



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

## DRAFT REGULATORY DOCUMENTS

# **Purpose and Scope Sections Proposed Regulatory Documents**

Issued for Public Consultation

February 2005

## REGULATORY DOCUMENTS

The legal framework within which the Canadian Nuclear Safety Commission (CNSC) operates includes the *Nuclear Safety and Control Act* (Act), its Regulations and other legal instruments such as licences, certificates and orders. The legal framework is supported by regulatory documents issued by the CNSC, the main classes of which are:

**Regulatory Policy (P):** a document that describes the philosophy, principles or fundamental factors that underlie the CNSC's approach to its regulatory mission. It provides direction to CNSC staff and information to stakeholders.

**Regulatory Standard (S):** a document that describes CNSC requirements. It imposes obligations on the regulated party, once it is referenced in a licence or other legally enforceable instrument.

**Regulatory Guide (G):** a document that indicates acceptable ways of meeting CNSC requirements, as expressed in the Act, Regulations, regulatory standard or other legally-enforceable instrument. It provides guidance to licensees and other stakeholders.

**Regulatory Notice (N):** a document that provides licensees and other stakeholders with information about significant matters that warrant timely action.

# **DRAFT REGULATORY DOCUMENTS**

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### **About this Document**

This draft regulatory document list sets out the purpose and scope for the documents proposed for development by the Canadian Nuclear Safety Commission (CNSC).

### **Comments**

The CNSC invites interested persons to assist in the further development of this draft list by commenting in writing on its content and potential usefulness. Please respond by April 22, 2005. Direct your comments to the postal or e-mail address provided below, referencing file 1-1-16-4.

The CNSC will take the comments received on this draft into account when developing it further. Any comments received will be publicly available upon request.

### **Document availability**

This document can be viewed on the CNSC Internet web site at ([www.nuclearsafety.gc.ca](http://www.nuclearsafety.gc.ca)). To order a printed copy in English or French, please contact:

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DRAFT REGULATORY DOCUMENT LIST

**PURPOSE AND SCOPE SECTIONS  
FOR PROPOSED REGULATORY DOCUMENTS**

Issued for public consultation by the  
Canadian Nuclear Safety Commission  
February 2005



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## **PURPOSE AND SCOPE SECTIONS FOR PROPOSED REGULATORY DOCUMENTS**

### **1.0 REQUIREMENTS FOR LEAK TESTING SEALED SOURCES CONTAINING NUCLEAR SUBSTANCES, REGULATORY STANDARD, S-116**

#### **1.1 Purpose**

The purpose of this proposed Regulatory Standard, when incorporated into a licence or other legally enforceable instrument, is to assure that licensees establish and maintain the minimum requirements for leak testing sealed sources and shielding containing nuclear substances.

#### **1.2 Scope**

This proposed Regulatory Standard would describe who is responsible for leak testing a sealed source and shielding containing nuclear substances, and would set out the minimum requirements for performing leak testing, leak testing certificates, sampling certificates, measuring certificates and record keeping.

### **2.0 CALIBRATION OF GAMMA RADIATION DETECTION INSTRUMENTS, REGULATORY STANDARD, S-117**

#### **2.1 Purpose**

The purpose of this proposed Regulatory Standard, when incorporated into a licence or other legally enforceable instrument, is to assure that the minimum requirements are established and maintained for calibrating gamma radiation detection instruments.

#### **2.2 Scope**

This proposed Regulatory Standard would describe the responsibility levels for the calibration of gamma radiation detection instruments and would set out the minimum requirements for internal or external calibration services, calibration certificates and stickers, supporting documentation and record keeping.

### **3.0 RADIOISOTOPE LABORATORY DESIGN, CLASSIFICATION AND RADIATION PROTECTION REQUIREMENTS, REGULATORY STANDARD, S-52**

#### **3.1 Purpose**

The purpose of this proposed Regulatory Standard, when incorporated into a licence or other legally enforceable instrument, is to assure the minimum requirements are established and maintained for the design, classification, and for radiation protection in radioisotope laboratories where unsealed nuclear substances are present.

#### **3.2 Scope**

This proposed Regulatory Standard would describe the responsibility levels for the design and classification of low, medium and high level radioisotope laboratories. It would set out the minimum radiation protection requirements for each laboratory consistent with the quantity of unsealed nuclear substances present, measures for dealing with spills, supporting documentation, record keeping, and reporting obligations.

### **4.0 CRITERIA FOR THE RELEASE OF NUCLEAR FACILITIES FROM LICENSING AFTER DECOMMISSIONING, REGULATORY STANDARD, S-326**

#### **4.1 Purpose**

The purpose of this proposed Regulatory Standard, when incorporated into a licence or other legally enforceable instrument, is to establish the contamination criteria that the Canadian Nuclear Safety Commission considers acceptable for the release of nuclear facilities from regulatory control.

#### **4.2 Scope**

This proposed Regulatory Standard would be of interest to Class I and Class II nuclear facilities as well as uranium mines and mills. It would set the contamination limits for building and site materials. It would describe acceptable limits for land and building contamination such that licensees, on achieving these limits, would apply for release of the property or structures from regulatory control.

## **5.0 REQUIREMENTS FOR NUCLEAR CRITICALITY SAFETY, REGULATORY STANDARD, S-327**

### **5.1 Purpose**

The purpose of this proposed Regulatory Standard, when incorporated into a licence or other legally enforceable instrument, is to assure that licensees maintain the minimum requirements with respect to nuclear criticality safety.

### **5.2 Scope**

This proposed Regulatory Standard would describe the requirements that are relevant in maintaining nuclear criticality safety. It would also provide requirements for an accepted sub-criticality margin, a criticality safety program, and a criticality safety acceptance report.

## **6.0 DETERMINING THE NEED FOR A URANIUM MINE SITE PREPARATION LICENCE, REGULATORY POLICY, P-328**

### **6.1 Purpose**

The purpose of this proposed Regulatory Policy is to provide direction to Canadian Nuclear Safety Commission (CNSC) staff in their review of uranium mine licence applications and to understand at what point a site preparation licence is required. It also provides information to licensees.

### **6.2 Scope**

This proposed Regulatory Policy would describe the principles that underlie the CNSC's approach to the licensing of uranium mining activities. The document would provide information of when surface exploration activities move to evaluation activities and thus require a CSNC licence in order to proceed.

## **7.0 EXTERNAL DOSIMETRY FOR NON-UNIFORM RADIATION EXPOSURES, REGULATORY GUIDE, G-153**

### **7.1 Purpose**

The purpose of this proposed Regulatory Guide is to inform licensees, including dosimetry services, of the proper use of dosimeters when workers' bodies are exposed to non-uniform radiation fields, as well as how to interpret dosimeter readings.

## **7.2 Scope**

This proposed Regulatory Guide would be of interest to licensees whose workers' bodies may be exposed non-uniformly to fields of ionizing radiation. It would discuss the use of multiple dosimeters worn on the head, torso and extremities to determine doses, and would examine estimates of effective and equivalent doses as compared to Canadian Nuclear Safety Commission dose limits.

## **8.0 REPORTING REQUIREMENTS FOR OPERATING NUCLEAR POWER PLANTS, REGULATORY GUIDE, G-99**

### **8.1 Purpose**

The purpose of this proposed Regulatory Guide is to help interested persons, such as applicants for nuclear power plant (NPP) licences and NPP licensees understand the extent of programs that may be required for collecting and reporting information to the Canadian Nuclear Safety Commission (CNSC).

### **8.2 Scope**

This proposed Regulatory Guide would provide guidance on the extent of reporting, the expected level of detail, the appropriateness, completeness, and timeliness of information that is reported to the CNSC by the licensees pursuant to Regulatory Standard, S-99, *Reporting Requirements for Operating Nuclear Power Plants*.

It would expand on the reporting requirements for operating NPPs that derive from the *General Nuclear Safety and Control Regulations*, *Class I Nuclear Facilities Regulations*, and the *Radiation Protection Regulations*. It would describe the type of information that the CNSC may require of a licensee who operates a nuclear power plant, as well as how, when and to whom the information should be provided.

## **9.0 TRITIUM BIOASSAY PROGRAM, REGULATORY GUIDE, G-100**

### **9.1 Purpose**

The purpose of this proposed Regulatory Guide is to help licensees establish and maintain an effective tritium bioassay monitoring and dose assessment program.

## **9.2 Scope**

This proposed Regulatory Guide would be of interest to the operators of facilities where tritium intakes by workers may occur. It would describe the current metabolic models for tritium intake, the selection of workers to participate in a bioassay program, monitoring methods and frequency. The Guide would also describe the interpretation of bioassay results.

## **10.0 DESIGNING AND IMPLEMENTING A BIOASSAY PROGRAM, REGULATORY GUIDE, G-150**

### **10.1 Purpose**

The purpose of this proposed Regulatory Guide is to help licensees design and implement a bioassay monitoring program.

### **10.2 Scope**

This proposed Regulatory Guide would describe the fundamental concepts in determining the need for a bioassay program, selecting participants for the program, and determining the optimal sampling frequency. The Guide would also describe methods of interpreting the results.

## **11.0 RELIABILITY PROGRAMS FOR NUCLEAR POWER PLANTS, REGULATORY GUIDE, G-98**

### **11.1 Purpose**

The purpose of this proposed Regulatory Guide is to inform licensees who operate nuclear power plants on the recommended methods to comply with Canadian Nuclear Safety Commission (CNSC) Regulatory Standard S-98, *Reliability Programs for Nuclear Power Plants*.

### **11.2 Scope**

This proposed Regulatory Guide would describe acceptable ways in which licensees can meet the requirements outlined in CNSC Regulatory Standard S-98.

## **12.0 ATTRIBUTES OF A PROBABILISTIC SAFETY ASSESSMENT, REGULATORY GUIDE, G-42**

### **12.1 Purpose**

The purpose of this proposed Regulatory Guide is to inform licensees who operate nuclear power plants on the attributes of a probabilistic safety assessment (PSA) which would be necessary when a licensee wishes to use a PSA-based argument in a licence submission.

### **12.2 Scope**

This proposed Regulatory Guide would describe the conditions that a PSA should meet when it is used in support of a licence submission. It would provide information on the relationship between the PSA's scope and content and the use of the PSA model.

## **13.0 DETERMINISTIC AND PROBABILISTIC CRITERIA IN DECISION-MAKING FOR NUCLEAR POWER PLANTS, REGULATORY GUIDE, G-152**

### **13.1 Purpose**

The purpose of this proposed Regulatory Guide is to inform nuclear power plant (NPP) licensees, who wish to use probabilistic arguments in a licence submission, on the deterministic and probabilistic conditions that are acceptable to Canadian Nuclear Safety Commission (CNSC) staff.

### **13.2 Scope**

This proposed Regulatory Guide would be of interest to licensees of Class I nuclear power plants. It would address

- a) how the CNSC approaches its decision-making responsibilities when probabilistic arguments are presented,
- b) how the CNSC staff reviews a licence submission containing probabilistic arguments,
- c) deterministic and probabilistic elements in a licence submission, and
- d) how the CNSC staff reviews probabilistic safety assessments and other probabilistic analyses.

## **14.0 COST-BENEFIT ANALYSIS, REGULATORY GUIDE, G-242**

### **14.1 Purpose**

The purpose of this proposed Regulatory Guide is to provide licensees with a recommended approach for the preparation of a cost-benefit analysis needed for consideration by Canadian Nuclear Safety Commission (CNSC) staff.

### **14.2 Scope**

This proposed Regulatory Guide would describe how a licensee may develop and submit a cost-benefit analysis. It would identify the elements of a typical analysis but would not preclude other approaches that licensees may wish to submit to the CNSC.

## **15.0 SAFETY ANALYSES FOR NUCLEAR POWER PLANTS, REGULATORY GUIDE, G-310**

### **15.1 Purpose**

The purpose of this proposed Regulatory Guide is to help licensees and licence applicants during the nuclear power plant (NPP) site preparation phase, or during the construction, operation or decommissioning of an NPP, to complete safety analyses in accordance with the Regulatory Standard S-310, *Safety Analyses for Nuclear Power Plants*.

### **15.2 Scope**

This proposed Regulatory Guide would describe the safety analyses and the conducting of the safety analyses, including the selection of events that may be analysed. It would also provide guidance on the use of acceptance criteria, safety analysis methods and assumptions, and the documenting and reviewing of safety analyses.

## **16.0 SAFETY CULTURE SELF-ASSESSMENTS, REGULATORY GUIDE, G-329**

### **16.1 Purpose**

The purpose of this proposed Regulatory Guide is to provide guidance to licensees in the performance of effective self-assessments of their organizational culture and safety culture.

## **16.2 Scope**

This proposed Regulatory Guide would describe the suggested criteria of a licensee's self-assessment method and would provide a description of the method used by the Canadian Nuclear Safety Commission to evaluate a licensee's safety culture. The document would also outline a self-assessment structure, including the scope, team composition and presentation of results.

## **17.0 COMPLIANCE REPORTS FOR CLASS IB NUCLEAR FACILITIES, REGULATORY GUIDE, G-330**

### **17.1 Purpose**

The purpose of this proposed Regulatory Guide is to help licensees of Class IB nuclear facilities in the preparation of compliance reports on the performance and operation of the facilities.

### **17.2 Scope**

This proposed Regulatory Guide would describe the elements of annual and quarterly compliance reports for Class IB facilities. These elements would include, but are not limited to the following:

- a) modifications to safety-related systems and structures,
- b) operational changes,
- c) significant safety-related events,
- d) worker radiation doses,
- e) public radiation dose assessment,
- f) environmental emissions and monitoring,
- g) waste management,
- h) non-radiological worker safety, and
- i) compliance with other federal and provincial regulations.

## **18.0 REPORTING OCCUPATIONAL DOSES TO THE NATIONAL DOSE REGISTRY WHEN MORE THAN ONE ORGANIZATION IS INVOLVED, REGULATORY GUIDE, G-136**

### **18.1 Purpose**

The purpose of this proposed Regulatory Guide is to help licensees and visitors to their premises to monitor and report occupational doses to the National Dose Registry (NDR) when more than one organization is involved, whether for internal or external dosimetry.

### **18.2 Scope**

This proposed Regulatory Guide would describe approaches that licensees may use for the concurrent wearing of assigned dosimeters, performing *in vivo* and *in vitro* bioassays, and for reporting these occupational doses to the NDR when more than one organization is involved. Both internal and external dosimetry would be addressed.

## **19.0 COMPLIANCE RATINGS FOR ALL LICENSEES, REGULATORY GUIDE, G-331**

### **19.1 Purpose**

The purpose of this proposed Regulatory Guide is to document the Canadian Nuclear Safety Commission's (CNSC) application of the compliance rating process with respect to safety and program areas.

### **19.2 Scope**

This proposed Regulatory Guide would describe how the CNSC's compliance rating process is used and would discuss the integration of the ratings from individual assessments and verification. The Guide would further describe how these ratings are used in the preparation of regulatory recommendations.

## **20.0 ANNUAL COMPLIANCE REPORT WORKSHEETS FOR NUCLEAR SUBSTANCE AND RADIATION DEVICE LICENSEES, REGULATORY GUIDE, G-304 SERIES**

### **20.1 Purpose**

The purpose of this proposed Regulatory Guide is to assist nuclear substance and radiation device licensees in understanding the various expectations of annual compliance reports.

## **20.2 Scope**

This proposed Regulatory Guide would contain a worksheet that sets out the elements and expectations for the annual compliance report requirements of licensees. Annual compliance report worksheets are tools used by Canadian Nuclear Safety Commission staff when assessing annual compliance reports.

## **21.0 RADIATION PROTECTION FOR NUCLEAR GAUGES, REGULATORY GUIDE, G-332**

### **21.1 Purpose**

The purpose of this proposed Regulatory Guide would be to help promote the proper handling and use of nuclear gauges. It would provide basic information on radiation protection for people who use and work with these radiation devices, and would provide recommended emergency measures should a nuclear gauge be involved in an incident.

### **21.2 Scope**

This proposed Regulatory Guide would assist nuclear gauge users in the development of a radiation protection program and in preparing appropriate emergency measures when a nuclear gauge is involved in an incident.

## **22.0 DEVELOPING AND CONDUCTING SIMULATOR-BASED EXAMINATIONS FOR CERTIFICATION AT NUCLEAR POWER PLANTS, REGULATORY GUIDE, G-317**

### **22.1 Purpose**

The purpose of this proposed Regulatory Guide is to help licensees who operate nuclear power plants, to develop and conduct simulator-based examinations for assessing whether candidates for plant positions satisfy the certification prerequisites set out in subsection 9(2) of the *Class I Nuclear Facilities Regulations*.

### **22.2 Scope**

This proposed Regulatory Guide would describe how licensees who operate nuclear power plants can develop and deliver simulator-based certification examinations for certain positions at the nuclear power plants.

## **23.0 DEVELOPING AND CONDUCTING WRITTEN EXAMINATIONS FOR CERTIFICATION AT NUCLEAR POWER PLANTS, REGULATORY GUIDE, G-318**

### **23.1 Purpose**

The purpose of this proposed Regulatory Guide is to help licensees who operate nuclear power plants, to develop and conduct written examinations that assess whether candidates for plant positions that require certification meet the prerequisites set out in subsection 9(2) of the *Class I Nuclear Facilities Regulations*.

### **23.2 Scope**

This proposed Regulatory Guide would describe how licensees, who operate nuclear power plants, can develop and deliver written certification examinations for positions examinations for certain positions at the nuclear power plants.

## **24.0 ANNUAL COMPLIANCE REPORTS FOR URANIUM MINES, REGULATORY GUIDE, G-333**

### **24.1 Purpose**

The purpose of this proposed Regulatory Guide is to help licensees of uranium mine and mill licensees in the preparation of annual compliance reports on the performance and operation of the facilities.

### **24.2 Scope**

This proposed Regulatory Guide would describe the elements of annual compliance reports for uranium mining and milling facilities. These elements include, but are not limited to the following:

- j) modifications to safety-related systems and structures,
- k) operational changes,
- l) significant safety-related events,
- m) worker radiation doses,
- n) public radiation dose assessment,
- o) environmental emissions and monitoring,
- p) waste management,
- q) non-radiological worker safety, and
- r) compliance with other federal and provincial regulations.

## **25.0 MANAGEMENT PROGRAMS FOR AGEING NUCLEAR POWER PLANTS, REGULATORY STANDARD, S-334**

### **25.1 Purpose**

The purpose of this proposed Regulatory Standard, when incorporated into a licence or other legally enforceable instrument, is to assure that nuclear power plant (NPP) licensees implement an overall plant ageing management program for systems, structures and components that are critical to nuclear safety.

### **25.2 Scope**

This proposed Regulatory Standard would provide requirements with respect to the organizational characteristics and generic attributes of an ageing management program for systems, structures and components (SSCs) at NPPs. It would describe the regulatory requirements for licensees' programs, including the selection of SSCs critical to nuclear safety, systematic ageing evaluations, implementation of ageing management actions, and for continuous improvement of the program.

## **26.0 PRESSURE RETAINING COMPONENTS, REGULATORY STANDARD, S-335**

### **26.1 Purpose**

The purpose of this proposed Regulatory Standard, when incorporated into a licence or other legally enforceable instrument, is to outline requirements that assure the integrity of pressure retaining components at nuclear power plants, research reactors, waste management facilities, heavy water plants, uranium refineries, and other nuclear facilities.

### **26.2 Scope**

This proposed Regulatory Standard would provide administrative requirements with respect to the design, installation, modification, repair, testing, examination, inspection, and performance of work related to pressure vessels, boilers, systems, piping, fittings, parts, and supports. It would outline the applicable technical codes and standards, the responsibilities and accountabilities of licensees, and the role of inspections agencies with respect to these pressure retaining components.