

January 27, 2017

NK21-CORR-00531-13354
NK29-CORR-00531-13903
NK37-CORR-00531-02706

Mr. B. Torrie
Director General, Regulatory Policy Directorate
Canadian Nuclear Safety Commission
P.O. Box 1046
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Dear Mr. Torrie:

Bruce Power comments on REGDOC-2.1.2, Management System: Safety Culture

The purpose of this letter is to comment on this draft Regulatory Document (REGDOC), which proposes requirements and guidance to help licensees foster and assess nuclear safety culture within their organizations.

This is an area of great interest and activity at Bruce Power, where efforts to nurture a healthy nuclear safety culture touch all corners of our organization. We share the CNSC's conviction that a company's communal beliefs and values are powerful influences on employee attitudes and behaviours and that culture is vital to the enduring success of a multi-pronged safety program.

It was against this backdrop that we considered the potential impacts of this document and posed questions to CNSC staff during a helpful information session in Ottawa earlier this month. Context gleaned from that session helped inform the detailed comments listed in the table attached to this letter, as did a collective review with our industry peers at Ontario Power Generation, New Brunswick Power, Canadian Nuclear Laboratories, SNC Lavalin, McMaster University, Cameco Corporation, AMEC-Foster Wheeler and the Canadian Nuclear Association.

For clarity, I have highlighted several key points in the body of this letter that emerged from those sessions and listed them according to the overall objective and three stated requirements in this draft REGDOC.

But first, let me register my disappointment at the overly rigid and prescriptive guidance throughout this document. Once again, we find a REGDOC with the troubling statement that, "*Licensees are expected to review and consider guidance; should they choose not to follow it, they should explain how their chosen alternate approach meets regulatory requirements.*" This is not reasonable. Guidance is meant to be guidance. If a licensee is required to meet guidance criteria, then it is a requirement, not guidance. This is an



important distinction and a recurring theme in all recent REGDOCS that I strongly urge the CNSC to address.

As for this specific REGDOC, I ask the CNSC to consider the points below and to continue to inform and engage licensees as future drafts are produced. Up-front time spent by CNSC staff to provide context and truly analyze the impacts of documents like this is an investment worth making. Early and ongoing consultation translates into simpler, stronger regulations which, in turn, enhance nuclear safety.

OVERALL OBJECTIVE of REGDOC 2.1.2: *Establish a common understanding of what constitutes a healthy safety culture and the importance of fostering safety culture in a licensee's organization*

Bruce Power's Recommendations:

- i. Adopt an existing, industry-accepted definition of safety culture for consistency, simplicity and more effective communications.***

The CNSC's proposed definition of safety culture as *"the characteristics of the work environment, such as the values, rules and common understandings that influence workers' perceptions and attitudes about the importance that the licensee places on safety"* is technically sound. However, it's less effective as a communications tool as either the WANO/INPO (2012) or IAEA (2006) definitions.

For consistency and simplicity, Bruce Power favours the WANO/INPO definition, which describes nuclear safety culture as *"the core values and behaviours resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment."* This definition emphasizes the importance of safety above all and is familiar and widely-accepted by the global nuclear industry.

- ii. It is premature to integrate nuclear safety culture and security culture into a single REGDOC.***

This draft cites a number of IAEA documents related to nuclear security even though the IAEA continues to develop guidance on assessment of nuclear security culture, including frameworks and assessment methodologies. We know that collaborative international efforts are underway in this area and licensees are proactively exploring ways to assess aspects of nuclear security culture using draft IAEA documents and industry expertise. However, it is simply premature to introduce security culture into a REGDOC at this time.

While there is overlap at a between nuclear safety culture and nuclear security culture, the frameworks for assessing and understanding culture for safety and culture for security are at very different levels of maturity and development. The industry has had 30 years to develop a common language, common understanding and to mature the frameworks and assessment methodologies for safety culture, whereas similar concepts for security culture are in their infancy.



Prematurely introducing requirements into a regulatory document could inadvertently, but effectively, stifle the collaboration and industry-wide learning necessary to mature the topic.

PROPOSED REQUIREMENT #1: *Licensees shall document their commitment to fostering safety culture in their governing documentation.*

Bruce Power's Recommendations:

- i. ***De-emphasize the link between documentation and fostering a nuclear safety culture.***

Bruce Power's management system already documents our commitment to nuclear safety. The expectation of this REGDOC is also established in our operating licence through the application of *CSA N286, Management Systems for Nuclear Facilities*. In fact, the most recent update of *N286*, which we are transitioning toward, explicitly says:

Management shall use the management system to understand and promote a safety culture by:

- (a) issuing a statement committing workers to adhere to the management system;*
- (b) defining and implementing practices that contribute to excellence in worker performance;*
- (c) providing a means by which the business supports workers in carrying out their tasks safely and successfully, by taking into account the interactions between individuals, technology and the organization; and*
- (d) monitoring to understand and improve the culture.*

Although governing documentation should include a statement of commitment making safety the overriding priority and forming a basis for promoting a healthy nuclear safety culture, it is not through documentation that culture will be influenced. Rather, it is leadership decisions, words and actions that shape culture. To overemphasize the role of documentation is counterproductive since it will influence a culture that relies too heavily on written rules, not leadership actions.

PROPOSED REQUIREMENT #2: *Licensees shall conduct comprehensive safety culture assessments that are empirical, valid, practical and functional.*

Bruce Power's Recommendation:

- i. ***Give licensees the discretion to conduct nuclear safety culture assessments best suited to their unique culture, operations and location.***

The restrictive and empirical underpinning of this requirement risks the unintended consequence of undermining efforts to foster a healthy nuclear safety culture

The expectation to conduct "comprehensive safety culture assessments that are empirical, valid, practical and functional" at least every three years, when combined with the recommended guidance in Section 3, will mandate an exercise concerned primarily with the gathering and analysis of data. Instead, it should foster a process of self-



discovery and reflection, supported by innovation in methodology, sharing experience and engaging leaders in the creative act of fostering a healthy nuclear safety culture over the entire lifecycle of an organization.

This initial draft has a limited view of nuclear safety culture assessment. Culture may be assessed through any number of means, including surveys, external reviews, performance metric analysis, event analysis, etc. Yet the proposed approach is rigid and emphasizes a cookie-cutter method against a static framework to ease comparability, using phrases like: *observable facts; logical analysis; clear interpretation; comparative analysis over time; analysis is defensible and replicable; structure; validated, etc.*

In reality, culture is an act of discernment, with the development of insights influenced by history and context. Direct comparison from one period to the next, or one licensee to the next, is ill advised and can be misleading. For example, a reduction in results in the survey tool could be the result of a healthier, more self-critical organizational culture, rather than a decline in a commitment to safety.

Bruce Power strongly believes the CNSC does not need to define how safety culture assessments are to be performed. That should be left to the discretion of licensees so they can approach an assessment in a manner best suited to their own culture, operations and location. If guidance is offered in subsequent drafts, we urge the CNSC to de-emphasize the restrictive and empirical nature of a nuclear safety culture assessment to protect the integrity of the assessments themselves.

PROPOSED REQUIREMENT #3 *Safety culture assessments shall be conducted at least every three years.*

Bruce Power's Recommendation:

- ii. ***Consider a three-year cycle as nominal with an option for five years.***

We find this proposed requirement to be overly restrictive without reason. Licensees need some flexibility to plan assessments, which are large projects that impact business plans. We agree that a three-year cycle is nominal, but suggest some flexibility out to five years with the understanding that licensees constantly evaluate safety culture through other means (i.e. corrective action processes, safety culture monitoring panels, daily leadership meetings, etc.).

PROPOSED REQUIREMENT #4: *Upon completion of a safety culture assessment, the licensees shall prepare a summary report for submission to the CNSC*

Bruce Power's Recommendation

- i. ***Protect the integrity of assessments and the privacy of participants by removing the requirement to submit summary reports.***

The requirement to submit a summary report to the regulator will negatively impact the validity and quality of future assessments because they will be open to *Access to Information* requests. This will have a chilling effect on participants, who may be less



self-critical or forthcoming if they know their views will be summarized for the CNSC and the public.

To its credit, the CNSC's current, non-intrusive approach has helped promote nuclear safety culture assessments as an effective management tool, not a regulatory one. This has resulted in positive benefits like ongoing engagement from site management and unfiltered, internal discussions about nuclear safety culture. Should the perception of assessments be changed to simply "another regulatory report/requirement," there is a real risk the utility of assessments will erode.

Bruce Power strongly encourages the CNSC to remove this requirement. Licensees should instead be urged to provide the CNSC with their approach to the assessment and a confidential briefing on the key themes and planned actions to ensure continuous improvement in fostering a healthy nuclear safety culture.

PROPOSED APPENDIX B: Safety Culture Maturity Model

Bruce Power's Recommendation:

- i. Remove the safety culture maturity model described in Appendix B from any future drafts of this REGDOC.***

While we appreciate the CNSC's desire to offer context and guidance, this particular model is misaligned with the nuclear safety culture characteristics and poorly integrated with the draft REGDOC itself. The use of this model could create an environment where a licensee's culture is perceived as an absolute value that is simply pass or fail. In turn, this could inadvertently pressure licensees to meet fixed culture score requirements rather than focusing on using nuclear safety culture surveys as another performance improvement tool. Given this, Bruce Power strongly encourages the CNSC to remove Appendix B from future versions of this REGDOC.

Once again, I thank you for the opportunity to comment on this proposed REGDOC and encourage the CNSC to continue to engage licensees as it is developed further. If you require further information or have any questions regarding this submission, please contact Susan Brissette, Department Manager, Management System, at (519)-270-3967, or susan.brissette@brucepower.com.

Yours truly,

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Frank Saunders
Vice President Nuclear Oversight and Regulatory Affairs
Bruce Power

cc: CNSC Bruce Site Office (Letter only)
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Bruce Power comments on REGDOC-2.1.2, Management System: Safety Culture

#	Industry Issue	Suggested Change (if applicable)	Major, minor or clarification	Impact on Industry, if major comment
REQUEST FOR INFORMATION on the proposed implementation of REGDOC-2.1.2, Management System: Safety Culture				
1.	<p>Neither this document nor the draft REGDOC itself are clear on how they will apply to non-NPPs. Section 3 of the Request for Information, under Objectives, says this draft REGDOC “applies to all licensees: it sets requirements and guidance for licensees of Class I nuclear facilities and uranium mines and mills, and provides guidance to all other licensees. The following three requirements support this objective:</p> <ul style="list-style-type: none"> • licensees shall document their commitment to fostering safety culture in their governing documentation • licensees shall conduct comprehensive safety culture assessments that are empirical, valid, practical and functional • upon completion of a safety culture assessment, the licensees shall prepare a summary report for submission to the CNSC <p>This is written as if all sections are required for all licensees, though points 2 and point 3 are requirements for NPP’s and guidance provided for all other facilities.</p>	<p>Modify to clearly delineate requirements for different facility types. The CNSC should have a very clear graded approach to implementation of this REGDOC for different types of licensees</p>	Major	<p>Undue burden on facilities to try and understand the intent of regulator or to justify a partial implementation of processes to meet this regulatory document. See comment below.</p>
2.	<p>Under Section 4, Regulatory Approach, this draft says, “The requirements and guidance for safety culture assessments are intended for nuclear power plants” which is an unclear explanation of which requirements and guidance apply to different facilities. In other parts of this Request for Information and the draft REGDOC itself, the wording suggests all facilities should develop processes to the same degree as the NPPs.</p>	<p>The CNSC should develop a crystal clear, graded approach to how this, and all other REGDOCs, are implemented and regulated for different types of facilities so all licensees can fully understand their requirements.</p>	Major	<p>As currently written, these documents could result in major, undue harm to smaller facilities (non-NPPs) where requirements are unclear. Many thousands/millions of dollars could be spent trying to rationalize processes as acceptable or to address action notices where facilities did not understand the requirements (or a CNSC Inspector incorrectly determined noncompliance with the requirements).</p>

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3.	<p>In Section 5, Potential Impacts, CNSC staff erroneously note, "The requirement to provide a summary report of safety culture assessments may result in a modest administrative burden on nuclear power licensees." This is contrary to the Cabinet directive on Regulatory Management and the Red Tape Reduction Act and the One-for-One rule, since there does not appear to be any administrative burden being removed from licensees.</p>	<p>Licensees strongly urge the CNSC to follow the Cabinet directive and the intent of the One-for-One rule.</p>	<p>Major</p>	<p>There continue to be an increasing number of administrative burdens placed on licensees through REGDOCs without any relief via the Red Tape Reduction Act and the One-for-One rule. These administrative burdens generally have no nuclear safety benefit, but increase costs to licensees which are passed on to ratepayers. From the Government of Canada website (http://www.tbs-sct.gc.ca/hgw-cgf/priorities-priorites/rtrap-parfa/fof-u-pu-eng.asp): "When a new or amended regulation increases the administrative burden on business, regulators are required to offset – from their existing regulations – an equal amount of administrative burden cost on business." Since the CNSC is using REGDOCs instead of regulations to implement new Regulatory Requirements, they are not following the one-for-one rule, which is inappropriate. This is resulting in hundreds of thousands of dollars of administrative burden being added to the licensees each year for this and other REGDOCs.</p>
REGDOC-2.1.2 – Management System: SAFETY CULTURE				
GENERAL				
4.	<p>Intent: Could the CNSC please clarify the driver or purpose of the regulation for Class I Nuclear Facilities, which the CNSC acknowledges already do what is expected with regard to safety culture assessments? Is the intent of this REGDOC to be a method of</p>		<p>Question for Clarification</p>	

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	measurement of safety culture or a method of improvement?			
5.	Why does the CNSC believe it necessary to include such level of detail in the guidance when it appears the requirements largely apply only to the NPPs, which already have detailed practices and processes?		Question for Clarification	
6.	Could you please clarify what "should" means throughout the draft regulatory document, specifically under the guidance sections?		Question for Clarification	
7.	What activities will the CNSC conduct to ensure compliance with the REGDOC? What additional activities will licensees need to perform to meet the requirements in this draft beyond those the CNSC has already observed from existing assessments?		Question for Clarification	
PREFACE				
8.	The statement, "licensees are expected to review and consider guidance: should they choose not to follow it, they should explain how their chosen alternate approach meets regulatory requirements" is not reasonable. Guidance is meant to be guidance, if the licensee is required to meet guidance criteria, then it is a requirement, not guidance.	Revise wording to: "Licensees are expected to review and consider guidance: should they choose not to follow it, they should explain how their chosen alternate approach meets regulatory requirements. "	Major	Licensees note that a similar statement appears in all REGDOCs, which puts an unreasonable onus on licensees to demonstrate not only how requirements are met, but also how guidance is met. Guidance is meant to be guidance. If a licensee is required to meet guidance criteria (even by other means), then it is a requirement, not guidance.
9.	Some licensee types have no requirements for this document, only guidance. However, the preface suggests all licensees must follow guidance or justify why they do not. Section 1.2 then discusses how Section 3 and 4 are intended only for nuclear power plants, yet all licensees must consider how they will address, use a graded approach, or justify a different approach for the guidance in these sections.	This draft should be revised to clearly lay out requirements for all facilities, including what the requirements are for a given section in Table A1 on Page 13 when it lists a facility type as 'G'. In future drafts, licensees urge the CNCS to clearly describe its expectations for how "prudent management practices" should be addressed.		Potentially significant financial and administrative burdens could be placed on smaller facilities to interpret expectations, create arguments for a graded approach and justify the processes that are used or implemented as a result of this document. Undue hardship could result from failure to understand requirements. Disagreements

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10.	Referring to existing facilities, the draft says, "The requirements contained in this document do not apply unless they have been included, in whole or in part in the licence or licensing basis." What is the intent of this statement? Can it be interpreted that this REGDOC applies or does not apply to existing facilities? Does this mean it only applies after relicensing changes? It this applicable to Nuclear Waste facilities?		Request for clarification	between licensees and the regulator regarding interpretations could lead to regulatory actions taken against the licensee, which would negatively affect the perception of their businesses with the regulator and the public in terms of perceived safety performance.
SECTION 1 – INTRODUCTION				
CNSC Objective: <i>To establish a common understanding of what constitutes a healthy safety culture and the importance of fostering safety culture in a licensee's organization</i>				
11.	The proposed CNSC definition of safety culture is technically sound in that it conveys a neutral stance to culture and can be either positive or negative in promoting certain outcomes. However, it differs from that of the various definitions industry uses and varies slightly between the Introduction and the Glossary. Was this intentional and can the definitions used by the industry continue? Where did the CNSC's proposed definition come from? As written, the definition in this paper is less useful as a communications tool to promote the importance of having a positive safety culture. The WANO/INPO (2012) and the IAEA (2006) definitions are more effective in this regard and would help give a sense to a workforce that safety takes precedence over competing goals. The CNSC's proposed	Licensees suggest the CNSC adopt an existing, accepted international standard definition such as the IAEA or WANO/INPO definition of nuclear safety culture, which says: "Nuclear Safety Culture is defined as the core values and behaviours resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment."	Major	Adopting an existing, internationally-recognized definition would help foster a common international understanding of nuclear safety culture.

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	definition also emphasizes a perception - 'the importance that the licensee places on safety' - rather than an attitude towards the importance of safety in the workspace throughout a licensee's organization and the role licensees play in promoting safety, safe practices, etc.			
12.	The document makes no specific mention of 'nuclear safety culture,' opting instead for the more generic 'safety culture.' Without specifying 'nuclear,' the document does not recognize the industry's unique nature or that safety culture, in a nuclear context, has an enhanced focus beyond industrial or occupational safety.	Licensees urge the CNSC to add 'nuclear' to all references of safety culture. For additional clarity, industry suggests the document be amended as follows: In Section 1, Introduction, Para 1, Add: "For further certainty, it is expected that licensees ensure management and workers understand the higher-level obligations for nuclear safety over that of a conventional work environment." In keeping with industry's recommendation to remove references to nuclear security culture at this time (see comment #16), delete the final line of the Introduction, which says, " In this document, "safety culture" denotes safety culture and security culture collectively, except where a distinction is made. "	Major	This document will be read and interpreted by members of the public who may not have a full awareness of the special and unique aspects of nuclear. Given this, the language must be particularly clear and not combine or confuse terminologies. Readers must understand that safety matters being discussed are not explicit to conventional safety, which could lead to misinterpretation of other Acts and regulations pertaining to occupational safety matters. Without a clear emphasis on nuclear safety culture, results of assessments could also be overly focused on conventional safety.
13.	Shaping and influencing culture is primarily an act of leadership, not workers. However, the introduction of this draft indicates all workers have a shared responsibility to ensure a healthy safety culture is a priority. While this may be true in principle, in practice a healthy culture is fostered when leadership makes it a priority. Workers do not always have the means or ability to ensure a healthy nuclear safety culture is a corporate priority or to influence values and rules or the importance placed on safety by the licensee.	Industry suggests emphasizing how leadership, not workers, shape culture in future drafts of this REGDOC.	Major	As currently written, this creates confusion as to the meaning of nuclear safety culture

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14.	Point #3 under section 1 says, "Safety culture is complex and <i>constantly changing</i> ." However, licensees believe the CNSC more accurately describes this sentiment in the third paragraph of page 10 when it says nuclear "safety culture can <i>change over time</i> ..."	Rewrite the point to say, "Safety culture is complex and constantly changing <i>changes over time</i> ."	Major	As currently written, the phrase 'constantly changing' might erroneously equate to 'constant monitoring', which would add an administrative burden to licensees with no appreciable impact on nuclear safety culture.
Section 1.3 Relevant Legislation				
15.	Relevant legislation also includes the Nuclear Non-Proliferation Import and Export Controls Regulations (NNIECR).	Add paragraphs 1(1), (2), (3) and (4) of the NNIECR: 1 (1) The definitions in this subsection apply in these Regulations. <i>Act</i> means the Nuclear Safety and Control Act <i>Controlled nuclear equipment</i> means the controlled nuclear equipment and the parts and components for controlled nuclear equipment referred to in the schedule. <i>Controlled nuclear information</i> means the controlled nuclear information referred to in the schedule. <i>Controlled nuclear substance</i> means a controlled nuclear substance referred to in the schedule. <i>Transit</i> means the process of being transported through Canada after being imported into and before being exported from Canada, in a situation where the place of initial loading and the final destination are outside Canada. (transit) (2) All controlled nuclear substances are prescribed as nuclear substances for the purpose of paragraph (d) of the definition nuclear substance in section 2 of the Act, with respect to the import and export of those substances. (3) All controlled nuclear equipment is prescribed equipment for the purposes of the Act, with respect to the import and export of that equipment. (4) All controlled nuclear information is prescribed	Major	The draft is incomplete and does not address relevant essential regulations essential for the implementation of this proposed REGDOC.

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Section 1.4.1 Security Culture				
16.	<p>Nuclear safety culture and nuclear security culture have important differences and the models require maturation before mandating integration.</p> <p>This draft cites a number of IAEA documents related to nuclear security. However, the IAEA has not yet published any guidance on nuclear security culture, including frameworks and assessment methodologies, although collaborative international efforts are underway to define them. While licensees are proactively exploring ways to assess aspects of nuclear security culture using draft IAEA documents and industry expertise, it is simply premature to introduce security culture into this draft REGDOC. The industry has had 30 years to develop a common language, common understanding and to mature the frameworks and assessment methodologies for safety culture, whereas similar concepts for security culture are in their infancy. Why does the CNSC believe the IAEA security culture requirements, which remain in development and are not well-established or understood, need to be blended into a very mature, well-established nuclear safety culture framework at this time?</p> <p>While there is some overlap at a very high-level between nuclear safety culture and nuclear security</p>	<p>Licensees strongly encourage the CNSC to remove references to nuclear security culture from this draft until industry-wide efforts in this area are more advanced.</p>	Major	<p>Prematurely introducing requirements into a regulatory document could inadvertently, but effectively, stifle the collaboration and industry-wide learning necessary to mature the topic.</p>

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	<p>culture, they have fundamentally different basis and origins. As the IAEA Nuclear Security Culture Implementing Guide (2012) says, "...both nuclear safety and nuclear security consider the risk of inadvertent human error, nuclear security places additional emphasis on deliberate acts that are intended to cause harm. Because security deals with deliberate acts, security culture requires different attitudes and behaviour, such as confidentiality of information and efforts to deter malicious acts, as compared with safety culture.</p> <p>Even within this draft, the relationship between nuclear safety culture and nuclear security culture is described inconsistently:</p> <ul style="list-style-type: none"> - 'Security culture is a major component of safety culture' (Introduction, Para 5); - 'Safety culture and security culture coexist and reinforce one another' (Introduction, paragraph 6); - "...healthy safety and security cultures have similar characteristics and indicators' (page 5, paragraph 4). 			
17.	<p>The second sentence in Section 1.4.1 does not explicitly consider the need to provide greater assurance of preventing, detecting, delaying and responding to theft, unauthorized access, illegal transfer, or other malicious acts involving prescribed information or prescribed equipment in use, storage, or transfer. Also, the term nuclear substance should be used, rather than radioactive material.</p>	<p>Change second sentence in Section 1.4.1 to read: "This will provide greater assurance of preventing, detecting, delaying and responding to theft, sabotage, unauthorized access, illegal transfer, or other malicious acts involving a nuclear substance, prescribed equipment or prescribed information in use, storage, or transport."</p>	Major	<p>As written, the draft regulation is clear that nuclear security envelopes nuclear safety through the addition of the additional attribute (i.e., matters identified in *). In this regard, however, the draft regulation must be enhanced to the level of required continuity in use of language as that found in the family of the other Regulations and Acts.</p>

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SECTION 2 – FOSTERING SAFETY CULTURE				
CNSC REQUIREMENT - Licensees shall document their commitment to fostering safety culture in their governing documentation.				
18.	Licensee’s management systems already document their commitment to nuclear safety. The expectation of this draft REGDOC is established in licences through the application of CSA N286. Licensees are transitioning to, or implementing, N286-12, whose Principle 1 states, “Safety is the paramount consideration guiding decisions and actions” and Clause 4.2 states, “Management shall use the management system to understand and promote a safety culture by: <ul style="list-style-type: none"> (a) issuing a statement committing workers to adhere to the management system; (b) defining and implementing practices that contribute to excellence in worker performance; (c) providing a means by which the business supports workers in carrying out their tasks safely and successfully, by taking into account the interactions between individuals, technology and the organization; and (d) monitoring to understand and improve the culture 	Licensees encourage the CNSC to deemphasize the link between documentation and fostering a nuclear safety culture in future drafts of this REGDOC.	Major	Although governing documentation should include a statement of commitment making safety the overriding priority, and forming a basis for promoting a healthy nuclear safety culture, it is not through documentation that culture will be influenced. Rather, it is leadership decisions, words and actions that shape culture. To overemphasize the role of documentation is counterproductive since it will influence a culture that relies too heavily on established, written rules.
19.	Under guidance, the proposed safety culture reference framework is overly rigid and prescriptive. As currently written, this draft: <ul style="list-style-type: none"> 1) Utilizes characteristics which are not aligned to the 10 WANO/INPO Traits of a Healthy Nuclear Safety Culture currently used by many licensees. For instance, it refers to “questioning attitude,” which in the traits includes “recognizing nuclear as special and unique.” However, there is no characteristic in 	In subsequent drafts of this REGDOC, licensee’s encourage the CNSC to: <ul style="list-style-type: none"> 1) Align the framework with the familiar, industry-accepted WANO/INPO traits and make it very clear this is simply an example framework that could be used to help licensees develop their own framework. This is already supported somewhat in the text by the phrase that calls the framework a “reference ... for demonstrating a 	Major	Misalignment with the WANO/INPO traits will create an additional, non-value added burden to licensees rather than build on industry’s current strengths in nuclear safety culture assessment. In addition, compelling licensees to use and/or address detailed safety culture characteristics that are currently listed in the CNSC framework but of limited applicability to their particular

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	<p>this REGDOC that supports this recognition.</p> <p>2) Implies an expectation that licensees must, if not actually adopt the framework, at least explicitly address the details in the CNSC list. This interpretation is supported later in this draft by the final line of page 9, which says, "The licensee should be able to demonstrate that each characteristic in the CNSC's safety culture reference framework is clearly and effectively addressed."</p>	<p>2) commitment to safety..."</p> <p>2) State that licensee should have a detailed framework, but not require them to cover all the detailed points listed by the CNSC.</p>		<p>situation would only weaken the long-term viability of assessments.</p>
20.	<p>While industry believes it is premature to include nuclear security culture in this REGDOC, licensees clearly recognize the need for healthy nuclear security and nuclear safety cultures. However, other than the phrase, "Everyone understands that a credible threat to security exists..." listed on page 4, the security indicators do not seem to reflect a characteristic specific to security.</p>	<p>Licensees urge the CNSC to remove references to nuclear security culture from this draft until industry-wide efforts in this area are complete. When cultural values are listed in any eventual guidance to help licensees develop their own frameworks, it would be helpful to include/create security-specific characteristics with security-specific indicators to accompany this REGDOC.</p>	Major	<p>To enhance safety, culture for security support across an organization is important, and this may differ from the characteristics specific to parts of the licensee which are security-specific organizations.</p>
21.	<p>The reference framework noted in section 2 says, "Everyone understands..." throughout the section. It is difficult to measure, "Everyone's understanding"</p>	<p>Suggest it say, "Workers understand" to make it less prescriptive.</p>	Minor	
<p>SECTION 3 – SAFETY CULTURE ASSESSMENTS</p> <p>CNSC Requirement: Licensees shall conduct comprehensive safety culture assessments that are empirical, valid, practical and functional. Safety culture assessments shall be conducted at least every three years.</p>				
22.	<p>The proposed requirement, when combined with the recommended guidance in this section, could potentially undermine the health of nuclear safety culture. As currently written, it will mandate an exercise which is concerned primarily with the gathering and analysis of data rather than fostering a process of self-discovery and reflection, supported by innovation in methodology, sharing experience and engaging leaders in the creative act of fostering a healthy nuclear safety</p>	<p>Licensees strongly believe the CNSC does not need to define how safety culture assessment is to be performed. That should be left to the discretion of the licensee, which may approach the assessment in a manner best suited to their own culture, operations and location. If guidance is offered in subsequent drafts, licensees urge the CNSC to deemphasize the restrictive and empirical nature of a nuclear safety culture assessment to protect the</p>	Major	<p>The restrictive and empirical underpinning of the regulatory expectations overemphasize the survey aspect of the assessment and could wrongly give an impression that culture is measurable from a quantitative perspective, rather than recognizing there is a significant qualitative or insight-driven aspect to the assessment. It risks the unintended consequence of undermining</p>

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	<p>culture over the entire lifecycle of an organization.</p> <p>This initial draft has a limited view of nuclear safety culture assessment. Culture may be assessed through any number of means, including surveys, external reviews, performance metric analysis, event analysis, etc. Yet the proposed approach is rigid and emphasizes a cookie-cutter method against a static framework to ease comparability, using phrases like: <i>observable facts; logical analysis; clear interpretation; comparative analysis over time; analysis is defensible and replicable; structure; validated, etc.</i> In reality, culture is an act of discernment, with the development of insights influenced by history and context. Direct comparison from one period to the next, or one licensee to the next, is ill advised and can be misleading. For example, a reduction in results in the survey tool could be the result of a healthier, more self-critical organizational culture, rather than a decline in commitment to safety.</p>	<p>integrity of the assessments themselves.</p>		<p>efforts to foster a healthy nuclear safety culture. It removes the desire from licensees to apply their creativity and identify assessment and improvement opportunities best suited to their unique organizations.</p>
23.	<p>What is the rationale for the prescriptive nature of the requirement for the safety culture assessments to be empirical, valid, practical and functional as described in the guidance?</p>		<p><i>Request for clarification</i></p>	
24.	<p>Is the methodology being used in Class 1 facilities appropriate for smaller licensees? What benchmarking was done to address the methodology for smaller licensees?</p>		<p><i>Request for clarification</i></p>	
25.	<p>The requirement that, "Safety culture assessments shall be conducted at least every three years" is overly restrictive without reason. It is suggested that some flexibility be built into this section to allow for business needs to be considered in the planning process.</p>	<p>Revise wording to: "Safety culture assessments should nominally be conducted every three years and shall be conducted at least once every five years."</p>	<p>Major</p>	<p>Licensees require flexibility and discretion to properly plan assessments. These are large projects which impact a licensee's business plan. Industry agrees that a 3-year cycle is nominal, but suggests some flexibility out to 5 years and some latitude with regard to</p>

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26.	<p>While the requirement says assessments shall be conducted at least every three years, the guidance indicates that, "Organizations engaged in complex work involving many interdependent workers and processes will benefit from comprehensive monitoring, which can include safety culture assessments."</p> <p>The 1st statement says assessments are mandatory, which seems to contradict the 2nd statement saying that safety culture assessments are an optional part of comprehensive monitoring.</p>		<p><i>Request for Clarification</i></p>	<p>scope, since an assessment for an entire organization may not always be required within that time frame. This is with the understanding that licensees are constantly evaluating safety culture through other means (i.e. corrective action processes, safety culture monitoring panels, daily leadership meetings, etc.)</p>
27.	<p>Why was this framework chosen over other proven frameworks that exist in the nuclear industry?</p>		<p><i>Request for Clarification</i></p>	
28.	<p>How does the CNSC plan to address changes resulting from international efforts between INPO/WANO, IAEA and the CNSC, when they are issued as a new common language framework later in 2017? What does the CNSC expect licensees to do differently given they use the INPO Traits and Attributes that do not map explicitly to the CNSC's framework?</p>		<p><i>Request for Clarification</i></p>	
29.	<p>The statement, "the chosen assessment method and associated safety culture framework" implies that licensees can use a safety culture framework different from the one described in Section 2. Please clarify whether the continued use of the INPO model without</p>		<p><i>Request for Clarification</i></p>	

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	revision meets the requirements?			
30.	On Page 6, what is the meaning of the bullet, "Managers do not abuse authority to circumvent security*" as part of the safety culture framework?		<i>Request for Clarification</i>	
Section 3.1 – Objectives applicable to safety culture assessment methods				
31.	Empirical – Industry has concerns with the 2nd and 3rd bullets and the need for clarification of the 4 th bullet point. How is it possible to make a nuclear safety culture assessment replicable? As written, it could be interpreted that the CNSC expects licensees to provide all information collected. How are observations objective? To what extent would licensees have to use a method that uses objective observations? Regarding the 4 th bullet point, are the words cultural characteristics/traits being used in a general sense? It seems there is some flexibility here as to use the WANO/INPO Traits of a Healthy Nuclear Safety Culture rather than the culture characteristics. Does the word range , mean that every cultural characteristic/trait is to be assessed?	Remove 2 nd and 3 rd bullet points and clarify the 4th.	Major	Regarding the 2 nd bullet point, industry does not want the information to be replicable to protect integrity of the assessments and the privacy of its participants. Licensees will not keep assessment data to assure workers it will be not used improperly or perceived to be held against them in any way.
32.	Practical , - Industry has questions around the meaning of the 1 st bullet: "Information obtained from the assessment method is clearly recorded to allow logical analysis." Similar to the comment above, this could indicate the CNSC expects all information from the assessment to be recorded and provided to CNSC. Is this the intent? For the 2 nd bullet, what is meant by demographics? Is it necessary, and is there value added, to collect demographic information? Why do licensees need to include job position? The current wording threatens the anonymity of the responses.		<i>Request for Clarification</i>	

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33.	<p>Functional – Industry has concerns with the phrase “observable facts” in the 1st bullet. What is meant by the 2nd bullet, which says, “The assessment yields relevant, actionable information”? Does the assessment also need to have actions?</p>	<p>Replace the phrase “observable facts” with “based on observations and perceptions” in the 1st bullet and clarify the 2nd bullet.</p>	<p>Major</p>	<p>Industry relies heavily on the perceptions of workers who participate in assessment surveys and discuss nuclear safety culture with interview teams. Changing the assessment methodology from what licensees in both Canadian and US facilities currently and effectively use would require significant additional effort without a corresponding benefit to nuclear safety. Observable facts are more of a continuous monitoring data-gathering technique and not applied extensively during the three-year assessment.</p>
3.2 Communications Strategy				
34.	<p>Licensees should not be expected to share information from a safety culture assessment with the public to protect the integrity of assessments and the privacy of their participants. Licensees need the freedom to be harshly critical of themselves to drive continuous improvement. Compelling public communication of results will inadvertently pressure licensees to ensure positive assessments through the setting of lower expectations.</p>	<p>Licensees urge the CNSC to remove any references or implied requirements to communicate nuclear security assessment results with external stakeholders. How licensees opt to communicate their assessments should be a matter of choice in line with their existing communication strategies, which makes this guidance unnecessary.</p>	<p>Major</p>	<p>To be useful, nuclear safety culture assessments need to be open and expressed in language understood by licensees in the context of their internal business practices. Assessments need to be unfiltered so leadership can reflect upon and take actions on internal issues. Findings are based on the perceptions of workers steeped in the nuclear culture of being extremely self-critical, which is vital to continuous improvement but easily misinterpreted by those unfamiliar with the industry. There is significant danger that results would be misunderstood by the public and generate unwarranted angst without extensive education, which is not practical. External</p>

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35.	Paragraph 4, 3 rd bullet, can the CNSC clarify what is meant by “contractors”? Licensees utilize contractors in various forms and require clarity to ensure there is no misunderstanding as to the extent of application to third parties who support the licensee.		<i>Request for clarification</i>	sharing of even high-level summaries creates the potential to sanitize reporting and ultimately lower the overall impact on nuclear safety.
36.	This draft acknowledges that “for security culture, the communications plan must consider that some information is security sensitive” but also says “for the benefit of greater awareness, all aspects should be shared broadly even if this requires some incidents or lessons learned to be generalized.”	Licensees urge the CNSC to remove the statement from future drafts or, at a minimum, add the words “to the extent possible” to the statement.	Major	Sharing security information even in a broad sense would not only expose vulnerabilities, but could also result in public angst if improperly characterized. It is noted on Page 9 that “some expectations differ from a safety culture assessment, in areas such as information sharing and communications.” It is not clear what the CNSC is willing to consider different.
Section 3.3 Preparing for the safety culture assessment				
37.	The CNSC is providing inconsistent information as to what constitutes a nuclear safety culture assessment. Although licensees may use formal assessments tools described in section 3.3, this is not the only means of assessing the culture of the organization, which appears to be recognized in section 3.4. Licensees should be encouraged to review their performance and culture on an ongoing basis, respond to changes in metrics and positive and negative events, both internal and external.	Remove Section 3.3. Section 3.4 provides sufficient direction for licensees to perform assessments.	Major	By defining a nuclear safety culture assessment in such a prescribed manner, the CNSC is hindering licensee’s flexibility to meet expectations.
38.	Industry has concerns with Section 3.3.1 of this draft, which says, “licensees should ensure that the safety culture assessment framework is mapped against the	Remove Section 3.3.1. Section 3.4 provides sufficient direction for licensees to perform assessments.	Major	Given that some licensees already use INPO’s 10 Traits of a Healthy Nuclear Safety Culture, licensees would have to restructure their

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	<p>five safety culture characteristics (section 2 of the document), and is used at all stages of the assessment process.” Licensees believe this is overly prescriptive and feel the regulator should not impose how an assessment is performed, what framework is chosen or how it is mapped against the regulatory framework. Some Canadian operators are actively engaged in the joint IAEA–WANO/INPO initiative to harmonize safety culture frameworks and believe this is counter to those efforts to use a common vocabulary in regard.</p> <p>Several licensees already use the INPO/WANO framework, which has been mapped against the IAEA Standard Framework, and would be willing to provide such a mapping of characteristics to the CNSC for future drafts of this REGDOC. It is unclear in the current version whether the CNSC expectation is for the assessment itself to be mapped back to the bespoke CNSC framework, which would be a level of effort that would not add value for licensees with mature programs.</p>	<p>Alternatively, industry suggests the use of the five safety culture characteristics be optional for utilities that may not currently have anything in place.</p>		<p>assessment processes greatly to meet what this section’s expectations. This draft document does say, in section 3.4.1, that, “The licensee should be able to demonstrate that each characteristic in the CNSC’s safety culture reference framework is clearly and effectively addressed.” This suggests that if licensees can prove their framework is effective, they can continue to use it.</p> <p>The quality of assessments will be preserved if licensees that already use the INPO traits continue to do so because the traits: are familiar to personnel; already integrated into existing frameworks; used by the NRC and other worldwide regulatory agencies; adopted to align with nuclear industries for benchmarking purposes; used in previous assessments allowing for direct historical (trend) mapping.</p>
Section 3.3.3 Assessment team selection				
39.	<p>Licensees believe this section provides an extensive list of “should” statement that, in practice, will be virtually impossible to satisfy. For instance, the assessment team leader selection is too detailed and prescriptive, particularly for hybrid assessments. These responsibilities do not necessarily need to be done by the team leader and often would not if they had an internal team lead. Nor does this section state that an assessment team should include someone with knowledge and expertise in assessments of security culture, should that requirement not be removed from</p>	<p>Remove Section 3.3.3. Section 3.4 provides sufficient direction for licensees to perform assessments.</p> <p>Alternatively, the CNSC could: delete the detailed list of responsibilities and simply state that responsibilities for the team leader and members should be defined (recognizing that any team will be a compromise of potentially competing factors and skill sets among its members); revise the “should” factors, to “considerations” for choosing team members; add nuclear security culture to the list of</p>	Major	<p>Industry needs flexibility to choose team members to conduct effective safety culture assessments.</p>

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	this draft as urged by licensees.	qualifications for assessment team members.		
Section 3.4 Safety culture assessment process				
40.	The draft identifies nuclear safety culture assessment as an ongoing process, but indicates assessments are to be conducted every three years which would make them periodic, repetitive events. The CNSC can provide clarity by removing the phrase, "is an ongoing process" from future drafts.		<i>Request for clarification</i>	
41.	3.4.1 - Industry is concerned the CNSC is prescribing detailed safety culture characteristics, particularly with the final sentence on page 9, which says, "The licensee should be able to demonstrate that each characteristic in the CNSC's safety culture reference framework is clearly and effectively addressed." As earlier indicated, licensees believe it should be acceptable to perform a one-time mapping of how the characteristics are related to the INPO Traits of a Healthy Nuclear Safety Culture, or other credible nuclear safety culture documentation.	Replace the sentence with, "The licensee should be able to demonstrate that it addresses its own framework."	Major	It is important that licensees retain control of what it determines are the important characteristics of its own safety culture framework.
42.	3.4.3 - The document suggests that improvements following an assessment will lead to improvements in established policies and procedures. Not all improvements will change policy and procedures.	Rewrite to say, "How a licensee chooses improvements following an assessment, and the commitment to implementing these improvements, should be consistent with the existing management system and lead to improvements in established policies and procedures. "	Minor	
43.	3.4.4 - A list of safety culture monitoring activities has been included in section 3.4.4, which states that, "Licensees should consider these monitoring activities when planning subsequent assessments."	Change the word "should" to "may" and remove the reference to appendix B in the second paragraph of 3.4.4.	Major	Currently, industry does not use all of these monitoring activities. If it were to do so, it would require additional effort with no corresponding benefit to nuclear safety. Examples include: providing topic-based surveys; focus area surveys and follow up surveys; reflecting on formal and informal dialogue focused on safety between

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44.	3.5 -The guidance on record keeping is too prescriptive and already covered by licensee management systems	Remove the section on record keeping.	Major	management and other workers. This is conflicting and unnecessary guidance.
Section 4 SUMMARY REPORTS CNSC Requirement: <i>Upon completion of a safety culture assessment, the licensees shall prepare a summary report for submission to the CNSC</i>				
45.	The requirement to submit a summary report to the regulator will negatively impact the validity and quality of future assessments because they will become publically available through the <i>Access to Information Act</i> . There is a real risk that participants in future assessments will be less self-critical or forthcoming knowing assessment summaries will be publically available. The need to protect the integrity of peer reviews is precisely why WANO continues to ensure its assessments remain as confidential and effective learning tools for the industry.	Remove the requirement to submit a summary report. Encourage licensees to provide the CNSC with their approach to the assessment, provide a confidential briefing on the key themes and planned actions to ensure continuous improvement in fostering a healthy nuclear safety culture.	Major	Licensees have conducted assessments in the past without submitting summary reports to the CNSC. It is highly likely that responses to surveys and interviews would be skewed once workers understand their responses are going to be summarized for the regulator and the public. This could have a negative effect on the validity of the assessments. The CNSC's current, non-intrusive approach has helped promote nuclear safety culture assessments as an effective management tool, not a regulatory one. This has resulted in positive benefits like ongoing engagement from site management and open, honest internal discussions about nuclear safety culture. Should the perception of assessments be changed to simply "another regulatory report/requirement," there is a real risk the utility of the assessments will erode. Ensuring a measure of confidentiality in the results is important to preserve continued open and self-critical reflection.
46.	Has the CNSC considered and understood the chilling effect on open, honest answers from licensee staff that is likely to result from requiring a detailed summary report be provided to the CNSC? Similarly, what considerations has the CNSC given to the impact of		Request for clarification	

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#	Industry Issue	Suggested Change (if applicable)	Major, minor or clarification	Impact on Industry, if major comment
	public communications on safety culture data collected from workers promised confidentiality to ensure they would be self-critical and fulsome during assessments?			
47.	Please clarify the level of detail the CNSC requires in a summary report, particularly as it relates to a chosen assessment model? Is it acceptable to refer to a licensee's procedure and not outline/reproduce that procedure in a summary report?		<i>Request for clarification</i>	
48.	The 3rd bullet says, "the chosen assessment method and associated safety culture framework." This implies that a licensee can use a safety culture framework different than the one described in Section 2. Please clarify.		<i>Request for clarification</i>	
49.	Under guidance in Section 4 on the summary report, what is meant by, "The description of the safety culture assessment's goals should explain how the assessment supports organizational objectives. An overview of how the safety culture assessment relates to relevant organizational programs and practices should be included"?		<i>Request for clarification</i>	
APPENDIX A - Applicable Requirements and Guidance, by Licence and Activity Type				
50.	Ensure consistency of language and intent between the main text and the appendix in the graded approach being adopted for some sections of the REGDOC.	Delete the term "prudent management practice" as part of the descriptor to guidance in Table A1, as this erodes the notion that these sections are guidance and can be applied in a graded manner as is stated in Section 1.2.	Minor	
51.	The draft REGDOC needs to ensure continuity with export and import license regulations.	Import and export licences should be added to Table A1 as guidance	Minor	
APPENDIX B – Safety Culture Maturity Model				
52.	Industry believes the proposed nuclear safety culture maturity model is misaligned with the nuclear safety	Licenseses strongly recommend the CNSC remove the entirety of Appendix B and any references to the	Major	This is a secondary methodology which is not aligned to the characteristics or attributes

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	<p>culture characteristics and poorly integrated overall with the draft REGDOC. Its use could create an environment where a licensee's culture is perceived as an absolute value that is simply pass or fail. Licensees are deeply concerned that indicator scores would be used to plot stage 1, 2 or 3 and culture cannot be measured by a set of indicators. Industry notes that in Table B1, the indicators section does not seem to list indicators at all.</p> <p>The IAEA has a number of documents and programs aimed at countries that are newly developing a nuclear industry and regulatory infrastructure. Stage 1: Requirement-driven' of the maturity model appears to be directed towards such countries. However, Canada has an established, internationally-recognized nuclear regulatory infrastructure. Operating within that infrastructure, licensees are already committed to remain within 'Stage 3: Continually improving.'</p>	<p>Maturity Model.</p>		<p>(i.e. the diversity element). This introduces another framework and would create an additional administrative burden with no apparent, corresponding value. There could potentially be unintended outcomes and consequences of using this maturity model causing strict compliance and a lowering of standards. It could pressure licensees to meet fixed culture score requirements rather than focusing on utilizing nuclear safety culture surveys as another performance improvement tool. Considering a nuclear safety culture assessment is, in part, the workforce's perception of safety, using a maturity model based on rigid scores could create an environment in which licensees shy away from any initiatives that could give workers a perception that safety needs improvement since this could result in lower scores.</p>
53.	<p>Why does the CNSC want to incorporate an unfamiliar, untested maturity model requirement? What value is expected? How will it be used? Does the CNSC consider the maturity model an empirical method of measurement? Is this intended to be a secondary assessment methodology? Given industry's questions on the maturity model, what assurances do licensees have that guidance provided in the document will be managed as guidance and not as requirements?</p>		<p><i>Requests for clarification</i></p>	