

III. The Canadian Nuclear Safety Commission

Performance Against Plans

The following section outlines the results achieved during 2005-2006 in implementing the 2005-2006 to 2007-2008 strategic plan. These results are presented in terms of the five immediate outcomes discussed in Section II.

1. A clear and pragmatic regulatory framework.

The CNSC is committed to maintain clarity and pragmatism in its regulatory regime so that licensees are aware of and able to comply with all requirements respecting the protection of Canadians and the peaceful use of nuclear energy and materials.

The CNSC's regulatory framework is composed of:

- The *Nuclear Safety and Control Act* (NSCA) regulations and regulatory documents
- The *Safeguards Agreement* and *Additional Protocol* between Canada and the International Atomic Energy Agency (IAEA)
- Canada's bilateral Nuclear Cooperation Agreements and associated Administrative Agreements
- The *Canadian Environmental Assessment Act*
- The *Nuclear Liability Act*

The following highlights the key enhancements to the CNSC regulatory framework during the reporting year.

Nuclear Safety and Control Act

The *Nuclear Safety and Control Act* (NSCA) must continue to incorporate adequate powers to protect health, safety, security, the environment and to respect Canada's international commitments on the peaceful use of nuclear energy. The Act, which gives the organization its specific regulatory

authority, does not state a mandatory statutory review period; however, the CNSC maintains an ongoing review. In 2005-2006, the CNSC developed, in conjunction with the Department of Justice, a Miscellaneous Amendments program for the NSCA. Under this program, amendments are submitted to the Department of Justice as a preparatory measure should the Government of Canada decide to subject the NSCA to a review.

Regulatory Strategies and Regulations that are Effective

The CNSC undertakes an ongoing, consultative and risk-informed approach to development or amendment of regulations, regulatory strategies and licensing requirements. All new or amended regulations ensure up-to date consistency with international recommendations and with regulatory best practices.

Development of new regulations, once a need is identified, requires approximately three years, depending on the nature of feedback received in the consultation process. In 2005-2006, the CNSC continued to develop the scope for new *Nuclear Safeguards Regulations* to clarify and consolidate measures to be undertaken by licensees as part of a national safeguards program, based on the requirements of the *Safeguards Agreement* and *Additional Protocol* between Canada and the IAEA.

In addition to these new regulations, the CNSC has focused on amendments to a number of existing regulations, to strengthen or modernize regulatory requirements and to reflect the latest international

standards. Revisions of the *Nuclear Security Regulations* have been in process for a number of years. Following extensive consultation, these were re-published in the *Canada Gazette* in June 2005 and are expected to be in place by the end of 2006-2007. More details of the regulations under amendment in 2005-2006 can be found in Section V—Other Information.

Regulatory Documents Clarify Requirements and Expectations

Acts, regulations, licences and directives administered by the CNSC establish nuclear regulatory requirements. The CNSC provides instruction, assistance and information on these requirements, in the form of regulatory documents. The CNSC maintains a Regulatory Documents Framework on its Web site. (CNSC - Regulatory & Licensing Information - Regulatory Documents). This framework lists current, in-process and future regulatory documents by regulatory safety area. Three different types of Regulatory Documents issued by the CNSC are (i) policies, (ii) standards, and (iii) guides. Identification and prioritization of new regulatory documents is ongoing, based on consultation with stakeholders and assessments of relative risk.

In 2005-2006, the CNSC published two regulatory standards for safety analysis and reliability programs at nuclear power plants, and another standard and guide relating to environmental protection policies, programs and procedures at Class I facilities, which mostly include nuclear power plants and uranium mines and mills.

In addition, a number of new regulatory documents were in process during the year. These address current areas of risk discussed in Section II's Challenges and Risks, such as management of aging nuclear power plants and their life extension, radioactive waste management, emergency preparedness, security, nuclear non-proliferation and today's increased need for security awareness. More details of the regulatory documents under amendment in 2005-2006 can be found in Section V—Other Information.

Alignment with International Standards

A key guiding principle in the development of the CNSC's regulatory framework is to adapt existing documents and standards. As outlined in more detail in section 4 below (International and Domestic Cooperation), the CNSC participates in IAEA technical working groups and standing committees responsible for the development of international standards in nuclear regulation, as well as with a number of other international nuclear regulatory groups. This allows important Canadian contributions to be made in the advancement of international norms, and results in clearer and more comprehensive regulatory tools that build on world experience and are aligned with internationally accepted best practices. As an example, the CNSC's draft regulatory document *Requirements for the Disposal of Nuclear Substances (S-307)*, which is currently with stakeholders for consultation, includes the IAEA's Safety Standards document RS-G-1.7 *Application of the Concepts of Exclusion, Exemption and Clearance Safety Guide*. The document, once adopted, will set out the conditions under which licensees must dispose of nuclear substances in line with international standards.

Countering Contemporary Nuclear Proliferation Threats

With its commitment to the safe and secure use of radioactive material, Canada has endorsed the *IAEA Code of Conduct on the Safety and Security of Radioactive Sources* (the Code). Canada is the world's largest manufacturer and exporter of radioactive sources that are used in a variety of medical, industrial and research activities. To counter contemporary nuclear proliferation threats, the CNSC is reinforcing the effectiveness of Canada's multilateral non-proliferation and export control regime. Under the Code, the CNSC is developing regulatory processes for the import and export of sealed sources (Category I and II). This will achieve a high degree of safety and security of certain 'high-risk' radioactive sources, and will reduce the likelihood of accidental harmful exposure or malicious use.



The Licensing Process for New Nuclear Power Plants in Canada

There have been no new nuclear power plants built in Canada in the last 25 years, and there has been much recent discussion on the need for new nuclear power plants in Canada—particularly in Ontario—to meet the growing demand for electricity.


Governments, CNSC licensees and other stakeholders have requested information from the CNSC on the regulatory requirements and process for licensing new nuclear power plants.

As a result, in February 2006 the CNSC published an information document entitled *Licensing Process for New Nuclear Power Plants in Canada*, which provides an overview of the process for licensing any new nuclear power plants in Canada. The document is a precursor to a series of regulatory documents which will be developed over the next few years, and responds to requests for guidance on the regulatory requirements and process for licensing such facilities.

The document is based on the requirements of the *Nuclear Safety and Control Act* (NSCA) and associated regulations, and provides a clear, consistent and transparent process for the licensing of new nuclear power plants in Canada. It also outlines the CNSC's expectations for all stakeholders, with emphasis on the environmental assessment process that will be required for any new nuclear power plants.

It is important to note that as of March 31, 2006, the CNSC had not yet received any applications to begin the licensing process for any new nuclear power plants. However, the document was prepared in response to requests for guidance, and in order to facilitate open communication with stakeholders.

In addition to publishing a licensing process document, the CNSC also held an information session for stakeholders, to ensure they have a well-informed understanding of the licensing process for new nuclear power plants. The information session was attended by representatives of the nuclear industry, federal, provincial and municipal officials, environmental groups and members of the public. It provided stakeholders an opportunity to ask CNSC staff specific questions and receive clarification on the licensing process.



A Modernized Canadian Safeguards Framework

The CNSC, in cooperation with the IAEA, has been actively preparing for the implementation of an integrated safeguards program to meet Canada's strengthened obligations. The purpose is to assure Canadians, international agencies and partners that all nuclear material is adequately accounted for in Canada. The program will clearly identify requirements of the CNSC and its licensees. In 2005-2006, technical aspects of safeguards implementation represented a large portion of the work of the Canada-IAEA safeguards consultations, and of the Integrated Safeguards Working Group.

The Environmental Assessment Process

In 2004, the Government of Canada announced plans for the possible consolidation of environmental assessments under the *Canadian Environmental Assessment Act*. During the 2005-2006 reporting period, the CNSC has been working with other independent tribunals such as the National Energy Board and the Canadian Transportation Agency, and has consulted with stakeholders on this government-wide initiative to streamline the environmental assessment process. The CNSC provided advice to the Canadian Environmental Assessment Agency on possible options and their potential impact on the CNSC's regulatory activities and decision-making responsibilities under the Act.

2. Individuals and organizations that operate safely and conform to safeguards and non-proliferation requirements.

Improving the Licensing and Certification Process

Implementing a Consistent, Risk-informed Licensing Methodology

The CNSC continued to integrate a consistent, risk-informed approach for licensing across a broad nuclear industry with very different risk factors. Following its development in 2004-2005, a risk-informed program has been fully implement-

ed for the regulation of nuclear substances. In licensing of uranium mining, milling and processing, waste management facilities, non-power reactors, research and test facilities and Class I accelerators, a risk-informed decision-making process was included in the documentation of a single, consolidated licensing process. For each type of licensee, the risk factors that need to be considered during decision-making were documented. The risk-informed methodology has been further expanded to the implementation of measures respecting Canada's nuclear non-proliferation policy, including import and export controls and safeguards requirements. In this regulatory area, a draft integrated risk management framework and supporting guidelines were completed.

The introduction of risk-informed regulatory programs into the licensing and compliance of complex power reactors presents very different challenges. In 2005, a working group was established under the CNSC's Power Reactor Regulation Improvement Program (PRRIP) to develop a risk-informed decision-making process for regulatory activities. A process based on Canadian standard CAN-CSA Q850 was adopted in consultation with CNSC staff and management, licensees and subject matter experts. A pilot implementation period is scheduled to begin in May 2006. Feedback following the pilot will lead to full implementation in the power reactor regulatory business line.

The implementation of a risk-informed licensing decision process across the CNSC will provide a more systematic means for the allocation of regulatory resources to risk priorities. It will also provide stakeholders with clearer information concerning licensing and operational requirements and expectations. Through an understanding of regulatory requirements and comprehensive compliance activities, licensees are expected to develop safety practices commensurate with the respective risk.

Licensing New Nuclear Power Plants

There has been much recent discussion on the need for new nuclear power plants in Canada—

particularly in Ontario—to meet the growing demand for electricity. Governments, CNSC licensees and other stakeholders have requested information from the CNSC on the regulatory requirements and process for licensing new nuclear power plants. As a result, in 2005-2006 the CNSC published a high-level information document on the CNSC's licensing process for new nuclear power plants in Canada. The document outlines the CNSC's expectations for all stakeholders, with emphasis on the environmental assessment process. It is a precursor to a series of regulatory documents that will need to be developed if new reactor projects are to proceed. Publication of this document was a proactive measure taken by the CNSC in response to a high number of requests. Further regulatory program development will require CNSC to seek additional funding if a decision to proceed with new nuclear power reactors is announced.

Reactor Refurbishment

Most of the existing nuclear power plants in Canada have reached a point where licensees must decide whether to extend the operating life of their facility. In 2005, life-extension projects were announced for New Brunswick's Point Lepreau reactor and two of Ontario's Bruce Power Inc. units at Bruce A. The CNSC began drafting a regulatory document which addresses oversight for aging nuclear facilities in Canada. This draft is scheduled to be issued for public consultation in the spring of 2006. It provides guidance to licensees about establishing project scope, sequencing of project work and considerations for project management.

In February 2006, CNSC staff presented their recommendations to the Commission on New Brunswick Power's application to renew its operating licence for the Point Lepreau Nuclear Generating Station. The Commission's decision on this matter is expected after the end of the 2005-2006 reporting period. The period of the proposed renewed licence covers a major planned project to shut down and refurbish the facility to extend its operating life.

Waste Management

The CNSC published Regulatory Policy P-290, *Managing Radioactive Waste*, in 2004 to guide licensees and CNSC staff on regulatory expectations for possible new waste management solutions when considering design, operating and decommissioning plans for new nuclear power plants. To support this policy, a draft Regulatory Guide G-320, *Assessing the Long-Term Safety of Radioactive Waste Management*, was issued for public consultation in the fall of 2005. This new document provides guidance for licensees to assess the safety of their radioactive waste management facilities in a manner that is acceptable to the CNSC. It is scheduled to be published in 2006. When licensees are well-informed about a licensing matter, the CNSC's licensing reviews can be more effective and efficient.

High-risk Sealed Sources

During the year, the CNSC amended over 250 licences for high-risk sealed source users. The amendments added new licence conditions under which it is mandatory for certain licensees to report specific information on use and movement of high-risk sealed sources. The immediate amendment of these licences allows the CNSC to begin implementation of the requirements of the IAEA Code of Conduct with respect to tracking of high-risk materials.

Clarifying Licensing Expectations

The CNSC continued to clarify and improve consistency of its licensing process across all nuclear regulatory sectors. For uranium mining, milling and processing facilities, nuclear substance processing facilities, waste management facilities, non-power reactors, research and test facilities and Class I accelerators, consistency has been improved by process mapping and analysis, and adopting best practices where unnecessary differences are found. This has resulted in clarification of the licensing process where Designated Officers are involved. Under the NSCA, the Tribunal may delegate certain licence decisions to a Designated Officer (DO), who is usually a member of the CNSC staff. The documentation of standardized processes for both daily work and orientation pur-

poses improves consistency across licensing activities, formalizes accountability and provides a level of knowledge retention when staff members leave the CNSC.

Improving Operator Certification

As mandated under the NSCA, the CNSC continues to administer the recertification program for operating staff at nuclear power plants. This ensures that operating staff maintain the required levels of knowledge and skills to operate these facilities safely. In 2005, the CNSC implemented a program to assess continuous training programs provided to operators by licensees. The CNSC assesses these programs to ensure that licensee staff complete the required recertification examinations.

3. High levels of compliance with the regulatory framework.

Achieving high levels of licensee compliance with legislation and regulations is fundamental to the work of the CNSC, and critical in assuring Canadians of the safety and security of nuclear installations and processes. In addition, the CNSC's compliance work involves ensuring that Canada meets international commitments made by the Government of Canada.

The CNSC rigorously enforces its regulatory requirements through a variety of measures. Licensee compliance is verified through inspections, reviews, audits and assessments. The CNSC requires any licensee found to be non-compliant with either its licence conditions or the regulations to resolve the issue and demonstrate improvement by a specified deadline, or face enforcement action.

CNSC staff report on licensee operations through mid-term performance reports, status reports, significant development reports and annual industry reports. This is in addition to performance infor-

mation provided in licensing hearings, transcripts of which are available to the public along with records of proceedings.

Implementing a Consistent, Risk-informed Compliance Program

In recent years, the rapid evolution of the CNSC's regulated sectors has had a significant impact on the level and type of compliance-verification activity the CNSC must conduct. In this reporting period, the CNSC advanced the implementation of risk-informed strategies to guide the scope of its regulatory activities, including inspection frequencies and resource requirements.

The CNSC continues to implement the new Type I and Type II³ inspection planning program, along with associated compliance tools. Inspection results provide trend analysis on performance, which in turn is used to make risk-informed decisions for setting compliance investigation priorities.

Under the Power Reactor Regulation Improvement Program (PRRIP), 2005-2006 saw the drafting of guidance tools on risk-informed decision making. Trial implementation will commence at the beginning of 2006-2007. Full implementation is expected to be completed over the course of the next two years.

In the area of nuclear substance regulation, following the first year of full implementation of a risk-informed approach to regulatory management, the Nuclear Substances Regulatory Program was amended to reflect stakeholder input and lessons learned. Increased understanding and use of risk-informed decision-making tools led to improved planning, scheduling and monitoring of regulatory activities. In addition, new annual compliance reporting requirements were developed to improve the reporting process. These will be introduced during the next reporting period.

³Type I inspections are on-site audits and evaluations of a licensee's programs, processes and practices. Type II inspections are routine (item-by-item) checks and rounds that typically focus on the outputs or performance of licensee programs, processes and practices. Findings from Type II inspections play a key role in identifying where a Type I inspection may be required to determine systemic problems in licensee programs, processes or practices.

Ongoing Regulatory Assurance to Canadians

A Licensee Information Management System

The CNSC's staff tracks licensee performance over time and across sectors. With the increase in workload, the complexity and volume of licensee information is growing, and consistent analysis and identification of resulting regulatory remedies is becoming more difficult. As a result, the CNSC is developing an integrated licensee information management system across all regulated sectors. This project is part of a comprehensive multi-year system initiative for which additional funding was provided to the CNSC. In 2005-2006, a number of the foundation elements of the CNSC's information platform were implemented in order to facilitate the remaining project development.

Strengthening the Safety Performance Rating System for Nuclear Power Plants

The CNSC Annual Industry Report on the Safety Performance of the Canadian Nuclear Power Industry contains the Report Card on Nuclear Power Plant Performance. This Report is publicly available from the CNSC and on the CNSC Web site (www.nuclearsafety.com). The rating system enables the CNSC to objectively grade the performance of nuclear power plant facilities in a number of critical safety areas. The CNSC continued to improve objectivity and consistency of the rating system. The most recent Report Card is available in Section V of this report.

A Revised Baseline Compliance Program for Nuclear Facilities

During the year, a draft baseline compliance program was developed for the oversight of nuclear power reactor facilities. The program defines a minimum set of regulatory activities required to maintain confidence in a licensee who consistently meets safety performance expectations by operating safely and in accordance with licence conditions. This program was partially integrated into the operational planning process for 2006-2007. Additional activities are added on a risk-informed basis for each licensee.

Staying the Course—Ongoing Licensee Compliance Management

Power Reactors: CNSC staff observed that the power reactor industry operated safely in 2005. No worker at any power reactor station or member of the public received a radiation dose in excess of the regulatory limits. Emissions from all plants were below regulatory limits.

Nuclear Cycle and Facilities: Licensees in uranium mining, milling and processing, waste management facilities, non-power reactors, research and test facilities and Class I accelerators sectors conducted activities within regulatory requirements during the 2005-2006 reporting period. Emissions from all regulated plants and facilities were below regulatory limits. As determined through CNSC inspections and reviews, the facilities were operated safely. No member of the public received a radiation dose in excess of regulatory limits. The overexposure of one nuclear energy worker was reported by a licensee. Subsequent independent medical advice stated that the risk of adverse health effects to that worker were very low. The licensee then applied for and received a permanent exemption from the Commission with respect to the extremity dose limit for the affected worker.

In 2005, the CNSC announced its decision to open a site office at Atomic Energy Canada Limited's Chalk River Laboratories to carry out on-site compliance activities, including inspections and audits. The decision was made following a risk assessment of the licensee's activities and the extent of compliance activities required by CNSC staff. The new site office opens in May 2006. It will be the sixth site office operated by the CNSC at one of Canada's major nuclear facilities. Site offices enhance the regulator's ability to deliver on its compliance activities in an effective and efficient manner.

Nuclear substance compliance: During the reporting period, there were approximately 3,000 active nuclear substance and radiation device licences. Six workers in the radiography industry received radiation doses in excess of the regulatory limits, and all required follow-up actions were taken by the licensees.

Nuclear import and export controls: In order to ensure compliance with Canada's international commitments and obligations to nuclear non-proliferation, the CNSC verifies licensee compliance with the terms and conditions of licences for the import and export of nuclear and dual-use materials. This was achieved through nuclear material reporting and accounting, reconciliation of inventory accounts with partner countries, review of licensing reports submitted pursuant to licence conditions, and collaboration with the Canada Border Services Agency.

Compliance with International Obligations

CNSC and Canada's Multilateral Arrangements

In Canada, the CNSC is responsible for implementing agreed-upon measures regarding the international control of the development, production and use of nuclear energy, including the non-proliferation of nuclear weapons and nuclear explosive devices. During the reporting period, the CNSC produced its Third Report to the Convention on Nuclear Safety, which was presented to the convention's review meeting held in Vienna in May 2005. The report, which was developed in consultation with industry representatives and other Government of Canada departments, describes the state of nuclear power reactor safety in Canada. Such reports are prepared every three years and are subjected to review and questioning by international peers. In addition, in accordance with international commitments, the CNSC prepared Canada's Second National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. This report is to be presented at the IAEA's Second Review Meeting in spring 2006. In September 2005, the CNSC participated in the

Canadian delegation to amend the International Convention on the Physical Protection of Nuclear Materials (CPPNM) to address the current security environment. Also in September, the CNSC contributed to development of the Canadian government position for the International Convention for the Suppression of Acts of Nuclear Terrorism. This was signed by Canada on September 14, 2005. The CNSC is the responsible authority for the implementation of both of these Conventions in Canada.

Non-proliferation and Bilateral Nuclear Cooperation Commitments

The CNSC ensures that Canada's Nuclear Non-Proliferation Treaty obligations are met in part through the administration of Canada's Nuclear Cooperation Agreements (NCAs) with its nuclear trading partners. This is achieved through CNSC implementation of the provisions of Canada's bilateral Administrative Arrangements with counterpart agencies in other countries. These provisions include measures such as bilateral notifications, providing annual reports to nuclear trading partners, maintaining inventory accounts, and reviewing and verifying annual reports Canada receives from its nuclear trading partners. All of these activities support Canada's nuclear non-proliferation policy, reinforce Canada's status as a responsible nuclear trading partner and strengthen the international nuclear non-proliferation regime.

Safeguards—a Significant Achievement

The CNSC is responsible for implementing the Canada/IAEA *Safeguards Agreement* and *Additional Protocol*. Under these agreements, the CNSC is specifically identified as responsible for the State System of Accounting for and Control of nuclear material in Canada. Through its regulatory process, the CNSC ensures that all relevant licensees have policies and procedures in place that include reporting and monitoring of nuclear material and nuclear activities, and that IAEA safeguards inspectors are provided access to nuclear facilities. A significant initiative was undertaken in 2005 by the CNSC, in co-operation with the IAEA and Cameco Corporation, to establish initial

inventory verifications at Cameco's conversion and refining facilities, and to successfully implement routine safeguards. This was undertaken because of a change in IAEA policy expanding safeguards requirements to also include these types of operations. Safeguards measures provide the basis for the IAEA to provide credible assurance not only that (i) all declared nuclear material in a State is for peaceful, non-explosive uses, but also that (ii) there is no undeclared nuclear material or activity. In September 2005, the IAEA reached a safeguards conclusion for Canada extending to the lack of undeclared nuclear material or activity for the first time. This very significant conclusion will enable the IAEA to fundamentally change safeguards implementation in Canada, moving away from a facility-specific perspective to one that focuses more on considerations relevant to the Member State as a whole. The CNSC is committed to maintaining this conclusion.

Nuclear Security

CNSC staff continued to monitor potential threats to Canadian nuclear facilities, and inspected and evaluated licensees' physical security programs, placing priority on higher-risk facilities. Specifically, security inspections were conducted at nuclear power plants, nuclear research facilities, fuel fabrication and tritium processing facilities, radioisotope facilities and waste management areas. Other facilities such as hospital and university laboratories that use, process or store high-risk radioactive sources were also included in the security inspection program. A number of physical security upgrades were put in place as a result of inspections, thereby reducing the risk of sabotage of nuclear facilities or theft of nuclear materials. A number of follow-up security inspections were conducted at higher-risk nuclear facilities to verify that previous inspection findings had been addressed and satisfied the requirements of the CNSC. Overall, CNSC staff is satisfied that licensees are taking appropriate measures to meet the requirements for the physical protection of their facilities.

4. CNSC cooperates and integrates its activities in national/international nuclear fora

The CNSC regularly participates in a variety of fora, both domestically and internationally. Its participation advances nuclear safety and security at home and abroad and provides opportunities for sharing best practices and benchmarking with counterparts and other agencies.

Nuclear Emergency Management

The CNSC manages its emergency management program as part of the Federal Nuclear Emergency Plan.

The CNSC held consultations with stakeholders during 2005-2006 to finalize its Nuclear Emergency Management (NEM) Policy (P-325). The Policy, to be published in May 2006, is the foundation for all CNSC emergency management documentation and activities. It provides guiding principles and direction for CNSC staff activities, improves consistency, and clarifies legal basis and roles and responsibilities for nuclear emergency management.

In addition, key improvements are being made to the CNSC's Nuclear Emergency Management (NEM) Program. The improved program is scheduled to be implemented fully by March 2007. The action plan is in progress and on schedule, and new elements are incorporated into the program as they are ready. A Memorandum of Understanding has been signed with Public Safety and Emergency Preparedness Canada for an alternate Emergency Operations Centre (EOC) location in the event the CNSC's EOC in Ottawa were to become unavailable.

In November 2005, the CNSC participated in a major nuclear emergency simulation exercise with the Province of Ontario and Ontario Power Generation at the Darlington Nuclear Generating Station. The exercise involved stakeholders from the federal, provincial and municipal governments. Cooperation and coordination are impera-

tive in emergency management. Certain improvements were identified and corrective actions are underway.

CNSC staff, along with staff from Defence Research and Development Canada (DRDC), travelled to South-east Asia in early 2006 to provide Chemical Biological Radiological Nuclear training to first responders, as part of the Counter-Terrorism Capacity Building plan instituted by Foreign Affairs Canada. First responders from Thailand, Malaysia, Indonesia and the Philippines participated in the session given by CNSC and DRDC staff. The CNSC is viewed as a centre of excellence in knowledge and expertise in radiological/nuclear emergencies, and the involvement of CNSC staff in various national and international activities helps harmonize approaches and practices in terms of emergency management among key stakeholders.

Canadian Safeguards Support Program

The Canadian Safeguards Support Program (CSSP), managed and funded by the CNSC, provides assistance to the IAEA to enhance its safeguards regime. During the reporting period, the CSSP and the CNSC provided assistance to the IAEA to implement a Public Key Infrastructure (PKI) system. The PKI will allow for the exchange of sensitive correspondence using electronic mail with the IAEA. This improvement in efficiency will benefit Canada and all other parties communicating with the IAEA.

The transfer of knowledge by the CNSC to the IAEA regarding the application of satellite monitoring and Geospatial Information Systems to international safeguards activities continues to be important. This support provides the IAEA with cutting-edge technology that allows it to improve its ability to obtain and manage information on nuclear activities worldwide, and to draw safeguards conclusions. The CSSP also introduced the IAEA to several other new technologies for safe-

guards application. As a result, the IAEA has requested that the CSSP further develop two of the instruments and continue to expose the IAEA to new technologies to increase its capability to detect undeclared activities and nuclear material. The CNSC's ability to continue to support this work is subject to availability of sufficient resources.

The CSSP also provided support to resolve deficiencies in safeguards equipment used to seal spent fuel at a CANDU reactor in Romania. The underwater sealing system seals spent fuel in the spent fuel bays of CANDU reactors. The underwater sealing system is currently being used by the IAEA in Romania and Canada to verify that stacks of spent fuel remain undisturbed. The IAEA encountered difficulties with the system in Romania and requested assistance from the CSSP. The CSSP's assistance helped Romania meet its safeguards obligations.

International and Domestic Cooperation—working together in a global context.

International Bilateral Cooperative Arrangements

The CNSC negotiates and maintains Memoranda of Understanding (MoU), Administrative Arrangements and Protocols with a number of foreign regulators. These arrangements support each party's regulatory programs through the exchange of information and technical cooperation. In 2005-2006, the CNSC renewed its MoU with its French nuclear regulatory counterpart, and negotiations were advanced in the renewal of the MoU with its counterpart in the Republic of Korea. The CNSC also maintains ad hoc information exchange and cooperative relationships with other nuclear regulators with whom no formal arrangements have been concluded.

Domestic Cooperative Arrangements

The CNSC, as a federal regulator, has a number of cooperative arrangements in Canada to improve the effectiveness of the overall regulatory regime.

Province of Saskatchewan: In 2005-2006, the CNSC and the Province of Saskatchewan continued the implementation of their Administrative Agreement, signed in 2002-2003, which qualified a number of provincial staff as CNSC inspectors. To date, implementation has focused on harmonizing the compliance programs of the CNSC and those of two government departments: Saskatchewan Environment and Saskatchewan Labour. The next priority will be to determine the type of inspection work provincial inspectors will do on behalf of the CNSC. The Agreement provides for greater administrative efficiency in regulating the uranium industry.

Environment Canada: The CNSC continued work with Environment Canada regarding the terms of reference of their 2003 MoU and its annex, signed in 2004. The MoU commits both organizations to assist each other in the performance of certain activities, preventing duplication of effort and improving efficiency of the regulatory regime.

Province of Quebec: The CNSC meets quarterly with the Province of Québec's *Ministère de Développement durable, de l'Environnement et des Parcs* regarding environmental compliance issues related to the Gentilly II Nuclear Generating Station.

Transport Canada: The CNSC is establishing an MoU with Transport Canada regarding the packaging and transportation of nuclear substances. The MoU will outline areas of responsibility and cooperation between the two agencies as they relate to the transport of dangerous goods (Class 7) in Canada.

Focused International Cooperation

On the world stage, there are a number of organizations that bring countries together in the interest of safe use of nuclear technology in its broad application. The CNSC plays an important role in several of these international fora to share best practices, to benchmark the Canadian nuclear regulatory regime against those of its peers and to bring a Canadian perspective to the development and implementation of international standards. Due to increasing demands on the international scene, the CNSC has now established an international relations group to coordinate the CNSC's international activities and to optimize resource utilization in important areas.

The following highlights some of the major international cooperation initiatives of 2005-2006:

International Atomic Energy Agency (IAEA)—www.iaea.org:

- Canada's Permanent Mission to the United Nations Organization in Vienna, as well as Foreign Affairs Canada and other Canadian stakeholder organizations received input on CNSC positions on safeguards, export control and non-proliferation issues.
- Commission on Safety Standards: the CNSC contributed to the development and revision of nuclear, radiation, waste and transport safety standards.
- CANDU Senior Regulators Group, where important information is exchanged that relates specifically to regulation of Canadian-made CANDU reactors. The CNSC demonstrates leadership in the regulation of CANDU reactors.
- Standing Advisory Group on Safeguards Implementation and the Advisory Group on Nuclear Security.

- IAEA Technical Meetings: facilitate discussion among Member States, resulting in the creation of documents, guidelines, codes of conduct and other normative literature, which are important to regulatory standards in Canada. In 2005-2006, the CNSC assisted in the completion of work on a Technical Document on the use of control room simulators in the certification of nuclear power plant room operators. The document will be made available to all IAEA Member States as a reference on the use of simulators. The work primarily involved the participation of Canada, Germany and the United States. Collaboration such as this allows the CNSC to contribute to the safe operation of nuclear power plants in other countries, and to learn from other leaders in the field.
- Coordinated Research Project (Accident Severity During Air Transport of Radioactive Material): developmental meetings were held during the reporting period.

Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development (OECD)—www.nea.fr:

Through CNSC involvement in the development of guides, standards, technical documents and other products, Canada is able to ensure continuous monitoring of nuclear safety trends, and can share its views for the advancement of nuclear regulatory programs worldwide. The CNSC was involved with the following committees in 2005-2006:

- Committee on the Safety of Nuclear Installations and the Committee on Nuclear Regulatory Activities.
- Committee on Radiation Protection and Public Health, an international forum to address issues related to enhancing radiation protection regulation and implementation.

International Nuclear Regulators Association (INRA):

An association comprised of the most senior officials of the nuclear regulatory authorities of Canada, France, Germany, Japan, Spain, Sweden, the United Kingdom, and the United States of America. The main purpose of the association is to influence and enhance nuclear safety, from the regulatory perspective, among its members and worldwide.

G8 Senior Nuclear Regulators:

The G8 is an informal group of eight countries (Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States of America) with a broad agenda that addresses a wide range of international economic, political, and social issues. In early 2006, CNSC's President and CEO participated in the International Conference on Effective Nuclear Regulatory Systems (hosted by Russia) as chair of the 2006 G8 annual meeting.

United Nations Scientific Committee on the Effects of Atomic Radiation:

A committee of internationally-renowned experts who review and summarize scientific literature on the effects of radiation on humans and biota.

Nuclear Suppliers Group (NSG)—www.nuclearsuppliersgroup.org:

A group of nuclear supplier countries which seeks to contribute to the non-proliferation of nuclear weapons through the implementation of Guidelines for nuclear exports and nuclear related exports. The NSG Guidelines are implemented by each participating government in accordance with its national laws and practices. Decisions on export applications are taken at the national level in accordance with national export licensing requirements. The CNSC works with the NSG to strengthen international export control guidelines and control lists.

United States Nuclear Regulatory Commission (NRC):

The CNSC maintained good regulatory cooperation with the United States Nuclear Regulatory Commission (NRC). The CNSC and the NRC share many regulatory objectives, including those under their Security and Prosperity Partnership (SPP). The SPP aims to increase security and enhance prosperity in North America through greater cooperation and information sharing.

5. Stakeholders' understanding of the regulatory framework

The CNSC is committed to openness and transparency with stakeholders in order to achieve its strategic outcome—public confidence.

Sustained, Consistent Relationships with Stakeholders

The CNSC engages stakeholders through a variety of consultation processes, information sharing and communications activities. Using public environmental analysis and stakeholder information surveys, the CNSC's outreach activities target appropriate stakeholders and apply consistent messaging.

CNSC's Outreach Activities and Strategic Communications Planning

The CNSC continued to carry out targeted outreach activities in 2005-2006 to heighten public awareness and understanding of regulated nuclear activities and the CNSC's role. Some new outreach approaches were proposed during the reporting period, however, during 2005, a decision was made to fully integrate a well-structured and sustainable outreach program within a strategic communications plan, which provides a more detailed and considered approach as to how the CNSC might best achieve stakeholder understanding of its regulatory program. Although the strategic

communications plan remained in draft form in 2005-2006, a number of elements proposed in the plan were implemented. However, due to other priorities, not as many elements were implemented as anticipated. The CNSC Strategic Communication Plan is expected to be finalized in 2006-2007.

Outreach activities undertaken in 2005-2006 include meetings with mayors in communities near nuclear facilities, with licensee boards of directors, with union representatives and union stakeholders, with provincial authorities, with technical associations, with industry and with staff at nuclear facilities. In addition, the CNSC provides all Canadians the opportunity to participate directly in the licensing process during public hearings.

In addition, the CNSC regularly participates in meetings of the Environmental Quality Committee (EQC) in Saskatchewan. The EQC is a standing committee that enables the people of Saskatchewan, particularly those who reside in the north, to be reassured that uranium mines are operating in compliance with all applicable federal and provincial regulations, and that northern economic benefits are being maximized through appropriate hiring practices and policies. The EQC provides a bridge between residents, government and the uranium mining industry, which operates primarily in Saskatchewan. It improves the level of communication with, and input from, northern residents to better ensure consideration of their concerns when making regulatory and policy decisions regarding uranium. These meetings are an opportunity for the CNSC to update representatives of northern Saskatchewan communities on the status of projects which affect them, and to provide information on the CNSC's regulatory oversight and joint regulatory approach. This also includes giving the EQC timely and constructive feedback and information on interventions they have submitted to the Commission in the context of public hearings.





Canada's Third National Report on Nuclear Safety presented to the Convention on Nuclear Safety.

CNSC President and CEO selected to head the International Convention meeting.

The Third Review Meeting of the International Atomic Energy Agency (IAEA)'s Convention on Nuclear Safety was held in Vienna, Austria, in April 2005. The purpose of the meeting was to review the current status of nuclear power plant safety worldwide, through national reports and peer reviews.

Linda J. Keen, President and CEO of the CNSC, was elected as President of the Third Review Meeting by the signatory countries. This marks the first time a Canadian has been selected as an executive officer for the Convention on Nuclear Safety, as well as a recognition of the CNSC's efforts as a leading nuclear regulator in the areas of effectiveness, efficiency, openness and transparency.

On her election as President of the Third Review Meeting of the Contracting Parties to the Convention on Nuclear Safety, Ms. Keen remarked, "The tenth anniversary of the adoption of the Convention is a crucial time for the Contracting Parties, their nuclear industries and their national regulators to reaffirm their commitments under the Convention to promote a high level of nuclear safety worldwide."

The Convention on Nuclear Safety was adopted in 1994 and represents the international community's commitment to the safe operation and effective regulation of nuclear power plants worldwide. Canada was one of the first signatories to the Convention. The Convention entered into force on October 24, 1996; there are currently 65 signatory countries to the Convention, of which 55 are Contracting Parties.

The Convention on Nuclear Safety commits participating States to maintaining a high level of safety in the operation and regulation of nuclear power plants.

The Canadian delegation for the Third Review Meeting presented the *Canadian National Report on Nuclear Safety – Third Report*. The report demonstrates how Canada continues to meet its obligations under the terms of the Convention on Nuclear Safety by systematically monitoring safety-related programs and their implementation in Canada. The report focuses on a number of themes, including:

- the specific improvements to the CNSC's regulatory framework;
- the transitioning and implementation of the Integrated Improvement Programs by two Canadian licensees into their routine nuclear power plant site operational projects programs;
- the return to service of three power reactor units;
- the use of the CNSC rating scheme to assess nuclear industry safety-related programs and their implementation;
- the extension of licence periods of nuclear power plants in Canada beyond two years; and
- the progress made on numerous generic and specific safety issues.

The report was produced by a core team of 20 representatives from the CNSC, federal and provincial departments and the nuclear power industry in Canada.

Monitoring the Public Environment

The CNSC continued to undertake public opinion research and analysis throughout 2005-2006. A survey was undertaken in six regions where large nuclear facilities are located to assess knowledge, perceptions and attitudes towards nuclear regulation. Having an in-depth knowledge and understanding of the public environment allows the CNSC to undertake specific and targeted communications, consultation and outreach activities that effectively and efficiently contribute to stakeholder understanding of the regulatory program.

The results of the survey indicated that:

- Canadians who live near a large nuclear facility share many of the same opinions as Canadians in general, but have slightly more awareness of, and confidence in, the CNSC.
- Sixty-five percent of Canadians living in the six communities surveyed are confident that Canada's nuclear industries are effectively regulated. There are some differences in Canadians' level of confidence, depending upon which nuclear facility they live close to. For example, Canadians living near the nuclear facility located in the Bruce area in Ontario have the highest levels of awareness and confidence, whereas those living near the Bécancour area in Québec near the Gentilly nuclear power reactor have the least.

In 2005-2006, the CNSC also undertook a secondary analysis of data gathered in late 2004 relating to stakeholder relations. The analysis concluded that:

- Overall, stakeholders have a positive impression of the CNSC and its communications, but less favorable opinions about CNSC consultations.
- Stakeholders from licensed organizations are more likely to have positive opinions of the CNSC as compared to non-licensee stakeholders.

In addition to carrying out public opinion research, the CNSC updated its annual public environmental analysis to maintain a current picture of the political, social and cultural climate in

which it operates. Using data from over 200 sources, the analysis concluded that support for, and debate about, nuclear energy increased substantially over 2005, but the prospect of refurbishing existing nuclear power reactors garners more support than building new nuclear power plants.

A review of media coverage related to the CNSC indicated that the CNSC continues to receive about 168 media calls each year. In terms of media coverage about the CNSC, the majority of media stories were neutral or positive in tone, with the CNSC emerging as a key factor in ensuring safety and security at Canada's nuclear facilities.

6. Management and Enabling Infrastructure

The CNSC's management and enabling infrastructure ensures that the Commission and CNSC staff have the necessary leadership, support and guidance to plan, perform and monitor the activities required to achieve the CNSC's strategic outcomes.

Governance, Accountability and Stewardship

As planned, the CNSC continued to demonstrate good governance, accountability and stewardship, adhering to government policies on disclosure of contracts, travel, hospitality and other expenses of senior management, adhering to a responsible system of internal controls and reporting to central agencies and to the public in a transparent and complete manner.

Implementing a Quality Management Program

The CNSC established a corporate-wide Quality Management Program in 2005-2006 to enable measured improvement toward its vision of being one of the best nuclear regulators in the world. The program is founded in accordance with the requirements and guidance of *IAEA Safety Standard GS-R-1, Planned Safety Standard DS-113*

and accompanying safety guides. A Quality Council, headed by the CNSC's Chief Quality Officer, was created, and is supported by a new division responsible for internal quality management. This will be a continuous improvement initiative that will build upon existing efforts and integrate them into a more single framework.

International Regulatory Review

As a starting point for the quality management initiative, in December 2005 the CNSC initiated the process for hosting a peer review by inviting the International Atomic Energy Agency (IAEA) to send an International Regulatory Review Team (IRRT) to Canada under the agency's Integrated Regulatory Review Service (IRRS). The IRRS is a peer review conducted by a team of experts selected by the IAEA from member countries. The review will compare the regulatory framework, practices and management system of the CNSC with international best practices, and will evaluate the CNSC's progress and performance in fulfilling its regulatory mandate and objectives. During 2005-2006, the CNSC initiated a self-assessment project in preparation for the IRRT review that will take place in 2007. Findings from the self-assessment will lead to the formulation in 2006 of a comprehensive agency-wide corrective action plan with an emphasis on power reactor regulation.

Values and Ethics

The CNSC recognizes that values and ethics are an imperative in both leadership and governance. As such, the CNSC's Values and Ethics Strategy was implemented in 2005-2006. It provides standards for ethical expectations and guidance for ethical decision-making, leadership and conduct for CNSC staff. The CNSC holds a significant responsibility for public trust, and an active ethics strategy demonstrates the CNSC's commitment in this regard. A process has also been put in place to allow staff to disclose wrongdoing in a manner that is safe and free from reprisals.

People

Strengthen Leadership and Management Capacities

In an effort to continue building a strong team of leaders, the CNSC provided leadership and management workshops to the management cadre during 2005-2006. The use of 360-degree performance evaluations, implemented for executive management in 2004-2005, was expanded to include all Directors General in 2005-2006, and Directors. A 360-degree evaluation is an anonymous and confidential process whereby feedback on an individual is obtained from a sampling of peers, staff and supervisors regarding the individual's leadership skills (e.g. direction, communication). It provides very balanced feedback for individual improvement plans in the areas of leadership and professional development.

Recruitment and Retention

Following the government's approval in June 2005 of the CNSC's request for additional funding to address increasing business pressures, the CNSC moved quickly to respond to corresponding staffing needs. A new process was defined to address the growing number of staff required as a result of the increased volume of work. The CNSC is placing increased emphasis on human resource planning to support long-term needs identification. Proactive recruitment and retention strategies are being developed to attract and retain the required mix of skills and experience in the future.

Collective Agreement

As reported in the 2004-2005 Annual Report, part of the CNSC's workforce was certified in 2004 by the Public Service Staff Relations Board (PSSRB) to be represented by the Professional Institute of the Public Service of Canada (PIPSC). The collective bargaining process with newly unionized staff began in 2004, and was ongoing as of March 31, 2006.

Non-Unionized Employees

The CNSC continues to ensure that staff who are not part of the CNSC workforce that was certified by the PSSRB are adequately represented in the various health and safety committees and workgroups within the CNSC.

Results and Performance

Integrated Information Management Improvement Plan

The CNSC has identified corporate-wide information management and technology projects to be undertaken to facilitate electronic exchanges of information with licensees and to improve document and data management within the CNSC.

In 2005-2006, progress was made on building the foundation elements of a technology platform. A new information management/information technology (IM/IT) governance structure was established to ensure IM/IT projects are properly prioritized, adequately funded and consistent with overall strategic direction. The new structure required the establishment of a cross-functional committee of directors.

Implementation of a Performance Measurement Framework

The CNSC recognizes the importance of being able to measure both the effectiveness and efficiency of its programs, and has initiated the development of an integrated performance management framework. Overall effectiveness of regulatory oversight requires **outcome measures** relating to the collective impact of activities conducted not only by the CNSC, but also by licensees and other

stakeholders. As stated in the CNSC's Regulatory Fundamentals Policy (P-299), those persons and organizations that are subject to the NSCA and regulations are directly responsible for managing regulated activities in a manner that protects health, safety, security and the environment, while respecting Canada's international obligations. The CNSC is responsible for regulatory policies and programs which assure that these responsibilities are properly discharged. Since the CNSC is not in control of all results, its measures reflect expectations of sound risk-informed oversight.

Efficiency, on the other hand, is measured using ongoing monitoring of the CNSC's performance against external and internal **performance standards** relating to individual activities undertaken and their associated outputs.

Outcome Measures

The outcome measurement framework is derivative of the CNSC Logic Model (see Section IV). During the year, the CNSC sought to implement the initial set of outcome measures that were published in its 2004-2005 Annual Report. Some of the CNSC's outcome measures indicate licensee performance within the regulatory framework. These measurements inform, firstly, the licensee and the CNSC on the licensee's performance, and secondly, the CNSC on the overall effectiveness of the regulatory framework. The outcome measurement framework is being given increased emphasis in 2006-2007. The following is a revised list of outcome measures for which information will be gathered in 2006-2007.

Outcome	Outcome Measure
1. A clear and pragmatic regulatory framework.	Percentage of regulations under review/revision in each year (this will ensure a complete rolling review over five years)
	Number of regulations published in <i>Canada Gazette</i>
	Number of regulatory documents finalized and published
2. Individuals and organizations that operate safely and conform to safeguards and non-proliferation requirements	Number of cases of delays in implementing effective regulatory control (licensing action) pursuant to the NSCA or Significant Development Reports subsequent to licence approval
3. High levels of compliance with the regulatory framework	Level of licensee performance ratings assessed by the CNSC on each of the power reactors, as per the CNSC Report Card on Nuclear Power Plant Performance. The CNSC measures separately (i) the quality of the existing safety program and (ii) its implementation. The ratings provided are: A = Exceeds requirements B = Meets requirements C = Below requirements D = Significantly below requirements E = Unacceptable
	Annual IAEA statement indicating Canada's compliance with international standards with respect to safeguards and non-proliferation
	100% provision by the CNSC of nuclear transfer notifications and reports pursuant to bilateral Administrative Arrangements
	100% Verification by the CNSC of bilateral nuclear material inventory reports, annually
4. CNSC cooperates and integrates its nuclear fora	100% Verification by the CNSC of bilateral nuclear material inventory reports, annually
	Level of stakeholder confidence in the CNSC's ability to regulate the use of nuclear energy and materials
	Level of stakeholder participation in the CNSC's decision-making process
5. Stakeholder understanding of the regulatory program	To obtain this information, the CNSC will conduct a survey of stakeholders every three years and will publish the results

Performance Standards

It is very important to note that as an independent regulator, it is inappropriate for the relationship between licensees and the CNSC to be considered a service; hence, there are no service standards. External performance standards focus on the needs and expectations of external stakeholders.

In 2005-2006, the Treasury Board Secretariat (TBS) completed an annual assessment of the user fee information tabled in the CNSC's 2004-2005

Departmental Performance Report. The TBS report stated that the CNSC is in compliance with the reporting requirements of the *User Fees Act* and the federal Policy on Service Standards for External Fees.

Given that the CNSC is currently in the early stages of implementing a performance standard reporting cycle for certain activities, it is expected these standards will mature over time. The standards will be consistent with program objectives, as well as responsive to stakeholder expectations.

Activity	Performance standard	Target	2005-2006 results
Compliance			
Verification			
Upon completion of the verification activity, the CNSC will:			
Issue Type I Inspection Report ⁴	within 60 business days	80%	50%
Issue Type II Inspection Report ⁵	within 40 business days	80%	86%
Issue Desktop Review Report ⁶	within 60 business days	90%	70%
Enforcement			
Upon an order being made, the CNSC will: Confirm, amend, revoke or replace the order (see Regulatory Guide – G-273)	within 10 business days	100%	100%
Licensing			
For requests pertaining to an <u>existing</u> licence, the CNSC will:			
Screen the request for completeness and issue notification that the licensing request is/is not complete ⁷	within 20 business days	90%	100%
Issue a licensing decision when a public hearing is not required (assuming an environmental assessment under the CEAA is not required)	within 80 business days	80%	97%
Issue a licensing decision when a public hearing is required (assuming an environmental assessment under the CEAA is not required) (see INFO-0715) ⁸	within 160 business days	90%	100%
Publish the Records of Proceedings, including Reasons for Decisions, upon conclusion of the public hearing ⁹ .	within 30 business days	90%	78%
Access to Information (ATI)			
Respond to requests under the ATI and Privacy Acts	within legislated time periods as stated in the Acts	90%	94%
Response to public inquiries			
Acknowledge request	within same business day	100%	100%
Complete request - low complexity	within same business day	100%	100%
Complete request - medium complexity	within 5 business days	100%	95%
Complete request - high complexity	within 10 business days	100%	80%
External Communications			
Post President's speeches to Internet ¹⁰	within 4 working hours of completion of final copy in both official languages	95%	80%
Place Public Hearings Advertisements ¹¹	within deadlines stipulated in the regulations	100%	95%
External Reporting to Central Agencies			
File annual Report on Plans and Priorities and Departmental Performance Report	within required timelines	100%	100%

⁴ With existing resource levels, preliminary inspection results were examined.

⁵ In Power Reactors, unless major issues arise, findings from Field Inspections and Control Room Inspections reported on a quarterly basis, within 40 business days of end of quarter.

⁶ Using the CNSC's risk-informed approach to regulation, initial priority was given to completion of those reports with results which were of higher significance.

⁷ The screening process does not apply to DNSR operations.

⁸ The screening process does not apply to DNSR operations; the hearing process is not required for DNSR licensing decisions.

⁹ The delay in publishing Records of Proceedings, including Reasons for Decisions, can be attributed to some complex decisions in early 2005-2006.

¹⁰ The posting of speeches is occasionally delayed in order to ensure that any changes to the speech made by the speaker during delivery are accurately incorporated into the text to be posted in both official languages.

¹¹ Under the *CNSC Rules of Procedure*, the Commission has the authority to vary any of the Rules in order to ensure that a proceeding be dealt with as informally and expeditiously as possible. During the 2005-2006 reporting period, the Commission exercised this authority for one public hearing and subsequently, the advertisements appeared after the normal period of notice.