



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Canada 



WASTE AND DECOMMISSIONING REGULATORY DOCUMENTS

Presented at the June 18, 2020
Commission Meeting



CMD 20-M13.B

e-Doc 6257399
PDF: 6308768



PURPOSE

Request for approval of the following draft regulatory documents (REGDOCs):

REGDOC-1.2.1, *Guidance on Deep Geological Repository Site Characterization*

REGDOC-2.11.1, *Volume I: Management of Radioactive Waste*

REGDOC-2.11.1, *Volume III: Safety Case for the Disposal of Radioactive Waste, Version 2*

REGDOC-2.11.2, *Decommissioning*

REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities*

**Modernizing the waste management
& decommissioning regulatory framework**



OUTLINE

- ✓ Waste management and decommissioning framework
- ✓ REGDOC development process and stakeholder engagement
- ✓ Draft REGDOCs
- ✓ Conclusion and recommendation

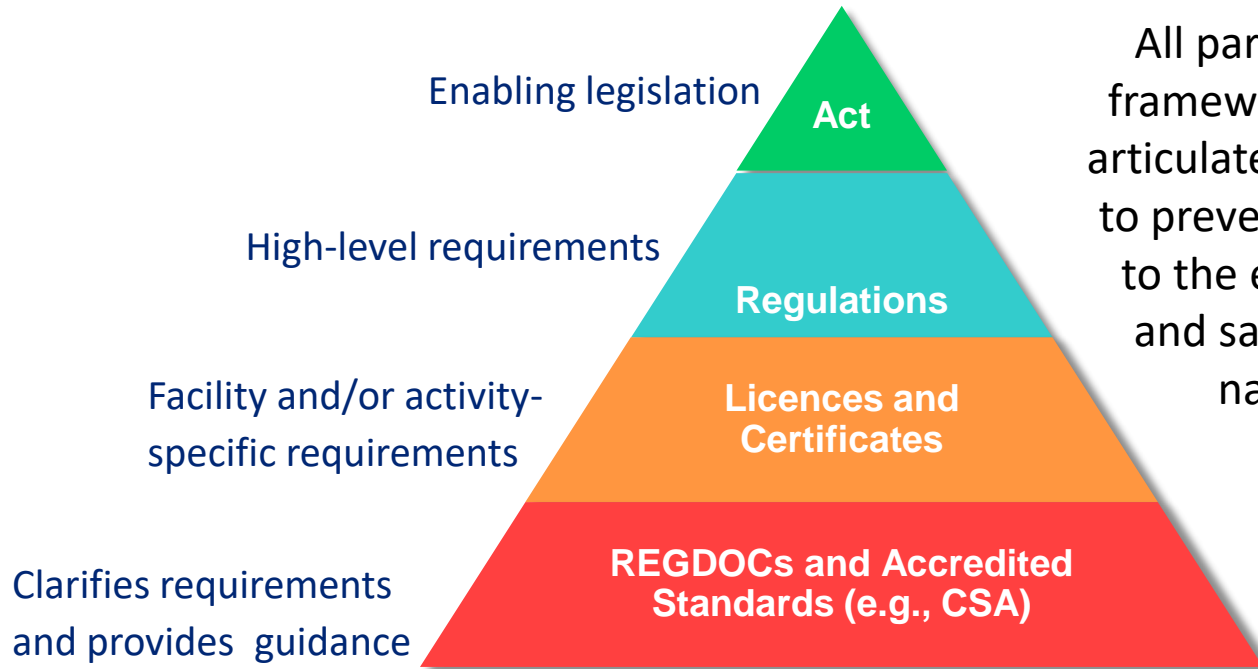


FRAMEWORK FOR RADIOACTIVE WASTE MANAGEMENT

- Natural Resources Canada is responsible for setting Canada's Radioactive Waste Policy
- The CNSC is responsible for making regulations, issuing licences and ensuring compliance
- Canada is a signatory to the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management*
- The 2020 Integrated Regulatory Review Service (IRRS) Review to Canada, with a special focus on waste, supported the proposed revisions to the Framework for Radioactive Waste Management and Decommissioning



THE CNSC'S REGULATORY FRAMEWORK



All parts of the regulatory framework work together to articulate objectives to be met to prevent unreasonable risk, to the environment, health and safety of persons and national security.



REGDOC MODERNIZATION

1.0 Regulated Facilities and Activities

- 1.1 Reactor Facilities
 - REGDOC-1.1.4, *Licence Application Guide: Licence to Decommission Reactor Facilities*
- 1.2 Class IB Facilities
 - **REGDOC-1.2.1, *Guidance on Deep Geological Repository Site Characterization***
- 1.3 Uranium Mines and Mills
- 1.4 Class II Facilities
- 1.5 Certification of Prescribed Equipment
- 1.6 Nuclear Substances and Radiation Devices

2.0 Safety and Control Areas

- 2.1 Management System
- 2.2 Human Performance Management
- 2.3 Operating Performance
- 2.4 Safety Analysis
- 2.5 Physical Design
- 2.6 Fitness for Service
- 2.7 Radiation Protection
- 2.8 Conventional Health and Safety
- 2.9 Environmental Protection
- 2.10 Emergency Management and Fire Protection

- 2.11 Waste Management
 - REGDOC-2.11: *Framework for Radioactive Waste Management and Decommissioning in Canada*
 - **REGDOC-2.11.1, Volume I: *Management of Radioactive Waste***
 - REGDOC-2.11.1, Volume II: *Management of Uranium Mine Waste Rock and Mill Tailings*
 - **REGDOC-2.11.1, Volume III: *Safety Case for the Disposal of Radioactive Waste, Version 2***
 - **REGDOC-2.11.2, *Decommissioning***
- 2.12 Security
- 2.13 Safeguards and Non-Proliferation
- 2.14 Packaging and Transport

3.0 Other Regulatory Areas

- 3.1 Reporting Requirements
- 3.2 Public & Aboriginal Engagement
- 3.3 Financial Guarantees
 - **REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities***
- 3.4 Commission Proceedings
- 3.5 CNSC processes and practices
- 3.6 Glossary of CNSC terminology



UPDATING EXISTING REGULATORY DOCUMENTS

Regulatory document (REGDOC) title:

Supersedes:

REGDOC-1.2.1, *Guidance on Deep Geological Repository Site Characterization*

R-72, Geological Considerations in Siting a Repository for Underground Disposal of High-Level Radioactive Waste (September 1987)

REGDOC-2.11.1, *Waste management, Volume I: Management of Radioactive Waste*

N/A

REGDOC-2.11.1, *Waste Management, Volume III: Safety Case for the Disposal of Radioactive Waste, Version 2*

REGDOC-2.11.1, Volume III: Assessing the Long-Term Safety of Radioactive Waste Management (May 2018) (formerly G-320, Assessing the Long-Term Safety of Radioactive Waste Management (Dec. 2006))

REGDOC-2.11.2, *Decommissioning*

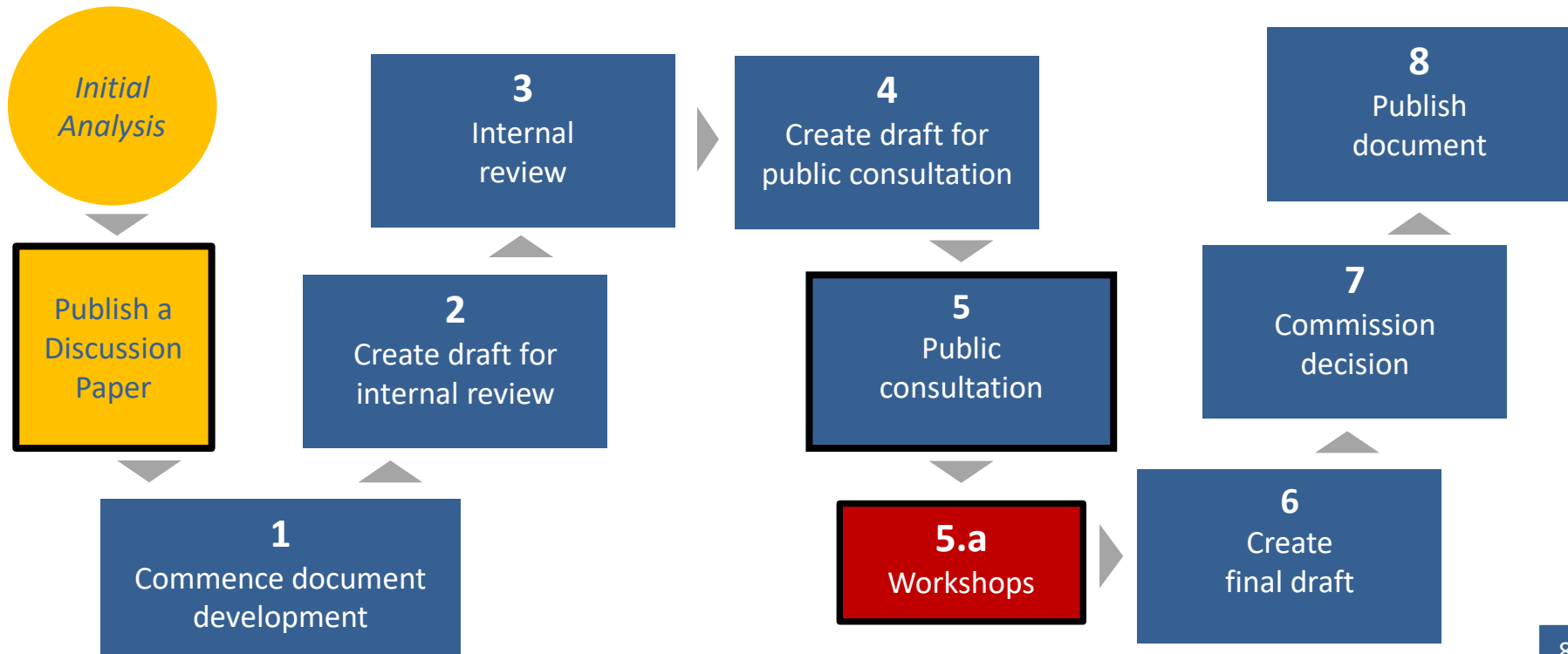
G-219, Decommissioning Planning for Licensed Activities (June 2000)

REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities*

G-206, Financial Guarantees for the Decommissioning of Licensed Activities (June 2000)

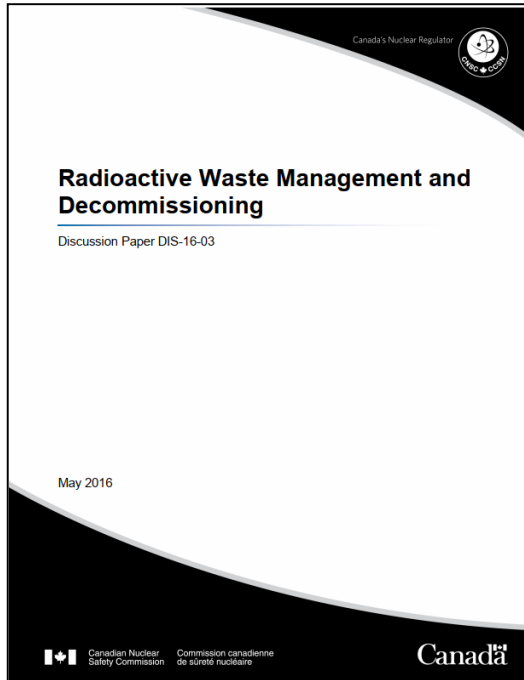


REGDOC DEVELOPMENT PROCESS





DIS-16-03, RADIOACTIVE WASTE MANAGEMENT AND DECOMMISSIONING



Comments were received from 18 stakeholders on topics including:

- Waste classification
- Waste minimization
- Waste management program requirements

In 2017, the CNSC published the [*What We Heard Report*](#)



IAEA SAFETY STANDARDS USED IN REGDOC DEVELOPMENT

REGDOC	IAEA safety standards
<i>1.2.1, Guidance on Deep Geological Repository Site Characterization</i>	SSR-5, SSG-14
<i>2.11.1, Waste Management, Volume I: Management of Radioactive Waste</i>	GSR-5, GSG-1, SSG-40, SSG-41, WSG-6.1, SSR-5, SSG-15, SSG-29, SSG-31, SSG-14
<i>2.11.1, Waste Management, Volume III: Safety Case for the Disposal of Radioactive Waste, Version 2</i>	GSR-5, SSR-5, SSG-23, GSG-3
<i>2.11.2, Decommissioning</i>	GSR-6, GSR-4, WS.G-2.4, WS-G-2.1, WS-G-5.2
<i>3.3.1, Financial Guarantee for Decommissioning of Nuclear Facilities and Termination of Licensed Activities</i>	GSR-6

REGDOC CONSULTATIONS

Phase	REGDOC-1.2.1	REGDOC-2.11.1, Vol. I	REGDOC-2.11.1, Vol. III	REGDOC-2.11.2	REGDOC-3.3.1
Public consultation	Oct. 19 – Dec. 17, 2018	Mar. 29 – Jun. 30, 2019	May 24 – Sep. 16, 2019	Jul. 16 – Oct. 16, 2019	Jul. 26 – Sep. 24, 2019
	100 comments	117 comments	126 comments	102 comments	33 comments
Feedback on comments	Jan. 18 – Feb. 8, 2019	Jul. 18 – Aug. 1, 2019	Oct. 16 – Nov. 5, 2019	Dec. 2 – Dec. 20, 2019	Nov. 6 – Nov. 26, 2019
	77 comments	42 comments	14 comments	31 comments	No comments



WORKSHOPS AND WEBINARS

	REGDOC-1.2.1	REGDOC-2.11.1, Vol. I	REGDOC-2.11.1, Vol. III	REGDOC-2.11.2	REGDOC-3.3.1
Industry (Feb. 5, 2020)	4 comments	16 comments	16 comments	15 comments	8 comments
Civil Society Organizations (CSOs) and members of the public (Apr. 23, 2020)	7 comments	45 comments	9 comments	20 comments	1 comment



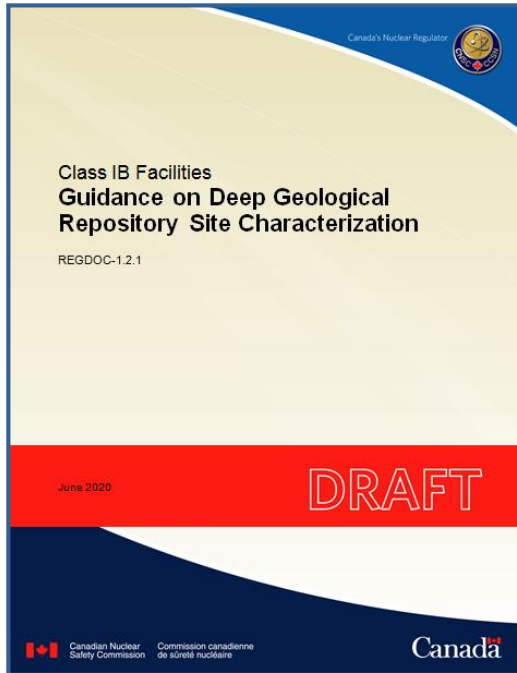
GENERAL FEEDBACK THEMES

The following general themes were heard from public consultation:

- Clarity of scope and applicability of the regulatory documents
- Use of consistent terminology and clear definitions
- Ensuring alignment with IAEA safety standards
- Applicability of the graded approach
- Use of CSA standards as part of the regulatory framework



REGDOC-1.2.1, GUIDANCE ON DEEP GEOLOGICAL REPOSITORY SITE CHARACTERIZATION



- Establishes guidance on site characterization for a deep geological repository (DGR) facility for radioactive wastes
- Describes the elements of a site characterization program

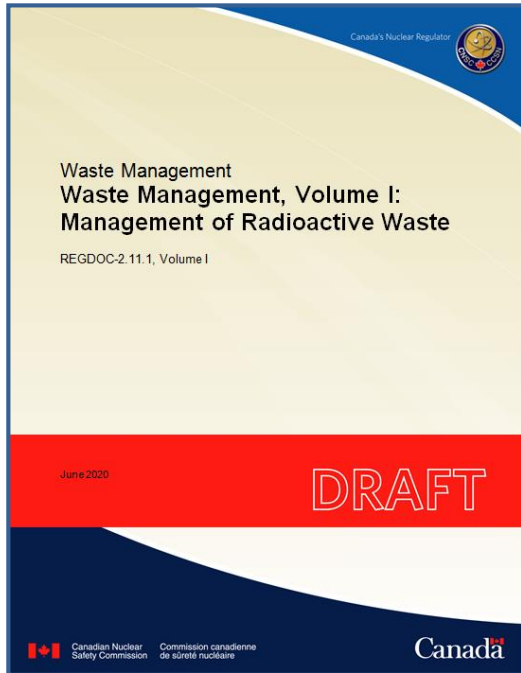


FEEDBACK THEMES ON REGDOC-1.2.1, GUIDANCE ON DEEP GEOLOGICAL REPOSITORY SITE CHARACTERIZATION

- Clarity of the purpose of the document (guidance versus requirements)
- Necessity for early involvement of the regulator and public participation during the site characterization process
- Clarity of the role of site characterization and site selection in the CNSC regulatory process
- Changes to the site characterization criteria



REGDOC-2.11.1, VOLUME I: MANAGEMENT OF RADIOACTIVE WASTE



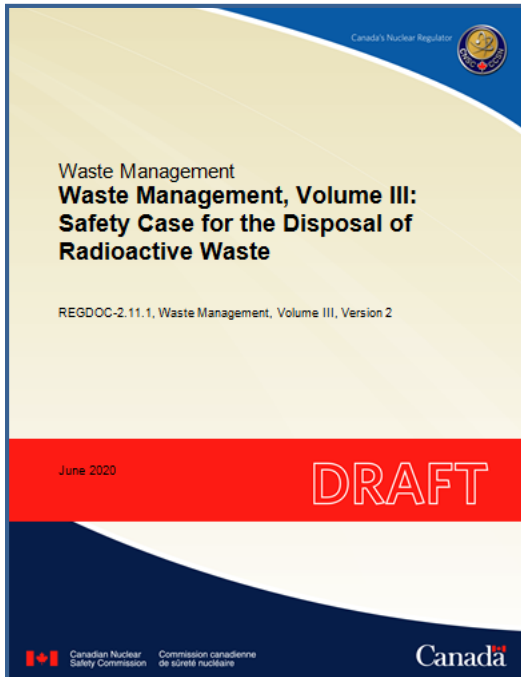
- Provides requirements and guidance for the management of radioactive wastes, from generation to disposal
- Describes specific requirements for radioactive waste storage and disposal facilities
- Specifies waste management program requirements



FEEDBACK THEMES ON REGDOC-2.11.1 , VOLUME I, MANAGEMENT OF RADIOACTIVE WASTE

- Clarity of NRCan's role in setting policy and the responsibility of waste owners
- Applicability of requirements at the different lifecycle phases of a facility
- Clarity on definitions of the radioactive waste classes
- Applicability, timing and level of detail of characterization and the expectations for maintaining waste inventory records
- Criteria for the transport of radioactive waste
- Use and application of passive and active institutional controls

REGDOC-2.11.1, VOLUME III: SAFETY CASE FOR THE DISPOSAL OF RADIOACTIVE WASTE, VERSION 2



- Addresses the development of a safety case and supporting safety assessment for the post-closure phase of disposal facilities
- Explains how the safety case is a structured framework for documenting and presenting all of the safety-related information for a disposal facility, in a consolidated manner

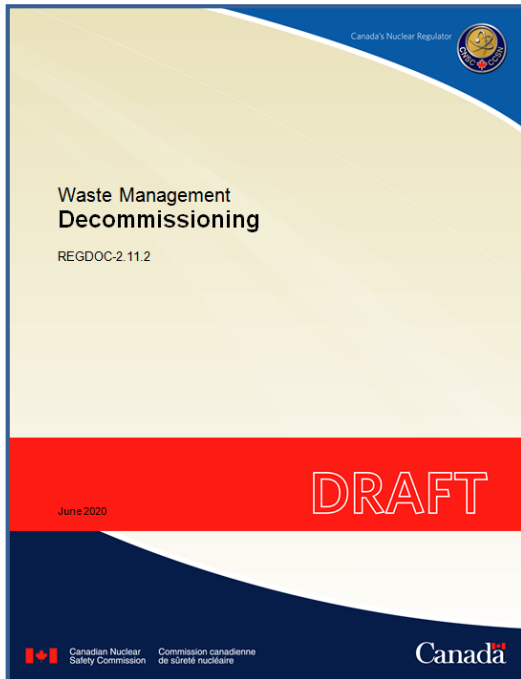


FEEDBACK THEMES ON REGDOC-2.11.1 , VOLUME III : SAFETY CASE FOR THE DISPOSAL OF RADIOACTIVE WASTE, VERSION 2

- Applicability of requirements at the different lifecycle phases of a facility
- Relevance of the operational aspects to the post-closure safety case
- Clarity on the applicability to long-term waste management facilities and/or waste disposal facilities
- Determination of time frames for the post-closure safety assessment
- Clarity on safety requirements and acceptance criteria for the post-closure phase
- Reliance on computer modeling



REGDOC-2.11.2, DECOMMISSIONING



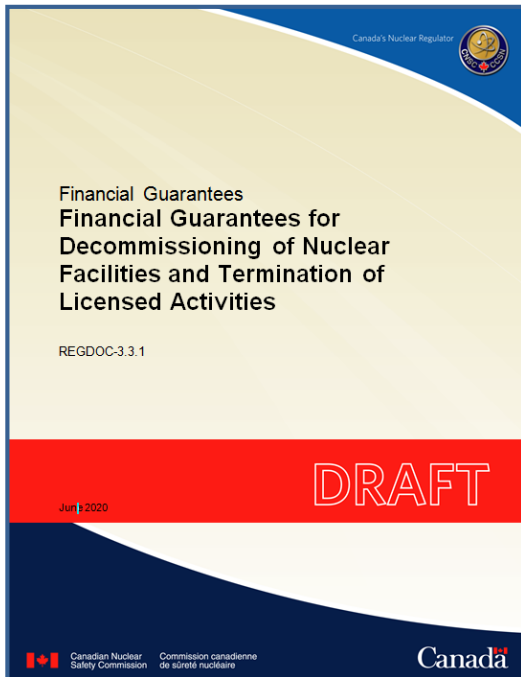
- Provides requirements and guidance regarding the planning, preparation, execution and completion of decommissioning
- Describes the elements that should be included in decommissioning plans



FEEDBACK THEMES ON REGDOC-2.11.2, DECOMMISSIONING

- Considerations for selecting decommissioning strategies, including *in-situ* decommissioning
- Clarity on the timing of submitting decommissioning plans and performing decommissioning activities
- Ensuring public and Indigenous engagement on decommissioning
- Expectations for a decommissioning safety assessment
- Clarification as to whether decommissioning activities include storage with surveillance
- Ensuring alignment with CSA N294 and IAEA GSR Part 6

REGDOC-3.3.1, FINANCIAL GUARANTEES FOR DECOMMISSIONING OF NUCLEAR FACILITIES AND TERMINATION OF LICENSED ACTIVITIES



- Provides requirements and guidance regarding the establishment and maintenance of financial guarantees for decommissioning
- Provides information on cost estimation, considerations and methodology



FEEDBACK THEMES ON REGDOC-3.3.1, FINANCIAL GUARANTEES FOR DECOMMISSIONING OF NUCLEAR FACILITIES AND TERMINATION OF LICENSED ACTIVITIES

- Clarity of expectations for financial guarantees (funding) for long-term monitoring of facilities transferred to institutional control
- Acceptability of expressed commitments by governments as financial guarantees
- Issues with changing guidance statements from G-206 into mandatory requirements
- Clarity of reporting requirements for financial guarantees



CONCLUSION

These draft REGDOCs:

- Clarify and formalize requirements and guidance related to waste management and decommissioning activities
- Align with national and international standards and best practices, while considering the Canadian context
- Were developed through an iterative process with stakeholders engagement

RECOMMENDATION



CNSC staff recommend that the Commission approve:

REGDOC-1.2.1, *Guidance on Deep Geological Repository Site Characterization*

REGDOC-2.11.1, *Waste Management, Volume I: Management of
Radioactive Waste*

REGDOC-2.11.1, *Waste Management, Volume III: Safety Case for the Disposal
of Radioactive Waste, Version 2*

REGDOC-2.11.2, *Decommissioning*

REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear
Facilities and Termination of Licensed Activities*



ANNEX SLIDES



Comment from Northwatch	CNSC staff response
<p>In response to a comment by the Saskatchewan Environmental Society, the comments table states that “The selection of a waste disposal site is not covered by the Nuclear Safety and Control Act (NSCA). Information on site selection is provided in IAEA SSG-14, <i>Geological Disposal Facilities for Radioactive Waste</i>, Appendix 1, and that the reference to CSA N292.0 <i>General principles for the management of radioactive waste and irradiated fuel</i></p> <p>Review of the revised REGDOC confirmed that the CSA N292.0 is no longer included in the listed references, but is referred to twice in the document.</p> <p>What is the status of CSA N292.0 <i>General principles for the management of radioactive waste and irradiated fuel</i> in relationship to REGDOC 1.2.1?</p> <p>Which of the following – if any – set out legal / regulatory requirements:</p> <ul style="list-style-type: none"> – <i>CSA N292.0</i> – <i>IAEA SSG-14</i> – <i>REGDOC 1.2.1</i> 	<p>CSA 292.0, <i>General Principles for the Management of Radioactive Waste and Irradiated Fuel</i> is provided in the revised document as additional information that is relevant for a DGR, but not used to inform the elements to be included within a DGR site characterization program (the focus of REGDOC-1.2.1).</p> <p>No requirements are provided in this REGDOC, but guidance on the expected elements that a site characterization program for a DGR facility should have. The requirements relating to site characteristics for a radioactive waste disposal facilities are found in REGDOC-2.11.1, <i>Waste Management, Volume III: Safety Case for the Disposal of Radioactive Waste</i>, Version 2, and also within IAEA Specific Safety Requirements SSR-5, <i>Disposal of Radioactive Waste</i>.</p> <p>REGDOC-2.11.1, Volume III includes the following requirements relevant to site characterization:</p> <ul style="list-style-type: none"> ● Site characterization must be included as part of the disposal system description (section 7.3 ● Quality of site characterization: the applicant (or licensee) shall ensure that the safety assessment describes and/or references the approach and criteria used in site selection and demonstrate that the site selected is in accordance with the safety strategy (section 7.4.1.1) ● Site characterization data must be included in the safety assessment (section 8.1.2.1)

Comment from Northwatch	CNSC staff response
<p>In response to a comment by the Saskatchewan Environmental Society, the comments table states that:</p> <p><i>“Reference to retrieval has been removed from the document. The cited CSA standard has been moved to “additional information”.</i></p> <p><i>The project applicant may or may not include retrieval as an option during a phase (e.g. construction, operation, closure). This is consistent with the CSA standard cited.</i></p> <p>CSA N292.0 makes multiple references to retrieval including in the definition “Repository — a facility, including its associated land, buildings, and equipment, where nuclear substances are emplaced, with no intention after closure of their future retrieval or transfer.”</p> <p>CSA N292.0 makes multiple references to retrieval including in the definition “Repository — a facility, including its associated land, buildings, and equipment, where nuclear substances are emplaced, with no intention after closure of their future retrieval or transfer.”</p> <p>IAEA SSG-14 Section 1.2 states that “The term ‘geological disposal’ refers to the disposal of solid radioactive waste in a disposal facility located underground in a stable geological formation so as to provide long term containment of the waste and isolation of the waste from the accessible biosphere. Disposal means there is no intention to retrieve the waste, although such a possibility is not ruled out.” (pg 1) Section 1.13 adds that “In some States, post-closure retrievability is a legal requirement and constitutes a boundary condition for the options available, which must always satisfy the safety requirements for disposal” (pg3)</p> <p>Where is legal or regulatory guidance / requirements provided to prospective licences with respect to retrievability? For example: <i>CSA N292.0, IAEA SSG-14, REGDOC 1.2.1, Other</i></p> <p>In what licencing / development stage(s) to those requirements apply? <i>Site selection, Repository design, Repository construction, Repository operation, Repository closure, Post closure, Other</i></p>	<p>As pointed out in the comment, IAEA SSG-14, <i>Geological Disposal Facilities for Radioactive Waste</i> refers to the legislated requirements that some countries have to maintain retrieval as an option in the post-closure period, while CSA N292.0, <i>General Principles for the Management of Radioactive Waste and Irradiated Fuel</i> restricts the potential to have retrieval as an option to the pre-closure period. The Government of Canada has not legislated the requirement to maintain retrieval as an option for the post-closure period of disposal facilities.</p> <p>From the perspective of long-term safety, for any/all licensed stages, a DGR facility would need to demonstrate that it met the requirements of a safety case laid out in REGDOC-2.11.1, <i>Waste Management, Volume III: Safety Case for the Disposal of Radioactive Waste, Version 2</i>. Should any change be proposed - including adding or removing the option of retrieval - the licensee or applicant would need to demonstrate the safety case could still be met.</p> <p>REGDOC-1.2.1, the focus of this comment, does not contain requirements. It does contain guidance on the expectations of a site characterization program for a DGR facility. Figure 1 and section 3.1 were created in the revision to clarify the role of site characterization, which begins in the pre-licensing period. Figure 1 is also intended to show that site characterization activities are expected to continue during licensed phases.</p>

Comment from Northwatch	CNSC staff response
<p>In response to comments from Northwatch (item 3) CNSC responded “If a proponent wishes to obtain a licence from the CNSC, they will need to demonstrate how they followed guidance (e.g. this document) and meet all applicable regulatory requirements. This document does not detail all of the information that would be required to support and application to licence a DGR.”</p> <p>Further, in response item 16, CNSC responds that “This is a guidance document only and does not set out any requirements.”</p> <p>Noting that REGDOC 1.2.1 is a “should” document rather than a “shall” document (guidance vs requirement):</p> <ul style="list-style-type: none"> – What are the regulatory requirements? – Where are these regulatory requirements set out? – What activities do they apply to, and at what stage in DGR development / licensing stages? 	<p>See responses to comment #225 and 226.</p> <p>There are no regulatory requirements within this document. Guidance is developed with the expectation that a licence applicant can demonstrate how they are following the guidance.</p> <p>While site selection is not a regulated activity in Canada, important information is collected during site selection – including site characterization information (please see response to comment 1 for CNSC regulatory requirements relating to site characterization).</p> <p>As site characteristics would be very important for evaluating the safety of a DGR project – guidance on the expected elements of a site characterization program are provided in this REGDOC. While characterization activities begin in a pre-licensing period, information collected during that time submitted as part of a licence application would be formally reviewed by CNSC staff.</p> <p>Figure 1 in the revised document does intend to help address this question, described further in the revised section 3.1.</p>

Comment from Northwatch

In response to Northwatch’s expression of frustration and the limited availability of CSA “standards”, the CNSC responded that *“The notion that CSA standards are not generally available to the public is not accurate. The public can access all CSA Nuclear standards free of charge and can review them as they see fit.”*

CNSC staff response

The Canadian Standards Association (CSA Group) is a not-for-profit independent organization that is accredited by the Standards Council of Canada to be legally allowed to develop standards in Canada. The CSA Group has a fiduciary duty to protect its intellectual property rights. In the interest of balancing the CSA Group’s legal obligations with the need for regulatory openness and transparency, the CNSC provides a yearly sum to the CSA Group to provide for free view-access to all its nuclear standards. In addition, to view access stakeholders can also request via a CSA copyright form to use parts of standards as parts of reviews, for example if preparing a submission to the Commission.

CNSC staff conducting regulatory analysis and benchmarking work often conduct screen-by-screen analysis of standards and other documents from applicable bodies such as the International Atomic Energy Agency. Online-only documents are becoming increasingly common and the availability of printed documents is becoming increasingly rare.

The CNSC has noted the comment and will continue to work with the CSA to improve stakeholders’ experience in freely accessing nuclear standards.

Comment from Northwatch

In response to a Northwatch comment that the REGDOC should explicitly set out what the pre-licensing requirements, CNSC responded that the revised section 2 explains the need for this type of REGDOC in the pre-licensing stage. This is consistent with international guidance and best practice consulted and listed in reference materials. We did not find that explanation. The CNSC response again stated that “This document provides guidance only”.

The relationship between site characterization and site selection (that occurs in the pre-licensing period) is illustrated in the new Figure 1 of the revised document. Section 2.1 sets out when this information will be reviewed by the CNSC during the environmental assessment and licence application process.

Repeatedly, the CNSC response is that REGDOC is for guidance only.

- Which is it a REGDOC rather than a guidance document?
- where are the standards / criteria by which the site characterization activities undertaken to support an application will be assessed?

CNSC staff response

Please see responses to comments #1 and 2 (Slides #27 and 28).

Comment from Northwatch

Northwatch made several comments on the need for transparency and openness; CNSC replied that “As a result of this comment, the text has been revised and moved to section 2.

Northwatch has reviewed the revised Section 2 and did not find that it incorporated requirements for openness and transparency, including public access to data, models, model inputs, and interactions between the CNSC and applicants.

CNSC staff response

In the revised REGDOC-1.2.1, CNSC staff aimed to clarify the need for transparency and openness. In the revised REGDOC, Section 2.2 links to CNSC REGDOC-3.2.1, *Public Information and Disclosure*.

Comment from Northwatch

CNSC responded (92) to a Northwatch comment on the lack of clarity with respect to shaft sinking and underground characterization with the statement that “The document does not include guidance on shaft sinking. Facilities for verification and characterization, which could include an underground research facility, are described in section 6. Section 5.3 is focused on site characterization activities that begin in a pre-licensing period (outside of CNSC’s regulated activities).”

CNSC further stated (98) that “Data from other URFs (e.g. generic ones) could be used for this purpose. Site specific URFs are not prescribed by the CNSC”

Underground site characterization, i.e. beyond bore holes and requiring shaft or ramp access to the underground environment, are the larger part of site characterization.

- Why is it excluded?
- Where is it addressed?

To the degree that DGR development is “standard”, it is standard practice to develop a URF to conduct site characterization to support predictions made at earlier stages of site investigations (eg. Finland, Sweden, U.S., Canada).

- What is the basis for this position being taken by CNSC staff?

CNSC staff response

To clarify, Figure 1 was added to the REGDOC, which is described in a new section (section 3.1).

While site characterization will begin from the surface (during the DGR siting process) characterization activities are expected to continue during the DGR facility lifecycle phases that will be licensed by the CNSC. This includes underground characterization.

While CNSC does not prescribe the method through which characterization information will be obtained, the guidance in this REGDOC is intended to lay out the expectations of a site characterization program. This is not limited to a particular method and would extend to regulated activities including the examples provided in Figure 1 (e.g., underground research facility activities).

COMMENTERS FOR DIS-16-03

Public Consultation

May 13 to September 12, 2016

AREVA (Orano)
Atomic Energy of Canada Limited
Bruce Power
Cameco Corporation
Canadian Nuclear Association
Canadian Nuclear Laboratories
Ian Turnbull
Jaro Franta
Kelly Clune
Kinetricks
Michael Grey
Nordion
Northwatch
Natural Resources Canada
Nuclear Waste Management Organization
Ontario Power Generation
SOS Great Lakes
The Inverhuron Committee

Feedback on comments

October 13 to November 2, 2016

Barbara Feldman
Brent Kimberly
Hydro-Québec
Ken Collier
Moltex
Normtek

COMMENTERS FOR PUBLIC CONSULTATION

	REGDOC-1.2.1	REGDOC-2.11.1, Vol. I	REGDOC-2.11.1, Vol. III	REGDOC-2.11.2	REGDOC-3.3.1
Public Consultation	Algonquin Eco-Watch	Bruce Power	Bruce Power	Berry Stemshorn	Bruce Power
	Anna Tilman	Cameco	Cameco	Bruce Power	Canadian Nuclear
	Canadian Nuclear Laboratories	Canadian Nuclear Association	Canadian Association of Physicians for the Environment	Cameco	Association
	Dodie LeGassick	Canadian Nuclear Laboratories	Canadian Nuclear Association	Canadian Environmental Law Association	Canadian Nuclear Laboratories
	Dr. Michael Stevens	Concerned Citizens of Renfrew County and Areas	Canadian Nuclear Association	Canadian Nuclear Association	NB Power
	Dr. Sandy Greer	Dorothy Goldin Rosenberg	Canadian Nuclear Laboratories	Canadian Nuclear Association	Nordion
	Environment and Climate Change Canada	Dr. Sandy Greer	Concerned Citizens of Renfrew County and Area	Canadian Nuclear Laboratories	Ontario Power Generation
	Inverhuron Committee	Dr. Albert Lee	Concerned Citizens of Renfrew County and Area	Canadian Nuclear Laboratories	Saskatchewan Environmental Society
	Jaro Franta	Lloyd's Register Consulting	Area	Dr. J.R. Walker	
	Metis Nation of Ontario	Ministere de la Sante et des Services Sociaux	Dr. J.R. Walker	Frank Greening	
NB Power	NB Power	Dr. Michael Stevens	Hydro-Quebec		
Northwatch	Northwatch	Dr. Sandy Greer	NB Power		
Nuclear Waste Management Organization	Nuclear Waste Management Organization	NB Power	Dr. Sunil Nijhawan		
Ontario Power Generation	Ontario Power Generation	Northwatch	Northwatch		
Saint John Citizens Coalition for Clean Air	Ontario Power Generation	Nuclear Waste Management Organization	Nuclear Waste Management Organization		
Saskatchewan Environmental Society	Ontario Power Generation	Ontario Power Generation	Ontario Power Generation		
Society of United Professionals	Ralliement contre la pollution radioactive	Ontario Power Generation	Ontario Power Generation		
University of Ontario Institute of Technology		Ralliement contre la pollution radioactive	Region of Durham		
			Safety Probe International		

WORKSHOPS PARTICIPANTS

Workshop with Industry

February 5, 2020

Bruce Power
BWX Technologies
Cameco
Canadian Nuclear Association
Canadian Nuclear Laboratories
CANDU Owners Group
Hydro-Québec
Kinetrics
New Brunswick Power
Nuclear Waste Management Organization
Ontario Power Generation
Orano

Workshop with Civil society organizations (CSOs) and members of the public

April 23, 2020

Canadian Environmental Law Association
Concerned Citizens of Renfrew County and Area
Gordon Edwards
Dr. Sandy Greer
Dodie LeGassick
Northwatch
Michael Stephens
Ralliement contre la pollution radioactive
Regional Municipality of Durham

IAEA SAFETY STANDARDS TITLES

- GSG-1, *Classification of Radioactive Waste* (2009)
- GSG-3, *The Safety Case and Safety Assessment for the Predisposal Management of Radioactive Waste*, (2013)
- GSR-4, *Safety Assessment for Facilities and Activities*, (2016)
- GSR-5, *Predisposal Management of Radioactive Waste*, (2009)
- GSR-6, *Decommissioning of Facilities*, (2014)
- SSG-14, *Geological Disposal Facilities for Radioactive Waste* (2011)
- SSG-15, *Storage of Spent Fuel* (2012)
- SSG-23, *The Safety Case and Safety Assessment for the Disposal of Radioactive Waste* (2012)
- SSG-29, *Near Surface Disposal Facilities for Radioactive Waste* (2014)
- SSG-31, *Monitoring and Surveillance of Radioactive Waste Disposal Facilities* (2014)
- SSG-40, *Predisposal Management of Radioactive Waste from Nuclear Power Plants and Research Reactors* (2016)
- SSG-41, *Predisposal Management from Nuclear Fuel Cycle Facilities* (2016)
- SSR-5, *Disposal of Radioactive Waste* (2011)
- WS-G-2.4, *Decommissioning of Nuclear Fuel Cycle Facilities* (2001)
- WS-G-2.1, *Decommissioning of Nuclear Power Plants and Research Reactors* (1999)
- WS-G-5.2, *Decommissioning of Nuclear Power Plants, Research Reactors and Other Nuclear Fuel Cycle Facilities*, (2018)
- WSG-6.1, *Storage of Radioactive Waste* (2006)