



Date: June 8, 2023

To.: Canadian Nuclear Safety Commission, sent by email consultation@cnsccsn.gc.ca

From: Nuclear Waste Watch

Re.: Feedback on Comments from the Nuclear Industry Regarding
Regulatory Document 1.2.3 - Licence Application Guide: Licence to Prepare Site for a Deep
Geological Repository (DGR).

Nuclear Waste Watch / Action déchets nucléaires is a national network of Canadian organizations concerned about high level radioactive waste and nuclear power founded in November 2003, to provide a public-interest response to the Nuclear Waste Management Organization (NWMO).

Nuclear Waste Watch is primarily focused on high level radioactive waste and its generation through the use of nuclear power in Canada, but shares the concerns of communities and organizations with respect to a now withdrawn proposal by Ontario Power Generation to bury low and intermediate level radioactive wastes beside Lake Huron, beneath the Bruce Nuclear site and communities and organizations in the Ottawa Valley and downstream of the Chalk River Nuclear Laboratories where a massive on-surface radioactive waste "mound" has been proposed by a consortium of multi-national companies.

Several civil society and environmental non-governmental organizations collaborated to prepare feedback on the comments submitted collectively by the Nuclear Waste Management Organization, Bruce Power, Ontario Power Generation, New Brunswick Power and Canadian Nuclear Laboratories on draft *Regulatory Document 1.2.3 - Licence Application Guide: Licence to Prepare Site for a Deep Geological Repository (DGR)*.

The attached table summarizes the outcome of this collaborative effort which included the Canadian Environmental Law Association, Concerned Citizens of Renfrew County and Area, Northwatch, Nuclear Waste Watch, Protect Our Waterways – No Nuclear Waste, Sierra Club of Canada Foundation and We the Nuclear Free North.

Thank you for this opportunity to provide feedback.

John Jackson
Citizens Network on Waste Management
Nuclear Waste Watch Steering Committee

FEEDBACK ON REGDOC 1.2.3 - LICENCE APPLICATION GUIDE: LICENCE TO PREPARE SITE FOR A DEEP GEOLOGICAL REPOSITORY

Several civil society and environmental non-governmental organizations collaborated to prepare feedback on the comments submitted collectively by the Nuclear Waste Management Organization, Bruce Power, Ontario Power Generation, New Brunswick Power and Canadian Nuclear Laboratories on draft Regulatory Document 1.2.3 - Licence Application Guide: Licence to Prepare Site for a Deep Geological Repository (DGR). The following table summarize the outcome of this collaborative effort which included the Canadian Environmental Law Association, Concerned Citizens of Renfrew County and Area, Northwatch, Nuclear Waste Watch, Protect Our Waterways – No Nuclear Waste, Sierra Club of Canada Foundation and We the Nuclear Free North.

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
0.	Overview	<p>Industry appreciates the opportunity to review future drafts as well to offer constructive feedback before this document is submitted to the Commission for approval and publication.</p> <p>During a collective review of this initial version, subject matter experts from Nuclear Waste Management Organization, Bruce Power, Ontario Power Generation, New Brunswick Power, and Canadian Nuclear Laboratories identified the following three themes to which many of our MAJOR comments relate to:</p> <ol style="list-style-type: none"> 1. This document lacks consistency with CSA N292.7. Since the CSA N292.7 is referenced frequently within this REGDOC, these inconsistencies will add confusion. <ol style="list-style-type: none"> a. The figure provided in Section 2 is an example of many of these inconsistencies. 2. The document references many CSA standards and other REGDOCs that are not in scope for a Licence to Prepare Site (LTPS) for a DGR. 3. Throughout the document, there appears to be requirements listed that come from the NPP Licence Application Guide (LAG); the requirements for many of the SCAs are more onerous or wouldn't be expected for a DGR LAG. <p>Specific examples are provided in the table below along with other requests for clarification.</p>				<p>- Agreed that there are inconsistencies between REGDOC and CSA standards</p> <p>- Additional issues are created by the CSA standards not being readily available to the public, being an industry product, and not built for purpose</p> <p>- Agreed that REGDOCs should set out their requirements as a stand-alone document, and not depend on by-reference-only inclusions</p>
1.	General	Most of the REGDOCs/CSAs referenced are not scoped for DGR	Consider developing separate codes/regulations or expanding on the scope to include DGR.	MAJOR	Creates significant barriers to any organization considering undertaking a DGR. The risks, complexity, and costs of licencing a DRG should not be the same as an NPP.	<p>- As per above, agreed that REGDOCs should set out their requirements as a stand-alone document, not depend on by-reference-only inclusions</p> <p>- This comment by industry is unclear; are they saying that the risks and complexities of a DGR are less than that of an NPP, or that the licensing process should be less complex in order to be less costly to the waste generators?</p> <p>- In either case, we disagree; the risks and complexity of a DGR operation, including surface and subsurface, are as complex as a NPP, albeit differently complex,</p>

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						and the uncertainties are at least equal; over the post-closure period the risks and uncertainties of a DGR are likely to be greater than that of a NPP (given that the risks of the NPP are largely transferred to a DGR in the post closure period); in this and other instances, the DGR must be regarded as a single project and the multi-stage licensing process must consider the full range of risks and uncertainties, including consideration of post-closure issues during the pre-operational licensing stages
2.	General	Technical scope for a DGR appears to have been copied almost entirely from REGDOC-1.1.3 Licence Application Guide: Licence to operate a Nuclear Power Plant.	Consider the technical scope in relation to a DGR. Similar comments have been made about SMR regulations being “too stringent” for the intent of preparing for a DGR.	MAJOR	Creates significant barriers to any organization considering undertaking a DGR. The risks, complexity, and costs of licensing a DRG should not be the same as an NPP.	<ul style="list-style-type: none"> - The view expressed by the nuclear industry that a DGR is a project with less risks and less complexity and should therefore be a lower cost licensing process is of great concern - Whether the regulatory requirements should or should not be the same or greater than that of an NPP should not be a determinant or a driver of the complexity of rigorousness of the DGR REGDOCs - this is not a competition between the two types of facilities - It is interesting that industry draws the parallel between SMR regulations being “too stringent” and now regulatory requirements for a DGR being “too stringent”; both are novel, first of a kind operations with significant technical uncertainty, the projects are largely conceptual and have no operating experience to draw from; for these reasons, SMRs and

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						DGRs require a high level of scrutiny and detailed and careful evaluations; we strongly disagree with industry's position that DGRs do not require stringent regulation delivered through a clear and detailed regulatory regime which takes a defence-in-depth approach and insures that the various licensing stages have sufficient redundancy and overlap to avoid gaps and omissions in the review and licensing system
3.	General	Several sections request nuclear-specific information (e.g., sources) without a clear path on how/where to obtain information.	Consult with NRCAN on the division of responsibilities and possible contacts to support the application.	Clarification	--	- We agree with industry that the lack of knowledge about future sources and pathways for emissions and releases is highly problematic; however, the onus is on the license applicant to demonstrate that they have sound knowledge of their project, and its effects, including nuclear releases and other nuclear-specific information at all project stages, including those in the far future
4.	General	Draft timelines should be developed within the REGDOC 1.2 series. It is understood that such a project and licencing phase(s) will take considerable time, but these timelines should be recognized in the regulatory framework for use in the business case development and to raise awareness for an organization preparing to make an application.	Consider consulting with NRCAN and the mining industry.	Clarification	--	- We agree that there should be a clear setting out of timelines and intersects between the various activities which are subject of REGDOC 1.2 series - The use of this timeline for "business case development" is unclear; does the industry anticipate multiple applicants, including private sector proponents? - We reject the suggestion that the CNSC should specifically consult with NRCAN and the mining industry on this point; the process for developing the REGDOCs should be open and transparent,

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						and if NRCan and/or the mining industry are to contribute to it, they should do so through the same avenue as the public, Indigenous peoples, and the nuclear industry; if input is provided outside of this current process it should be posted in the same manner as the comments received as part of this process
5.	General	Reference to CSA N292.7 does not include the year of publication, while other referenced CSA standards include.	Change “ CSA N292.7 ” to “ CSA N292.7-22 ” throughout the document including the appendices.	Clarification		- As per above, REGDOCs should set out their requirements as a stand-alone document, and not depend on by-reference-only inclusions
6.	Section 1.1., 2 nd paragraph		The definition of the DGR facility needs to be clarified to explicitly include the surface facilities associated with the underground repository, and REGDOC 1.2.2 (once approved) should be referenced.	MAJOR	Ambiguous requirements will increase the regulatory uncertainty for the proponents and operators of a DGR.	<ul style="list-style-type: none"> - We agree that the definition of the DGR facility needs to be clarified to explicitly include the surface facilities associated with the underground repository - Ambiguous requirements will increase uncertainty and reduce public trust in the review and licensing processes - The DGR is a single project, including the underground repository, and surface facilities, including the used fuel packaging plant and other operations - The NWMO's plans to date are of a conceptual nature, based on a number of “reference cases” which continue to evolve and show significant differences from one generation to the next - The REGDOC must make fully clear that the review and licensing process cannot commence prior to project definition and a project description having been developed, including a description of all functions and operations,

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						including whether certain “optional” operations are to be included in the project (such as a shallow caverns for interim sub-surface storage)
7.	Section 1.1 3 rd paragraph	<p>This document tends to align the start of the post-closure period with the completion of decommissioning and abandonment of the site. This may be logical from a licensing point of view, but unreasonable from technical and management point of view. Once the DGR is closed by sealing the shafts or ramps, the multiple barriers system has been fully completed and the waste has been fully isolated. From this moment, the post-closure safety case takes effect, and the post-closure monitoring would start.</p> <p>Decommissioning of surface facilities is an important licensing step, but does not necessarily affect the post-closure safety or performance. Also, decommissioning of surface facility does not necessarily happen together with the closure of the repository. It may be possible that some surface structures/facilities are kept for post-closure monitoring or institutional control purposes. Aligning post-closure period with licencing stages is not consistent with CSA N292.7.</p>	Suggested revision: <i>“the pre-closure period encompasses site preparation, construction, operation and closure of <u>the underground repository, including the decommissioning of ancillary facilities</u>”</i>			<ul style="list-style-type: none"> - The industry statement that ‘Once the DGR is closed by sealing the shafts or ramps, the multiple barriers system has been fully completed and the waste has been fully isolated’ rests on unsupported assumptions - The comment that aligning the start of the post-closure period with the completion of decommissioning and abandonment of the site is “unreasonable from technical and management point of view” is unclear; why is it unreasonable? Is this because achieving post-closure objectives is unmanageable or unachievable? - It’s unclear whether industry’s proposed revision would have the statement under discussion end with “ancillary facilities” or if the remaining text “while the post-closure period follows the closure of a DGR facility” would remain included - The comment from industry that “Decommissioning of surface facilities... <u>does not necessarily</u>

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						<u>affect the post-closure safety or performance</u> ” is problematic; some surface facilities – such as the used fuel packaging plant – will be highly radioactive, and will certainly be a significant factor in the post-closure safety performance of the site; this comment illustrates why the regulatory and licensing approach must take a whole-project approach for on-site facilities
8.	Section 1.1 4 th paragraph, 4 th bullet points	<p>The document requires information in an application</p> <ul style="list-style-type: none"> • demonstrates that the site is suitable for a facility's full lifecycle. <p>This requirement may be difficult to meet because:</p> <ol style="list-style-type: none"> The word “suitable” is ambiguous and lacks definition. It is not very clear if the DGR lifecycle in this document includes the post-closure period that lasts indefinitely. Assuming the lifecycle includes post-closure, it is difficult to fully prove the site will remain good for the full lifecycle due to the large uncertainties associated with the time frame. 	<p>Suggest revising the bullet point as follows: <i>“demonstrates that the site <u>characteristics are</u> is <u>consistent with the post-closure safety case suitable for a facility's full lifecycle.</u>”</i> The above statement is consistent with the idea that suitability is answered by both site characterization and safety case.</p>	<i>Clarification</i>		<ul style="list-style-type: none"> - We agree that some of the language throughout the REGDOC is ambiguous and this should be rectified - It should be clarified that the lifecycle of the project includes the post-closure period; industry should further indicate where they have identified further clarification is correct - We agree with industry that it will be “difficult to fully prove the site will remain good for the full lifecycle due to the large uncertainties associated with the time frame”; this is a fundamental issue with the DGR approach to radioactive waste management; - Uncertainties about long term safety are central to the discussion of DGRs, but the issue cannot be resolved simply through omission of any or all related regulatory requirements
9.	Section 1.1 and figure on pg 7	Both Section 1.1 and figure on Page 7 acknowledges the DGR lifecycle and differentiation between pre-closure (i.e., site preparation, construction, operation, and closure) from the post-	Provide clarification of the licence type for the post-closure period.	<i>Clarification</i>		<ul style="list-style-type: none"> - Industry's confusion around how CNSC is differentiating between pre-closure and post-closure periods has been created by the drafters of REGDOC 1.2.3

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
		closure period. Under the Nuclear Safety Control Act what licence application will move a DGR from closure or into the post-closure period?				omitting the 5 th of the CNSC's five licensing steps, i.e. the "Licence to Abandon", which we presume was removed for messaging or political purposes, i.e. the CNSC wishes to avoid acknowledging that the final license will be to abandon the wastes at the selected site - While we disagree with a licensing approach that includes abandonment, since that is the CSNC approach and industry's intention it should be clearly stated; Figure 7 should be amended to identify the "License to Abandon"
10.	Section 1.2	Is the intention of the document to provide guidance for geologic disposal facilities shallower than several hundred meters below the surface? Shallower geologic disposal is not in the list of exclusions in Section 1.2.	Provide clarification in the scope.	Clarification		- We agree with industry's comment that this is an important clarification; we had read the document to mean that RD 1.2.3. did not apply to shallow geological repositories and that shallow geologic repositories were included in "apply to surface and <u>near-surface</u> waste management facilities" - Additionally, we assume that, consistent with international practice, these shallow / near surface facilities would be for storage, not disposal
11.	Section 1.3	Since the Impact Assessment Act (IAA) clearly links to the NSCA and CNSC – should the IAA not be cited in the relevant legislation?	Consider an IAA reference as well as Environmental Assessment regulations and provincial environmental requirements. Furthermore, consider a clear distinction in CNSC oversight regarding nuclear and environmental aspects	MAJOR	Significant costs and complexities associated with the broad range of regulations cited in this draft are likely to deter potential applicants.	- Exactly how many potential applicants does the industry anticipate there being? Coupled with their remarks about making "the business case", the industry comments support the rising concern about the potential for multiple for-profit waste facilities, including for imported wastes.

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
			and those under other federal/provincial jurisdictions.			- Given that the last paragraph in the immediately previous section clearly links the Impact Assessment Act to the review steps for a DGR, industry's suggestion to add the same reference in section 1.3 would create an unnecessary redundancy
12.	Section 1.3	The list is confusing; for an example with regards to Class I Nuclear Facilities Regulations: <ul style="list-style-type: none"> • <i>section 3</i> • <i>subsections 14(1), (2)</i> • <i>paragraphs 3(a), (b), (d), (d.1), (e), (f), (g), (h), (i) and (k), 4(a), (b), (c), (d) and (e)</i> Does bullet #3 "paragraphs 3(a), (b)..." refer to the same section 3 listed in bullet #1? However, a few items have been removed from the list, like. 3(c).	Simplify the list and consider adding an Appendix, similar to draft RegDoc-1.2.2, October 2021.			<ul style="list-style-type: none"> - We agree that clearly identifying which section the referenced subsections are a subsection of could be helpful - We agree that clearly identifying which section or subsection the referenced paragraphs are found in could be helpful - We agree that adding further detail in an Appendix would be a reasonable approach, including a description of the rationale and the overall objective of including them - We do not agree that the section should be wholly moved to an Appendix
13.	Section 2, Figure - Title: Pre-closure and post-closure licensing stages and lifecycle activities for a deep geological repository	The first row in the figure shows the "Lifecycle" of a DGR and includes "post institutional control" as a lifecycle stage. The definition of lifecycle in the latest version of REGDOC-3.6 is " <i>The various stages of a nuclear facility's lifespan, including site selection, site preparation, construction, operation, decommissioning and abandonment.</i> " This definition does not include the post institutional control which is post abandonment. The figure seems inconsistent with the REGDOC-3.6 definition.	Revise the figure to shade the "Post institutional control" in a different way and add a note to indicate that post institutional control is not considered a lifecycle stage per nuclear regulations. Alternatively, keep the figure as is and add a revised definition of lifecycle stages to the document, which includes the post institutional control as a lifecycle stage.	<i>Clarification</i>		<ul style="list-style-type: none"> - Industry's confusion around how CNSC is differentiating between pre-closure and post-closure periods has been created by the drafters of REGDOC 1.2.3 omitting the 5th of the CNSC's five licensing steps, i.e. the "Licence to Abandon", which we presume was removed for messaging or political purposes, i.e. the CNSC wishes to dodge acknowledging that the final license will be to abandon the wastes at the selected site - While we disagree with a licensing approach that includes

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						abandonment, since that is the CSNC approach and industry's intention it should be clearly stated; Figure 7 should be amended to identify the "License to Abandon"
14.	Section 2, Figure - Title: Pre-closure and post-closure licensing stages and lifecycle activities for a deep geological repository	The figure indicates the post-closure period starts after the site is released from CNSC control. However, Figure A.1 in CSA N292.7 indicates that post-closure period starts when the DGR is closed, while a post-closure monitoring period is still under the CNSC control. There are two questions: <ul style="list-style-type: none"> • What is the starting point of the post-closure period (closure of the DGR or release from CNSC control)? • Does the CNSC control cover the post-closure monitoring activities and these activities are considered part of "Closure" and "License to decommission"? 	Seeking clarity for the starting point of the post-closure period and licensing coverage on post-closure monitoring in the document.	<i>Clarification</i>		<ul style="list-style-type: none"> - Excellent questions. - This is a significant issue. - We propose that the CNSC prepare a discussion paper specifically on this topic and include in that discussion paper a detailed description of how other jurisdictions have made this determination and an analysis of the strengths and weaknesses of different options considered. - The issue is further complicated by the potentially very long time-frame for operations, and the current "adaptive repository layout" approach being described by the NWMO and the attendant potential for closure being carried out on a panel-by-panel basis; under this conceptual approach some sections of the repository could be in a "post closure" mode while others are in construction mode.
15.	Section 2, Figure - Title: Pre-closure and post-closure licensing stages and lifecycle activities for a deep geological repository	The figure shows "indigenous and public engagement", "site evaluation", "site characterization" and "post-closure safety case" all extend beyond release of CNSC control. CSA N292.7 Figure A.1 shows these activities all stops before release from CNSC control. In addition, the last bullet in Section 1.1 requires the proponent	Seeking clarity on the inconsistency with the CSA N292.7. If these activities are required to continue beyond release from CNSC control, please answer the following questions: <ul style="list-style-type: none"> • Who is responsible to regulate these activities? 	<i>Clarification</i>		<ul style="list-style-type: none"> - Industry comments that the unnumbered figure at the top of page 7 shows "indigenous and public engagement", "site evaluation", "site characterization" and "post-closure safety case" all extend beyond release of CNSC control" and asks who is responsible for regulating these activities, when in fact the figure shows these activities do not continue beyond

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
		<p>“demonstrates that the site is suitable for a facility’s full lifecycle.”</p> <p>It is unclear what activities would be required to be maintained during institutional controls with respect to site evaluation, site characterization and post-closure safety case, and under what jurisdiction.</p>	<ul style="list-style-type: none"> How should the outcomes from these activities be used and for what purpose? Suggest either deleting ‘site evaluation’, ‘site characterization’ and ‘post-closure safety case’ activities from the graphic or adding clarification text with respect to the regulatory requirements for these activities after the closure of the DGR facility 			<p>institutional control (i.e. the CNSC license to abandon) and the question is more problematic: how is post-closure monitoring to be carried out, how are the public and Indigenous peoples to be engaged, what will the response be to unexpected monitoring results (assuming that effective monitoring can and will be undertaken and results made known)</p> <p>- Industry’s question about how the outcome of monitoring and engagement activities will be used is very pertinent, but their proposed resolution that these activities be simply deleted is completely unacceptable</p>
16.	Section 2, Figure - Title: Pre-closure and post-closure licensing stages and lifecycle activities for a deep geological repository	The figure shows “site characterization” in parallel with “site evaluation”. CSA N292.7 Section 6 indicates that site characterization is a subset of site evaluation, which is inconsistent.	Seeking clarity on the inconsistency with the CSA N292.7 on site evaluation and site characterization.	Clarification		<p>- This request for clarification illustrates the problematic approach adopted by CNSC of referencing industry standards in Regulatory Documents, for which the public has limited or no access and which are – as noted by industry – often contradictory.</p> <p>- The resolution to this comment should be to include sufficient requirements in the REGDOC so that it is a stand-alone document, and cease relyubg on the industry-generated CSA standards.</p>
17.	Section 2, Figure - Title: Pre-closure and post-closure licensing stages and lifecycle activities for a deep geological repository	The design phase is shown to be completed at the end of construction; what happens with construction that continues in parallel with the Operation phase? Also, design will continue in Operations to support improvements and optimization.	Continue the Design Line through Operations	Clarification		<p>- The question posed by industry in this comment is unclear.</p> <p>- The industry suggestion that the Design Line be continued through operations could open the door to a proponent filing an incomplete application with design relegated to a “to be determined” status</p>

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						<ul style="list-style-type: none"> - A license application must include a complete design as part of the project description which will be required to produce the required pre-and-post closure safety assessments; given the NWMO's stated intention to rely on the construction period (post license to construct) to carry out site characterization activities to obtain information necessary to support their safety case (pre and post closure) this appears to be an intractable contradiction. - CNSC's response to this comment from industry must be clear in the requirement for a full set of safety reports (pre and post-closure) to be filed as part of the site preparation license (and licens to const application, and license to operate application).
18.	Section 2.2.	It would be beneficial, if it is not in the referenced documents, to have a Canadian equivalent to Table 1 in IAEA SSG-14 to be included to explain this concept.	Clearly reference or, if not available, provide a Canadian equivalent to Table 1 in IAEA SSG-14.	<i>Clarification</i>		<ul style="list-style-type: none"> - The resolution to this comment should be to include sufficient requirements in the REGDOC so that it is a stand-alone document; if an IAEA SSG is to be relied upon, it should be reproduced or replicated in the REG DOC
19.	Section 3	There are SCAs which may not be applicable during the licence to prepare the site so some of these sections are misleading (e.g., <i>Radiation protection</i>), especially since the licence to prepare the site does not permit the licensee to process, handle or store radioactive substances (as mentioned elsewhere in the document).	Review the citing of all 14 SCAs in this REGDOC to identify only those applicable for the LTPS.	MAJOR	Unnecessary reference to SCAs that are not relevant to the LTPS increase administrative burden.	<ul style="list-style-type: none"> - For consistency, all 14 SCAs should be identified in the REGDOC and should be responded to in the application; if there are some which an applicant deems to not be appropriate to the application / licensing stage the applicant can state that in the application.
20.	Section 3.1, bullets on Management	Last bullet "A work schedule" appears to be incomplete or is unclear on what it means – the licensing	Add more text to clarify this bullet.	<i>Clarification</i>		<ul style="list-style-type: none"> - We agree with industry that there appears to be a formatting error in Section 3.1 which resulted in "a

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
	System – a work schedule	package will include a work schedule, however, it's not clear how it should be a requirement of the management system.				work schedule” not being bulleted; “work schedule” should be bulleted - Industry states that the licensing package will include a work schedule, but this is not actually indicated in the REGDOC, including in Section 4. “Standard application information” - A work schedule should be included in section 3.1 to indicate how it intersects with the management approach, and a more detailed work schedule or work plan should be included in the application, including dates, description of each work item, and the responsible party within the applicant's management and operational team(s) who will have lead responsibility
21.	Section 3.1, bullets on Management System – policy for the use of contractor's resources...	The prescriptive nature of requiring a policy for the use of contractors isn't clear – suggest changing this requirement to any type of control.	policy for the use of management of contractors' resources to supplement in-house capability.	<i>Clarification</i>		- We agree that “policy” might not be the appropriate descriptor the requirement “policy for the use of contractors' resources to supplement in-house capability” and this may be better captured by the term “procedure”, or protocol” - We support the requirement and suggest that the intersect between this protocol and the requirement several bullets further down the list that “documentation on the resources to control the work performed by contractors, in particular, defining the requirements for the activities, and description of oversight and integration” be required should be clearly stated - Our expectation is that these requirements are intended to

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						achieve important management elements such as transparency, traceability, continuity, and consistency and that protocols will be required to ensure that the licensee has and maintains overall knowledge and understanding of their own project; this may be challenging over time and given the many diverse aspects of the project, but is essential to building and maintaining institutional knowledge and control, as well as accountability
22.	Section 3.1, bullets on Management System – procedures to control the effectiveness....	The following bullet: <i>procedures to control the effectiveness of assessments and engineering activities performed in the different stages of the site evaluation process, including records of all work carried out during site evaluation and characterization, which must include a description of the measures for preservation of the records</i> seems like an odd mix of activities. The required expectation from this bullet is not clear.	Recommend reviewing the bullet and providing clarity around the required expectation.	Clarification		- As per above, our expectation is that these requirements are intended to achieve important management elements such as transparency, traceability, continuity, and consistency and that protocols will be required to ensure that the licensee has and maintains overall knowledge and understanding of their own project; this may be challenging over time and given the many diverse aspects of the project, but is essential to building and maintaining institutional knowledge and control, as well as accountability. - We support the REGDOC including additional detail to ensure that industry understands these requirements.
23.	Section 3.1, bullets on contractual obligation	The following statement and bullets are premature for a Licence to Prepare Site application: <i>The applicant must also ensure, as a contractual obligation, that:</i>	Remove these bullets. At this point this is premature. A company would not be procuring components for the nuclear facilities until the construction phase.	MAJOR	Additional administrative burden on the applicant without any benefit to nuclear safety.	- We disagree with the industry comment that these requirements should be removed. - We accept the industry's comment that at this point a proponent would not be utilizing components for the nuclear

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
		<ul style="list-style-type: none"> • <i>the applicant and the CNSC will have right of access to the premises of any supplier carrying activities specified in the application</i> • <i>all sub-suppliers will provide right of access to their premises by those clients who are suppliers</i> 				facilities until later phases, but a licensee may in fact be procuring components for the nuclear facilities or prototypes of those components, and these components may be incorporated into the safety case which the applicant is providing at each licensing stage, including the site preparation licensing stage. For example, the applicant may reference or rely upon a specific design for a used fuel container which is not going to be utilized until a later stage but which has been incorporated into the safety case being submitted as part of licencing for earlier stages.
24.	Section 3.1, bullets on contractual obligation	The wording for sub-suppliers is unclear – should the CNSC choose to keep the two bullets in the regdoc (see comment above), suggest similar language as the first bullet.	<u>all sub-suppliers will provide right of access to their premises by those clients who are suppliers the applicant and the CNSC will have right of access to the premises of any sub-supplier carrying activities specified in the licence</u>	<i>Clarification</i>		<ul style="list-style-type: none"> - See immediately above. - We agree that the CNSC should be added to the second bullet. - Any such inspections or site visits should be documented, and the document included in a public registry for the project which spans all licensing stages.
25.	Section 3.1, last paragraph	It is unclear the purpose of this statement - Implies the licensees do not use qualified staff. Contradictory if required to comply with N286-12 which requires the workers to be qualified.	Delete unnecessary/redundant requirement.	<i>Clarification</i>		<ul style="list-style-type: none"> - We disagree with industry's statement that this paragraph implies that licensees do not use qualified staff and we strongly disagree with the industry request that it be removed. - Industry's failure to recognize the appropriateness of this requirement is worrisome, and furthers the impression that industry considers constructing a DGR to be on par with a quarry operation and that industry dismisses or seeks to diminish

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						recognition of the sensitive and safety-related nature of this project.
26.	Section 3.2	"...including worker training, is addressed under the management system SCA." This supports the redundancy identified in s. 3.1 comment.	Delete unnecessary/redundant requirement from s. 3.1.	Clarification		- As with the redundancy comment with respect to s 3.1 (i.e. industry's previous comment) we disagree, and note that industry provided no supporting argument for this comment.
27.	Section 3.3	Some of the content described at Operating performance may be more applicable under other SCAs (e.g., the second bulleted list are risk or hazards that would be covered under a safety analysis or conventional health and safety).	Move second bulleted list to Conventional Health and Safety section.	Clarification		- It is appropriate to retain these bullets in this section on operating performance - We support adding additional text to establish clear linkages between Section 3.3 and Section 3.8
28.	Section 3.3, last paragraph	The text states: " <i>Where risks to the health and safety of either workers or the public could be higher than for a conventional project, the applicant should provide credible research supporting the potential consequences and measures to mitigate the risks. For example, if site investigation has indicated the presence of a sub-surface hazardous substance, the applicant should provide an investigation of the effects of that substance, if unearthed, on the health and safety of workers and the local public.</i> " It is unclear how the applicant should establish if the "risks to health and safety... could be higher than for a conventional project".	Suggest revising the text to: Where risks to the health and safety of either workers or the public could be higher than for a conventional project are identified , the applicant should provide credible research supporting the potential consequences and measures to mitigate the risks.	Clarification		- The industry's suggestion to insert "are identified" creates more ambiguity and removes the onus on the licensee to carry out this evaluation - Who is industry suggesting would identify the additional risks? - The suggested change to wording implies that it is the responsibility of some entity other than the licensee to carry out that identification, hence obfuscating their responsibilities
29.	Section 3.4, 1 st bullet	The current wording in Section 3.4 might be interpreted as requiring a full analysis at the site preparation stage, where some of the data might	When referring to the safety analysis for later licensing stages of a DGR, under different CNSC	MAJOR	Ambiguous requirements will increase the regulatory	- The greater need for certainty is that of the public, Indigenous peoples and the environment; it is, as previously noted in this

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
		not be fully available until the Licence to Operate licence application stage. A graded approach should be applied.	licences, the text in this section should be revised and " <u>preliminary</u> " should be used. For example, <u>preliminary</u> safety analysis of operational and post-closure activities.		uncertainty for the proponents and operators of a DGR.	comment column, essential that safety assessment for both pre-closure and post-closure be assessed in each licensing stage
30.	Section 3.4	Under Safety Analysis, the pre-closure portion is referred to as an "analysis" whereas the post-closure portion is referred to as an "assessment". Furthermore, Section 3.6 refers to a "pre- [and post-] closure safety assessment. REGDOC-2.11.1 (Waste Management, Volume III) states that "Safety assessment is often used interchangeably with safety analysis". If these terms can be used interchangeably with no difference in meaning, suggest defining safety analysis and stating that the terms "analysis" and "assessment" can be used interchangeably.	Add the definition of a safety analysis in the REGDOC with a note that " <u>Safety assessment is often used interchangeably with safety analysis.</u> "	Clarification		<ul style="list-style-type: none"> - We support clarity being brought to the terminology with respect to the safety case, and would support a determination that safety analysis, safety assessment, safety report and safety case could be used interchangeably. - Insider language and use of jargonized terminology often has the effect of excluding members of the public from important discussions and discounting or discarding public comments when they use terms as a lay person rather than with a silo-specific meaning, as might be the case in the use of some terms by industry and regulator.
31.	Section 3.4, 4 th bullet	The fourth bullet says the applicant must include: <ul style="list-style-type: none"> • <i>considerations for both design-basis events and beyond-design-basis events for the operational phase, with a focus on the concept of potential cliff-edge effects when analyzing external hazards, where a small change of conditions may lead to a catastrophic increase in the severity of consequences.</i> The <u>operational phase</u> covers activities and timescales that go beyond the activities under the licence to prepare site. Is this interpreted as the portion of the operational phase that is only relevant	It is suggested that the fourth bullet is deleted: " <u>considerations for both design-basis events and beyond-design-basis events for the operational phase, with a focus on the concept of potential cliff-edge effects when analyzing external hazards, where a small change of conditions may lead to a catastrophic increase in the severity of consequences.</u> "	MAJOR	Ambiguous requirements will increase the regulatory uncertainty for the proponents and operators of a DGR.	<ul style="list-style-type: none"> - Further to the previous comment, we consider "cliff-edge effects" to be another example of insiders' language. We find the term to be useful and relevant and appreciate that the bullet does include some explanatory text, but it is an example where a hyperlink to further explanation would make the document more accessible. - We firmly disagree with the industry proposal that this bullet be deleted; as noted above, in this and other instances, the DGR must be regarded as a single project and the multi-stage licensing process must consider the full range of

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
		to the activities required for preparation of site?				risks and uncertainties, including consideration of post-closure issues during the pre-operational licensing stages
32.	Section 3.4	The last bullet (<i>a post-closure safety assessment that is in accordance with REGDOC-2.11.1 Volume III</i>) should include the adjective "preliminary" to align with IAEA SSG 14.	Add " <u>preliminary</u> " in front of "post-closure".	Clarification		- We disagree with industry's suggestion that this requirement be downgraded to "preliminary"; as noted above, in this and other instances, the DGR must be regarded as a single project and the multi-stage licensing process must consider the full range of risks and uncertainties, including consideration of post-closure issues during the pre-operational licensing stages
33.	Section 3.4, last paragraph	"The applicant should have a credible program for managing safety issues, which includes a research and development program." What defines a R&D Program and why does it need to be a requirement?	Seeking clarity on the expectations for an R&D program and the rationale for why it is a requirement.	Clarification		- As requested in Northwatch's comments, we propose that CNSC provide a full dispositioning of comments received on draft REGDOC 1.2.3; we are interested in how CNSC dispositions this comment by industry. - We note that industry persistently resists requirements related to safety issues.
34.	Section 3.5, last line	This sentence: <i>For structure design and system design at the site preparation stage for a DGR facility, the applicant should propose design descriptions and guides.</i> doesn't appear to be adding any additional detail or guidance to the REGDOC. Clarity on deliverables or explanation on what this sentence is adding to the requirements already provided in this section is requested.	Either delete this sentence or add clarity to the requirement (such as "conceptual of preliminary).	MAJOR	Ambiguous requirements will increase the regulatory uncertainty for the proponents and operators of a DGR.	- We note that industry is differentiating between the role of proponent and operators of a DGR and correspondingly comment that the REGDOC must make absolutely clear who the responsible entity is. - As requested in Northwatch's comments, we propose that CNSC provide a full dispositioning of comments received on draft REGDOC 1.2.3

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
						- We are interested in how CNSC dispositions this comment by industry.
35.	Section 3.6	It is unclear how SSCs as defined in REGDOC-2.6.3 apply to the features of the repository essential to the performance of the repository through the post-closure period, including the geosphere, the engineered sealing materials, the used fuel container, and the used fuel. Aging management plans for these components through the operations period would not be meaningful. Aging management should ensure that these SSCs are as described at the start of the post-closure period.	Suggest revised text: <i>The application must include a preliminary aging management plan, listing all <u>identifying key SSCs important to safety during the lifecycle of the facility, and in particular addressing any such SSCs that are part of the LTPS</u> to provide for the timely detection and mitigation of the aging effects to ensure integrity and functional capacity of the SSCs throughout the pre-closure period and ensure that they are described in the pre- and post-closure safety assessments (see Safety Analysis). For more information, see Appendix A of REGDOC 2.6.2, Aging Management [9]. SSCs important to safety .</i>	Clarification		- As noted above, in this and other instances, the DGR must be regarded as a single project and the multi-stage licensing process must consider the full range of risks and uncertainties, including consideration of post-closure issues during the pre-operational licensing stages
36.	Section 3.7	The licensed activity in the site preparation stage does not include any radioactive waste. Is the radiation protection (RP) program meant for radiation source used for construction/inspection (e.g., X-ray examination)?	Seeking clarity on the scope for the RP program in the site preparation stage.	Clarification		- As noted above, in this and other instances, the DGR must be regarded as a single project and the multi-stage licensing process must consider the full range of risks and uncertainties, including consideration of post-closure issues during the pre-operational licensing stages

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
37.	Section 3.8	Conventional Health & Safety	Seeking clarity on whether this section is just for the site preparation phase? If so, this should be clearly stated.	<i>Clarification</i>		- As noted above, in this and other instances, the DGR must be regarded as a single project and the multi-stage licensing process must consider the full range of risks and uncertainties, including consideration of post-closure issues during the pre-operational licensing stages
38.	Section 3.9	Defining baseline characteristics would have been part of the site selection process while continuing to collect baseline data could be activities part of the site preparation activities.	For site preparation, environmental monitoring consists of defining baseline characteristics and of monitoring the effects of site preparation activities on the environment.	<i>Clarification</i>	For site preparation, environmental monitoring consists of defining baseline characteristics and monitoring the effects of site preparation activities on the environment.	- Any activities carried out during the NWMO's site selection process is outside of any licensing or regulatory process, including outside the impact assessment process, and as such was wholly at the discretion and advantage of the licensee. - While it is a significant flaw in the overall system that there is no oversight or regulatory requirements during the site selection stage, the industry suggestion that anything that happened in the site selection period is out of bounds for the license to prepare the site application process should be fully rejected.
39.	Section 3.10	Requirements for an Emergency Preparedness (EP) Program seems premature for this phase.	Seeking clarity on the scope for EP program in the site preparation phase.	<i>Clarification</i>		- We are puzzled as to why the industry questions the need for an emergency preparedness program for an industry operation at an industrial site, potentially in a remote and/or rural area. - We are interested in how CNSC dispositions this comment by industry.

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
40.	Section 3.10	The requirement to demonstration a fire response capability as described in CSA N393:22 is for facilities that handle radioactive substances. During the site preparation phase, there will not be any radioactive substances, therefore, this CSA standard shouldn't apply at this time.	Remove reference to CSA N393:22, but keep the requirement to describe the fire protection program.	<i>Clarification</i>		- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions, particularly to industry generated documents such as the CSCA standards,
41.	Section 3.12	CSA N290.7 – scope should be reviewed for the appropriateness and applicability to DGR site preparation phase.	Review the scope of CSA N290.7 for applicability to DGR at the site preparation phase.	<i>Clarification</i>		- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions.
42.	Section 3.15	REGDOC 3.1.2 – scope should be reviewed for the appropriateness and applicability to DGR site preparation phase.	Review the scope of REGDOC 3.1.2 for applicability to DGR at the site preparation phase.	<i>Clarification</i>		- As noted above, in this and other instances, the DGR must be regarded as a single project and the multi-stage licensing process must consider the full range of risks and uncertainties, including consideration of post-closure issues during the pre-operational licensing stages
43.	Section 4.12	Considering the duration of the DGR, it would seem much too early to request cost projections.	Seeking clarity on the scope of tentative cost projections appropriate for this stage of development. Lessen rework for later changes to financial projections or misunderstandings leading up to cost estimates.	<i>Clarification</i>		- The industry is proposing, with this comment, that they should be permitted to proceed with a project for which the costs are unknown. This is unacceptable, both as a suggested change to the REGDOC and as a practice on the part of a project proponent.

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
44.	Appendix A	Since the LTPS does not permit the licensee to process, handle or store radioactive substances (as mentioned elsewhere in the document) a number of the CSA standards listed will not be applicable at the site preparation phase. While the licensee needs to demonstrate a management system framework meets the regulatory requirements for any specific safety and control has been addressed, some of those functions are not required until the applicant is licenced to possess, handle, or store radioactive substances onsite.	Review the list of standards in the Appendix to identify which are applicable for the LTPS.	<i>Clarification</i>		- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions.
45.	Appendix A	This appendix mentions CSA N292.6 as a reference document. N292.6 is being withdrawn because of the restructuring of the N292 series. The N292 TC recently voted on this matter.	Seeking clarity whether N292.6 is still applicable.	<i>Clarification</i>		- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions.
46.	Appendix A, Physical design, Site characterization	CSA N292.7-22 should be included as a reference document. Section 2.2 points to this standard, so the appendix should be consistent.	Add CSA N292.7-22 as a reference document.	<i>Clarification</i>		- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions.
47.	Appendix A, Physical design, Facility design	CSA N292.2-13 was listed as a reference document. It was the consensus that N292.2 (the dry storage standard) would not apply to the DGR. The DGR programs would not interface with the Dry Storage Container (DSC) as the responsibility of opening the DSCs and transferring	Remove reference to N292.2.	<i>Clarification</i>		- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions.

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
		the fuel to transportation package falls on the utilities.				
48.	Appendix A, Physical design, Structure, system and component design	CSA N285.0 is listed as a reference document. N285 is specific for NPP and reactor design. It is not appropriate for the design of Class IB facilities, even with the graded approach. REGDOC 1.2.2 (Draft) would be the appropriate guide. CSA N285 is specific for the pressure boundary of NPPs. For reactors in the NPPs, the pressure boundary is the major system (the entire reactor is a pressurized system), and N285 would address the primary structural safety needs. In a nuclear substance processing facility, e.g., the used fuel packaging plant. Pressure boundary is not the key. The key aspect of safety is on handling and manipulations of nuclear substance, radiation protection and containment, which is not addressed by N285.	Remove reference to CSA N285 and replace with REGDOC-1.2.2.	MAJOR	Following N285 to design the SCCs in a Class IB facility may create a significant burden without increasing safety. For example, N285 is structured around the classified process system, e.g., Class 1, 2, 3 and 6. Per the definitions for these classes, most (if not all) process systems in a used fuel packaging plant would be Class 6. Design of Class 6 is referred to CSA B51 which goes to ASME B31. It would be more efficient and logical to identify the design guide commensurate with the need and refer to the appropriate standards without cycling around. REGDOC-1.2.2 provides a flexible and more reasonable framework for the	- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions.

#	Section of DRAFT REGDOC	Nuclear Industry Issue as per Industry's joint submission 05/23	Industry Suggested Change	MAJOR or Clarification [for industry]	Impact on Industry as per industry comments	ENGO / Civil Society Feedback on Nuclear Industry Comments
					physical design of the facilities. It is better than pointing to N285 (which can be misleading).	
49.	Appendix A, Physical design, Structure, system and component design	Some ASME codes are listed as reference documents. These codes are at the technical detail level and only address some specific applications (i.e., pressure boundary construction). Why aren't other technical codes and standards listed here, such as those governing automation, electric/electronic equipment, lifting equipment, control system, human interface, etc. The calling of references here seems random and lack of focus. It is better to limit the references to high-level requirements and guidance (i.e., REGDOCs, CSA standards) and not to include those at the detail level.	Remove all ASME codes from the reference list.	Clarification		- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions.
50.	Appendix A, Waste management, Decommissioning plans	Reference list does not include CSA N292.7-22. Clause 14 of N292.7 provides guidance on repository closure.	Add CSA N292.7-22 as a reference document.	Clarification		- As previously noted, REGDOCs should set out their requirements as a stand-alone document, not dependent on by-reference-only inclusions.
51.	Appendix A, Table 1	Unclear whether this list is guidance or requirements?	Revise text to confirm the list is for guidance purposes.	Clarification		- We are interested in how CNSC dispositions this comment by industry.

