

# V. The Canadian Nuclear Safety Commission

## Other Information

### V.1 Report Card on Nuclear Power Plant Performance as of January 2006

CNSC staff assesses licensee programs ("P") and their implementation ("I") separately, according to five ratings. As of January 2006, Pickering A Units 2 and 3 reactors which are presently in a long-term lay-up state, will have their fuel and heavy water removed and will be placed in a safe storage state until the station is decommissioned. Bruce A Units 1 and 2 remained defuelled and in a lay-up state.

**Legend:** A = Exceeds requirements      B = Meets requirements      C = Below requirements  
 D = Significantly below requirements      E = Unacceptable  
 Indicates an increased rating from last year's report       Indicates a decreased rating from last year's report

Safety Area/Program	P / I	Bruce		Darlington	Pickering		Gentilly-2	Point Lepreau
		A	B		A	B		
<b>Operating Performance</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Organization & Plant Management	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Operations	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Occupational Health & Safety (non-radiological)	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
<b>Performance Assurance</b>	P	B	B	B	B	B	B	B
	I	C	B	B	B	B	C	B
Quality Management	P	C	C	B	B	B	B	B
	I	C	B	B	B	B	C	B
Human Factors	P	B	B	B	B	B	B	C
	I	C	C	B	B	B	C	C
Training, Examination, and Certification	P	B	B	B	B	B	B	B
	I	C	B	B	B	B	C	B
<b>Design &amp; Analysis</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	C	B	B
Safety Analysis	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Safety Issues	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
Design	P	B	B	B	B	B	B	B
	I	C	B	B	B	C	B	B
<b>Equipment Fitness for Service</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	C	B	B
Maintenance	P	B	B	B	B	B	B	B
	I	C	B	B	B	C	B	B
Structural Integrity	P	B	B	B	B	B	B	C
	I	B	B	B	B	B	B	C
Reliability	P	B	B	B	B	B	B	B
	I	B	B	B	B	C	B	B
Equipment Qualification	P	B	B	B	B	B	B	B
	I	B	B	C	B	B	B	B
<b>Emergency Preparedness</b>	P	A	A	A	A	A	A	A
	I	A	A	A	A	A	B	B
<b>Environmental Protection</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
<b>Radiation Protection</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B
<b>Site Security</b>	P	Protected						
	I	Protected						
<b>Safeguards</b>	P	B	B	B	B	B	B	B
	I	B	B	B	B	B	B	B

## V.2 Regulatory Amendments in Process 2005-2006

The following regulatory amendments were underway during the year:

- *Nuclear Security Regulations*: Following extensive input from stakeholders, proposed amendments to the *Nuclear Security Regulations* were re-published in the *Canada Gazette* Part I in June 2005. The amended regulations will strengthen and codify security expectations for nuclear facilities, taking into account current security threats. They are expected to be in place by the end of 2006-2007.
- *Nuclear Substances and Radiation Devices Regulations*: Amendments were proposed to the regulations to address deficiencies in the current regulations, and to introduce the latest international values for exemption quantities and clearance levels used to regulate the possession of nuclear substances. Pre-publication consultation with over 3,000 licensees and other stakeholders was completed in December 2005. Publication in the *Canada Gazette* is scheduled for 2007 and the amended regulations are expected to come into force in 2007-2008.
- *Class II Nuclear Facilities and Prescribed Equipment Regulations*: Amendments were proposed to address deficiencies, enhance safety and reflect the latest international standards. Pre-publication consultation with over 3,000 licensees and other stakeholders was completed in December 2005. Publication in the *Canada Gazette* is scheduled for 2007 and the amended regulations are expected to come into force in 2007-2008.
- *Nuclear Non-Proliferation Import and Export Control Regulations*: Heightened concerns on the part of the international community, including the IAEA, regarding the scope and possible intent of nuclear programs in a number of other countries has led to a further strengthening of the international nuclear non-proliferation regime. Amendments were proposed to the CNSC's regulations to ensure continued effectiveness and efficiency of regulatory control over imports and exports of proliferation-significant nuclear and dual-use substances, materials, equipment and technology. The amended regulations will also ensure that Canada's regulatory controls continue to reflect international export control guidelines and Canadian nuclear non-proliferation policy. Drafting instructions for the amendments to the regulations, which address administrative and technical issues and reflect related international developments, were initiated in 2005-2006. Publication in the *Canada Gazette* is scheduled for 2007 and the amended regulations will come into force in 2007-2008.

## V.3 Regulatory Documents Published in 2005-2006

- *Probabilistic Safety Analysis (PSA) for Nuclear Power Plants (S-294)*: This Standard sets out the requirements for a Probabilistic Safety Analysis that a licensee who constructs or operates a nuclear power plant must conduct when the Regulatory Standard is incorporated into a licence or other legally enforceable instrument.
- *Reliability Programs for Nuclear Power Plants (S-98, Revision 1)*: This Standard describes the requirements of a licensee who constructs or operates a nuclear power plant to develop and implement a reliability program that assures that systems important to plant safety can and will meet their defined design and performance specifications at acceptable levels of reliability throughout the lifetime of the facility.

- *Environmental Protection Policies, Programs and Procedures at Class I Nuclear Facilities and Uranium Mines and Mills (S-296)*: This Standard sets out the environmental protection policies, programs and procedures that licensees shall implement at Class I nuclear facilities and uranium mines and mills when the Regulatory Standard is incorporated into a licence or other legally enforceable instrument.
- *Developing Environmental Protection Policies, Programs and Procedures at Class I Nuclear Facilities and Uranium Mines and Mills (G-296)*: This document provides guidance to applicants for licences of Class I nuclear facilities and uranium mines and mills to develop environmental protection policies, programs and procedures.
- *Assessing the Long-Term Safety of Radioactive Waste Management (G-320)*: This guide will assist licensees and applicants to assess the long-term impacts that radioactive waste storage and disposal methods have on the environment and on the health and safety of people.
- *Nuclear Emergency Management (P-325)*: This policy will provide guiding principles and direction on CNSC staff activities related to nuclear emergency management.
- *CNSC Safeguards and Nuclear Non-Proliferation Reporting Requirements (S-336)*: This standard, which will replace the former Atomic Energy Control Board 1049 standard, sets out expectations for accounting and reporting on nuclear material to meet both the CNSC's domestic needs and international obligations. The standard is currently undergoing internal review.

#### V.4 Regulatory Documents in Process in 2005-2006

- *Design Requirements for Nuclear Power Plants (S-337)*: This standard will set out the CNSC's expectations for the design of nuclear power plants. It will provide stakeholders, potential licence applicants, vendors and the public greater clarity and will support the CNSC's assessment of potential future licence applications.
- *Management Programs for Aging Nuclear Plants (S-334)*: This standard will ensure implementation and integration of effective aging management programs at nuclear power plants, and will closely align Canadian requirements with draft standards currently being developed by the IAEA.
- *Life Extension of Nuclear Power Plants (G-360)*: This guide will inform licensees of the steps and phases to consider when undertaking a project to extend the life of a nuclear power plant.
- *Trip Parameter Acceptance Criteria for the Safety Analysis of CANDU Nuclear Power Plants (G-144)*: This guide will inform licensees who operate CANDU nuclear power plants of the trip parameters that will preclude direct or consequential failures of reactor fuel or reactor pressure tubes.
- *Technical and Quality Assurance Requirements for Dosimetry Services (S-106) (Revision 1)*: This standard will increase assurances that licensed dosimetry service providers meet technical requirements and implement quality assurance measures in accordance with the NSCA.