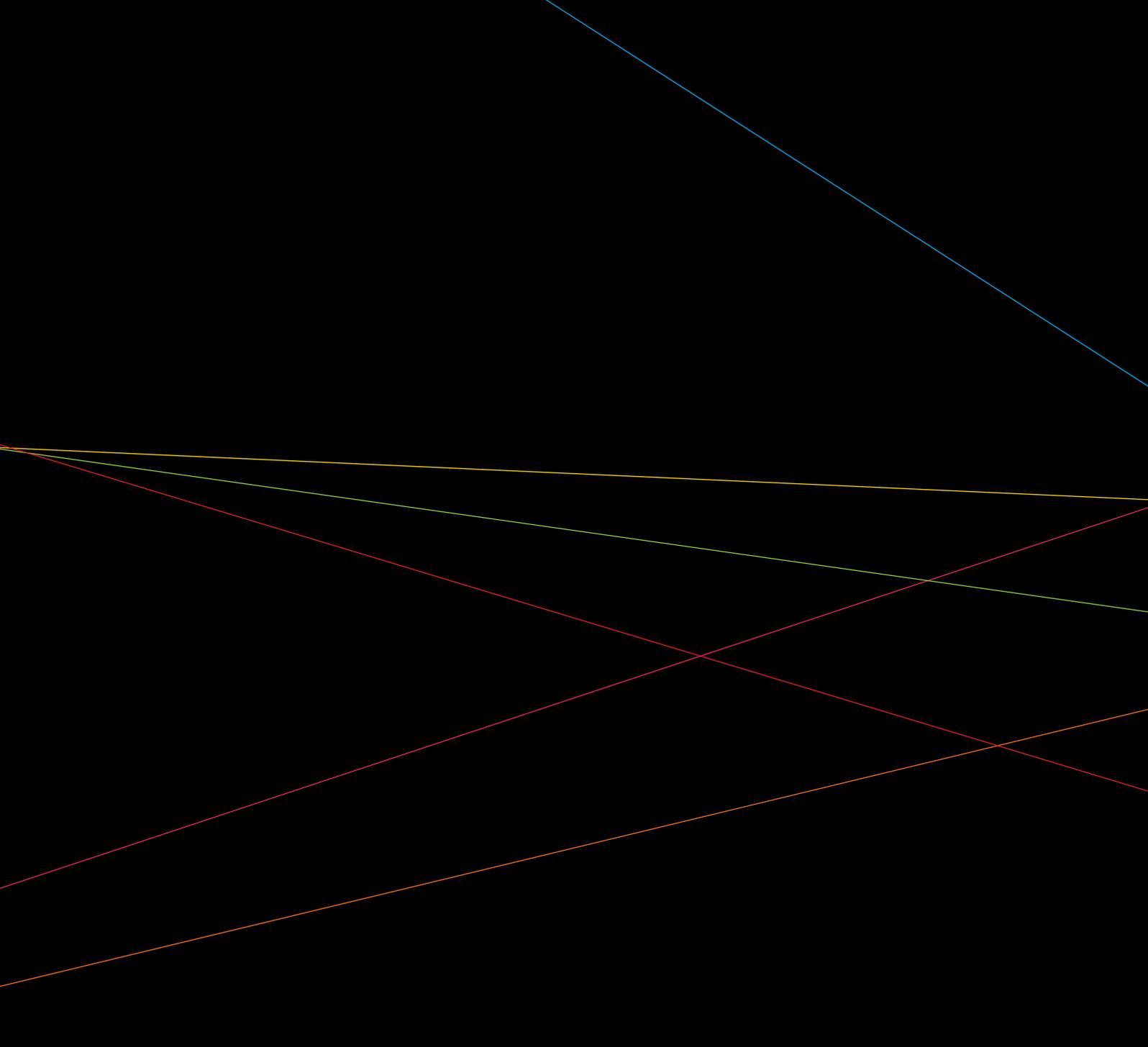
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