

**Review of REGDOC-1.2.3, *Licence Application
Guide:***

Licence to Prepare Site for a Deep Geological Repository

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1 Introduction

Please find below Integral Ecology Group's technical review of **REGDOC-1.2.3, Licence Application Guide: Licence to Prepare Site for a Deep Geological Repository**. The review was conducted on behalf of Athabasca Chipewyan First Nation and includes a review of REGDOC-1.2.3 (Sections 1 through 4 and Appendix A) and supporting regulations and or documents identified within REGDOC-1.2.3, for example, REGDOC-2.11.1., REGDOC-2.9.1., REGDOC-2.11.2., REGDOC-3.2.2.

Project context

REGDOC-1.2.3 is part of the CNSC's regulated facilities and activities series of regulatory documents. REGDOC-1.2.3, *Licence Application Guide: Licence to Prepare Site for a Deep Geological Repository (DGR)* provides clarity on the requirements and guidance for preparing an application for a licence to prepare a site for a DGR. A DGR is a facility where radioactive waste is placed in a deep, stable, geological formation (usually several hundred metres or more below the surface). The facility is engineered to isolate and contain radioactive waste to provide the long-term isolation of nuclear substances from the biosphere. This regulatory document provides clarity about the requirements and provides guidance on the information needed to apply for a license to prepare a site for a DGR facility.

This document is not intended to:

- provide guidance on finding or selecting a site,
- apply to surface and near-surface waste management facilities,
- apply to waste from uranium mines and mills,
- describe the requirements and guidance needed for a safety case for disposal facilities, and,
- replace the federal impact assessment requirements.

2 SECTION 2 Overview of site preparation

Section 2 Overview of Site Preparation

On review of REGDOC-1.2.3., Section 2, pre-closure and post closure licencing stages and lifecycle activities for the DGR, it is noted and recognized that Indigenous engagement is included as ongoing activities. ACFN acknowledges the importance of continuous, iterative engagement throughout the licencing stages and lifecycle activities of the DGR.

ACFN recognizes and commends the requirement to have a licence to prepare a site before any site preparation work for a DGR facility begins. ACFN notes that licenced site preparation activities such as, clearing vegetation, grading, fencing, infrastructure, establishing access roads and parking, construction of structures, e.g., Flood protection, erosion control, non-nuclear structures, and systems and components, likely have impacts on how Indigenous communities are able to use the land and practice their rights as Indigenous peoples.

1. Recommendation:

ACFN recommends that licences required above activities to prepare a site and site evaluations (section 2.1) needs to take into account potential impacts on Indigenous peoples and their ability to exercise rights. This would include working directly with local Indigenous communities to understand and mitigating concerns and impacts from site preparation activities and creating a communication plan for the purpose of engaging Indigenous communities.

Section 2.2 Site characterization

The REGDOC-1.2.3 states that the applicant must provide a description of planned activities and provide data about the site characteristics for licence to prepare a site for a DGR facility. The site characterization demonstrates how radioactive waste will be contained and isolate from the environment over the timeframe and supported by the post-closure safety case.

2. Recommendation:

ACFN recommends that the standard to which radioactive waste will be contained and isolated from the environment takes into the account Indigenous peoples use of the environment to ensuring the safety of Indigenous people for future generations. ACFN is concerned that Indigenous uses of the land and resources (e.g., drinking water from the rivers, streams, lakes etc. and consumption of animals and plants) are not factored into the standards of how radioactive waste is contained and isolated from the environment.

Section 2.3 Post-closure safety case

REGDOC-1.2.3 states that the applicant must provide a post-closure safety case in support of a license to prepare site application for the DGR facility. Requirements and guidance for developing a post-closure safety case are provided by REGDOC-2.11.1 and indicate that “the development of the safety case enables ongoing engagement with the public and Indigenous groups and the incorporation of stakeholder feedback. At closure of the disposal facility, the safety case will contain information that future generations may require (e.g., institutional control plans, long-term monitoring plan)”

3. Recommendation:

ACFN acknowledges that the safety case enables ongoing engagement with the public and Indigenous groups and the incorporation of feedback, and that it contains information that future generations may require (e.g., plans). ACFN notes that post-closure safety case needs to include the interests and use of future generations of Indigenous peoples and recommends that the post closure safety case explicitly support Indigenous multigenerational use that will adequately protect Indigenous people throughout the entire lifecycle (site preparation, construction, operation, and decommissioning). This including Indigenous input on institutional control plans and Indigenous-led long-term monitoring. Indigenous peoples use of the land varies from non-Indigenous peoples (public), including but not exclusive to the consumption of animals, plants and water on the land. These uses are important to accommodate when

demonstrating a facility will adequately protect Indigenous people and the environment.

3 Section 3

Section 3.3 Operating performance

REGDOC-1.2.3 states that “risks to the health and safety of the public in site preparation include:

- noise hazards from blasting and operation of heavy machinery
- chemical hazards from the handling of fuels, lubricants and other conventional chemicals used in the construction equipment
- mechanical hazards from excavation, earth movement and road building
- electrical hazards from installation of construction infrastructure
- dust from overburden and rock removal and movement
- ground vibration and flying rock hazards from blasting

ACFN acknowledges that these risks to health and safety of the public is an important component to prepare a site for DGR. However, Indigenous peoples use of the land and its resources may differ from the general public and therefore may require tailored measures of risk to the health and safety of Indigenous peoples. This may include measures that take into account Indigenous land use, consumption of animals, plants and water in and downstream from the region.

4. Recommendation

ACFN recommends that amendments be made to include not only the risks to the health and safety of the public, but also the risks and health of Indigenous peoples in site preparation. ACFN recommends the applicant work directly with local Indigenous groups to understand their concerns and risks that may arise during site preparation.

Section 3.3 also states the applicant's assessment of risks to the health and safety of workers and the public resulting from the activities encompassed by the license to prepare site should include consideration of accidents and malfunctions that could occur during site preparation activities. When considering accidents and malfunctions, Indigenous peoples' use of the land and resources may require special consideration.

5. Recommendation

Similar to the above ACFN recommends that accidents and malfunctions be considered with input from local Indigenous peoples.

Section 3.5 Physical design

REGDOC-1.2.3 states: “the applicant must also provide information on the proposed exclusion zone, including size and boundary, and on the proposed emergency planning regions”. ACFN recognizes that Indigenous peoples may be using nearby land and resources for consumption or traditional purposes. Information provided regarding proposed exclusion zones, including size

and boundary, and proposed emergency planning regions may need to consider Indigenous use of the land and resources.

6. Recommendation

ACFN recommends that applicant include input from Indigenous peoples and their use of the land to inform proposed exclusions zone, size and boundary, and proposed emergency planning.

Section 3.7 Radiation protection

REGDOC states “the application must describe how radiological hazards will be monitored and controlled during any site preparation activities”. ACFN notes that in order to protect Indigenous peoples, monitoring radiological hazards must include monitoring for potential hazards arising from Indigenous use of the land. This may include consumption of animals and plants and water around and downstream of a DGR.

7. Recommendation

ACFN recommends protecting Indigenous peoples by monitoring radiological hazards with criteria that accommodates potential hazards arising from Indigenous use of the land. The applicant should work with local Indigenous communities to identify risks arising from Indigenous use of the land and waters.

Section 3.9 Environmental protection.

REGDOC-1.2.3 outlines that the applicant must include “a comprehensive set of applicable Environmental Protection measures, including an environmental risk assessment, environmental management systems, effluent emissions control and monitoring program, environmental monitoring program, and groundwater protection and monitoring program that meet all requirements applicable to site preparation activities of REGDOC-2.9.1”. ACFN acknowledges and commends the following as important components to environmental protection. REGDOC-2.9.1 describes any “licensee should describe the potential effects of the facility or activity on the physical well-being of Indigenous groups and other people resulting from biophysical effects, including the effects of the facility or activity on environmental components and the resulting effects on human health”. This includes identifying “any change that the facility or activity is likely to cause on the environment and any effect of any such change on the health and social economic conditions, physical and cultural heritage and on the current use of lands and resource is for traditional purposes by any indigenous group including effects on hunting, trapping, fishing, and gathering.” The licensee “should also identify any concerns raised by Indigenous people about the facility or activity in relation to any Indigenous or treaty rights.” (REGDOC-2.9.1, 2016).

Section 3.12 Preliminary decommissioning plan

As part of the application to prepare site, the applicant must demonstrate that the site evaluation process has appropriately considered future decommissioning in the planning for the nuclear facility and has adequately considered end-of-life decommissioning, prepare a preliminary decommissioning plan in accordance with REGDOC-2.11.2. REGDOC-2.11.2 identifies that when determining the appropriate decommissioning strategy, the licensee

should make “considerations”, including Indigenous engagement. ACFN requests that Indigenous engagement be included as a requirement for determining the appropriate decommissioning strategy. The land that the DGR is developed on has likely been used by local Indigenous peoples for generations. Usability and suitability of the land after decommissioning is of high interest to Indigenous peoples ensuring the end use is maximized for future Indigenous peoples.

8. Recommendation

ACFN Recommends that Indigenous engagement be included as a requirement for determining the appropriate decommissioning strategy.

[Section 3.16 Indigenous and public engagement](#)

REGDOC- 1.2.3 outlines the CNSC’s obligation for “consultation to avoid, mitigate or offset adverse effects”. REGDOC-3.2.2, Indigenous Engagement [13] outlines “requirements and guidance for applicants whose proposed projects may raise the Crown's duty to consult and accommodate”. REGDOC-1.2.3 also outlines that engagement activities with the public and Indigenous peoples should be conducted early in the project development process, including site evaluation. Engagement is expected to result in more effective and efficient consultation practices, strengthen relationships and assist the Crown in meeting its obligations regarding any potential legal duty to consult and accommodate, as well as reduce the risk of delays in the regulatory review process. ACFN acknowledges the value of engagement stated in REGDOC-1.2.3, but suggests including that the engagement improves how Indigenous communities contribute their knowledge and experience on the land toward reducing the potential risks and impacts on Indigenous communities throughout the life cycle of DGR.

9. Recommendation

ACFN recommends that the benefits of engagement include the contribution Indigenous knowledge toward reducing potential risks and impacts on Indigenous communities throughout the lifecycle of DGR. Further, ACFN recommends that Indigenous engagement take place throughout the life of the project. Decommission plans should be developed with input from Indigenous communities and made available for them to review.

[REGDOC-3.2.2 Section Appendix C](#)

Appendix C of REGDOC-3.2.2. outlines the qualification of current practice: Canadian Nuclear Safety Commission commitment to aboriginal consultation. Appendix C also outlines the CNSC’s approach to Aboriginal consultation with generally practices that enable Indigenous communities to engage in license applications. One aspect that is missing from this document and the REGDOC-1.2.3. that ACFN sees as valuable to include is the recognition of Indigenous knowledge to inform the licencing process. Indigenous knowledge is valuable equal to that of scientific knowledge where both sets of knowledge inform and have potential to deepen understanding of potential impacts and improve outcomes from DGR site preparation.

10. Recommendation

ACFN recommends Indigenous knowledge be included as a requirement of knowledge when preparing a site for a DGR.