

**REGDOC-2.10.1: Nuclear Emergency Preparedness and Response /  
Préparation et intervention relatives aux urgences nucléaires**  
**Comments received from public consultation / Commentaires reçus dans le cadre du processus de consultation**

## Comments received:

- during first round (20 August to 19 October 2013): 125 comments from 11 reviewers (see comments 1 to 125)
- during feedback period ( 22 November to 6 December): no comments were received
- during additional consultation period ( 10 April to 20 May 2014): 28 comments from 7 reviewers, (see comments 126 to 154)
- by email from Ontario Power Generation (OPG), on behalf of NB Power, Bruce Power and AECL 25 (June 20, 2014): 25 comments from 4 reviewers (see comments 155 to 175)
- during a workshop held June 23, 2014: 7 comments (comments 176 to 183)

## Commentaires reçus :

- lors de la première période (du 20 août au 19 octobre 2013) : 125 commentaires reçus de 11 examinateurs (voir commentaires 1 à 125)
- lors de la période des observations (du 22 novembre au 6 décembre 2013) : aucun commentaire reçu
- lors de la consultation supplémentaire (du 10 avril au 20 mai 2014) : 28 commentaires reçus de 7 examinateurs (voir commentaires 126 à 154)
- par courriel d'Ontario Power Generation (OPG), au nom d'Énergie NB, de Bruce Power et d'EACL (20 juin 2014) : 25 commentaires de 4 examinateurs (voir commentaires 155 à 175)
- lors d'un atelier tenu le 23 juin 2014 : 7 commentaires (commentaires 176 à 183)

	Section	Organization	Comment	CNSC Response
1.		Nordion	<p>In general, the applicability of these regulations to Class 1B facilities are not clear. They appear to be written specifically with reactor sites in mind and appear overly complex and prescriptive to apply to a lower risk, non-reactor facility.</p> <p>The Scope section states that, "An EP program should be developed in a manner that is commensurate with the complexity of the facility's associated undertakings, as well as the probability and potential severity of the emergency scenarios with the operation of the licensed facility." However, the requirements within the REGDOC appear to be written commensurate with the risks, probability and potential severity of emergency scenarios at reactor sites versus those at a 1B facility like Nordion. The complexity and prescriptive detail of the regulations will not allow for appropriate scaling of the program to non-reactor facilities that have a lower risk profile and scenario impact.</p> <p>Our concern is that compliance with these regulations will add significant complexity to our plans and programs that are not aligned with our risk</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>All nuclear facilities are required to assess, plan for, and respond to potential emergencies. Many of the activities related to nuclear emergency and response are common, regardless of the nature of the facility in question. In some cases, when warranted by the potential risk or complexity of the facility, such as nuclear power plants, additional activities may be required.</p> <p>Consistent with the recommendations from the Fukushima Task Force, and the CNSC's practice of consolidating regulatory documents, REGDOC-2.10.1 presents a consolidated set of requirements for all major nuclear facilities, incorporating content from existing publications G-225 and RD-353.</p> <p>However, as a result of this feedback, the distinction</p>

	Section	Organization	Comment	CNSC Response
			profile. The result of unnecessary complexity can be a less efficient emergency response and will require more program management resources for implementation and maintenance, again, not commensurate with risks. It is difficult to see how right-sizing of the program, as noted in the scope section, is achievable.	between universal requirements and those applying only to NPPs has been clarified. In addition, provisions recommending other facilities give consideration to these additional NPP requirements have been removed. All requirements are written to be applicable based on relative risks posed by the facilities.
2.		Canadian Nuclear Association (CNA)	The CNA suggests that CNSC staff consider the tradeoff of benefits by incorporating Nuclear Emergency Preparedness and Response regulations for different license classes into one document. While we appreciate the efficiencies achieved in issuing a single RegDoc, we would caution that this could be interpreted as a 'one-size-fits-all' approach. Or in practice it could become that the approach and requirements for a Nuclear Power Plant (Class IA) become the default requirements for all affected licensees, regardless of the risks each individual facility contains. Emergency preparedness and response requirements should reflect the frequency, probability and the severity of the risks associated with the very different license classes this RegDoc will apply to. These differences should be clearly described and detailed in the Regulatory Document. This is important to do, not just for the understanding of non-technical industry specialists who may also read this document, but also from a practical perspective, to clarify the differences in the probabilities and severities of the risks associated with the wide range of nuclear facilities up front. We believe that the document should be structured so that the regulations and requirements for Class IA, Class IB and Uranium Mines and Mills are very clearly differentiated and explained to add clarity.	The REGDOC was modified as a result of comments provided. See comment 1 for details.
3.		CNA	We are supportive of many of the items contained in this document; however there are three areas that raise significant concern to our membership. These are centered on the following observations. 1. Overlap and uncertainty caused by jurisdictional conflict between the contents of RegDoc-2.10.1 and various Provincial requirements and requirements to support response organizations. 2. Maintaining a clear distinction between Design Basis accidents and Beyond Design Basis accidents. 3. Requirements to submit plans to CNSC prior to their being implemented, and timelines for providing information to CNSC staff.	Comments are addressed in the specific sections below.
4.		NB Power	The main areas we are concerned with are:	Comments are addressed in the specific sections below.

	Section	Organization	Comment	CNSC Response
			1) The requirement for facilities inside the primary zone to be hardened. 2) A reduced time period for preparation of full scale exercise reports. 3) The requirement for licencees to report results of plume dispersion and dose modelling, as these are currently done by an external organization. 4) It may not be possible to notify the CNSC prior to containment venting.	
5.		AECL, Ontario Power Generation (OPG)	This Reg Doc contains significant detail for the EP Program. In Ontario the Provincial requirements are extensive raising the concern that jurisdictional conflict could arise over time.	While the document was not modified based on the comments provided, the CNSC acknowledges the concern.  Further it is cognizant of the need to work closely with provincial and municipal governments. For example, for CSA Standard N1600 General Requirements for Emergency Management for Nuclear Facilities, the CNSC is part of the development team along with provincial and industry representatives. The CNSC also ensures that CSA and REGDOC requirements and guidance are well aligned.
6.		AECL	Licensees should describe the methods and procedures for the continual assessment of the following pertinent conditions and parameters: <ul style="list-style-type: none"> <li>• the status, integrity and stability of the affected facilities and their components</li> <li>• identification, quantities, concentrations, or release-rates of radiation, contaminants, or other hazardous substances</li> <li>• onsite and offsite impacts on or threats to health, safety, national security and the environment</li> <li>• location and direction of radioactive plumes or other emissions</li> <li>• loss of instrumentation</li> </ul> Level of detail leads to jurisdictional issues and conflicts with existing legislation, resulting in non-compliance with licence conditions.	While the document was not modified based on the comments provided the CNSC acknowledges the concern. Further it is cognizant of the need to work closely with provincial and municipal governments; see comment 5 for details.
7.		CNA	We do agree that "an EP program should be developed in a manner that is commensurate with the complexity of the facility's associated undertakings, as well as the probability and potential severity of the emergency scenarios associated with the operation of the licensed facility", but we do not believe that the document currently reflects the	The REGDOC was modified as a result of comments provided  See comment 1 for details.

	Section	Organization	Comment	CNSC Response
			<p>range in complexity and emergency scenarios associated with the different licensee types.</p> <p>The CNA agrees that the range of Emergency Preparedness program requirements could conceivably be addressed in a single RegDoc, but we recommend that the range of licensees be addressed in an itemized fashion and in a manner that is reflective of the frequency, probability and severity of risks associated with each licence type.</p>	
8.		AREVA	<p>Uranium Mines and Mills (UMM) do not fit well within this regulatory document, and we would prefer that UMM are not included. It seems that the document has been written for nuclear power plants (NPP) with secondary consideration of UMM to enable the elimination of G-225, Emergency Planning at Class I Nuclear Facilities and Uranium Mines and Mills. Regulatory Guide G-225 together with provincial requirements in Saskatchewan sufficiently defines the expectations of UMM for emergency preparedness and response. The consolidation of advice into a single regulatory document risks confusing UMM licencees and CNSC Project Officers on the applicability of much of the content of the document to UMM. For example, the need for 15 minute notification of activation of the emergency response organization (public preparedness program) or providing the CNSC with workspace are more appropriate for NPP than UMM. Another important reason is that UMM have little, if any, potential for a "nuclear emergency" as defined by Health Canada as an emergency which has led, or could lead, to a radiological threat to public health and safety, property, or the environment". Emergency preparedness and response for UMM focuses on risks which are generally non-nuclear in nature.</p>	<p>The REGDOC was modified as a result of comments provided</p> <p>See comment 1 for details.</p>
9.		Cameco	<p>Cameco would like to start by emphasizing our support for the comments provided by the Canadian Nuclear Association (CNA) on this Regulatory Document in their letter of October 11, 2013.</p> <p>To ensure that the emergency requirements for uranium mines and mills are transparent and certain, Cameco recommends that these facilities should not be included in the current document. Rather, a separate document specific to these facilities should be developed.</p> <p>If this approach is not utilized, then we have specific concerns about the proposed document. More specifically, the Regulatory Document provides as follows in the Introduction (page 1): <i>This regulatory document applies to</i></p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 1 for details.</p> <p>As noted, references to all licensees needing to consider the requirements for NPPs over 10MW have been removed.</p> <p>All requirements are written to be applicable based on relative risks posed by the facilities.</p>

	Section	Organization	Comment	CNSC Response
			<p><i>all Class I nuclear facilities and uranium mines and mills (UMMs). Some requirements in this document are specifically designated as applying only to nuclear power plants and research reactors whose thermal output capacity is greater than 10 MW. Nevertheless, all requirements should be considered and applied when appropriate.</i></p> <p>Rather than leave it that the licensee should apply everything in this document unless demonstrated that it is not appropriate, we believe that this document should be structured so as to detail the specific requirements for different types of Class I facilities. For example, if there are specific requirements for uranium mines and mills, then these should be detailed. Our recommendation is to therefore remove the last sentence of the above paragraph, "<i>Nevertheless, all requirements should be considered and applied when appropriate</i>".</p>	
10.		AREVA	<p>Alternatively, should UMM remain to be included in REGDOC 2.10.1, AREVA expects that clarity on applicable sections would be needed in licencees' Licence Condition Handbooks (LCH) rather than referencing the regulatory document in its entirety as a license basis document in order to eliminate any risks of confusion.</p>	<p>While the document was not modified based on the comments provided the CNSC acknowledges the concern.</p> <p>Once REGDOC-2.10.1 is published, implementation plans for each facility will be developed, with consideration given to any unique elements of their design or operation.</p>
11.	General	AECL, OPG	<p>Requirement to submit documentation to CNSC should be consistent within this document and other licensing documentation such as the PROL or the Licence Condition Handbook for NPP -</p> <p>Ensure alignment between reporting requirements (e.g. Section 2.2 EP program changes, 2.3.9 ER plan and plan validations, 2.4.1 training program changes, etc) within REGDOC-2.10.1 and other licensing requirements, (e.g. PROL and LCH). Requirements for providing modified documentation should be only in the LCH.</p>	<p>While the document was not modified based on the comments provided the CNSC acknowledges the concern.</p> <p>See comment 10 for details. Typically – in cases where there are no immediate safety benefits - provisions from new REGDOCs are first listed in LCHs and incorporated into PROLs at the time of renewal.</p>
12.	General	AECL, OPG	<p>The usage of the term emergency preparedness programs (EP programs) throughout the document is potentially confusing and unnecessary. It is confusing in that each licensee will have one program and not several. The term "an EP program" can be used in places where it is referring to the separate program that each licensee must have.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The singular term program is now used throughout the document.</p>
13.	General	AECL, OPG	<p>The overall document structure is quite different from REGDOC-2.3.2. In particular the inclusion of guidance sub-sections with the requirements</p>	<p>While the input was noted, no change was made to the document as a result of the comment.</p>

	Section	Organization	Comment	CNSC Response
			rather than completely separate requirements and guidance sections could lead to confusion about requirements. Preference is to have the separate sections as in REGDOC-2.3.2.	A standard format for REGDOC 2.3.2 and 2.10.1 was not followed due to the differences in the types of guidance provided to the requirements. In 2.10.1 there is a close relationship between the requirements listed and the specific guidance which follows. In 2.3.2 requirements are based on four categories: general requirements, equipment and instrumentation requirements, procedural and guideline requirements, and human and organizational performance requirements. Meanwhile the guidance sections are laid out in the order of development (preparation), implementation, evaluation (review), and documentation for accident management programs.
14.	General	Bruce Power	Requirement to submit documentation to CNSC should be consistent within this document and other licensing documentation such as the PROL or the Licence Condition Handbook for NPP. Ensure alignment between reporting requirements (e.g. Section 2.2 EP program changes, 2.3.9 ER plan and plan validations, 2.4.1 training program changes, etc) within REGDOC-2.10.1 and other licensing requirements, (e.g. PROL and LCH). Requirements for providing modified documentation should be only in the LCH. Requirement for consistency across the Regulatory Framework	While the input was noted, no change was made to the document as a result of the comment.  See comments 10 and 11 for details.
15.	General	Bruce Power	The overall document structure is quite different from REGDOC 2.3.2. In particular the inclusion of guidance sub-sections with the requirements rather than completely separate requirements and guidance sections could lead to confusion about requirements. Preference is to have the separate sections as in REGDOC 2.3.2.	While the input was noted, no change was made to the document as a result of the comment.  See comment 13 for details.
16.	General	Bruce Power	Consistency of this document to the industry standard CSA Z1600 Emergency and Continuity Management Programs It is suggested this document be closely reviewed against the CSA Z1600 in order to ensure the consistent use of professional emergency management terminology throughout this document, as well as for alignment with the standards and expectations that are set out by the CSA Z1600 industry standard.	While the input was noted, no change was made to the document as a result of the comment. The CSA standard Z 1600 is concerned with business continuity and not with nuclear emergency preparedness and response. . For a similar reason draft CSA standard N-1600 General Requirements for Emergency Management for Nuclear Facilities does not mirror the structure of Z-100.

	Section	Organization	Comment	CNSC Response
17.	Preface	Bruce Power	<p>“EP programs are based on four components: planning basis; program management; response plan and procedures; and preparedness.”</p> <p>Content of emergency preparedness programs should be consistent with the structure of the new CSA Z1600 Emergency and Continuity Management Programs.</p> <p>Suggested change will further add additional clarity as the above components “planning basis; program management” are reflective of a management system, whereas “response plan and procedures; and preparedness” may be sub-components within that managed system. While the four components mentioned originally are relevant to emergency preparedness, it is not a complete list of components that contribute to emergency preparedness. Hazard identifications and risk assessments are equally important, and while they are intended to fall within “planning basis” it is not immediately clear whether they are considered from the original statement. The suggested change articulates to the reader that the EP program is structured on a strategic comprehensive framework that enables the complete management of the EP initiative, and all other components are included in that system</p> <p>“EP programs are structured on a management system and include five major components including program management, planning, implementation, program evaluation and management review”.</p> <p>Note: As a result of this change, the remainder of the document would need to be structured under the five main headings.</p>	<p>While the input was noted, no change was made to the document as a result of the comment.</p> <p>The CSA standard Z 1600 is primarily concerned with business continuity and not specifically with response to a nuclear emergency. The standard states that it is meant to be applied within the broader context of legal, regulatory and other requirements – REGDOC-2.10.1 provides the regulatory requirements component of the broader setting.</p>
18.	1.2	AECL, Bruce Power, OPG	<p>Requirements in this draft Reg Doc cover all Class 1 facilities (which includes the Class 1B Waste facilities) however the requirements are focused on the NPP response.</p> <p>Change 1.2 to read: This regulatory document lists and discusses the components and supporting elements that CNSC licensees shall implement and consider when establishing emergency preparedness programs to prepare for, to respond to, and to recover from the effects of accidental radiological/nuclear and/or hazardous substance releases from Class I nuclear power plant facilities or uranium mines or mills.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 1 for details.</p>

	Section	Organization	Comment	CNSC Response
19.	1.2	AECL	<p>Releases of hazardous substances or hazardous materials are included as part of the scope of an EP program. Furthermore, although not specifically mentioned, releases of hazardous materials other than radioactive materials must then be included in the planning basis.</p> <p>It is recommended that a note be added where appropriate that non-radioactive hazardous releases may be addressed by a separate plan.</p> <p>Note that significant non-radioactive release from a Nuclear facility of comparable severity to a nuclear accident is extremely unlikely. As such, these plans should be separate from the nuclear/radiological plans.</p>	<p>While the input was noted, no change was made to the document as a result of the comment.</p> <p>Hazardous substances or hazardous material releases are an important component of a comprehensive EP program which consolidates a range of potential threats and circumstances.</p>
20.	1.3	Nordion	<p>The question of applicability to non-reactor sites is further compounded by section 1.3 where it states that an IAMP, as described in REGDOC 2.3.2 Accident Management: Severe Action Management Programs for Nuclear Reactors, works alongside 2.10.1 to form required defense in depth. This leads to confusion for non-reactor sites who build the principles accident management into their Emergency Management Programs.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The title of section 1.3 was modified as indicated below to clarify that REGDOC 2.3.2 only applies to power reactors: 1.3 Accident management and its links with emergency preparedness and the principle of defence-in-depth for power reactors</p>
21.	1.3	AECL, Bruce Power, OPG	<p>The definition of "Accident Management" in this document (and in REGDOC 2.3.2) is not consistent with the IAEA definition.</p> <p>Define and use terms consistent with IAEA definition. (Refer to comments for Regdoc 2.3.2)</p> <p>It is vitally important to maintain the distinction between design basis (DB) and beyond design basis (BDB). Using a term that is internationally acknowledged as referring to a BDB state in a manner that is inclusive of DB has the potential to create significant confusion, both with implementation requirements and with the public.</p>	<p>While the input was noted, no change was made to the document as a result of the comment.</p> <p>CNSC staff acknowledges the distinction between design basis accidents (DBA) and beyond design basis accidents (BDBA). The CNSC also recognizes that there are many distinct aspects between treatment of the accidents that do not challenge core integrity and that include core degradation. However, the essence of accident management and emergency preparedness is to utilize the available materiel and human resources to provide counteracting responses regardless of its progression into a stage belonging to DBA or BDBA.</p> <p>The CNSC's approach to DBA and BDBA distinctions is aligned with current international approaches. For example, the IAEA are currently updating its approaches and terminology to reflect regulatory best practices post-Fukushima.</p>
22.	1.3	CNA	<p>This Regulatory Document needs to be reviewed, and where required rewritten, so that it is consistent in its use of the term "Accident</p>	<p>While the input was noted, no change was made to the document as a result of the comment.</p>

	Section	Organization	Comment	CNSC Response
			Management" with the definition provided by the International Atomic Energy Agency (IAEA). Throughout the document "Accident Control" needs to be used when cross referencing Level 3 of Defence in Depth. Likewise "Accident Management" should be used when cross referencing Level 4 of Defence in Depth It is critically important that this distinction be made and used consistently so that there is no confusion between Design Basis and Beyond Design Basis states. Using a term that is internationally acknowledged as referring to a Beyond Design Basis state that is inclusive of a Design Basis state has the potential to create significant confusion.	See comment 21 for details.
23.	1.3	AECL, OPG	Significant portion of section 1.3 is a direct repeat from Draft Reg Doc 2.3.2. Duplication between Reg Docs should be avoided Delete duplicative text and replace with: "An effective response to an emergency requires strong linkages between accident management and emergency response. Refer to Reg Doc 2.3.2, Accident Management for clear understanding of Accident Management."	The REGDOC was modified as a result of comments provided. The text was revised to reduce duplicative information.
24.	1.3	AECL, OPG	This section is mostly identical to Section 2. of REGDOC-2.3.2. However the order of the text in relation to Accident Management and Emergency Preparedness need to be reversed to emphasize the scope of this document. Revise order of the text to emphasize the scope of this document.	The REGDOC was modified as a result of comments provided. The text was revised to reduce duplicative information.
25.	1.3	AECL, NB Power, OPG	"credible accident" should be defined as it is open for interpretation. Add definition or reference to definition. Ensure clarity to differentiate from "worst case scenario"	The REGDOC was modified as a result of comments provided. To clarify the "worst case scenario" the following text was added: "Licensees are expected to be able to respond to any set of conditions which cannot be practically eliminated." The term "practically eliminated" was then defined as follows in the glossary "the possibility of certain conditions occurring being physically impossible or with a high level of confidence to be extremely unlikely to arise."  Please see comment 183 for additional discussion related to practically eliminated.

	Section	Organization	Comment	CNSC Response
				The same approach and definition is used in REGDOC-2.5.2, <i>Design of Reactor Facilities: Nuclear Power Plants</i> and REGDOC 2.3.2: <i>Accident Management</i>
26.	1.3	AECL, Bruce Power, NB Power, OPG	<b>Figure 1:</b> Offsite Emergency Response on Diagram is not fulsome. Offsite ER is currently noted only at the level of BDBA. Offsite Emergency Response occurs within a DBA Concept of "on-site" and "off-site" should be defined Lack of clarity could potentially result in difference in interpretation and implementation	The REGDOC was modified as a result of comments provided. The Offsite ER arrow was lengthened.
27.	1.4	CNA	The RegDoc is currently worded to include the statement "... under the administrative framework of the Federal Emergency Response Plan and the Federal Nuclear Emergency Response Plan, all levels of government, along with various agencies and organizations, have responsibilities for developing and implementing emergency plans to address nuclear emergencies with impacts outside the bounds of CNSC-licensed nuclear facilities". This would benefit from the addition of clarifying examples of the risks and severity of emergencies associated with unlicensed facilities.	While the input was noted, no change was made to the document as a result of the comment. REGDOC-2.10.1 provides requirements and guidance for licensees in matters relating to emergency preparedness and response at licensed nuclear facilities. It is not intended to provide general emergency preparedness information to the public.
28.	1.5	AECL, OPG	Paragraph 3(1.1)(b) is incorrect Replace with 3(1)(n)	The REGDOC was modified as a result of comments provided 3(1)(n) of GNSCR has been repealed
29.	1.5	Canadian Environmental Law Association (CELA)	The CNSC must not limit its review on the topic of emergency planning to plant boundaries or operator action. Rather it must specify its expectations for emergency planning to the fullest extent of potential impact on members of the public or the environment, and must exercise its decision making in the context of requirements respecting those full potential consequences. CELA urges the CNSC to exercise a stringent oversight role as to whether emergency planning and preparedness have been proven prior to exercising its discretion at all points in its decision making.	While the comment was acknowledged, however, there were no specific suggestions as to document modifications. While REGDOC – 2.10.1 only applies to licensees, the CSNC is simultaneously working with offsite authorities, other provincial authorities and industry in developing CSA Standard N-1600 General Requirements for Emergency Management for Nuclear Facilities.
30.	1.5	CELA	It is the regulator's responsibility, among other things, to do the following (excerpts from GS-R-2 paragraphs 3.8 to 3.12: The regulatory body shall require that arrangements for preparedness and response be in place for the on-site area for any practice or source	Comment was acknowledged, however, there were no specific suggestions as to document modifications GS-R-2 applies to requirements on licensee and the CNSC does ensure GSR-2 requirements are met.

	Section	Organization	Comment	CNSC Response
			<p>that could necessitate an emergency intervention.</p> <p>The regulatory body shall ensure that such emergency arrangements are integrated with those of other response organizations.</p> <p>The regulatory body shall ensure that such emergency arrangements provide a reasonable assurance of an effective response, in compliance with these requirements, in the case of a nuclear or radiological emergency.</p> <p>The regulatory body shall require that the emergency arrangements “shall be tested in an exercise before the commencement of operation [of a new practice]. There shall thereafter at suitable intervals be exercises of the emergency [arrangements], some of which shall be witnessed by the regulatory body.”</p> <p>In fulfilling its statutory obligations, the regulatory body... shall establish, promote or adopt regulations and guides upon which its regulatory actions are based;... shall provide for issuing, amending, suspending or revoking authorizations, subject to any necessary conditions, that are clear and unambiguous and which shall specify (unless elsewhere specified):... the requirements for incident reporting;...and emergency preparedness arrangements.</p> <p>In planning for, and in the event of [a nuclear or radiological emergency], the regulatory body shall act as an adviser to the government.</p> <p>The regulatory body shall ensure that the co-ordinated arrangements are implemented adequately by the operators.</p> <p>Moving ahead to implement a regulation is consistent with the expectations of the IAEA standard, as well as with the external review recommendations of Canada’s regulatory system post-Fukushima.</p>	<p>Effective emergency management and preparedness procedures and practices are integral to the safe operation of reactor facilities. The CNSC uses REGDOCs, such as the proposed 2.10.1 as a part of a comprehensive regulatory framework which licensees have to demonstrate compliance with in order to operate.</p> <p>More specifically, the proposed REGDOC addresses issues such as the integration of emergency response plans with other response organizations and the testing of emergency measures. If the Commission approves the document implementation plans will be developed for each facility and incorporated into their respective LCHs. Provisions from 2.10.1 would subsequently be incorporated as a part of the PROL as a component of the license renewal process which includes public Commission Hearings.</p>
31.	2.1	Office of the Fire Marshal & Emergency Management - Ontario	a definition of “worst case scenario” be included	<p>The REGDOC was modified as a result of comments provided.</p> <p>To clarify the “worst case scenario” the following text was added: “Licensees are expected to be able to respond to any set of conditions which cannot be practically eliminated.</p> <p>The term “practically eliminated” was then defined as follows in the glossary</p> <p>“the possibility of certain conditions occurring being</p>

	Section	Organization	Comment	CNSC Response
				<p>physically impossible or with a high level of confidence to be extremely unlikely to arise."</p> <p>The same definition is used in REGDOC-2.5.2, <i>Design of Reactor Facilities: Nuclear Power Plants</i> and REGDOC 2.3.2: <i>Accident Management</i></p> <p>Please see comment 183 for additional discussion related to practically eliminated.</p>
32.	2.1	CNA	<p>The requirements in the RegDoc include the consideration of multi-unit events and the inclusion of scenarios that involve both a nuclear or radiological emergency along with a conventional emergency. We believe that the document would benefit from an acknowledgement regarding the cross-industry coordination in response to such an event.</p>	<p>While the input was noted, no change was made to the document as a result of the comment.</p> <p>The CNSC recognises industry's efforts in response to the Fukushima incident in developing collaborative initiatives to improve emergency preparedness and response and agrees that these efforts will enhance emergency preparedness and response activities; however, given the document is drafted at the programmatic level, no specific reference to these activities was included in the document.</p>
33.	2.1	AECL. OPG	<p>Response to criminal or malicious activity (theft, sabotage, hostile action) may be considered under a separate program.</p> <p>In the Guidance section, after noting the malicious activity, suggest adding a statement that: "Response to criminal and malicious activity may be dealt with under a separate program."</p> <p>This requirement should be in the LCH for the facility, to ensure it is captured in licensee management systems.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>Text modified as suggested.</p> <p>See comment 10 for details on application of REGDOC-2.10.1 to LCHs.</p>
34.	2.1	CELA	<p>... it is time for the CNSC itself to establish the planning basis for emergency planning in response to severe or catastrophic accidents at nuclear power plants in Canada. This planning basis must be specified to include severe, catastrophic accidents with extensive offsite consequences including potential early release of radionuclides, as well as geographically extensive release of radionuclides from an accident. This must be done in a manner that does not assume containment will hold; nor assume that controlled venting will proceed as designed. It must not be based on probabilistic accident scenario calculations.</p> <p>...there also must be a mindset on the emergency planning front that in</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>REGDOC-2.10.1 requires licensees to plan for emergencies which cannot be practically eliminated. See comment 31 for details.</p> <p>In addition, the text has been modified to include the following new requirement:</p> <p>Licensees of reactor facilities greater than 10MW thermal and with emergency planning zones.</p>

	Section	Organization	Comment	CNSC Response
			<p>some cases it may be that nothing in the “defence in depth” scheme has worked and therefore the resources and planning must be in place to respond to that situation extremely quickly, and extremely effectively. While emergency planning and response alone will not be sufficient in such a case to prevent all harm such as damage to property or even to persons, it is well within the realm of appropriate and feasible emergency planning to prevent much harm to people. This will only be the case if the planning basis clearly includes catastrophic accidents; if it does not, then people will be unnecessarily harmed. Examples include scenarios where evacuation takes far too long; where there is massive uncertainty as to evacuation routes; where there is complete inadequacy of medical response and accommodation; and where people have not had access to KI in advance and so its effectiveness, if ingested at all, is needlessly reduced.</p>	<p>“Provide offsite authorities with sufficient information to allow for effective emergency planning policies and procedures to be established and modified, if needed, periodically.”</p> <p>In addition the guidance section was revised to read:  A nuclear emergency may be caused by, or involve, different types of hazards, including natural incidents (e.g. flooding, tornadoes, tsunami, ice or snowstorms, forest fires) and equipment accidents or malfunctions (identified within the design basis and beyond design basis). All hazards that cannot be practically eliminated with possible initiating and propagating pathways should be identified within the planning basis. Response to criminal and malicious activity may be dealt with under a separate program.</p> <p>The planning basis should be based on a full range of postulated scenarios that may challenge the facility’s emergency response capabilities. This should include scenarios that involve a nuclear or radiological emergency combined with a conventional emergency, such as an earthquake or forest fire. A detailed analysis may be used to determine scenarios that can be practically eliminated. Plans should be developed for those scenarios that cannot be practically eliminated. Inputs to be considered in the analysis should include: the licensee’s safety analysis, probabilistic safety analysis, and operating experience.</p> <p>The information to be provided to offsite authorities should provide sufficient detail for the offsite authorities to make informed decision on the size of emergency planning zones and the level of preparedness required. This should include:</p> <ul style="list-style-type: none"> <li>• possible accidents that cannot be practically eliminated</li> <li>• an estimate of the probability of such accidents occurring</li> <li>• an estimate of the associated radiological</li> </ul>

	Section	Organization	Comment	CNSC Response
				consequences, including isotopic release quantities, possible release start time and duration and the geographical area potentially affected. See comment 119 concerning KI pill distribution.
35.	2.1	CELA	CELA is extremely disappointed to see that the draft REGDOC-2.10.1 states in the Guidance section to the Planning Basis that ``all credible hazards`` be identified in the planning, and that ``all credible worst-case scenarios and plans should be developed accordingly``. The term ``credible`` should be deleted from the Guidance. This guidance should not encourage continued reliance on arguments that severe or catastrophic nuclear accidents are unlikely; but the inclusion of this term in this context will do just that. This will result in the continued situation of inadequate emergency planning and preparedness that we presently face in the vicinity of Canada's nuclear power plants.	The REGDOC was modified as a result of comments provided. In lieu of the term "credible" the document was modified to use the phrase "conditions which cannot be practically eliminated" as described in comment 31.  Please see comment 183 for additional discussion related to practically eliminated.
36.	2.1	Environment Canada	given the proximity of Darlington and Pickering (and the fact they are operated by the same organization) is there a need to include a hazard/risk assessment of a multi-facility scenario, similar to the IAEA DS457 considerations?	While the input was noted, no change was made to the document as a result of the comment. All plant sites are required to be sufficiently resourced to independently fully address emergency situations.
37.	2.4 (Formerly section 2.2)	AECL, NB Power, OPG	Redundant information found in licences and LCHs. Delete: "submit all EP program changes to the CNSC at least 30 days before implementing" This requirement should be in the LCH for the facility, to ensure it is captured in licensee management systems	The REGDOC was modified as a result of comments provided. The text was amended as suggested.
38.	2.2 (Formerly section 2.3)	Environment Canada	should consider the need for requirements/procedures outlining a "transition from normal operations to emergency operations" to account for the maintenance of regular site activities when staff are deployed to the emergency response organizations (ie. backfilling of normal operating positions when staff are tasked to the response).	While the input was noted, no change was made to the document as a result of the comment. The transitioning from normal to emergency operation considerations has already been addressed in other regulatory required procedures, such as in minimum staff complement requirements. Guidance can be found in G-323. It is also within licensees internal emergency response procedures that are reviewed by the CNSC.
39.	2.2.1 (Formerly	Environment Canada	does turnover briefings include transfer of authority if required? For example, if an authority falls ill, are there procedures to officially transfer	While the input was noted, no change was made to the document as a result of the comment.

	Section	Organization	Comment	CNSC Response
	section 2.3.1)		the authority and communicate the transfer to other organizations?	Transfer of authority procedures are contained in licensees' internal emergency response procedures that are reviewed by the CNSC.
40.	2.2.1 (Formerly section 2.3.1)	AECL	The clause "Consideration shall be given" is used in several instances. The term "Consideration" implies "good practice" and is inconsistent with "shall", which implies a firm a requirement. Revise to "Consideration should be given" in all instances where it is used."	The REGDOC was modified as a result of comments provided References to all licensees needing to consider the requirements for NPPs over 10MW have been removed.
41.	2.2.2 (Formerly section 2.3.2)	AECL, OPG	Bullets 5b,c: Notification of CNSC "within 15 minutes of activation of ERO and again within 15 minutes of initial notification to offsite authorities" is new and adds additional demands on operating staff at a critical time in the response to the event. It is also noted that there should only be one required notification to the CNSC, further updates will be provided per the program requirements. Suggest rewording as follows: b) off-site authorities are notified within time-frame defined by Provincial /Territorial authority Alternatively, these should be moved to guidance. There may be situations where licensees take longer than 15 minutes to issue notifications; this should not be an issue as long as it is done in a prompt fashion as soon as staff is available to make the notifications. Making this a strict requirement could result in unnecessary issues arising during post accident/incident follow up. Notification is already covered in S-99 and will be covered by S-99's replacement REGDOC - 3.1.1.	The REGDOC was modified as a result of comments provided. The requirement for all Class I facilities was changed to: "Ensure that the CNSC is notified within 15 minutes of activation of the ERO." The specific timing notification requirements in REGDOC-2.10.1 provide additional clarity for licensees in emergency situations. REGDOC - 3.1.1. Section 2: Reporting Requirements provides the following generic definition: "'immediately" means immediately after the licensee becomes aware of the situation or event and initiates any required response actions, such as alerting the staff of the nuclear power plant, or alerting any municipal or provincial authorities who are responsible for responding to the situation or event." The following words of clarification were added to the guidance section: "It is critical that the CNSC and offsite authorities be advised within the identified timeframes. The only acceptable exception to the requirement would be a situation in which immediate action was required to prevent a catastrophic incident from occurring."
42.	2.2.2 (Formerly section 2.3.2)	NB Power	Bullet 5(c): Notification of CNSC "within 15 minutes of activation of ERO and again within 15 minutes of initial notification to offsite authorities" is new and adds additional demands on operating staff at a critical time in the response to the event Suggest rewording as follows: b) off-site authorities are notified within	The REGDOC was modified as a result of comments provided  See comment 41 for details.

	Section	Organization	Comment	CNSC Response
			time-frame defined by Provincial I Territorial authority c) All Notifications follow direction provided in RD	
43.	2.2.2 (Formerly section 2.3.2)	Cameco	<p>Bullet 5(c): In the uranium mining and milling context, we believe that 15 minutes is an unreasonable requirement to report to CNSC and offsite authorities. Site response happens quickly, and protection of human life, environment and property are the primary priorities. Once these priorities are being addressed, then there will be time to notify the CNSC and offsite authorities.</p> <p>We would therefore recommend that "as soon as practicable" following the categorizing of the event be the reporting timeframe to report to CNSC and offsite authorities.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>Bullet 5 (c) has been removed. The section title was modified to retain the applicability of the requirement to all Class I facilities:  <b>Additional requirements for all Class I facilities</b>  Ensure that the CNSC is notified within 15 minutes of activation of the ERO.</p>
44.	2.2.2 (Formerly section 2.3.2)	Bruce Power	<p>Bullet 5: 5 should appear as guidance. The main priority needs to be stabilizing the situation and if notification takes longer than 15 minutes it should not become an issue. The current reporting requirements for operating NPPs require immediate notification upon activation of the ERO. It is also noted that there should only be one required notification to the CNSC, further updates will be provided per the program requirements.</p> <p>Move 5 to guidance and reword to: describe all offsite notification requirements and any time requirements that apply, ensuring that: a. the description includes identification of the appropriate positions, by title and agency, of the provincial, territorial and local government agencies as required by the provincial or territorial Emergency Plan b. offsite authorities including CNSC are notified, this should occur within 15 minutes of any event categorized as a Reportable Event or above, c. status of the Licensee ERO should be included with the initial notification, d. notification of changes in ERO status to off site authorities should be made within 15 minutes of the change.</p> <p>The requirements should be performance based and not prescribed. This is already covered in S-99 and will be covered by S-99's replacement REGDOC 3.1.1. There may be situations where licensees take longer than 15 minutes to issue notifications; this should not be an issue as long as it is done in a prompt fashion as soon as staff is available to make the notifications. Making this a strict requirement could result in unnecessary issues arising during post accident/incident follow up. It is also unnecessary to provide multiple notifications, this will add unnecessary</p>	<p>The REGDOC was modified as a result of comments provided</p> <p>See comment 41 for details.</p> <p>Licensees have established relationships with offsite authorities and hence there is no need for the CNSC to be prescriptive.</p>

	Section	Organization	Comment	CNSC Response
			confusion and complication during events that require these notifications	
45.	2.2.2 (Formerly section 2.3.2)	CNA	<p>Bullet 5(c): information to CNSC staff within overly constrictive timelines, and often before action is taken. Such rules are not only burdensome, but in certain cases could negatively affect safety and health.</p> <p>Similarly Section 2.3.2 (5c) stipulates a requirement to notify the CNSC " ... within 15 minutes of activation of the Emergency Response Organization, and again within 15 minutes of initial notification to offsite authorities."</p> <p>In the immediate moments during an emergency, all priority needs to be given to stabilizing the situation. Diverting staff engaged in managing the situation to meet this reporting timeline risks distracting key staff from matters more directly focused on responding to the emergency. Likewise there is no benefit to be gained by having two reporting requirements to the CNSC; the first initial notification and again after offsite authorities have been notified. The RegDoc should be modified to require notification of CNSC staff within 15 minutes of offsite authorities being notified.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 41 for details.</p>
46.	2.2.2 (Formerly section 2.3.2)	AECL, NB Power, OPG	Guidance: Note that the categories listed do not match NBEMO offsite classification terminology.	<p>While the input was noted, no change was made to the document as a result of the comment.</p> <p>The categories were suggested for facilities without existing notification categories.</p>
47.	2.2.3 (Formerly section 2.3.3)	AECL	The guidance in 2.3.3 is overly prescriptive e.g.: Source term sampling and estimation should be determined and reported to the CNSC on a best effort basis, upon determination and compilation of the data in an approved format.	<p>While the input was noted, no change was made to the document as a result of the comment.</p> <p>In the event of an emergency situation the CNSC would need accurate information as quickly as possible. The information in guidance sections are not requirements and it is up to the discretion of the licensee to follow these recommendations or to adopt other means of meeting the requirements.</p>
48.	2.2.3 (Formerly section 2.3.3)	AECL, OPG	<p>Bullet 5: Clarification of "station perimeter" is requested.</p> <p>Suggest replacing with "station perimeter (or near site boundary)" for clarity and alignment with industry nomenclature.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The term nuclear facility perimeter was added to the glossary with the following definition:</p> <p><b>nuclear facility perimeter</b></p> <p>"A geographical area that contains the authorized facility, and within which the management of the authorized</p>

	Section	Organization	Comment	CNSC Response
				facility may directly initiate emergency actions. This is typically the area within the security fence or other designated property marker."
49.	2.2.3 (Formerly section 2.3.3)	AECL, OPG	Emergency Assessment Requirements – Security issues should be kept separate and not included in EP program "Onsite and offsite impacts on or threats to health, safety, national security....." <i>Remove 'national security'</i>	The REGDOC was modified as a result of comments provided The term national security was removed.
50.	2.2.3 (Formerly section 2.3.3)	Bruce Power	Bullet 6: have real-time fixed radiological detection and monitoring capabilities off site with appropriate backup power, this REGDOC should not restrict the option of real-time off-site monitors have sufficient capacity and capability for offsite radiological monitoring, including mobile offsite survey teams or real-time fixed radiological detection and monitoring capabilities with appropriate backup power and report results to the offsite response authorities and the CNSC The current wording is too restrictive and discounts an option to have real time off site monitoring.	While the input was noted, no change was made to the document as a result of the comment. Offsite survey teams can provide measurements that fixed monitors cannot –such as air monitoring and contamination monitoring.
51.	2.2.3 (Formerly section 2.3.3)	AECL, OPG	Bullets 5 and 6: Some licensees are planning to have real-time fixed radiological detection and monitoring capabilities off site with appropriate backup power, this REG DOC should not restrict the option of real-time off-site monitors Reword items to: 5. have sufficient capacity and capability for radiological detection and monitoring including real-time or mobile off-site monitoring around the station perimeter with appropriate backup power, and shall communicate results to offsite authorities <i>including</i> the CNSC. 6...and capability for <i>on-site</i> and off-site..... authorities <i>including</i> the CNSC. The current wording is too restrictive and discounts an option to have real time off site monitoring.	While the input was noted, no change was made to the document as a result of the comment. See comment 50 for reasoning.
52.	2.2.3 (Formerly section 2.3.3)	AECL, OPG	Bullets 7, 8: Restate Items 7 & 8 to be prefaced as follows: As part of their Emergency Plan, identify the organization responsible to: 7..... authorities <i>including</i> the CNSC. 8..... authorities <i>including</i> the CNSC.	While the input was noted, no change was made to the document as a result of the comment. The CNSC is not an off-site authority.
53.	2.2.3 (Formerly	NB Power	Licensees should identify in their program who will do 7 & 8. NB Power relies on Health Canada for plume dispersion and dose modeling.	While the input was noted, no change was made to the document as a result of the comment.

	Section	Organization	Comment	CNSC Response
	section 2.3.3)		Modify wording to indicate the licensees should identify in their program the organization who will perform plume dispersion and dose modeling.	Licensees are required to arrange for their own model to be developed to ensure effective comparisons in emergency situations. In addition, licensee recommendations will be based on their dispersion models and not ones developed by federal agencies. Federal models are focussed on longer-term developments and not on immediate site-specific circumstances.
54.	2.2.3 (Formerly section 2.3.3)	AECL, OPG	Meaning of the affected facilities and their components is unclear Provide clarification	The REGDOC was modified as a result of comments provided. The following definition of "affected facilities" was added to the glossary: <b>affected facilities</b> On site locations in duress and the components, the affected facility/ unit(s) and their components that control, contain and cool nuclear substances and prevent the release of nuclear substances.
55.	2.2.3 (Formerly section 2.3.3)	Bruce Power	Bullet 5: Suggest replacing with "nuclear facility perimeter" as this is defined by the license	The REGDOC was modified as a result of comments provided. Change made as suggested.
56.	2.2.3 (Formerly section 2.3.3)	CELA	Bullets 1 to 4: In terms of the provisions numbered 1 to 4 in this section, requiring licensees to describe their methods by which they will assess and predict onsite and offsite conditions and parameters, CELA recommends that this must be done by way of public submissions to and approval by the Commission, with opportunity for public input. A mere requirement for a description of the methodology does not provide assurance that this will be a robust approach on which the public should have high confidence. And clearly this must be done, not in the context of an actual emergency, but in prior thinking and planning. The public has an essential stake in such methods and approaches.	While the input was noted, no change was made to the document as a result of the comment. Licensees are required to submit the information as a part of the licensing process. The public are invited to participate in that process through participating in the Commission Hearing process.
57.	2.2.3 (Formerly section 2.3.3)	CELA	[ Bullets 5, 6] the CNSC should require that this information also be made publicly available in the event of an accident; this is essential to build public trust in the decision making and instructions being provided at such a time. It also provides a mechanism for knowledgeable observers to challenge findings or decisions; in the case of Fukushima such	The REGDOC was modified as a result of comments provided. See comment 113 for details.

	Section	Organization	Comment	CNSC Response
			possibilities might have saved a great deal of harm when people were evacuated to an area subsequently found to be severely contaminated, contrary to prior expectations.	
58.	2.2.3 (Formerly section 2.3.3)	CELA	[Note in the submission the section was misidentified as section 2.2.3]: In the Guidance to this section, provision is made that during an emergency ``Source term sampling and estimation shall be determined and reported to the CNSC on a best efforts basis...`` (p. 10, emphasis added) CELA recommends that the phrase ``best efforts`` should be deleted.	The REGDOC was modified as a result of comments provided. The text was changed to use hourly in lieu of best efforts.
59.	2.2.4 (Formerly section 2.3.4)	Bruce Power	Bullet 5: promptly and regularly provide recommendations to offsite authorities and the CNSC when protective action is required  Suggest rewording as follows:  promptly and regularly provide the necessary information to offsite authorities and the CNSC to allow informed decisions on protective action for the public to be made.  The original statement has the potential to create confusion about the authority to enact protective measures.	The REGDOC was modified as a result of comments provided.  Licensees are experts in the fields of nuclear emergency response and are best placed to understand the potential effects of developments and to recommend the most effective mitigating measures.  The following text was added to the requirements section to clarify recommendations from licensees: "promptly and regularly provide recommendations to offsite authorities when protective action is required and inform the CNSC."  In addition the following wording was added to the guidance section: "While the licensee is required to provide recommendations to offsite authorities, it is up to the discretion of the authorities to accept, reject or modify recommendations."
60.	2.2.4 (Formerly section 2.3.4)	CNA	Bullet 5: It is not within the jurisdiction of our members to provide such recommendations and this requirement should be removed from the RegDoc prior to its being finalized.	The REGDOC was modified as a result of comments provided. See comment 59 for details.
61.	2.2.4 (Formerly section 2.3.4)	CNA	The RegDoc would benefit from the inclusion of an explanation of the jurisdictional responsibilities when it comes to hazardous substances. A brief discussion of and/or reference to the CNSC's Memorandum of Understanding with Environment Canada, with an explanation of their respective responsibilities under the Canadian Environmental Protection Act would be helpful.	While the input was noted, no change was made to the document as a result of the comment. REGDOC-2.10.1 provides requirements and guidance for licensees in matters relating to emergency preparedness and response at licensed nuclear facilities. It is not intended to provide general information concerning hazardous substances or CNSC MoUs with other

	Section	Organization	Comment	CNSC Response
				organizations. to the public. However, information on the issues raised in the comment can be found on the CNSC website.
62.	2.2.4 (Formerly section 2.3.4)	AECL, OPG	<p>Bullet 5: Inconsistent with other legislation</p> <p>Suggest rewording 5 As follows: 5. promptly and regularly provide the necessary information to offsite authorities and the CNSC to allow informed decisions on protective action for the public to be made.</p> <p>Or</p> <p>Remove from this REGDOC, as this is not within the authority of the Utility. Licensee provides data only.</p> <p>This is not consistent with current legislation, and leads to jurisdictional issues and conflicts with existing legislation, resulting in non-compliance with licence conditions. Provincial accountability is provided to ensure decision making for public protective actions is done independent of the utility.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 59 for details.</p>
63.	2.2.4 (Formerly section 2.3.4)	NB Power	<p>promptly and regularly provide recommendations to offsite authorities and the CNSC when protective action is required</p> <p>Suggest rewording 5 as follows: 5. identify the organization responsible to determine protective actions. OR Remove from this RD, as this is not within the authority of the Utility. Licensee provides data only.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 59 for details.</p>
64.	2.2.4 (Formerly section 2.3.4)	AECL	<p>Bullet 6: Interface and support for offsite response organizations</p> <p>Provide clarification on "other information"</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The following text was added: "...and any other pertinent information that is determined as relevant to the emergency response"...</p>
65.	2.2.4 (Formerly section 2.3.4)	OPG	<p>Bullet 6: The term "other information" is vague.</p> <p>Provide clarification on "other information" or Remove "other information"</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The following text was added: "...and any other pertinent information that is determined as relevant to the emergency response..."</p>
66.	2.2.4 (Formerly section 2.3.4)	Office of the Fire Marshal & Emergency Management -	<p>Promptly and regularly provide recommendations to offsite authorities and the CNSC when protective action is required.</p> <p><i>This information is not required in Ontario given that protective action(s) are under Provincial jurisdiction</i></p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 59 for details.</p>

	Section	Organization	Comment	CNSC Response
		Ontario		
67.	2.2.4 (Formerly section 2.3.4)	Office of the Fire Marshal & Emergency Management - Ontario	Develop and maintain public evacuation time estimates based on current census data and future population growth on a per decade estimation until end of life – <i>OPG currently meets this requirement; to date, Bruce Power and CRL have not undertaken this. We see this as a positive development.</i>	Comment was acknowledged, however, there were no specific suggestions as to document modifications.
68.	2.2.4 (Formerly section 2.3.4)	NB Power	Public evacuation time estimates should be provincial offsite responsibility. We rely on NBEMO for this. Modify wording that evacuation will be achieved "as soon as achievable" rather than trying to estimate.	While the input was noted, no change was made to the document as a result of the comment. Licensees need to conduct estimates to ensure availability of data supporting evacuation plans can be developed and maintained.
69.	2.2.4 (Formerly section 2.3.4)	AECL	Bullet 9: Not all licensees have individual with this authority and responsibility on-site. For example, AECL has a Senior Emergency Officer (SEO) with full authorizations for emergencies. During the off-shift the NRU Senior Reactor Shift Engineer (SRSE) is in charge until the SEO is reached for decisions and/or on-site. The SEO could be making decisions from an "off-site" location. As written, this adds significant resourcing burden to licensees where the required authority exists, but is not located on-site. Therefore suggest removal of the word "on-site". Remove word: "onsite" Adds significant resourcing burden to licensees where the required authority exists, but is not located on site.	The REGDOC was modified as a result of comments provided. The requirement ensures that there is no delay in the decision-making process during an emergency. Quality decisions need to be made by the appropriate authority with the required authority – either direct or delegated. An on-site individual also mitigates against collapses in communications with the outside world. However, the power can be delegated. The text was modified to add the following words of clarification in the guidance section: During an emergency it is critical to have an on-site person with the required authority to order emergency venting if required. However, this authority can be delegated should it not be practical to have a senior emergency officer onsite at all times.
70.	2.2.4 (Formerly section 2.3.4)	Bruce Power	Bullet 11: The requirement to notify the CNSC prior to nominal venting and the requirement to ensure consultation prior to alternate venting must have an allowance for situations where venting is required without first having these activities carried out. Suggest rewording as follows: for NPPs, designate an onsite person with the authority for nominal venting and ensure that notification is made to offsite authorities and the CNSC prior to nominal venting. Protecting the	The REGDOC was modified as a result of comments provided. See comment 41 for details. Protecting the structural integrity of containment is always the priority. If prior notification of venting cannot be made due to exigent circumstances, notification shall be made as soon as possible after venting.

	Section	Organization	Comment	CNSC Response
			<p>structural integrity of containment shall take priority if notification cannot be made due to circumstances beyond Licensee's control. In this case notification shall be made as soon as possible.</p> <p>This is to avoid confusion on the priority in the highly unlikely event that communication is not possible. It is an important provision for the plant operator to have authority to vent when required to protect the plant/personnel/public. In certain circumstances, it may not be possible to notify or consult in advance of the requirement to vent. This is consistent with current practice.</p>	
71.	2.2.4 (Formerly section 2.3.4)	AECL, NB Power, OPG	<p>Bullets 11-12: The requirement to notify the CNSC prior to nominal venting and the requirement to ensure consultation prior to alternate venting must have an allowance for situations where venting is required without first having these activities carried out.</p> <p>Suggest reword for 11 &amp; 12 as follows: 11.....and ensure, <i>that</i> where practicable, notification is made ...12•...and ensure, <i>that where practicable</i>, consultation .... Alternatively, add note ". Protecting the structural integrity of containment shall take priority if notification can not be made due to circumstances beyond Licensee's control. In this case notification shall be made as soon as possible.</p> <p>Important provision for the plant operator to have authority to vent when required to protect the plant/personnel/public. In certain circumstances, it may not be possible to notify or consult in advance of the requirement to vent. This is consistent with current practice.</p>	<p>The REGDOC was modified as a result of comments provided. See comment 41 for details.</p>
72.	2.2.4 (Formerly section 2.3.4)	AECL, OPG	<p>Bullets 11-12: Definitions of nominal venting and alternate venting in footnote 2 are not aligned with industry practice.</p> <p>Suggest that nominal venting be defined in the glossary as using prescribed station equipment for maintaining containment pressure below specified values (eg, below atmospheric pressure or below a structural pressure limit). The definition of alternate venting should include provision for non-standard venting procedures.</p>	<p>The REGDOC was modified as a result of comments provided. Bullets 11 and 12 were modified as below and the footnotes removed:</p> <ul style="list-style-type: none"> <li>• for NPPs, ensure there is a designated person on site at all times with the authority for venting</li> <li>• for NPPs, ensure that offsite authorities and the CNSC are consulted prior to undertaking any venting activity, unless venting must be performed in an urgent manner to protect the structural integrity of containment. In such a case, every effort shall be made to inform the offsite authorities and the CNSC</li> </ul>

	Section	Organization	Comment	CNSC Response
				as early as possible
73.	2.2.4 (Formerly section 2.3.4)	AECL	Bullets 11 – 13: Not all licensee facilities have containment. For example, AECL's NRU reactor does not have containment. To ensure no ambiguity for the future, add new note, "15. Where containment venting is not applicable, follow confinement processes."	The REGDOC was modified as a result of comments provided. As a result of revisions noted in comment 72, the following text has been added as a footnote to bullet 12: "Where containment venting is not applicable, licensees shall follow confinement processes."
74.	2.2.4 (Formerly section 2.3.4)	Office of the Fire Marshal & Emergency Management - Ontario	13. Include in each report to the CNSC, an estimate of the time at which venting will be required. - <i>"offsite authority" is not included here.</i>	The REGDOC was modified as a result of comments provided. "Offsite authority" was added.
75.	2.2.4 (Formerly section 2.3.4)	AECL	Bullet 14: What is 'Abnormal Incident' referring to? Clarify whether this is initial notification or ongoing updates of status (i.e. significant changes or new information/failures/risks).	The REGDOC was modified as a result of comments provided. Bullet 14 was modified to read: "notify the Province and the CNSC of all abnormal incidents as described in section 2.2.2" The following definition of abnormal incident was also added to the glossary: <b>"abnormal incident</b> an abnormal occurrence at the nuclear facility that may have a significant cause and/or may lead to more serious consequence"
76.	2.2.4 (Formerly section 2.3.4)	AECL, Bruce Power, OPG	Footnotes page 11: The footnotes do not line up with the correct bullets (11 and 12). The definition of venting is not necessary here and should be in the glossary. Then the footnotes can be aligned with the proper bullets.	The REGDOC was modified as a result of comments provided. See comment 72 for details.
77.	2.2.4 (Formerly section 2.3.4)	Office of the Fire Marshal & Emergency Management - Ontario	Notify the Province and the CNSC of abnormal incidents - <i>"abnormal Incidents" is not defined here. Under the Provincial Nuclear Emergency Response Plan, this has a specific, defined meaning. Does this terminology have a different, CNSC definition?</i>	The REGDOC was modified as a result of comments provided. See comment 75 for details.

	Section	Organization	Comment	CNSC Response
78.	2.2.4 (Formerly section 2.3.4)	Office of the Fire Marshal & Emergency Management - Ontario	<i>Suggest the addition of "offsite authority" per above.</i>	The REGDOC was modified as a result of comments provided. The text was modified as suggested.
79.	2.2.4 (Formerly section 2.3.4)	Office of the Fire Marshal & Emergency Management - Ontario	<i>Suggest a definition of "abnormal incidents" be included.</i>	The REGDOC was modified as a result of comments provided. See comment 75 for details.
80.	2.2.4 (Formerly section 2.3.4)	OPG	What is 'Abnormal Incident' referring to? Clarify whether this is initial notification or ongoing updates of status (i.e. significant changes or new information/failures/risks). Define what an abnormal incident is or remove this point.	The REGDOC was modified as a result of comments provided. See comment 75 for details.
81.	2.2.5 (Formerly section 2.3.5)	AECL, OPG	Level of detail suggested by "defined" is not needed in an ER plan. Suggest "Back-up facilities ..... should be <i>referenced</i> within ER plan."	The REGDOC was modified as a result of comments provided Text was modified as suggested.
82.	2.2.5 (Formerly section 2.3.5)	NB Power	PLGS only does accounting for personnel within the protected area, not the entire site as indicated. Clarify what is meant by onsite, or specify within protected area.	The REGDOC was modified as a result of comments provided. The following text was added to bullet 4 to clarify: Accounting should be commensurate with the scale/categorization of the emergency.
83.	2.2.5 (Formerly section 2.3.5)	Cameco	Bullet 2: Pursuant to the <i>Saskatchewan Mines Regulations</i> , Cameco's mining operations are required to have three -5 person teams (for a total of 15 individuals) on site to respond to underground emergencies. Mine rescue teams have a capacity to function in an emergency situation to a maximum of four hours per team providing the teams approximately 12 hours of coverage. Same team rotation is expected, but cannot be sustained for 72 hours without mutual aid support from the other northern mining operations. A lengthy underground emergency is unusual and can be normally resolved with site teams and mutual aid support, but 72 hours without offsite assistance is not reasonable for these operations. Cameco therefore recommends that uranium mines and mills be exempted from this requirement.	The REGDOC was modified as a result of comments provided. See comment 1 for details.

	Section	Organization	Comment	CNSC Response
84.	2.2.5 (Formerly section 2.3.5)	AECL, OPG	Bullet 16: Clarity around responsibilities for KI pill distribution Suggest rewording 16 as follows: Providing KI Pills for only on-site personnel and procuring for the primary zone and distributing to the municipalities.	The REGDOC was modified as a result of comments provided. See comment 119 For details.
85.		Bruce Power,	Bullet 16: Clarity around responsibilities for KI pill distribution Suggest rewording 16 as follows: Providing KI Pills for only on-site personnel and procuring for the primary zone and distributing to the municipalities.  The document needs to be clear on the expectations for the most appropriate method of distribution of KI pills. While due to logistics, pre-distribution may be required in some locations, it may not be required for other locations.	The REGDOC was modified as a result of comments provided. See comment 119 for details.
86.	2.2.6 (Formerly section 2.3.6)	AECL, OPG	Bullet 2: Clarity requested for term "Emergency response facilities" Define emergency response facility	The REGDOC was modified as a result of comments provided. The following definition of emergency response facility was added to the glossary: <b>emergency response facility</b> An area or room that can be immediately activated when required during an emergency/incident.
87.	2.2.6 (Formerly section 2.3.6)	AECL, OPG	Bullet 4: Licensees should not be responsible for CNSC emergency response equipment. Suggest rewording as follows: 4. have at least one onsite emergency response facility outside of the protected area, with an allocated work space for the CNSC. Licensees should not be responsible for CNSC emergency response equipment. While the licensee could make a satellite phone available if required, there should not be the requirement to provide and maintain a designated satellite phone. This can be negotiated with the individual licensee.	The REGDOC was modified as a result of comments provided. Bullet 4 became bullet 7 and was modified as follows: "provide a work space with computer, internet access and telephone for a CNSC representative in each ERF. In addition, the CNSC shall be granted access to install an antenna for a satellite phone at each ERF."

	Section	Organization	Comment	CNSC Response
88.	2.2.6 (Formerly section 2.3.6)	AECL, OPG	<p>Bullet 6: Emergency response facilities within the primary zone may not be hardened for existing plants Existing plants have a range of backup facilities that can be utilized if required.</p> <p>Add a provision that: "Hardened emergency response facilities within the primary zone are not required, provided alternate diverse provisions are in place to ensure that functions normally carried out in the emergency response facilities inside the primary zone remain available following a design-basis external events (e.g., earthquake, tornadoes)."</p> <p>Existing plants do not have hardened emergency response facilities within the primary zone, but instead rely on the ability to perform operations from alternate locations. This flexibility should be retained for existing plants, as changing the requirements is not justified from a risk benefit / cost perspective. The requirements should be performance based rather than a prescriptive requirement (ie. it must be possible to carry out the function, but should not prescribe how).</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The following section was revised to now read:</p> <p>Additional requirements for licensees of reactor facilities with a thermal capacity greater than 10 MW. These licensees shall:</p> <ol style="list-style-type: none"> <li>4. have an emergency response facility located on site, but outside of the protected area</li> <li>5. have an emergency response facility located off site and outside of the plume exposure planning zone</li> <li>6. ensure that the emergency response facilities (ERF) will ensure the health and safety of workers in the ERF and ensure the continuity of operations for all emergency situations that cannot be practically eliminated. If this cannot be achieved, then</li> <li>7. have backup facility with similar capability for each of the onsite and offsite such that the back up facility is unlikely to be effected by an event that would disable the primary. In addition, activation or transfer of operations to the backup facility must be done without disruption to the response operations</li> <li>8. provide a work space with computer, internet access and telephone for a CNSC representative in each ERF. In addition, the CNSC shall be granted access to install an antenna for a satellite phone at each ERF</li> <li>9. ensure all emergency response facilities have the capacity and capability of sustaining emergency response for a minimum of 72 hours without offsite support</li> <li>10. ensure the design and layout of emergency response facilities are able to support the emergency response</li> <li>11. ensure emergency response facilities have provisions in place to provide nuclear facility data</li> <li>12. pre-arrange memoranda of understanding and/or other priority services agreements required to keep</li> </ol>

	Section	Organization	Comment	CNSC Response
				<p>ERFs functional over prolonged periods, and ensure such agreements are documented and either referenced or attached to the ER plan</p> <p>13. determine and implement methods for communicating with onsite personnel and offsite authorities, including the implementation of at least two levels of backup communications systems; licensee communication links must be compatible with the licensee, province or territory, and the CNSC</p> <p>In addition the following guidance was added: The preferred means of ensuring the protection of workers and the continuation of operation is to have hardened facilities within the primary zone that have:</p> <ul style="list-style-type: none"> <li>• radiological protection/ shielding</li> <li>• adequate ventilation,</li> <li>• contamination control</li> <li>• The ability to withstand Design Based Events (DBE) hazards such as wind, tornado, snow, ice, etc.</li> </ul> <p>Future facilities will be subject to requirements provided in <i>REGDOC-2.5.2, Design of Reactor Facilities: Nuclear Power Plants</i> section 8.10.1 Emergency support facilities".</p>
89.	2.2.6 (Formerly section 2.3.6)	NB Power	<p>Bullet 6: Emergency response facilities within the primary zone may not be hardened for existing plants Existing plants have a range of backup facilities that can be utilized if required.</p> <p>Add a provision that: "Hardened emergency response facilities within the primary zone may not be required, provided alternate diverse provisions are in place."</p>	<p>The REGDOC was modified as a result of comments provided. See comment 88 for details.</p>
90.	2.2.6 (Formerly section 2.3.6)	NB Power	<p>Bullet 11: We interpret "display nuclear facility data" as including hardcopy chart/paper as well as electronic displays, in event of power unavailability.</p> <p>Add wording to indicate hardcopy chart/paper and electronic displays meet the intent of this statement.</p>	<p>The REGDOC was modified as a result of comments provided. The term "display" was replaced with "provide".</p>
91.	2.2.6 (Formerly section 2.3.6)	Bruce Power	<p>Bullets 4-14: Suggest rewording as follows: 4. ensure that emergency response facilities are planned, constructed and located such that effective command and control can be maintained in all postulated</p>	<p>The REGDOC was modified as a result of comments provided. See comment 88 for details.</p>

	Section	Organization	Comment	CNSC Response
			<p>emergencies. Severe circumstances such as earthquake and tornadoes; the possible presence of hazardous materials; and operation for extended times (72 hours minimum) without external support will be included in the plan.</p> <p>5. have at least one facility within or in close proximity to the licensed facility.</p> <p>6. have at least one emergency response facility outside of the protected area in a suitable location but in close enough proximity to the facility to support effective command and control of response activities,</p> <p>7. have a back up facility to each primary facility such that the back up facility is unlikely to be effected by an event that would disable the primary.</p> <p>8. clearly designate the location of emergency response facilities .</p> <p>9. pre-arrange memoranda of understanding and/or other priority services agreements required for activities such as providing fuel for backup power generation, and ensure such agreements are documented and either referenced or attached to the ER plan</p> <p>10. determine and implement methods for communicating with onsite personnel and offsite authorities, including the implementation of at least two levels of backup communications systems; licensee communication links must be compatible with the licensee, province or territory, and the CNSC</p> <p>11. designate a predetermined work space for a CNSC representative at all emergency operations facilities and ensure necessary communication and information equipment/technology is available</p> <p>The terms off site and on site can add confusion and are not necessary. Several of the bullets were repetitive in nature; summarizing the requirements is clearer. The approach should not specify hardened facilities but should instead require an effective strategy to deal with hazardous circumstances. A hardened facility is only one approach and other approaches may be more effective depending on the circumstances.</p>	
92.	2.2.8 (Formerly section 2.3.8)	Environment Canada	consider including a requirement(s) to consult and work with off-site authorities/agencies on recovery (ie. interface and support for offsite recovery, similar to section 2.3.4 for response).	While the input was noted, no change was made to the document as a result of the comment Licensees currently engage with various off-site

	Section	Organization	Comment	CNSC Response
				authorities through various fora such as on various CSA standards, Nuclear Emergency Management Coordination Committee meetings, through various large-scale emergency exercises.
93.	2.2.8 (Formerly section 2.3.8)	Environment Canada	consider more detailed recovery plan requirements. For example: a) development of recovery communication plan b) ongoing security and access control as dictated by the situation c) delineation, characterization, and long-term surveillance of the radiological situation in the environment d) delineation, characterization, and long-term surveillance of the radiological situation in food products, drinking water e) decontamination procedures/operations f) clean-up and remediation procedures/operations g) waste and radioactive waste management operations/plan	While the input was noted, no change was made to the document as a result of the comment. Bullets a, b and e are captured within existing regulatory requirements. Bullets c and d, are outside the CNSC's mandate other than to require contaminated lands be limited to less than 1 mSv per year. Bullets f and g are contained in licensee's operational plans that are reviewed by the CNSC.
94.	2.2.8 (Formerly section 2.3.8)	CNA	Information to CNSC staff within overly constrictive timelines, and often before action is taken. Such rules are not only burdensome, but in certain cases could negatively affect safety and health.  Similarly Section 2.3.2 (5c) stipulates a requirement to notify the CNSC. This is the case with the wording of Section 2.3.8 (3) where it states " ... licensees shall: submit the actual recover plans to the CNSC prior to commencing recovery efforts." Having this requirement in the Regulatory Document could cause delays in the recovery process and as a result could potentially adversely affect site health, safety, security and the environment. Some recovery efforts may be required to begin immediately after control of the event has been regained and it is reasonable that such activities could begin before a full recovery plan is produced, much less submitted to CNSC staff.  In the immediate moments during an emergency, all priority needs to be given to stabilizing the situation. Diverting staff engaged in managing the situation to meet this reporting timeline risks distracting key staff from matters more directly focused on responding to the emergency. Likewise there is no benefit to be gained by having two reporting requirements to the CNSC; the first initial notification and again after offsite authorities have been notified. The RegDoc should be modified to require notification of CNSC staff within 15 minutes of offsite authorities being notified.	The REGDOC was modified as a result of comments provided.  See comment 42 regarding section 2.3.2. In addition, bullet 3 was removed.

	Section	Organization	Comment	CNSC Response
95.	2.2.8 (Formerly section 2.3.8)	AECL, OPG	<p>Bullet 3: This is an unreasonable requirement as some recovery efforts will commence as soon as the event/accident is under control.</p> <p>Suggest rewording as follows: <i>3. As recovery plans become available, submit to CNSC., with the understanding those recovery efforts already in progress will be noted.</i></p> <p>This could cause delay in recovery process, potentially adversely impacting site health, safety, security and environment. Dependent upon the scope of the incident, some recovery steps may get started without a full plan.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>Bullet 3 was removed.</p>
96.	2.2.8 (Formerly section 2.3.8)	Cameco	<p>Submission of an actual recovery plan to the CNSC prior to commencing the recovery efforts may not always be possible. If approval is required, then this could unnecessarily prolong a simple, straight forward response, increase the risk of contamination being spread, and delay production start-up. This requirement should not apply to uranium mines and mills. Alternatively, only under extreme circumstances, where recovery is significant and long term, should a plan be required.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 95 for details.</p>
97.	2.2.8 (Formerly section 2.3.8)	Bruce Power	<p>Bullet 3: This is an unreasonable requirement as some recovery efforts will commence as soon as the event/accident is under control.</p> <p>Reword to:</p> <p>submit the actual recovery plan to the CNSC as soon as practical after commencing recovery efforts noting any recovery efforts that may have already taken place</p> <p>This could cause delay in recovery process as some recovery efforts are required to commence immediately after the event/accident is under control for protection of the health and safety of workers, the public and the environment, therefore; it is unreasonable to expect that the plan will be submitted prior to commencing any activity.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 95 for details.</p>
98.	2.2.9 (Formerly section 2.3.9)	AECL, OPG	<p>LCH provides requirements for changes to documents made to the documents needed to support the licensing basis. Validation process should be risk based, as per the utility's change management process.</p> <p>There are many ways to perform validation and in licensee experience the expectations of the CNSC is highly dependent of the CNSC specialist reviewing the validation</p> <p>Delete:</p> <p>"notify the CNSC of changes to ER plans and procedures, and submit the</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The following the caveat was added to the requirement: "unless otherwise specified in the LCH".</p>

	Section	Organization	Comment	CNSC Response
			<p>results of the validation to the CNSC, at least 30 days before implementing changes"</p> <p>The level of validation needs to be consummate with the nature of the change for example; minor changes should only require low level desktop validation whereas major changes could require a full HF validation following guidance in G-278.</p>	
99.	2.2.9 (Formerly section 2.3.9)	NB Power	<p>Bullet 3: Notification should be in accordance with licensee change management process; also covered by license handbook which lists documents required to be submitted.</p> <p>Reference License handbook requirements</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 98 for details.</p>
100.	2.2.9 (Formerly section 2.3.9)	Bruce Power	<p>LCH provides requirements for notifications of changes to documents made to the documents needed to support the licensing basis. Any validation process should be risk based, as per the utility's change management process. There are many ways to perform validation and in licensee experience the expectations of the CNSC is highly dependent of the CNSC specialist reviewing the validation.</p> <p>Delete: "notify the CNSC of changes to ER plans and procedures, and submit the results of the validation to the CNSC, at least 30 days before implementing changes" Reword the Guidance section to: For the purpose of this section, "change" means an action that results in modification to, addition to, or removal from a licensee's ER plan. All changes should be validated to demonstrate that performance requirements are met and to determine if there has been a reduction in effectiveness (i.e., decreased capability to respond to an emergency). Purely administrative changes that are intended to update the document without changing intent do not require validation,</p> <p>Repeating notification requirements contained elsewhere is unnecessary and can result in inconsistent or conflicting requirements. The level of validation needs to be consummate with the nature of the change for example; minor changes should require no validation or only low level desktop validation whereas major changes could require a full HF validation following guidance</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 98 for details.</p>

	Section	Organization	Comment	CNSC Response
101.	2.2.9 (Formerly section 2.3.9)	Cameco	Bullet 3: Cameco conducts review and revises to our site Emergency Response Plans and procedures annually. We do not believe it is necessary to provide notifications on minor administrative updates. Accordingly, we would recommend that a threshold be established - e.g. "for major changes".	The REGDOC was modified as a result of comments provided. See comment 98 for details.
102.	2.3.1 (Formerly section 4.1)	Office of the Fire Marshal & Emergency Management - Ontario	In accordance with training and qualification, all licensees <b>shall</b> : 1. provide radiation protection training (either onsite or offsite) for offsite authorities' emergency response staff expected to assist in an emergency; training programs, for both onsite and offsite emergency responders, must be submitted to the CNSC at least 30 days prior to implementation.  <i>It is not clear what type of training this refers to – is it only for <b>First Responders</b>? - Recommendation: Suggest that the audience for such training be clarified.</i>	The REGDOC was modified as a result of comments provided. The following text was added to the guidance section for clarity: The training is intended for any person who would be responding to the emergency on behalf of an offsite authority and is not solely limited to First Responders. The following text was added to the guidance section: Licensees can also develop and use online training materials. Emergency drills are an additional option.
103.	2.3.1 (Formerly section 2.4.1)	NB Power	In some cases PLGS does not provide the offsite authority radiation protection training. Change "provide" to support. Delete "must be submitted to the CNSC at least 30 days prior to implementation".	The REGDOC was modified as a result of comments provided.  Bullet 1 was modified to read: support radiation protection training for offsite authorities' emergency response staff expected to assist in an emergency; training programs, for both onsite and offsite emergency responders
104.	2.3.1 (Formerly section 2.4.1)	AECL, OPG	Bullet1: Licensees do not submit training programs for other areas (with the exception of certified training programs). It should not be required here. Suggest rewording as follows: 1. <i>"ensure the organization responsible, provides" ... and delete "must be submitted to CNSC .... 11 2. as defined in REGDOC 3.1..1, develop... 3. Remove reference to REGDOC 2.2.2 as it is not yet available for review and comment</i>  Submission of this training program does not fit in with the current regulatory framework as other training programs are not submitted. Review of this should be part of the CNSC compliance inspection program.	The REGDOC was modified as a result of comments provided. See comment 103 for details.

	Section	Organization	Comment	CNSC Response
105.	2.3.1 (Formerly section 2.4.1)	Bruce Power, OPG	<p>Bullet 1: Licensees do not submit training programs for other areas (with the exception of certified training programs). It should not be required here.</p> <p>Delete the requirement to submit the training program – Reword Bullet 1 to: provide radiation protection training (either onsite or offsite) for offsite authorities' emergency response staff expected to assist in an emergency</p> <p>Submission of this training program does not fit in with the current regulatory framework as other training programs are not submitted. Review of this should be part of the CNSC compliance inspection program.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 103 for details.</p>
106.	2.3.1 (Formerly section 2.4.1)	AECL, Bruce Power, OPG	<p>Bullet 2: This requirement is not contained in the current LCHs. If it is a reporting requirement it should be in the new REGDOC 3.1.1</p> <p>Delete Bullet 2 This requirement should be considered for inclusion in REGDOC 3.1.1 instead of in this REGDOC</p> <p>Will result in confusion in compliance, as requirement does not occur in reference document.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>Reference to the LCH was removed.</p> <p>This is not a reporting requirement but rather a required submission to ensure training, drills and exercises are scheduled and performed.</p>
107.	2.3.1 (Formerly section 2.4.1)	AECL, Bruce Power, OPG	<p>Bullet 3: The training development requirements are already covered in the operating licence under CSA N286.</p> <p>Delete Bullet 3</p> <p>There is no need to have this requirement as it already exists through the operating licence covered by CSA N286. (It is assumed REG DOC 2.2.2 will be referenced in the future thus making this require redundant).</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The bullet was removed.</p>
108.	2.3.1 (Formerly section 2.4.1)	AECL, OPG	<p>Guidance: Define EROs. Unclear if this refers to multiple Emergency Response Organizations or to the ERO Roles.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The following text was added: "emergency response organizations (EROs)".</p>
109.	2.3.1 (Formerly section 2.4.1)	AECL, OPG	<p>Guidance: Define physical competence</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The term physical competence was removed.</p>
110.	2.3.2 (Formerly section 2.4.2)	AECL, OPG	<p>Requirement to ensure that emergency facilities are maintained in working condition at all times does not cater to some maintenance circumstances where alternate (redundant) facilities are used. (Requirement and Guidance sections affected.)</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The following text was added in the requirement section: "However, facilities may be taken out of service for</p>

	Section	Organization	Comment	CNSC Response
			Suggest adding a clarification in both the requirement and guidance sections: "Facilities may be taken out of service for required maintenance if alternate provisions are put in place during these periods."	required maintenance if alternate provisions are put in place during these periods." There was no need to repeat the same information in the guidance section.
111.	2.3.3 (Formerly section 2.4.4)	CELA	It is of course essential to test the emergency plans in a variety of way as outlined in the RegDoc. However, as far as CELA is aware none of the plans have so far included general members of the public and this is an essential aspect of emergency planning. Members of civil society and members of the public in the vicinity of the nuclear power plants should be included in the emergency measures planning testing and drills; both full scale and many smaller scale drills. In the case of the plants in Durham Region, this should include residents of the City of Toronto in addition to Durham Region.	Comment noted however there were no suggested changes to the text. However, a public consultation process is now required in the development of emergency plans and updates to the plans. See comment 120 for details.
112.	2.3.3 (Formerly section 2.4.4)	AECL, OPG	Bullet 7: Drills and Exercise Define "full-scale integrated emergency testing exercise"	The REGDOC was modified as a result of comments provided. The following sentence was added to the guidance section: A full scale exercise tests onsite and the offsite agency responses to an emergency resulting in a release of nuclear substances from the affected unit(s).
113.	2.3.3 (Formerly section 2.4.4)	AECL, OPG	Bullet 8: Requirement to submit emergency exercise objectives, team organization and scenario development framework to the CNSC at least 20 business days before conducting full-scale emergency exercises needs to recognize that minor changes may occur up until the time of the exercise <i>"It is understood that small changes may be required up to, and including, exercise day."</i> Or Referencing REGDOC 3.1.1 With so many players and interfaces, change is to be expected. It needs to be clearly understood that a scenario submitted in advance of the exercise is subject to change.	The REGDOC was modified as a result of comments provided. The following caveat was added at the end of bullet 7: Due to operational requirements and factors beyond licensee control changes can be made up to the day of the exercise.
114.	2.3.3 (Formerly section 2.4.4)	AECL, NB Power, OPG	Requirement for full-scale emergency exercise self-assessment reports to be submitted to the CNSC within 40 days does not allow sufficient time for a quality response Suggest that the requirement should be to submit the reports within 90 days.	The REGDOC was modified as a result of comments provided. Bullet was reworded as follows: Prepare self-assessment reports regarding the execution of full-scale emergency exercises; such reports must be

	Section	Organization	Comment	CNSC Response
			<p>This is in recognition of the breadth of a full scale exercise, which may incorporate multi-unit / multisite scenarios. There is significant coordination required across a multi-jurisdictional exercise and sufficient time is required to ensure clear understanding and disposition of the issues raised.</p>	<p>submitted to the CNSC if at all possible within, 40 days after exercises have been conducted. (in exigent circumstances reports could be delayed to no longer than 90 days following the conclusion of exercises)</p> <p>The 40 day timeframe is maintained due to the importance of capturing lessons learned and overall impressions while the experiences are still fresh. Emergency exercises have “hot wash” sessions immediately following exercises for the same reasons. In addition, a delay in the submission of the self-assessment reports necessarily entails a delay in the time taken for CNSC staff to conduct their reviews.</p> <p>However, to further clarify the specific information the CNSC is seeking in the self-assessment reports the following text was added at the end of the guidance section:</p> <p>Self-assessment reports should contain the following information:</p> <ul style="list-style-type: none"> <li>• Success and failures of exercise drills</li> <li>• Lessons learned</li> <li>• Areas for improvement</li> <li>• Corrective action plans</li> </ul>
115.	2.3.3 (Formerly section 2.4.4)	Bruce Power	<p>Bullet 15: Requirement for full-scale emergency exercise self-assessment reports to be submitted to the CNSC within 40 business days does not allow sufficient time for a quality response</p> <p>Suggest that the requirement should be to submit the reports within 90 calendar days and the requirement be moved to REGDOC 3.1.1 which contains reporting requirements.</p> <p>This is in recognition of the breadth of a full scale exercise, which may incorporate multi-unit / multi-site scenarios. There is significant coordination required across a multi-jurisdictional exercise and sufficient time is required to ensure clear understanding and disposition of the issues raised. It is preferable to maintain all reporting requirements in a</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>See comment 114 for details.</p>

	Section	Organization	Comment	CNSC Response
			single document.	
116.	2.3.3 (Formerly section 2.4.4)	AECL, OPG	<p>Guidance: In the Guidance section the draft document indicates that emergency exercises should not be used as part of a participant's training development. Industry does use emergency exercises to perform continuing training for participants.</p> <p>Add an allowance that exercises can be used for continuing training of participants and development of staff. Also unsure of intent of last statement " ...for credit and qualification".</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The phrase "for credit and qualification" was removed.</p> <p>In addition the following text was added to the guidance section:</p> <p>The key objective of emergency exercises is to evaluate the performance of an emergency plan and not the competency of the individuals participating.</p>
117.	2.3.3 (Formerly section 2.4.4)	AECL, OPG	<p>Page 21 2<sup>nd</sup> paragraph: It states that emergency exercises measure the competence of participants. Competency of individuals is primarily captured within training and drills. Exercises are designed to confirm response plans and focus more on plan execution, command, control, coordination etc. In support of this comment, the second last paragraph on Page 21 states that "exercise is not meant to evaluate an individual's competency"</p> <p>Suggest to revise "demonstrate competence of participant" to "<i>demonstrate competence of role</i>" in terms of effectiveness as a broader part of the response organization.</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>The text was modified to state: "Emergency exercises simultaneously measure and demonstrate: the preparedness and competence of participants in the specific emergency response roles; the quality of the associated procedures; and the effectiveness of the administrative framework."</p> <p>During exercise play, incompetent participants will affect the effectiveness of the emergency response role. It is expected that training and drills is the primary function for identifying incompetent individuals and/or issues with emergency response roles.</p>
118.	2.3.4 (Formerly section 2.4.3) -	Office of the Fire Marshal & Emergency Management - Ontario	<p>The following educational information should be made available to the public:</p> <ul style="list-style-type: none"> <li>· Possible radiological and non-radiological hazard(s), including their short term effects as well as their potential long term effects on the public for all emergency scenarios –</li> </ul> <p><i>how is "all emergency scenarios" determined?</i></p>	<p>The REGDOC was modified as a result of comments provided</p> <p>The guidance section now reads:</p> <p>In the emergency plan, licensees should describe the procedures to communicate information about the emergency to offsite authorities during emergencies. These procedures should ensure that emergency information is sent routinely – and as conditions change (either positively or negatively) – to offsite authorities so the information can be disseminated to the public.</p> <p>The information communicated to offsite authorities should include possible radiological and non-radiological</p>

	Section	Organization	Comment	CNSC Response
				<p>hazard(s), including their short-term effects as well as their potential long-term effects on the public, for all emergency scenarios</p> <p>In the emergency plan, licensees should describe the protocols to ensure coordinated public communications during an emergency. For nuclear power plants, provisions should include consideration of communications strategies and describe the roles and responsibilities of organizations that are responsible for communicating key information to the public.</p> <p><b>Note that to improve clarity the changes mentioned in this section now appear in Section 2.2.7 of the document.</b></p>
119.	2.3.4 (Formerly section 2.4.3)	Office of the Fire Marshal & Emergency Management - Ontario	<p>Where to get potassium iodide pills (if necessary)...</p> <p><i>There is no reference to KI distribution in advance of an emergency and so this document is not in alignment with the current DRAFT CSA N1600 and thereby, the CNSC decision regarding the Pickering relicensing which states:</i></p> <p>365. The Commission directs OPG to ensure the production of an emergency management public information document, to be distributed to all households in the Pickering area, summarizing the integrated emergency response plan of all involved organizations, including all key roles and responsibilities. This document should also include information on potassium iodide (KI) tablet distribution and information included in CSA Standard N1600. This document is expected to be produced by the end of June 2014.</p> <p><i>Recommendation: Suggest that "all emergency scenarios" be detailed/clarified.</i></p> <p><i>Suggest that the document be aligned with CSA N1600 and the CNSC relicensing decision for Pickering.</i></p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>To clarify responsibility for the distribution of potassium iodide (KI) pills the following text was added to section 2.3.4 concerning NPPs over 10MW:</p> <p>Additional requirements for licensees of reactor facilities with a thermal capacity greater than 10 MW and with designated offsite emergency planning zones.</p> <p>These licensees shall collaborate with offsite authorities to:</p> <ol style="list-style-type: none"> <li>1. ensure that a sufficient quantity of iodine thyroid blocking (ITB) agents is pre-distributed to all residences, businesses and institutions within the designated plume exposure planning zone</li> <li>2. ensure that a sufficient quantity of ITB agent is pre-stocked and ready for prompt distribution beyond the designated plume exposure planning zone</li> <li>3. ensure that the pre-distributed and pre-stocked ITB agents are maintained within expiry date</li> </ol> <p>In addition the following guidance was added: The term Iodine Thyroid Blocking (ITB) agent is used</p>

	Section	Organization	Comment	CNSC Response
				<p>generically and includes Potassium Iodide (KI) tablets.</p> <p>The pre-distribution of ITB agents should be done in a carefully planned and coordinated manner, to ensure that the public receives the appropriate information and education related to the benefits, risks and usage instructions of ITB agents.</p> <p>The pre-distribution of ITB agents should be undertaken by representatives of the Health and/or Emergency Management authorities of the province or region/municipality, with support from the licensee.</p> <p>The term designated plume exposure planning zone is sometimes referred to as "primary zone", "urgent protective action zone" or "emergency planning zone".</p> <p>The size of the plume exposure planning zone is determined by the appropriate offsite authorities based on information in the planning basis and is typically sized in the range of 8 to 16km.</p> <p>See comment 120 for information on public information materials.</p> <p><b>Please note that this section was further modified based upon supplemental feedback from stakeholders – see comments 173,177, and 182 for details.</b></p>
120.	2.3.4 (Formerly section 2.4.3)	CELA	<p>The provisions listed in the Draft RegDoc are appropriate as far as they go. However there are many additional issues that should be included in the public education materials, including evacuation and transportation routes; host community information; information about expectations of the public in the case of a severe offsite accident (the current plans expect them to mainly find alternate accommodation and in some cases undertake decontamination themselves); where the radiation-accident equipped medical facilities are; what to do if they have senior residents, hospitalized residents or school age children in other facilities at the time of an emergency and much else.</p> <p>... the expectations of the licensees as to what to communicate should be far more specific and should be tested in consultation with engaged and</p>	<p>The REGDOC was modified as a result of comments provided.</p> <p>Public information provisions were strengthened in the document by adding the following requirements for reactor facilities with a thermal capacity greater than 10 MW and with emergency planning zones:</p> <p>4. ensure that all residences, businesses and institutions within the designated plume exposure planning zone are provided with public emergency preparedness information detailing how to they should prepare for a nuclear emergency and what they should do or expect during a</p>

	Section	Organization	Comment	CNSC Response
			<p>informed members of the public in the vicinity of the nuclear power plants such as those non-industry members of the public who have attended CNSC hearings and meetings or meetings of agencies such as the Durham Nuclear Health Committee. For example the limitations of sheltering in place must be clear, and the time sensitiveness of ingesting KI pills must also be explained clearly and broadly to the public.</p>	<p>nuclear emergency</p> <p>5.ensure that this public emergency preparedness information is readily available online</p> <p>To support the requirements the following text was added to the guidance section:</p> <p>The purpose of the public emergency preparedness information is to provide residents with useful information on how they should prepare, what they should expect and how they should respond to an emergency at the nuclear facility. Accordingly, the information should include information on:</p> <ul style="list-style-type: none"> <li>• how they will be alerted</li> <li>• how they will be notified or informed on what to do</li> <li>• sheltering-in-place instructions</li> <li>• evacuation orders</li> <li>• how/when to take ITB agents, and where to get them if not pre-distributed</li> <li>• contact details for where to obtain additional information, such as Web sites and social media sites</li> </ul> <p>To ensure the public have easy access to the required emergency information and that this is available online for those in the secondary zone, licensees should:</p> <ul style="list-style-type: none"> <li>• create an emergency preparedness information pamphlet and distribute hard copies annually to every residence, business and institution within the plume exposure planning zone.</li> <li>• post the emergency preparedness information on a variety of websites, including those of the licensees, municipalities and provincial EMOs</li> <li>• establish a formal public consultation process to be included in the emergency plan development and updates</li> </ul> <p><b>Please note that this section was further modified based upon supplemental feedback from</b></p>

	Section	Organization	Comment	CNSC Response
				stakeholders – see comment 182 for details.
121.	2.3.4 (Formerly section 2.4.3)	AECL, OPG	Bullet 6: Activation of public alerting should allow for use of alternate means of public alerting. Suggestion to remove "(sirens)" from the text. Suggest removing the word "sirens". The text would then read: "activation of public alerting systems"	The REGDOC was modified as a result of comments provided. The text was changed to remove sirens and replace with activation of public alerting systems.
122.	2.3.4 (Formerly section 2.4.3)	AECL, Bruce Power, OPG	Public Education Program - Title refers to "education", text refers to "information" Differentiate from terms "public education program" vs. "public information program". Educating the public about what to do at the time of a nuclear emergency is the responsibility of the province Differentiate from terms "public education program" vs. "public information program". Should clarify CNSC expectations with respect to the extent of the zone requiring a public education program. This should be consistent with proposed CSA N1600. Public education is the responsibility of the province. There is a potential for jurisdictional conflict. Suggest that this section should direct to REGDOC/GD 99.3. where the intention is "information" Terminology between documents needs to be consistent for appropriate compliance. Public education is the responsibility of the province. There is a potential for jurisdictional conflict.	The REGDOC was modified as a result of comments provided. The text was changed to public information program.
123.	Appendix A	AECL	Suggest change of Title to "Accident Control and Management". Align with request made under review of REGDOC 2.3.2 to revise definitions Ensure consistency of understanding and requirements for licensees and the members of the public.	While the input was noted, no change was made to the document as a result of the comment. CNSC staff acknowledges industry's concern related to the definition and scope of "Accident Management". IAEA definitions referred to by industry pre-date Fukushima lessons learned. Older IAEA definitions no longer adequately reflect CNSC expectations or international approaches and best practices in a post-Fukushima context.
124.	Appendix A	OPG	Figure 2 in Appendix A is confusing. It implies that Level 4&5 belongs to the EP program and does not fall under accident management. Attached is a revised Figure 2 clarifying the relationships in line with proposal for revised Figure 2 for RegDoc 2.3.2. Ensure consistency of understanding and requirements for licensees and the members of the public.	The REGDOC was modified as a result of comments provided. Diagram was modified for clarity.

	Section	Organization	Comment	CNSC Response
125.	Other	CELA	A document was also submitted: "Emergency Planning at the Pickering Nuclear Generating Station", which contained CELA's review of the adequacy of emergency planning at the Pickering nuclear power plant complete with 30 associated recommendations	While the subject matter is pertinent, the report was initially submitted in May 2013 as part of CELA's request to intervene at the Pickering Nuclear Generating Station License Day Two Hearings and not in relation to REGDOC-2.10.1. However, the comments and recommendations in the document have been reviewed and were taken into consideration in revising REGDOC-2.10.1.
<b>Consultation on additional requirements</b>				
On April 11, 2014 an email invited stakeholders to comment on new requirements are related to distribution of iodine thyroid blocking agents and emergency preparedness information to members of the public as well as provision of planning information to off-site authorities. Comments 126 through to 154 are the responses to that email.				
126.	Additional Requirement (AR) General	AECL	AECL has major concerns with these new requirements and requests a joint Industry/CNSC workshop to provide clarification and ensure that the proposed changes are practical.	In response to the request the CNSC will organize a meeting for organizations who commented on the additional amendments to discuss issues and implementation.
127.	AR - General	Bruce Power	Bruce Power recommends an open workshop to be scheduled with all interested stakeholders to better understand the impacts of what is being proposed and to provide answers to several questions before meaningful comment can be provided.	See comment 126 for response.
128.	AR - General	CELA	CELA commends the CNSC for the proposal to add these three items to RegDoc-2.10.1. Their addition, if included in the final proposal, and approved by the Commission in August, 2014, may provide a major level of improvement to the level of emergency preparedness in Canada. Importantly, they could also significantly strengthen the Commission's ability to assure itself of the state of emergency planning around nuclear power plants in Canada when considering applications for licences for those plants. As CELA noted in our original submission in October 2013 and in prior submissions such as during the Pickering hearing in 2013, this is what the IAEA Guide Standard, Preparedness and Response for a Nuclear or Radiological Emergency, Series No. GS-R-2, Safety Standards (Vienna: IAEA, 2002) expects of the national regulator of nuclear power plant licenses. The Commission is the only licensing authority in Canada for these plants as nuclear power plants, and this is an integral factor in licensing. The exercise by the Commission of its authority to review the offsite nuclear emergency plans and to satisfy itself as to their efficacy was also a matter that was the subject of the Fukushima Task Force	Noted, implementation will be discussed at the June 23 <sup>rd</sup> meeting mentioned in comment 126.  For further explanation concerning the IAEA Guide Standard, Preparedness and Response for a Nuclear or Radiological Emergency, Series No. GS-R-2, Safety Standards please see comment 30 above.

	Section	Organization	Comment	CNSC Response
			<p>Report 2011 and the IRSS Report, 2011. We reiterate here our review of these recommendations and the relevant IAEA Standard GS-R-2, edited and updated from our submission to the Pickering hearing in 2013.</p> <p>The IAEA Standard, Preparedness and Response for a Nuclear or Radiological Emergency, Series No. GS-R-2, Safety Standards (Vienna: IAEA, 2002) sets out expectations as to the responsibility of the regulator. It is the regulator's responsibility, among other things, to do the following (excerpts from GS-R-2 paragraphs 3.8 to 3.12:</p> <ul style="list-style-type: none"> <li>• The regulatory body shall require that arrangements for preparedness and response be in place for the on-site area for any practice or source that could necessitate an emergency intervention.</li> <li>• The regulatory body shall ensure that such emergency arrangements are integrated with those of other response organizations.</li> <li>• The regulatory body shall ensure that such emergency arrangements provide a reasonable assurance of an effective response, in compliance with these requirements, in the case of a nuclear or radiological emergency.</li> <li>• The regulatory body shall require that the emergency arrangements "shall be tested in an exercise before the commencement of operation [of a new practice]. There shall thereafter at suitable intervals be exercises of the emergency [arrangements], some of which shall be witnessed by the regulatory body."</li> <li>• In fulfilling its statutory obligations, the regulatory body... shall establish, promote or adopt regulations and guides upon which its regulatory actions are based;... shall provide for issuing, amending, suspending or revoking authorizations, subject to any necessary conditions, that are clear and unambiguous and which shall specify (unless elsewhere specified):... the requirements for incident reporting;...and emergency preparedness arrangements.</li> <li>• In planning for, and in the event of [a nuclear or radiological emergency], the regulatory body shall act as an adviser to the government.</li> </ul> <p><input type="checkbox"/> The regulatory body shall ensure that the co-ordinated arrangements are implemented adequately by the operators.</p>	

	Section	Organization	Comment	CNSC Response
129.	AR - General	CELA	<p>The Fukushima Task Force 2011 discussed the lack of specific regulatory requirements in Canada for operators for emergency planning and the lack of specific and detailed requirements as well as the lack of sufficient regulatory oversight given the gap in the regulatory framework. (CNSC Fukushima Task Force Report 2011 at 40). CELA concurs with this concern, as in reviewing G-225 "Emergency Planning at Class I Facilities and Uranium Mines and Mills" and RD-353, "Testing the Implementation of Emergency Measures", we observed that the requirements were too high-level and non-specific to provide useful measures against which the nuclear emergency plans applicable to an accident at a plant could be compared and tested. The Fukushima Task Force reiterated this concern in its chapter reviewing the Canadian nuclear regulatory framework in view of lessons learned from the Fukushima accident. It again stated that the CNSC should require offsite emergency plans to be submitted along with applications to construct or operate nuclear power plants. (At 53). The CNSC's proposal for RegDoc 2.10.1 will address this issue to the extent that it adds these types of requirements.</p> <p>The Fukushima Task Force report stated that: "Federal and provincial nuclear emergency planning could be strengthened through establishing a formal, transparent, national-level oversight process for offsite nuclear emergency plans, programs and performance, and through scheduling of regularly planned full-scale exercises." The IRSS report also noted these Fukushima Task Force made recommendations that the CNSC should require the submission (to the CNSC) of the provincial nuclear emergency response plans. The IRSS report encouraged this to be done. (At 58) In the presentation by CNSC at the March, 2013 inter-jurisdictional emergency planning workshop, the responsibility of regulators to ensure emergency response capability and these Fukushima Task Force and IRSS recommendations were also noted.</p> <p>The IRSS report (conducted of CNSC from Nov 26 to Dec 2, 2011) also noted that there are a multiplicity of agencies and levels of government with responsibilities in nuclear emergency planning in Canada and recommended that the CNSC should "verify the requirements and standards described in the offsite emergency plans are met, through tests and assessments." (at page 59)</p> <p>CELA submits that even without additional regulatory amendments recommended by the Fukushima Task Force and the IRSS, the CNSC</p>	<p>Comments were noted.</p> <p>CNSC staff agrees that REGDOC-2.10.1 will strengthen the regulatory framework in the area of nuclear emergency preparedness and response. In addition, the CNSC has also been active in the development of Canadian Standards Association document <i>CSA N1600-14 - General requirements for nuclear emergency management programs</i>. The CSA standard provides additional guidance and clarification concerning the respective roles and interactions among industry and various governmental and offsite agencies.</p>

	Section	Organization	Comment	CNSC Response
			<p>already has jurisdiction to consider the adequacy of the emergency plans in place at nuclear power plants in deciding whether to issue the licence requested, and/or whether to impose additional requirements by way of licence conditions to better protect health, safety and the environment. (Sections 3, 9, 24 of the Nuclear Safety and Control Act, S.C., 1997, c. 9) However, the addition of specific requirements by way of a proposal such as RegDoc 2.10.1 will improve the CNSC's oversight and ability to assure itself of the sufficiency of offsite emergency planning.</p> <p>CELA again urges that the Fukushima Task Force recommendations for CNSC oversight of the offsite nuclear emergency response plans be pursued forthwith by way of amendment of the CNSC regulations such as RegDoc 2.10.1 and requirements there-under. This particularly includes the recommendation for description of the regulatory requirements to address radioactive hazards during an emergency in greater detail. This also includes the recommendation of the Task Force to enhance regulatory oversight with periodic safety reviews and to increase requirements for "requirements and expectations for both design basis and beyond design basis accidents". (Task Force at v).</p> <p>As important as the role of the province is in developing their general emergency plans, and their specific nuclear emergency plans, they are not the approval authority for the licensing of nuclear power plants. It is untenable that the content and efficacy of those plans be determined entirely by agencies that are not regulated directly by the CNSC such as EMO, as important as they are in the undertaking of the plans.</p> <p>Constitutionally, the authority over nuclear power plants has, as you know, been definitely declared to be federal by way of the declaration of nuclear power to be for the general advantage of Canada (Ontario Hydro v Ontario Labour Relations Board [1993] 3 SCR 327. We have noticed recent correspondence by the EMO to the CNSC objecting to the CNSC's jurisdiction to set the content of offsite emergency planning and we respectfully submit that they are in error in this submission as this is a matter integral to the operation and licensing of nuclear power in Canada. Furthermore, as noted it is the CNSC and only the CNSC which has the authority in furtherance of the purposes of the Nuclear Safety Control Act in granting licenses. While the EMO has a role, they do not have the jurisdiction over plant licensing, and plant licensing considerations cannot stop at the plant boundary. The Act requires the Commission in licensing</p>	

	Section	Organization	Comment	CNSC Response
			<p>assure itself that the licensee:                      s. 24(4) (b) will, in carrying on that activity, make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.</p> <p>It is a red herring that the Ontario cabinet approves the provincial nuclear emergency response plan. If nuclear power plants are to be operated in the province, then all requirements of the national regulator must be met. If these include specific components relevant to offsite protection of the public from effects of accidents at those plants, then the operators must comply, and must demonstrate a reasonable basis to rely on other actors such as EMO to ensure that the level of protection required by the CNSC is in place.</p> <p>Footnotes cited in stakeholder comment:  <i>CNSC Fukushima Task Force Report</i>, CNSC INFO-0824, October 2011 at iv, v.</p>	
130.	AR- General	Greenpeace	<p>Greenpeace is supportive of the proposed additional regulatory requirements....</p> <p>As mentioned, Greenpeace believes these are sensible additions, but also feels additional detailed instructions are required for them to be meaningful.</p> <p>At a high-level, Greenpeace suggests that these additional emergency planning requirements should be designed to fight complacency. Greenpeace has observed a significant amount of complacency among provincial, municipal and federal agencies responsible emergency planning in spite of the Fukushima disaster.</p> <p>It has been documented that corporations and government agencies often depend on emergency plans to maintain a delusion that they are adequately prepared for such disasters. Reliance on such "fantasy documents" – including Ontario's current offsite nuclear emergency plans – may actually increase risks to public safety because they provide a false sense of security.</p> <p>Greenpeace feels that Canadian authorities, such as the CNSC, EMO</p>	<p>The CNSC is committed to perpetual vigilance in ensuring Canadians would be protected in the unlikely event of a nuclear emergency. In May 2014 the CSNC took part in a major emergency exercise – Unified Response - involving 54 organizations including Ontario Power Generation, provincial, municipal and international organizations as well as offsite responders. In all over 1000 individuals were involved over the three-day exercise. Included in the exercise were external international observers from the United States and the International Atomic Energy Agency (IAEA). The resulting reports from the exercise will be used for continual improvement.</p> <p>REGDOC-2.10.1 addresses several concerns noted in the comment. REGDOC-2.10.1 will provide offsite authorities and the public with sufficient information to assess the adequacy of emergency response plans. See comment</p>

	Section	Organization	Comment	CNSC Response
			<p>and OPG, are currently relying on such “fantasy documents” and giving Canadians a false sense of security. This increases threats to the public. Greenpeace recommends CNSC staff revise RegDoc-2.10.1 with an eye to deterring Canadian authorities from becoming complacent, giving a false sense of security and relying on such “fantasy documents.” Greenpeace believes this could partially be done by modifying the three aforementioned requirements to:</p> <ul style="list-style-type: none"> <li>• Establish an ongoing dialogue with affected populations regarding nuclear emergency plans;</li> <li>• Require regular public reporting on the public attitudes and understanding of nuclear emergency plans;</li> <li>• Require regular (preferably annual) reporting on the success of pre-distributing iodine thyroid blocking agents;</li> <li>• Establish mechanisms to regularly challenge the provincial planning basis for offsite nuclear plans, in light of such things as population growth and technological changes (particularly communication technology);</li> <li>• Regularly test the adequacy of offsite nuclear emergency plans through the development and publication of modelling of large accidental radiation releases and anticipated emergency response.</li> </ul> <p>The aforementioned measures would help ensure an ongoing transparent dialogue between the public and government authorities (both provincial and federal) based on continually updated evidence. At present there is no such dialogue, no reporting requirements, or evidence gathering mechanisms. This has allowed government authorities, including the CNSC, to fall into complacency.</p> <p>Indeed, the additional requirements proposed by the Commission only came about because of heightened public concern following the Fukushima disaster. Greenpeace urges the Commission to ensure that the next rigorous review of offsite emergency plans doesn't wait for the next nuclear disaster. It should be a regular ongoing public discussion.</p> <p>Footnote cited in stakeholder comment:  Lee Clarke, <i>Mission Improbable: Using Fantasy Documents to Tame</i></p>	<p>140 for further details.</p>

	Section	Organization	Comment	CNSC Response
			<i>Disaster</i> , University of Chicago Press, 1999.	
131.	AR-1	AECL	<p>There are several questions that should be answered before we can provide meaningful comment. Canada has made great progress in the Fukushima response because we studied each issue carefully and then moved quickly to deal with any concerns. It appears that we have skipped the study phase here and are in danger of making an uninformed decision. We suggest that the CNSC needs to better understand the impacts of what is being proposed and recommend an open workshop be held with all interested stakeholders to discuss this and provide a fair opportunity for input.</p> <p>Agree, pre-distribution is the "right thing to do". The issue is "how" to get KI to 'everyone', respect community personal boundaries, minimize safety risk in the process, and measure success.</p> <p>General Issues:</p> <p><input type="checkbox"/> The community is not in the jurisdiction of industry. Health Canada has the jurisdiction to determine, but has not yet done so, whether a mass distribution of KI pills would be a contravention of s. 14(1) of the Food and Drugs Act.</p> <p><input type="checkbox"/> The KI working group (federal, provincial and industry) looked at pre-distribution and raised various concerns - examples of concerns are:</p> <p>a. Mailing: KI unsolicited brings risk to children who might open the package.</p> <p>b. Mailing: will result in waste when a portion gets disposed as junk mail.</p> <p>c. Door to Door Delivery: a stranger coming to the door to inform and distribute KI can stress the homeowner or latch key children.</p> <p>d. Door to Door Delivery: many people are not home or won't answer the door to a stranger so when is there "enough" distribution.</p> <p>e. Door to Door Delivery: there is a risk to the delivery person going to a stranger's home.</p> <p>f. Centralized Pick-Ups: Are already available in OPG areas via "call us" or area pharmacies. Almost no utilization by the public.</p> <p>KI has a specific purpose and there is no established planning basis that supports the need for pre-distribution beyond 10km. Other ingestion</p>	<p>The wording of the additional requirement was clarified based upon this comment.</p> <p>See comment 126 regarding having a meeting to discuss additional requirements.</p> <p>To clarify distribution and jurisdictional responsibilities following requirements and guidance have been added:</p> <p>"Additional requirements for licensees of reactor facilities with a thermal capacity greater than 10 MW and with designated offsite emergency planning zones.</p> <p>These licensees shall collaborate with offsite authorities to:</p> <ol style="list-style-type: none"> <li>1.ensure that a sufficient quantity of iodine thyroid blocking (ITB) agents is pre-distributed to all residences, businesses and institutions within the designated plume exposure planning zone</li> <li>2.ensure that a sufficient quantity of ITB agent is pre-stocked and ready for prompt distribution beyond the designated plume exposure planning zone</li> <li>3.ensure that the pre-distributed and pre-stocked ITB agents are maintained within expiry date....</li> </ol> <p>Guidance:</p> <p>The term ITB agent is used generically and includes potassium iodide (KI) tablets.</p> <p>The pre-distribution of ITB agents should be done in a carefully planned and coordinated manner, to ensure that the public receives the appropriate information and education related to the benefits, risks and usage instructions of ITB agents.</p> <p>The pre-distribution of ITB agents should be undertaken by representatives of the Health and/or Emergency Management authorities of the province or region/municipality, with support from the licensee.</p>

	Section	Organization	Comment	CNSC Response
			control measures are already available for outer areas.	<p>The term "designated plume exposure planning zone" is sometimes referred to as "primary zone", "urgent protective action zone" or "emergency planning zone". The size of the plume exposure planning zone is determined by the appropriate offsite authorities based on information in the planning basis and is typically sized in the range of 8 to 16 km."</p> <p>The requirement states that the distribution of ITBs is to be done in collaboration with offsite authorities. In the guidance it states that the provincial authorities should lead the distribution of ITBs with support from the licensee.</p> <p>In addition, in the guidance section the importance of an associated education program for the public in conjunction with distribution.</p>
132.	AR-1	NB Power	<p>There are several questions that should be answered before we can provide meaningful comment. Canada has made great progress in the Fukushima response because we studied each issue carefully and then moved quickly to deal with any concerns. It appears that we have skipped the study phase here and are in danger of making an uninformed decision. PLGS suggests</p> <p>that CNSC needs to better understand the impacts of what is being proposed and recommend an open workshop be held with all interested stakeholders to discuss this and provide a fair opportunity for input.</p> <p>Agree, pre-distribution is the "right thing to do". The issue is "how" to get KI to 'everyone', respect community personal boundaries, minimize safety risk in the process, and measure success.</p> <p>General Issues:</p> <p>The community is not in the jurisdiction of industry. Health Canada has the jurisdiction to determine, but has not yet done so, whether a mass distribution of KI pills would be a contravention of s. 14(1) of the Food and Drugs Act.</p> <p><input type="checkbox"/> The KI working group (federal, provincial and industry) looked at predistribution and raised various concerns.</p> <p><input type="checkbox"/> KI has a specific purpose and there is no established planning basis</p>	<p>The wording of the additional requirement was clarified based upon this comment.</p> <p>See comment 131 for details.</p> <p>See comment 126 regarding having a meeting to discuss additional requirements.</p>

	Section	Organization	Comment	CNSC Response
			<p>that supports the need for pre-distribution beyond 10km. Other ingestion control measures are already available for outer areas.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> There is no clarity on what/who is part of "selective pre-distribution"?</li> <li><input type="checkbox"/> Industry does not have medical experts to manage the process or questions.</li> <li><input type="checkbox"/> There needs to be a capability to "recall" KI once it has been distributed in case of problems... what are the rules for when KI is past the shelf life?</li> <li><input type="checkbox"/> Cost with unconfirmed benefit, particularly if extending past 10km</li> </ul> <p>How" to pre-distribute KI safely - examples of concerns:</p> <ul style="list-style-type: none"> <li>a) Mailing: KI unsolicited brings risk to children who might open the package.</li> <li>b) Mailing: will result in waste when a portion gets disposed as junk mail.</li> <li>c) Door to Door Delivery: a stranger coming to the door to inform and distribute KI can stress the homeowner or latch key children.</li> <li>d) Door to Door Delivery: many people are not home or won't answer the door to a stranger so when is there "enough" distribution.</li> <li>e) Door to Door Delivery: there is a risk to the delivery person going to a stranger's home.</li> <li>f) Centralized Pick-Ups: Are already available in some areas via "call us" or</li> <li>g) area pharmacies. Almost no utilization by the public.</li> </ul> <ol style="list-style-type: none"> <li>1. Convene information gathering workshop</li> <li>2. ADD words - "the opportunity for pre-distribution of iodine thyroid blocking agents will be made to all residences, businesses and institutions within the plume exposure planning zone (sometimes named the primary zone or the urgent protective action zone, typically sized at approximately 10 km),</li> </ol> <p>DELETE words - "and selective pre-distribution in the ingestion planning zone (sometimes named secondary zone or extended planning distance, typically sized at approximately 50 to 80 km)".</p>	

	Section	Organization	Comment	CNSC Response
133.	AR- 1	Bruce Power	<p>Bruce Power understands the benefits of Potassium Iodine (KI) pill pre-distribution. Other agencies such as the Office of the Fire Marshall and Emergency Management (OFMEM) and Municipality of Kincardine have jurisdiction and responsibility for KI distribution, whereas Industry does not. These agencies are working with Bruce Power and other stakeholders, to assess, plan and implement the distribution in a manner that is efficient and safe for the public. There also is further concern regarding compliance controls once KI pills have been distributed to recall and lack of option provided to residents as to whether they want to receive KI pills or not. Bruce Power is committed to meeting its current KI pill resourcing obligations as documented in the Provincial Nuclear Emergency Response Plan (PNERP), which, is to "procure in advance, adequate stocks of stable iodine tablets for the Primary Zone populations". However, further information is required here to address impacts and questions.</p>	<p>The wording of the additional requirement was clarified based upon this comment. See comment 131 for details. See comment 126 regarding having a meeting to discuss additional requirements.</p>
134.	AR - 1	OPG	<p>Other agencies such as the Office of the Fire Marshal and Emergency Management (OFMEM) and Durham Emergency Management Office however are vested with the jurisdiction and responsibility for KI distribution, not OPG. These agencies are working with OPG and other stakeholders, to assess, plan and implement the distribution in a manner that is efficient and safe for the public. OPG will, of course, continue to collaborate with the OFMEM on this issue and meet its KI tablet resourcing obligations as documented in the Provincial Nuclear Emergency Response Plan (PNERP) which is to "procure in advance, adequate stocks of stable iodine tablets for the Primary Zone population", regardless of the decision on how to distribute the KI pills.</p> <p>Suggested Changes:</p> <ol style="list-style-type: none"> <li>1. Convene information gathering workshop</li> <li>2. ADD words - "the opportunity for pre-distribution of iodine thyroid blocking agents will be made to all residences, businesses and institutions within the plume exposure planning zone (sometimes named the primary zone or the urgent protective action zone, typically sized at approximately 10 km),</li> </ol> <p>DELETE words - "and selective pre-distribution in the ingestion planning zone (sometimes named secondary zone or extended planning distance,</p>	<p>The wording of the additional requirement was clarified based upon this comment. See comment 131 for details. In addition: The term selective pre-distribution has been dropped. References to specific distances in the requirement have been dropped in favour of referencing the provincially established plume exposure zone. Compliance will be measured through adherence to the program established to implement the requirement. The program should be developed collaboratively with provincial authorities and include such questions as recall of pills and the supply of ITBs outside the plume exposure zone. See comment 126 regarding having a meeting to discuss additional requirements.</p>

	Section	Organization	Comment	CNSC Response
			<p>typically sized at approximately 50 to 80 km)".</p> <p>Impact on Industry</p> <p>Industry has an obligation to support the community, with community and provincial agreement, but industry has no legal jurisdiction. Industry cannot "force" the public to accept KI tablets into their businesses and homes so how can pre-distribution compliance be measured?</p> <p>Clarification:</p> <ol style="list-style-type: none"> <li>1. What is level of industry authority (jurisdiction) in the community? Where is this confirmed?</li> <li>2. What is the basis for expanding distribution outside the UPA/primary zone?</li> <li>3. What/who is part of "selective pre-distribution"?</li> <li>4. What are the expectations for "recall" of KI?</li> <li>5. What is the measure of compliance?</li> <li>6. Who ensures that industry will not be held liable from issues arising from distribution</li> </ol>	
135.	AR - 1	Office of the Fire Marshal & Emergency Management - Ontario	<p>The Ontario Office of the Fire Marshal and Emergency Management (OFMEM) firmly believes that the distribution of KI pills in advance of an emergency needs to be managed by the proper authority having jurisdiction and consistent with responsibilities outlined in the Province's approved Provincial Nuclear Emergency Response Plan (PNERP). As well, successful KI distribution needs to be done in conjunction with an effective public education campaign and through providers perceived by the public to be credible. It is only when citizens understand what they have, why they have it and what to do with it, that KI distribution will be effective and worthwhile.</p> <p>In our opinion, the nuclear facility is not the appropriate authority for the distribution of KI. Nor should they be put into the position of being accountable for KI distribution. They should, however, be accountable for providing the required support and resources to enable off-site authorities to implement an effective KI distribution program. This approach is consistent with the Ontario's PNERP and with the views of our stakeholders.</p>	<p>The wording of the additional requirement was clarified based upon this comment.</p> <p>See comment 131 and 134 for details. The wording of the additional requirements clarifies that licensees are responsible to providing needed support and sufficient resources to the offsite authorities to ensure the effective distribution of ITBs.</p>

	Section	Organization	Comment	CNSC Response
136.	AR - 1	Office of the Fire Marshal & Emergency Management - Ontario	<p>In the context of Section 6 (k) (i) of the Class I Nuclear Facilities Regulations pursuant to the Nuclear Safety and Control Act, we propose the following edits:</p> <ol style="list-style-type: none"> <li>1. Ensure, in accordance with the off-site authority's nuclear emergency response plan<sup>1</sup>, that a sufficient quantity of iodine thyroid blocking (ITB) agents, such as potassium iodide (KI) pills, are distributed in advance of an emergency for residences, businesses and institutions within the designated plume exposure planning zone (sometimes referred to as primary zone or urgent protective action zone), the radius of which is defined in the offsite authorities' nuclear emergency response plan.</li> <li>2. Ensure, in accordance with the off-site authority's nuclear emergency response plan<sup>1</sup>, that a sufficient quantity of ITB agents are pre-stocked and available in advance of an emergency for the population within the designated ingestion control zone (sometimes referred to as the Secondary Zone or extended planning distance), the radius of which is defined in the offsite authorities' nuclear emergency response plan.</li> <li>3. Ensure iodine thyroid blocking (ITB) agents are provided together with a detailed factsheet (that includes appropriate medical information, dosage, risks and benefits and possible side effects), and in conjunction with a public education program administered by an off-site authority.</li> <li>4. Ensure all inventories of ITB agents, including those distributed in advance and pre-stocked are managed to ensure that they remain within expiry dates.</li> </ol> <p>In order to clarify the responsibilities related to ITB, the wording has been changed to reflect the nuclear facilities' role as one of assisting offsite authorities in implementing ITB.</p> <p>The original wording relating to pre-distribution of KI to all residences and institutions with children within the secondary zone has been reworded: Policies for administration, stocking and distribution in the secondary zone will be defined in the offsite authorities' and associated organizations' nuclear emergency response plans, implementing plans and procedures.</p> <p>As drafted by the CNSC, implementation of the secondary zone requirement would be extremely difficult logistically and exceptionally resource intensive.</p>	<p>The wording of the additional requirement was clarified based upon this comment.</p> <p>The importance of collaboration with the offsite authorities is stressed throughout the requirements and guidance sections.</p> <p>References to specific distances in the requirement have been dropped in favour of referencing the provincially established plume exposure zone. Determination of pre-distribution beyond the primary plume exposure zone would be subject to discussions between the licensee and the offsite authorities.</p> <p>The guidance section notes the importance of an associated education program for the public in conjunction with distribution.</p>
137.	AR- 1	CELA	CELA supports pre-distribution of iodine. In addition to pre-distribution	Comments were noted and CNSC staff agree that the pre-

	Section	Organization	Comment	CNSC Response
			<p>within the Primary Zone, CELA submits that the selective pre-distribution in the ingestion planning zone should include in the case of Durham region, the geographical area between the Pickering and the Darlington nuclear generating plants that are outside of 10 kilometers, but between two plants. (We also submit that the plume exposure planning zone or "primary zone" should be expanded as per our prior submissions in the Darlington and Pickering licensing hearings in 2011, 2012 and 2013.)</p> <p>We repeat here many of the submissions we made following our thorough review of the state of emergency planning during the Pickering 2013 licensing hearing, which includes a summary of some of the key documents and rationale pertaining to the issue of Potassium Iodide (KI) (referred to above in the CNSC proposal as "thyroid blocking agents"). The following is edited for the current context as submissions respecting proposed RegDoc-2.10.1.</p> <p>Potassium Iodide (KI) is important because its ingestion helps to block uptake of radioactive iodine in case of a severe offsite accident. Radioactive iodines are among the earliest radionuclides emitted from a nuclear power plant in case of breach of containment or in controlled venting following an accident. Emergency response to protect against radioactive iodine is needed since iodine "concentrates in the thyroid gland... a quarter of all ingested iodine goes to the thyroid under normal circumstances. As a result, when iodine is ingested the thyroid receives a very large dose compared to the rest of the body (roughly 1000 times as much)". Health Canada states that: "Once in the bloodstream, about 20% of the iodine is absorbed by the thyroid.... It is particularly susceptible to beta and gamma irradiation from radioisotopes of iodine, especially I-131." (Health Canada Guidelines for Intervention During a Nuclear Emergency, 2003 at 21).</p> <p>The ICRP notes that Iodine Thyroid Blocking is primarily intended as a short term measure to reduce uptake of radioiodines by the thyroid from inhalation over a few days. The prevention of uptake by ingestion should primarily be accomplished by controlling foodstuffs, milk and water that may be contaminated. (ICRP Publication 109 at 65). IAEA Guide GS-G-2.1 states that radioiodine uptake by the thyroid gland following an accident can be reduced by taking stable (non-radioactive) iodine. It outlines that "to achieve maximum effectiveness, stable iodine must be administered before or soon after the intake of radioiodine. The</p>	<p>distribution of KI pills can have a prophylactic effect on residents.</p> <p>The additional requirements require the licensee to support the offsite authorities in ensuring sufficient quantities of ITBs are available for local populations.</p> <p>In addition, the requirements in REGDOC-2.10.1 apply to all nuclear generating stations in Canada with designated offsite emergency planning zones.</p>

	Section	Organization	Comment	CNSC Response
			<p>effectiveness of the measure decreases rapidly with delay, and can be reduced to 50% or less if administered 6 hours after a single intake of radioactive iodine.” (at Appendix V, V.15) The IAEA Guide states that its reduction of dose is only 20% 10 hours after the intake of radioiodine and almost zero 24 hours after. (Ibid, V.15) ICRP publication 109 reinforces this – if stable iodine is taken up to 6 hours before the intake of radioactive iodine, “the protection provided is almost complete”; if at the time of radioiodine inhalation, its effectiveness is 90%; and 50% within a few hours. The ICRP stated that “to obtain the maximum reduction of the radiation dose to the thyroid, stable iodine should be administered before any intake of radioiodine or as soon as practicable thereafter.” (At 65.) (emphasis added)</p> <p>As long ago as 1984, the province of Ontario’s Working Group #2 to the Ontario Nuclear Emergency Plan (established by the Solicitor General to make recommendations on the use of stable iodine in case of a nuclear emergency) recommended pre-distribution of KI because it must be ingested very early in or prior to a release from an accident in order to be effective. The Working Group #2 also reviewed the reasons for ingestion of KI for thyroid blocking as a significant preventive measure for public health to prevent early thyroid injury or longer term thyroid cancer risks. The Working Group stated that “The Group recognized that the cost-benefit ration was high, but that it would be prudent to consider pre-distribution.” (at Recommendation #3) Provincial Working Group #2 also stated in 1984 stated that “if there is any use at all by KI as a blocking agent it would have to be by pre-distribution to an area considered to be at risk.” – this was based on the time frame in which KI must be taken to be effective, and that if the warning time available before release is as little as thirty minutes, then “that will not be sufficient for house-to-house distribution from a central stockpile.”</p> <p>CELA submits that KI MUST be pre-distributed because it must be ingested before or shortly after a radioactive release, and if necessary during a release. It would not be reasonably feasible to quickly obtain KI after such a severe accident that requires ingestion of potassium iodide. In that scenario people will likely be required to shelter in place and/or evacuate so it will not be possible to attend pharmacies to obtain it, nor would it be practical to have extensive distribution at that time. In any event there is no possibility this could happen on time for the affected</p>	

	Section	Organization	Comment	CNSC Response
			<p>population numbers if there was not adequate pre-distribution. The IAEA Guide GS-G-2.1 stresses that other organs (bone marrow, lungs and other organs) are not protected by KI and therefore "sheltering or evacuation of people at risk of life threatening doses should not be delayed for the provision of stable iodine prophylaxis." (at V.21)</p> <p>There is a further concern about the adequacy of KI availability. This is highlighted by comparing the numbers of KI pills available. During the Pickering hearing, the CNSC staff submission noted that there is an inventory of 325,000 potassium iodide tablets for residents of the 10 km zone around Pickering (page 62 of the CNSC's submission CMD 13-H2.) This compares to the population of approximately 260,000 in the 10 km zone but does not take account of the potential necessity for repeat doses nor for provision beyond the 10 km primary zone to the high populations in Scarborough and Pickering in the event of an offsite emergency requiring broader KI distribution.</p> <p>We have compared the lack of a comprehensive KI pre-distribution approach in Ontario to the approach taken by France as described by J.C. Niel, in Ottawa during remarks made on April 10, 2013 during a session on Emergency Management. He stated that the approach taken by France for KI distribution had been first to mail all of the residents in the protective action zone coupons to redeem at local pharmacies for KI for the household, at no charge. After finding that the uptake was insufficient, they then mailed every single household the KI doses needed to ensure that they would have them on hand in the event of a severe accident. CELA submits that based on testimony heard by the Commission at several recent licensing hearings, it is obvious that there is a similar lack of awareness and lack of uptake of KI by households in advance of a potential accident and therefore pre-distribution is the only reasonable approach.</p> <p>The CNSC Fukushima Task Force Report, 2011 also noted that the effectiveness of the approach of stocking the KI tablets at local pharmacies, as opposed to pre-distribution to all households "has not been confirmed." (at 52) It is notable that the CNSC 2011 Fukushima Task Force reported that Ontario is the only nuclear province in Canada that does not pre-distribute KI to the residents in the surrounding planning zones. (at 47)</p>	

	Section	Organization	Comment	CNSC Response
			<p>CELA supports the proposal that the CNSC require and ensure 100% pre-distribution of KI tablets to the residents in the Primary Zone, as well as institutions and businesses and that this requirement be included in the licensing conditions for each of the nuclear generating stations in Canada.</p> <p>Footnotes cited in stakeholder comment:  DRNERP 2011 and TNEP 2012 sources for total population numbers within 10 km of the Pickering NGS.  J.C. Niel, of the Autorite' de surete' Nucle'aire (ASN) at the IAEA International Conference on Effective Nuclear Regulatory Systems hosted by the CNSC in Ottawa, April 8-12, 2013.</p>	
138.	AR - 1	CELA	<p>Furthermore, CELA recommends that all residents of the area between the Pickering and Darlington nuclear power plants in Ontario be included in pre-distribution of KI, even if outside of the current 10 km primary zone. These residents are at increased risk of exposure from an accident with offsite consequences by virtue of being resident in close proximity to two sets of NPP units. The necessity for this recommendation is further indicated by the inclusion of Durham Region in the province of Ontario's Places to Grow targets for increased density of populations therein, and the City of Pickering's plans for increased density by way of Official Plan amendments. See for further details the excellent letter written by Ms. Barbara Pulst to Ontario's Ministers of Infrastructure and Community Safety on May 2, 2014, and included here with her permission. Additionally, OPG commented at the recent hearing to remove the Hold Point at Pickering, in response to a question about their recent submissions to the Ontario Energy Board seeking resources for a research project, that there is the possibility of operating the plant for a longer time frame than has even been contemplated in recent CNSC licensing applications. (See CNSC Public Hearing Pickering Hold Point May 7, 2014 Edocs # 4433743 transcript –pages 134-136). In any event, the expectation that the Pickering plant may close in a few years is not a valid argument to avoid the costs of KI pre-distribution in this larger area, since the corollary is that it is an aging plant, with all of the technical and performance issues that entails. From the perspective of the public, the necessity of KI pre-distribution is as important as ever, during every year</p>	<p>The comment was noted; however additional text was not added.</p> <p>The additional requirement accounts for those living beyond the designated plume exposure zone. The licensee in collaboration with the offsite authority is expected to develop an effective program for those beyond the designated plume exposure zone.</p>

	Section	Organization	Comment	CNSC Response
			<p>of operation, and potentially more-so in the latter years of the plant's operations.</p> <p>During the recent hearing regarding removal of the Pickering holdpoint, CNSC staff (per Mr. Santini) stated that in the proposal for the amended RegDoc 2.10.1, licensees will also be required to ensure that sufficient stocking of KI pills for residents beyond the 10 km zone is provided. CELA supports this, in addition to pre-distribution, and in addition to our recommendation for automatic pre-distribution in the zone between Pickering and Darlington in particular. CELA submits that the RegDoc must also require that information as to where these KI pills can be obtained, and clear direction to pharmacists to release them on request (as opposed to seeking proof of residency within the 10 km zone) must be provided and widely communicated to the public.</p> <p>Footnotes cited in stakeholder comment: (see CNSC Edocs # 4433743, transcript May 7, 2014 at page 68).</p>	
139.	AR - 1	Greenpeace	<p>Greenpeace supports the addition of this requirement, but would like to highlight that by adding this requirement the CNSC and Ontario are just playing catch-up with international practices.</p> <p>The Fukushima Task Force noted in 2011 that Ontario is the only nuclear province in Canada that does not already pre-distribute KI to residents in the surrounding planning zones. The pre-distribution of iodine is already common place in Europe within the Emergency Planning Zone. Moreover, Switzerland passed a new regulation this year requiring iodine to be pre-distributed to everyone within 50 km of a Swiss reactor.</p> <p>So while commendable, the CNSC's proposal to pre-distribute iodine to residences within 10 km of Canadian nuclear stations is long overdue but does not meet international best practices.</p> <p>Greenpeace would also note that there is no discernable scientific or evidence base for the current 10 km Primary Zone. It is an artefact of decisions made by Ontario in 1980s and is arbitrary. Its use to limit the pre-distribution of iodine pills would also be arbitrary.</p> <p>In this light, Greenpeace believes the CNSC and EMO have an obligation to consult affected communities outside of the 10 km zone before foreclosing on the pre-distribution of iodine beyond the 10 km primary</p>	<p>The comment was noted and the proposed final wording of the requirements and guidance sections addresses the issues raised.</p> <p>Licensees provide a supporting role to the work of the offsite authorities and, among other actions, pay the costs of stocking ITBs and help develop associated public information programs.</p> <p>Please see comments 131 and 134 regarding implementation issues and the creation of an associated program to meet the additional requirements.</p>

	Section	Organization	Comment	CNSC Response
			<p>zone.</p> <p>Greenpeace makes the following recommendations related to this requirement:</p> <ul style="list-style-type: none"> <li>• RegDoc-2.10.1 should state that polluter-pays principle will apply to the pre-distribution of iodine. Even if not responsible for the pre-distribution and public communications, licensees should cover the costs.</li> <li>• RegDoc-2.10.1 should state that the pre-distribution of iodine to residents within the 10km primary zone is a minimum, pending public consultations with surrounding communities.</li> <li>• RegDoc-2.10.1 should require annual public reporting on the success of iodine pre-distribution. Such public reports should identify barriers to pre-distribution as well as recommendations and plans for improving pre-distribution.</li> </ul> <p>Footnotes cited in stakeholder comment:</p> <p>CNSC, <i>Fukushima Task Force Report</i>, INFO-0824, October 2011, p. 47.</p> <p>ENCO, <i>Review of Current Off-Site Nuclear Emergency Preparedness and Response Arrangements in EU Members States and Neighboring Countries</i>, Prepared for the European Commission, December 2013, p. 30.</p> <p>ENCO, <i>Review of Current Off-Site Nuclear Emergency Preparedness and Response Arrangements in EU Members States and Neighboring Countries</i>, Prepared for the European Commission, December 2013, p. 30.</p> <p>See: <a href="http://www.admin.ch/opc/fr/classified-compilation/20131043/index.html">http://www.admin.ch/opc/fr/classified-compilation/20131043/index.html</a></p>	
140.	AR-2	AECL	<p>Because there is no clear description of “what” emergency plan information includes, what is compliance? The general emergency plan information is already available through the Ontario provincial plans and the community plans which are available through the Licensee central web-sites. Physical “distribution” is always a concern. People move so what does “success/compliance” look like.</p> <p>Rewrite “ensure provincial and municipal nuclear emergency plans and</p>	<p>The comment was noted and the proposed final wording of the requirements and guidance sections addresses the issues raised.</p> <p>The proposed final wording states that licensees have to work in collaboration with offsite authorities. Details concerning the content of the information are in the guidance section.</p>

	Section	Organization	Comment	CNSC Response
			<p>public support information materials are available online.”</p> <p>The jurisdiction for providing materials to the public is already in the domain of the community and province. If “distribution” of information is required, there needs to be clarification around frequency and expected level of content. The public already has access to the community and provincial plans that clearly outline what they need to know.</p> <p>Site specific information, not related to the community, can be security sensitive. The industry site response plans are pre-reviewed (review and comment) and shared with the community, provincial and federal staff who support response. Additional distribution should be on a “need to know” basis.</p>	<p>Compliance will be measured through adherence to the program established to implement the requirement.</p> <p>“These licensees shall, or in collaboration with offsite authorities: ...</p> <p>4.ensure that all residences, businesses and institutions within the designated plume exposure planning zone are provided with public emergency preparedness information detailing how to they should prepare for a nuclear emergency and what they should do or expect during a nuclear emergency</p> <p>5.ensure that this public emergency preparedness information is readily available online</p> <p><u>Guidance</u></p> <p>In discussion with local authorities, licensees should consider providing public preparedness information with ITB packages when distributing to local populations. The purpose of the public emergency preparedness information is to provide residents with useful information on how they should prepare, what they should expect and how they should respond to an emergency at the nuclear facility. Accordingly, the information should include information on:</p> <ul style="list-style-type: none"> <li>•how they will be alerted</li> <li>•how they will be notified or informed on what to do</li> <li>•sheltering-in-place instructions</li> <li>•evacuation orders</li> <li>•how/when to take ITB agents, and where to get them if not pre-distributed</li> <li>•contact details for where to obtain additional information, such as websites and social media sites</li> </ul> <p>Licensees should conduct periodic reviews with local populations to assess the adequacy of public emergency preparedness information programs.</p> <p>To ensure the public have easy access to the required</p>

	Section	Organization	Comment	CNSC Response
				<p>emergency information and that this is available online for those in the secondary zone, licensees should collaborate with municipalities to:</p> <ul style="list-style-type: none"> <li>•create an emergency preparedness information pamphlet and distribute hard copies annually to every residence, business and institution within the plume exposure planning zone</li> <li>•post the emergency preparedness information on a variety of websites, including those of the licensees, municipalities and provincial EMOs</li> <li>•establish a formal public consultation process to be included in the emergency plan development and updates</li> </ul>
141.	AR – 2	NB Power	<p>Because there is no clear description of "what" emergency plan information includes, what is compliance? The general emergency plan information is already available through provincial plans and the community plans. Physical "distribution" is always a concern. People move so what does "success / compliance" look like.</p> <p>Rewrite "ensure provincial and municipal nuclear emergency plans and public support information materials are available online.</p>	<p>The comment was noted and the proposed final wording of the requirements and guidance sections addresses the issues raised.</p> <p>See comment 140 for details.</p>
142.	AR - 2	OPG	<p>OPG has a fulsome public information program, which meets the requirements of the CNSC RD/GD-99.3, in accordance with the Pickering and Darlington Power Reactor Operating Licences. Emergency information aspects of OPG's public information program are also described in the Consolidated Nuclear Emergency Plan (CNEP).</p> <p>The CNEP additionally defines OPG's commitments under the PNERP which contains requirements for the distribution of emergency information to the public. Pursuant to the PNERP, Annex C, OPG participates in the Public Education Program Subcommittee chaired by the Province's Office of the Fire Marshal and Emergency Management. Through this sub-committee, OPG provides direct support to Durham Region in the development and regular distribution of emergency plan information to the primary zone residents. This information is currently available online and may be linked from any of the participants' websites. OPG in cooperation with our partners, and with input from primary zone residents, will be distributing an additional Public Education document to both the Pickering</p>	<p>The wording of the additional requirement was clarified based upon this comment.</p> <p>See comment 140 for details. RD/GD 99.3 is addressed in the guidance section.</p> <p>The additional requirement may not require additional work on the part of licensees beyond current practice; however, the requirement ensures that all nuclear power plant licensees operating plant over 10MW are subject to the same standards.</p>

	Section	Organization	Comment	CNSC Response
			<p>and Darlington primary zones in May, 2014. This project included holding focus groups with primary zone populations to determine what information the public knows, what information they believe is important, and what format would engage them to read and keep the information.</p> <p>With respect to putting emergency plan information on line, it is not clear whether this refers to the public information or to specific emergency plans. The Federal, Provincial, Regional and City of Toronto emergency plans are currently available on line. Detailed nuclear utility plans may contain sensitive information and should not be distributed in the public domain.</p> <p>In terms of regulatory framework OPG believes public information requirements should be directed to RD/GD-99.3, Public Information and Disclosure and not included in REGDOC-2.10.1 in order to reduce regulatory overlap and maintain clear regulatory direction.</p>	
143.	AR- 2	Bruce Power	<p>Bruce Power has a robust public information program, in accordance with Bruce A and Bruce B Power Reactor Operating Licences. Emergency information aspects of Bruce Power's public information program are also described in the Nuclear Emergency Response Plan (NERP).</p> <p>The NEAP additionally defines Bruce Power's commitments under the PNERP, which contains requirements for the distribution of emergency information to the public. Pursuant to the PNERP, Annex C, Bruce Power participates in the Public Education Program Subcommittee chaired by the OFMEM. Through this sub-committee, Bruce Power provides direct support to the Municipality of Kincardine in the development and regular distribution of emergency plan information to the Primary Zone residents. This information is currently available online. There is no clear direction outlined in this additional requirement regarding the method of distribution, whether it is physical or electronic. Bruce Power requires further clarification as to the type and level of detail over and above what is already provided by the PNERP.</p> <p>With respect to putting emergency plan information online, it is not clear whether this refers to the public information or to specific emergency plans. The Federal, Provincial, and Municipality of Kincardine emergency plans are currently available online. Detailed nuclear utility plans may contain sensitive information and should not be distributed in the public domain.</p>	<p>The wording of the additional requirement was clarified based upon this comment. See comment 140 for details.</p>

	Section	Organization	Comment	CNSC Response
144.	AR – 2	NB Power	<p>The PNERP provides the foundation for a nuclear emergency plan's offsite response, and site specific design basis accidents are fully detailed in each nuclear generating station's Licensing Basis. The industry requires clarification on additional provisions beyond those presently provided.</p> <p>Convene information gathering workshop in order to clarify the information required</p>	<p>The wording of the additional requirement was clarified based upon this comment.</p> <p>See comments 140 for details.</p> <p>Comment 126 states the CNSC's willingness to convene a meeting with stakeholders to discuss implementation implications.</p>
145.	AR - 2	Office of the Fire Marshal & Emergency Management - Ontario	<p>The preparation and provision of all public materials related to nuclear emergency preparedness and response should be done in collaboration with off-site authorities.</p>	<p>The wording of the additional requirement was clarified based upon this comment.</p> <p>The additional requirement states that public information materials are to be developed in collaboration with offsite authorities.</p>
146.	AR - 2	CELA	<p>CELA supports this addition to the RegDoc and recommends that the CNSC specify minimum content for the emergency information materials that are to be distributed and posted. CELA also submits that the CNSC should require demonstration of the effectiveness of the information program, and its reach, with verifiable objective measures to show the level of awareness of the general public as to what they would have to do in an emergency. Very basic information is required especially in the case of the Ontario plants, in all of Durham Region and a large portion of the City of Toronto where recent license hearings have demonstrated the general lack of availability of information for the public. For the Bruce and Pt. Lepreau plants, the situation may be similar (CELA will be examining the general state of emergency planning preparedness and compliance for the next Bruce licensing hearing with the assistance again of funding from the CNSC's funding panel). There has been a recent initiative by OPG to distribute a `flashlight` brochure with basic information in a format that has a better likelihood that it will be retained by home-owners. However, the level of awareness and state of knowledge by the general public is so lacking that it will take repeated and concerted efforts at outreach, public education, training, and communications to ensure that the residents of these areas around the OPG plants are sufficiently informed. In addition, this brochure is only the beginning and much more information needs to be disseminated. For example more details on decontamination; on sheltering efficacy; on specifics around family reunification; on transportation when there is no personal transportation,</p>	<p>Comments were noted.</p> <p>Through robust licensing and compliance processes, including consultations with the public, through the public hearing process and other means, the CNSC monitors licensees' activities to ensure the health, safety and environment of Canadians are protected.</p> <p>The effectiveness of information distribution activities will be measured through adherence to the program established to implement the requirement.</p>

	Section	Organization	Comment	CNSC Response
			<p>and many other practical examples require extensive public education for residents living in the vicinity of Canada's nuclear power plants. Furthermore, most communications efforts by the plant operators have been to communicate their perspective that the plants are safe and it is therefore difficult, we predict, to have the public take in the message about the necessity of awareness about nuclear emergency planning. Given the decades of operation by these plants in these communities, this is a striking state of affairs and it is therefore evident that the CNSC as regulator must assume oversight on this topic for the sake of protection of the public from potential accidents at the plants. As the Japanese regulator attending the IAEA Regulator's conference in Ottawa stated last year, the lack of emergency readiness was a significant factor in the extent to which the public was affected by the Fukushima accident. An informed, well-educated public residing in the vicinity of operating nuclear power plants is essential. We repeat here, in edited form, the submissions we made on this topic during last year's Pickering hearings:</p> <p>To this point in time, it has been a matter of significant concern as to the extent to which the public for example in both Durham Region and the City of Toronto have been unaware of, and not engaged in providing input to the content of the nuclear emergency plans. This in itself increases the risks and potential consequences from a severe offsite accident at a nuclear power plant. During the recent Pickering and Darlington licensing processes, for example, it was evident that many residents of Durham region were unaware of provisions in the Nuclear Emergency Response Plan that anticipate that they will find their own accommodation with friends and family in case of evacuation; that they may be asked to "self-decontaminate" in some scenarios, and what that means; that KI is effective only if taken before or immediately upon commencement of a release; they were unaware of the transportation plans that would be available if they do not have their own vehicles; and they were concerned about family reunification in the event of evacuation scenarios in which members of their family are evacuated separately from the family such as from schools and long term care institutions.</p> <p>IAEA Publication "Lessons Learned from the Response to Radiation Emergencies (1945 – 2010), (IAEA, August 2012) includes a comment in the chapter "providing information and issuing instructions and warnings to the public", about the importance of providing information to the public</p>	

	Section	Organization	Comment	CNSC Response
			<p>on protective actions to be taken in event of an emergency in advance of any emergency for threats such as Nuclear Power Plants. They stated that "This will engender confidence – the knowledge that the officials have their interest at heart – and, by doing so, improve compliance with protective action recommendations in the event of a real emergency. In addition, there will be a better understanding of the systems used to warn them of an emergency." (At 27) This requirement is reinforced by the comment in ICRP Publication 109 which recommends engagement with stakeholders and discussions of the plans, including with members of the public. The rationale is that "Otherwise, it will be difficult to implement the plan effectively during the response. The overall protection strategy and its constituent individual protective measures should have been worked through with all those potentially exposed or affected, so that time and resources do not need to be expended during the emergency exposure situation itself in persuading people that this is the optimum response." (at 42)</p> <p>CELA agrees with these assessments but we have not seen a sufficient level of advance communication with the public in the 10 km zone and beyond, around at least the Pickering and Darlington NGS's, both within the Region of Durham and within the City of Toronto, to feel confident that people sufficiently understand the protective actions to be taken in the event of a nuclear generating station emergency. The recent distribution of the "flashlight" brochure is positive, but this will not be sufficient. CELA supports the CNSC in requiring extensive public engagement to be undertaken by licensees as a condition of operating licences of the Nuclear Generating Stations, to include detailed specific explanation of the protective actions that may be required, why, how they would be communicated and in what eventualities. In particular, CELA supports this addition to the RegDoc-2.10.1, provided the Commission includes an outline of detailed minimum content and expectations for public communications and its efficacy in terms of improving public safety and preventing harm to members of the public in the event of an accident.</p>	
147.	AR-3	AECL	<p>The PNERP provides the foundation for the Licensee's nuclear emergency plan's offsite response, and site specific design basis accidents are fully detailed in each Licensee's Licensing Basis. The industry requires clarification on additional provisions beyond those presently provided.</p>	<p>The wording of the additional requirement was clarified based upon this comment.</p> <p>See comment 126 regarding having a meeting to discuss additional requirements.</p> <p>The wording for the additional requirement provides a</p>

	Section	Organization	Comment	CNSC Response
			<p>Convene information gathering workshop in order to clarify the information required.</p> <p>Dependent upon the level of detail for the technical planning basis will grade whether this is a major issue. It would be highly security sensitive to provide "all information" that makes up the technical planning basis for all things including design basis accidents, the basis for Emergency Response Organization minimum complements.</p>	<p>general requirement to provide for sufficient information. The subsequent guidance provides a further explanation of CNSC expectations:</p> <p>"Additional requirements for licensees of reactor facilities with a thermal capacity greater than 10 MW. These licensees shall:</p> <p>4. provide offsite authorities with sufficient information to allow for effective emergency planning policies and procedures to be established and modified, if needed, periodically.</p> <p>Guidance ...</p> <p>The information to be provided to offsite authorities should provide sufficient detail for the offsite authorities to make informed decision on the size of emergency planning zones and the level of preparedness required. This should include:</p> <ul style="list-style-type: none"> <li>• possible accidents that cannot be practically eliminated</li> <li>• an estimate of the probability of such accidents occurring</li> <li>• an estimate of the associated radiological consequences, including isotopic release quantities, possible release start time and duration and the geographical area potentially affected" <p>The additional requirement may not require additional work on the part of licensees beyond current practice; however, the requirement ensures that all nuclear power plant licensees operating plant over 10MW are subject to the same standards.</p> <p>Please see comment 153 for further details on the level of information to be provided.</p> </li></ul>
148.	AR - 3	OPG	<p>The PNERP provides the foundation for OPG's nuclear emergency plan's offsite response, and site specific design basis accidents are fully detailed in each nuclear generating station's Licensing Basis. OPG requires clarification on additional provisions beyond those presently provided.</p>	<p>Guidance was added to the additional requirement in response to this comment.</p> <p>See comments 147 and 154 for details.</p>

	Section	Organization	Comment	CNSC Response
149.	AR- 3	Bruce Power	The PNERP provides the foundation for Bruce Power's nuclear emergency plan's offsite response, and site specific design basis accidents are fully detailed in each nuclear generating station's Licensing Basis. Bruce Power requires clarification of this additional provision in order to make complete assessment of the impact.	Comments were noted. See comments 147 and 154 for details.
150.	AR - 3	Office of the Fire Marshal & Emergency Management - Ontario	The wording of this amendment should reflect the following reality: <ul style="list-style-type: none"> <li>• The technical planning basis for the station's emergency preparedness and response program must, where it concerns offsite assistance, be in conformity with the Offsite Authorities' nuclear emergency planning basis.</li> <li>• The severity of an accident which must be planned for and responded to, should be defined by the Regulator together with the offsite authority having jurisdiction.</li> </ul>	Comments were noted. See comments 147 and 154 for details. The additional requirement ensures that offsite authorities have sufficient information upon which to develop effective emergency response plans and to update as necessary.
151.	AR - 3	CELA	This requirement would be a significant improvement to RegDoc- 2.10.1. CELA submits that after obtaining the technical planning basis for the various Nuclear power generating stations' emergency preparedness and response programs, the next step will be to evaluate its suitability, and if necessary (as we submit is likely), to require improvements to the planning basis, i.e. to assure that more severe accidents such as multi-unit accidents as occurred at Fukushima, or severe catastrophic offsite releases as occurred at Chernobyl and Fukushima are part of the offsite emergency planning basis. This discussion must engage the public. In particular, given that CNSC staff stated during the May 2014 hearing on removal of the Pickering Hold-Point, that this would include provision of release and source term information, we submit that members of the surrounding community and public interest organizations such as CELA must be engaged in the discussion as to the appropriate planning basis. As we submitted during our comments on the recent Pickering and Darlington licensing hearings, it was obvious from the documentation that the planning basis was a much smaller accident – at least in Ontario in the 2009 plan it was based on assumptions that radiation doses would not be over 250 mSv at the plant boundary, for example. The 2012 plan stated that with low probability, an accident could occur “which could result in a more severe offsite effect.” The 2012 premise was a significant improvement over the 2009 plan, but on the ground detailed planning is not yet in place to respond to a catastrophic type accident. The CNSC should assume regulatory oversight over this issue in RegDoc 2.10.1 in	Comments were noted. REGDOC-2.10.1 provides clarification on the types of possible accidents to be addressed through clarifying “credible” as accidents that cannot be practically eliminated. The additional requirement ensures that such accidents are accounted for in emergency response plans. See comments 25, 31, 35, 147 and 150 for further details.

	Section	Organization	Comment	CNSC Response
			<p>terms of assuring itself BOTH that a sufficiently large accident is utilized as the planning basis for emergency planning AND that the emergency plans themselves are sufficiently detailed that there is a realistic prospect that such a large accident would meet a robust emergency response that would significantly reduce harm to people offsite. In our submission this includes evaluating the sufficiency and particularity of the public notification, evacuation planning, KI pre-distribution, decontamination, medical response and all of the other details of the plan. CELA strenuously submits that the response that the CNSC has been provided to date (that in Ontario at least) that the province's plans "are sufficiently flexible" to respond to a larger accident should be wholly unacceptable to the Commission. CELA is hopeful that the large offsite accident exercise that is planned for the end of this month will provide more information as to the extent to which the existing plans would be responsive, but urges the commission to demand strenuous demonstration of the efficacy of the offsite emergency plans to respond to large offsite emergencies as a routine condition of all licensing of nuclear power plants going forward. Given that the forthcoming exercise will not result in actual notification to hundreds of thousands of people, nor actual advice to ingest KI, nor actual advice to shelter, nor actual evacuation of those same numbers of people, there must be surrogates to establish confidence in the plans. The exercise (which is absolutely necessary) must be supplemented with other mechanisms to demonstrate sufficiency and efficacy of the plans and we submit that one measure of this is that there is sufficient detail in the planning for the Commission to be more assured that it would be sufficiently responsive. For example, the Commission being told the plans are "flexible enough" to respond does not provide a strong basis for the Commission members to have confidence in the emergency planning. Again as earlier submitted it is the Commission itself which must be satisfied under the NSCA that the public will be protected in the event of an accident.</p>	
152.	AR- 3	CELA	<p>Although CELA has a much more extensive treatment in our prior submissions, as to the background pertaining to the planning basis, we here repeat the portion of our prior submission dealing with the current state of planning readiness in Durham region, and reference therein the Fukushima Task Force and IRSS recommendations that support this addition to the RegDoc. We would also add that despite recent</p>	<p>Comments were noted. REGDOC-2.10.1, including the additional requirements will create sufficient improvements in the level of emergency planning information provided to both offsite authorities and to the local public. In addition, CNSC compliance and monitoring programs,</p>

	Section	Organization	Comment	CNSC Response
			<p>references by witnesses in various Commission hearing processes to “work that is underway” on these topics, there is no public documentary information available as to what improvements will be made to the requirements for emergency planning other than the present consultation (and the CSA consultation that was temporarily available to the public last August, but is not now available despite requests to the CSA.) We should also add that CELA and Greenpeace were invited to present our recommendations from the Pickering hearing on emergency planning and planning basis to the inter-jurisdictional committee on nuclear emergency planning in Ontario. This was appreciated, but it was a one-way exercise wherein we outlined again a high level overview of our findings and recommendations but we have not yet been engaged by the planning authorities in any discussion on the planning basis or any other concrete changes to the regulatory requirements or to the offsite plans themselves. Accordingly the following remains the state of the public record in this respect regarding the planning basis, and our concerns remain relevant.</p> <p>The IAEA’s Integrated Regulatory Review Service (IRRS) report post Fukushima (November – December 2011) called on the CNSC to do a “national assessment of nuclear power plant off-site emergency plan that includes all relevant organizations”. (at page 10) It made a specific recommendation: “The Government of Canada should assure that the review and assessment of off-site emergency plans for nuclear power plants includes all relevant authorities, are comprehensive, and that the relevant organizations which implement those plans are capable of performing the assigned duties.” (IRSS at Recommendation RF7). (emphasis added)</p> <p>The level of detail of emergency planning and preparedness is a significant issue. CELA submits that the CNSC must ensure a level of detail with specified time frames, tested and verified, to respond to large offsite severe accidents. CELA submits that the current level of planning in Ontario beyond the 10 km zone has hardly exceeded what Commissioner Hare in 1988 called “a conceptual framework” that would “enable a response to be improvised should an emergency occur before all preparations are complete.” (Hare, Vol. 1, 1988, p. 230) The CNSC Fukushima Task Force, 2011, confirmed that the PNERP, 2009 is “based on a single-unit accident and does not consider multi-unit accidents.” (At 45.) The issue of the adequacy of the current emergency planning basis</p>	<p>as discussed in comment 146, will ensure that the CNSC remains aware of the concerns of local populations.</p>

	Section	Organization	Comment	CNSC Response
			<p>in Ontario was briefly discussed on December 3, 2012 hearings before the CNSC on the Darlington refurbishment application, when a witness from Emergency Measures Ontario discussed their desire to have “a greater inclusivity of events beyond the normal planning horizon”. Although they indicated they were satisfied with the responses provided by CNSC staff prior to that hearing in response to a letter they had submitted to the CNSC, they also recognized “this isn’t the last time we will be sitting here” and it was not the only opportunity they would have to continue to push what EMO thinks is really important regarding emergency management in terms of how to plan and how to exercise and how to modify the nuclear emergency plans going forward. In response to a question by the CNSC President about what EMO would be able to do by 2014 for the refurbishment continued operations licence, the witness further stated that they are in a process of evolution – and would want to present a provincial position that represents various aspects of planning that goes well beyond traditional planning scenarios. She commented that they would be working with all partners in that expanded view of the world. She looked forward to being able to speak to that at subsequent hearings and being able to identify any areas of concern as well as hopefully areas of significant progress. CELA submits that the CNSC commissioners must demand details of the offsite emergency planning basis and independently assess its sufficiency in licensing applications. Contrasted with the Ontario PNERP, 2009, the PNERP, 2012 states that, with low probability, an accident could occur “which could result in a more severe offsite effect.” It is defined as one or more of: i) the time between the accident and release of radioactivity may be generally limited (also sometimes described in other regulatory and industry documents as “early release”); ii) radiation doses could be high, greater than 250 mSv at the plant boundary; iii) radioiodines and particulates could form a component of the radioactive emission; iv) environmental contamination could be significant; v) area affected could be larger than for the basic offsite effect. (At 2.3.3 (d)). For these more severe but less probable accidents, the province outlines a limited number of issues for which to undertake preparedness: “ i) timely public alerting and direction; ii) prioritizing evacuations for those closest to the hazard; iii) radiation monitoring and if necessary, decontamination; if needed, medical assessment, treatment and counselling.” (At 2.3.3.(e)) The PNERP states that the detailed</p>	

	Section	Organization	Comment	CNSC Response
			<p>planning and preparedness “will establish an effective basis to deal with an emergency caused by any type of nuclear installation accident.” Despite this provision, CELA is concerned that detailed planning is not yet in place for a very severe catastrophic accident. During our reviews for the Darlington and Pickering hearings, it was evident that the level of planning was more consistent with the prior PNERP 2009 and the traditional, smaller accident it outlined. And while some of those who intervened in these hearings (Canadian Environmental Law Association, Durham Nuclear Awareness, and Greenpeace) have had assurances by the province that the planning basis is under examination, we have not yet been provided any further information or been asked for input. For example, the inability to assess the extent to which the province and emergency responders are prepared to deal with medical assessment and treatment because of the lack of available Radiation Health Plans is one indicator that the province still does not have that capability in place. We should note that even now, in May 2014, the province’s Radiation Health Plan has not yet been made public.</p> <p>CELA has not yet seen evidence that more severe, beyond design basis severe accidents, initiated by a variety of severe external events such as hostile action, extreme weather events and others have been considered in Ontario as a basis for emergency planning. Similarly, CELA has not seen evidence that the consequences of multi-unit events have been considered in Ontario as a basis for emergency planning. To the contrary, the CNSC Fukushima Task Force Report 2011 stated that none of the nuclear power plant operators in Canada had at that time considered “multi-unit accident scenarios in development of their emergency plans”. (at 37) The Task Force stated that it was confident that the operators could respond to a beyond design basis accident “provided they are single-unit accidents only.” (at 37, emphasis added). While there have been indications that the exercise planned for the end of May, 2014 will represent a multi-unit accident, no details have been made public.</p> <p>CNSC should require multi-unit severe accident planning to be demonstrated by licensees, along with the effectiveness of off-site emergency response in such a case. Similarly, CNSC should ensure, contrary to previous practice, that extreme natural hazard initiated events and “gross human error” are also examined in terms of presenting an</p>	

	Section	Organization	Comment	CNSC Response
			<p>emergency planning basis, and that the on-site and off-site emergency preparedness and planning are demonstrated to be sufficient and reliable to respond to all of these undesirable scenarios in the event that they lead to severe offsite releases.</p>	
153.	AR- 3	CELA	<p>A related concern is that raised by the Fukushima Task Force Report (2011) that the licensee can perform “post-accident source term estimation” – however “these are designed for <b>an accident in only one unit.</b>” (emphasis added) (At 38). As the Task Force noted, this is important information to be able to provide to offsite authorities in the case of a nuclear accident. CELA recommends that this post-accident source term information be required by the CNSC as a condition of licensing and that the CNSC require OPG to upgrade their capacity to provide source term information and its basis, for multi-unit accidents, as a condition of licencing. This should include reassessment of plume and dose modelling for multi-unit accidents at the Nuclear Generating Stations (see Task Force Report at 38).</p> <p>For severe accident emergency planning, twenty-five years after the Hare commission, CELA is of the view that Ontario still only has a “conceptual framework” allowing for “improvisation” in the event of a catastrophic accident at Ontario nuclear power plants, including the Pickering NGS (what the EMO witnesses called “flexibility” in the recent hearings.) Despite all of the recommendations, Commissions, and world-wide accident experience that would suggest that planning for more severe accidents is required, post Fukushima there has been some discussion about increasing the basis for accident planning, and recommendations to do so, but changes in the Plans, in emergency preparedness on the ground, and in details of planning are not yet evident or proven. CELA recommends to this Commission that now is the time to end the situation of operating the nuclear power plants without sufficient detailed emergency planning for large scale catastrophic accidents in place.</p> <p>In terms of a planning basis, in RegDoc 2.10.1 CELA recommends that the CNSC should require the licensees to demonstrate that there are, in place, properly resourced, sufficiently detailed emergency and preparedness plans that would address Chernobyl–size accidents or Fukushima–size accidents. The basis for this recommendation includes world-wide experience with these catastrophic accidents. This recommendation is independent of particular event sequences and rather</p>	<p>Comments were noted.</p> <p>As noted in comment 151 and elsewhere, licensees are expected to provide information on all potential accidents that cannot be practically eliminated.</p> <p>The effectiveness of existing response plans are testes, in part, though exercises such Unified Response discussed in comment 130.</p>

	Section	Organization	Comment	CNSC Response
			<p>takes account of the myriad ways that things that can go wrong resulting in an accident and resulting in a serious breach of containment, regardless of how caused. It also includes consideration of the fact that among the events that may initiate a catastrophe at a CANDU are those that are beyond the control of the operator such as hostile action or unforeseen external weather events or unforeseen combinations of failures including human error. There is no policy justification for excluding these types of events from emergency planning and preparedness since it is amply demonstrated (Three Mile Island, Chernobyl, Fukushima, 9/11) that all of them may occur in the real world, with disastrous consequences.<sup>1</sup></p> <p>RegDoc 2.10.1 should provide that licences will not be granted by the CNSC without demonstration of not only the planning basis, but the sufficiency of the planning basis, and the ability of the relevant emergency offsite planning to actually respond to severe offsite accidents with large releases and prevent and reduce harm from those accidents are actually in place and demonstrated to the regulator, with evidence, to be effective. CELA also submits that it is critical that this evidence be made public. Members of the surrounding communities must be able to understand what is in place; how effective it is; what has changed; and on what basis the regulator is judging the emergency plans to be in place.</p> <p>Footnote cited in stakeholder comment:</p> <p>CELA notes that the Working Group #8 Report included a concept of Worst Credible Radiation Emission in its 1988 report, which it described as “the very worst that could happen: the maximum effects possible from any accident, however caused or however developed” and that it would thus encompass accidents including those that could not be calculated due to lack of quantifiable data as well as those with very low probabilities. For this accident that the Working Group #8 styled “WCRE”, it recommended that planning be done to prevent “the worst consequences” of this type of accident; namely early morbidity or mortality. Their rationale was that the most severe consequences are “extreme enough to warrant consideration in planning” “however remote their likelihood.” Working Group #8 also based this recommendation in</p>	

1

	Section	Organization	Comment	CNSC Response
			part on the fact that provincial and other authorities, when interviewed at this time (1988), were of the view that their ability to “improvise” for such a severe accident would begin after 24 hours, but “immediate and effective improvisation was not thought to be possible” before 24 hours in the case of a larger than anticipated event. (At 28.) The Working Group decided that “in general no probability could be associated with the WCRE... it represents the bounding case which subsumes all events, however low their probability.” (At 62.) The WCRE would result from the “failure of a large number of fuel elements in a short period of time, with a simultaneous breach of containment.”	
154.	AR-3	Greenpeace	<p>Greenpeace supports the addition of this requirement.</p> <p>Greenpeace has had significant problems acquiring information from Emergency Management Ontario on the assumptions and details of its offsite nuclear emergency plans. At the Pickering relicensing hearings in May 2013, EMO staff stated that the public must resort to provincial Freedom of Information (FOI) requests to acquire such information.</p> <p>EMI has been unresponsive to these requests. Greenpeace currently has approximately 20 FOI requests pending with EMO. These requests are nine to eighteen months overdue with no timelines for a final response. Greenpeace has, however, received timely response to similar information requests filed with the CNSC.</p> <p>In this light, Greenpeace encourages the CNSC to require EMO to proactively publish information related to offsite nuclear emergency plans, including the technical planning basis for the station’s emergency preparedness and response program.</p>	<p>Comments were noted.</p> <p>OFEMO is not a CNSC licensee. However, the additional requirement and associated guidance section clarifies the planning information to be provided to offsite authorities. Some technical planning basis information could be considered sensitive within the context of FOI requests. However, the proposed high-level information required and expected in REGDOC-2.10.1 will provide offsite authorities and the public with sufficient information to assess the adequacy of emergency response plans.</p>
Supplemental comments				
Comments 155 through were submitted by OPG on behalf of NB Power, Bruce Power and AECL on June 20, 2014				
155.	General	OPG	<p>With N1600 now published, industry believes the REGDOC should only address those items specifically applicable to licensees that are not currently addressed in N1600. For example, if both documents are going to end up in our licences why does the REGDOC need to say anything about emergency facilities? How is the duplication issue going to be addressed?</p> <p>REGDOCS should be considered the higher level document which then refers to standards like N1600.</p>	<p>While the comments and concerns were noted, no additional changes were made to the document.</p> <p>Through its active participation in the drafting of CSA N1600, the CNSC ensured that the CSA and REGDOC requirements and guidance are well aligned.</p> <p>REGDOC-2.10.1 provides a sole independent source for licensees on the baseline requirements licensees have to meet in order to satisfy the Commission that the public are</p>

	Section	Organization	Comment	CNSC Response
			<p>Modify REGDOC 2.10.1 to remove any requirements addressed by N1600.</p> <p>Increased regulatory burden.</p>	<p>adequately protected in the event of a nuclear emergency. N1600 drives a consistent approach and common understanding of roles and responsibilities for all entities involved in nuclear emergency management and response. The standard provides additional guidance information which licensees can use to go beyond baseline requirements.</p> <p>Where necessary and appropriate the REGDOC supplements the CSA Standard, such as in the context of expectations for distribution of iodine thyroid blocking agents.</p>
156.	Preface	OPG	<p>Typo in sentence. "T The full list of regulatory document series is included at the end of this document and can also be found on the CNSC's website."</p> <p>Delete extra T. Convert page 29 into an appendix and refer to it as such in the preface: "The regulatory document series is listed in Appendix x and can also be found on the CNSC's website."</p>	<p>The type O was corrected. The regulatory document series is included in all REGDOCs to explain document framework structure. There would not be a value-add to converting the list to an Appendix.</p>
157.	1.2 Page 1	OPG	<p>Typo: 10 MW thermal..</p> <p>Delete extra period</p>	Corrected
158.	General	OPG	<p>Original Industry comment provided for August 2013 Draft: This REGDOC contains significant detail for the EP Program. In Ontario the Provincial requirements are extensive raising the concern that jurisdictional conflict could arise over time. CNSC Disposition: While the document was not modified based on the comments provided, the CNSC acknowledges the concern. Further it is cognizant of the need to work closely with provincial and municipal governments. For example, for CSA Standard N1600 General Requirements for Emergency Management for Nuclear Facilities, the CNSC is part of the development team along with provincial and industry representatives. The CNSC also ensures that CSA and REGDOC requirements and guidance are well aligned. Additional Industry comment: Understanding the need to work closely with provincial and municipal governments, there needs to be a process or explanation regarding how</p>	<p>The CNSC acknowledges industry's concerns over potential jurisdictional conflicts. Provincial and municipal authorities, as well as the CNSC, may set requirements within the purview of their oversight and authorities. In some instances, in order to ensure that a NPP can be safely operated in a manner that ensures the public are protected, the CNSC requirements outlined in the document may go beyond provincial expectations. Further to this comment, the CNSC has reviewed the document and has not identified any instances that would mandate non-compliance with expectations from another jurisdiction. The relevant requirements included in the document have been specifically drafted to acknowledge the importance of close collaboration with off-site authorities.</p>

	Section	Organization	Comment	CNSC Response
			<p>jurisdictional issues will be addressed. The lack of modification of the document leaves industry in a precarious situation.</p> <p>Potential for jurisdictional conflict could result in non-compliance with licence conditions.</p>	
159.	1.2	OPG	<p>This REGDOC "does not include requirements for accident management" and yet the very next section 1.3 deals with accident management</p> <p>Revise wording as follows:</p> <p>"REGDOC-2.10.1 focuses on the aspects of emergency preparedness and response while requirements for accident management are addressed in REGDOC-2.3.2, Accident Management."</p>	The suggested wording change was accepted as it improves clarity without affecting the intent of the text.
160.	1.3	OPG	<p>Original Industry comment provided for August 2013 Draft:</p> <p>The definition of "Accident Management" in this document (and in REGDOC 2.3.2) is not consistent with the IAEA definition. Define and use terms consistent with IAEA definition. (Refer to comments for RegDoc 2.3.2) It is vitally important to maintain the distinction between design basis (DB) and beyond design basis (BDB). Using a term that is internationally acknowledged as referring to a BDB state in a manner that is inclusive of DB has the potential to create significant confusion, both with implementation requirements and with the public.</p> <p>CNSC Disposition</p> <p>While the input was noted, no change was made to the document as a result of the comment. CNSC staff acknowledges the distinction between design basis accidents (DBA) and beyond design basis accidents (BDBA). The CNSC also recognizes that there are many distinct aspects between treatment of the accidents that do not challenge core integrity and that include core degradation. However, the essence of accident management and emergency preparedness is to utilize the available materiel and human resources to provide counteracting responses regardless of its progression into a stage belonging to DBA or BDBA. The CNSC's approach to DBA and BDBA distinctions is aligned with current international approaches. For example, the IAEA are currently updating its approaches and terminology to reflect regulatory best practices post-Fukushima.</p> <p>Additional Industry comments:</p> <p>1. To clarify - are the changes IAEA are making to its approaches and</p>	<p>The text was modified based on the comment. To improve clarity and to better show alignment between REGDOC-2.10.1 and REGDOC 2.3.2 Accident Management, the definition of accident management used in REGDOC 2.3.2 will be added to the glossary. The definition is in line with international approaches since Fukushima and with emerging definitions of the term.</p> <p>The following was added to the glossary:</p> <p><b>accident management</b></p> <p>The taking of a set of actions during the evolution of an accident to prevent the escalation of the accident, to mitigate the consequences of the accident, and to achieve a long-term safe stable state after the accident.</p>

	Section	Organization	Comment	CNSC Response
			<p>terminology going to align with this CNSC RegDoc?</p> <p>2. The definition of accident management in this REGDOC needs to align with the definition of accident management in REGDOC- 2.3.2, Accident Management.</p> <p>3. This inconsistency highlights the fundamental concerns arising from jurisdictional inconsistencies for identifying the planning basis.</p> <p>If definition is not clear, how can industry effectively plan</p>	
161.	2.1 part 2 (a)	OPG	<p>Concern with this section: ...."will also consider:</p> <p>(a) All accidents and internal or external events that may have an impact on their facilities"</p> <p>Change "will" to "shall" and revise wording of (a) to "All accidents and internal or external events that have been analyzed as having an unacceptable impact on their facilities"</p> <p>PRA identifies all event scenarios but not all will have an impact on the facility, and some are dismissed because their frequency is so low e.g. &lt;10<sup>-8</sup>.</p> <p>This proposed change is aligned with the wording at the top of page 6..."Plans should be developed for those scenarios that cannot be practically eliminated. Inputs to be considered in the analysis should include: the licensee's safety analysis, probabilistic safety analysis, and operating experience."</p>	<p>The suggested wording change was accepted as it improves clarity without affecting the intent of the text.</p>
162.	2.1 (4)	OPG	<p>Concern with this section:</p> <p>"provide offsite authorities with sufficient information to allow for effective emergency planning policies and procedures to be established and modified, if needed, periodically."</p> <p>Discussion is needed at the June 23 2014 workshop to clarify this new draft section.</p> <p>Revise wording as follows: "provide offsite authorities with the necessary information to allow for effective emergency plans, policies and procedures to be established and modified as needed.</p> <p>How do you quantify "sufficient"?</p>	<p>The suggested wording change was accepted as it improves clarity without affecting the intent of the text.</p> <p>The guidance section provides information on the CNSC's expectations concerning the minimum amount of information required to be considered necessary.</p> <p>Revised guidance text:</p> <p>The information to be provided to regional and provincial offsite authorities should provide all necessary details required for the offsite authorities to make informed decision on the size of emergency planning zones and the level of preparedness required. The necessary information should include:</p>

	Section	Organization	Comment	CNSC Response
163.	2.2.2	OPG	<p>This sentence is not clear:</p> <p>“For nuclear facilities without notification categories for offsite authorities, licensees should follow provincial requirements or use the following categories, listed in order of increasing significance, to classify various events:”</p> <p>All class one nuclear facilities have notification categories defined by the Province. Either delete, or use this recommended revision; “Licensees should follow provincial requirements or when none exist, use the following categories, listed in order of increasing significance, to categorize various events:</p> <p>Clarification As written a Class 1 Facility in Ontario could adopt the “on-site area emergency” category without it being in the PNERP.</p>	The suggested wording change was accepted as it improves clarity without affecting the intent of the text.
164.	2.2.3	OPG	<p>In the following sentence, who approves the format?</p> <p>“Source term sampling and estimation should be determined and reported to the CNSC on an hourly basis, upon determination and compilation of the data in an approved format.”</p> <p>Suggest revise as follows: “Source term sampling and estimation should be determined and reported to the CNSC on an hourly basis, upon determination and compilation of the data in a format approved by the provincial authority.</p> <p>Need to identify that the Province determines the “approved format”</p>	The suggested wording change was accepted as it improves clarity without affecting the intent of the text.
165.	2.2.4 (5)	OPG	<p>The provision of protective action recommendations is not a requirement of the PNERP.</p> <p>Recommend revision as follows: “where required by offsite authorities, promptly and regularly provide recommendations on protective actions and inform the CNSC”</p> <p>Not all provincial emergency plans require NPPs to provide the province with protective action recommendations, as such this is a new requirement</p>	<p>Licensees have specific expertise in nuclear emergencies which may be valuable for offsite authorities. Requiring licensees to provide recommendations to offsite authorities ensures that those responsible for response decisions have the best possible information and options before them on which to base a decision.</p> <p>As was noted in Comment 59 offsite authorities are not obligated to accept recommendations.</p>
166.	2.2.4 (8)	OPG	<p>Municipalities are responsible for evacuation planning, not NPP and as such the wording needs to change.</p> <p>“collaborate with the municipality to develop and maintain public evacuation time estimates based on current census”</p> <p>Current wording restricts the licensee to developing and maintaining</p>	<p>The text was modified based on the comment to now read:</p> <p>8. collaborate with the municipal or regional authorities to develop and maintain public evacuation time estimates based on current census data, and future population growth projections on a per-decade estimation until end of</p>

	Section	Organization	Comment	CNSC Response
			Evacuation Time Estimates when in fact provincial ministries or vendors may do this work on behalf of the municipality who is responsible for evacuation planning.	life of the facility
167.	2.2.9 (3)	OPG	The licence and licence conditions handbook should dictate the requirements for submitting changes to the ER plans to the CNSC. Suggest change to: 3. unless otherwise specified in the licence conditions handbook, notify the CNSC of changes to ER plans and procedures, and submit the results of the validation to the CNSC as per the terms and conditions of the CNSC licence.	The suggested wording change was accepted as it improves clarity without affecting the intent of the text.
168.	2.2.9 bullet 3(Formerly section 2.2)	OPG	Original Industry comment provided for August 2013 Draft: Redundant information found in licences and LCHs. Delete: "submit all EP program changes to the CNSC at least 30 days before implementing" This requirement should be in the LCH for the facility, to ensure it is captured in licensee management systems CNSC Disposition The REGDOC was modified as a result of comments provided. The text was amended as suggested. Additional Industry comment: There is significant regulatory burden if changes to all procedures require CNSC notification. Modify requirement to Notify CNSC of program changes only Regulatory burden	The text was modified to improve clarity. Text was added to the guidance section to clarify those modifications to programs or procedures can be reported through established channels such as the Quarterly Operations Report or formal correspondence. Additional guidance wording: Minor or administrative modifications to programs or procedures can be reported to the CNSC through established channels such as the Quarterly Operations Report or through formal correspondence.
169.	2.3.1 (1)	OPG	Requirement on training is not aligned with PNERP Recommend revise 2.3.1 (1) as follows: "Collaborate with responding offsite agencies to educate them on radiation protection." Delete "; training programs, for both onsite and offsite emergency responders" NPPs cannot force offsite agencies to receive RP training. What level of "training" is required? These agencies are not Orange Badge trained, or qualified nor do they need to be.	The suggested wording change was accepted as it improves clarity without affecting the intent of the text.
170.	2.3.1 (3)	OPG	This new training requirement is not possible for licensees to enforce. Please clarify intent. Delete: "The training is intended for any person who would be responding to the emergency on behalf of an offsite authority and is not solely limited	In response to comments the text was modified to improve clarity by using the term "educational materials" in lieu of "training".

	Section	Organization	Comment	CNSC Response
			<p>to first responders.” Compliance as written is not possible.</p>	<p>The last sentence of bullet 3 now reads: “Educational materials are required to be available for any person who would be responding to the emergency on behalf off an offsite authority; not just the first responders.”</p>
171.	2.3.3 (6)	OPG	<p>Industry concerns:</p> <ol style="list-style-type: none"> <li>1. This is a new 3 year requirement for large scale exercise</li> <li>2. Need consistency with WANO, INPO requirements for full scale exercises</li> <li>3. Industry understands that offsite agencies may not have the capacity to meet the proposed exercise frequency and further industry cannot enforce offsite agency compliance</li> </ol> <p>Delete: “with a full-scale integrated emergency testing exercise at least once every three years”. Suggest a mention of full scale exercises in guidance.</p> <p>Revise the frequency of large scale exercises to meet INPO/WANO requirements of every 8 years</p> <p>Industry cannot support the cost, or participate in exercises like Unified Response, on this frequency. The requirement as written would result in the Province of Ontario doing one every year to support OPG and BP alone, Durham Region and OPG would have to do 2 in a 3 year period.</p>	<p>The text was clarified in response to stakeholder comments.</p> <p>The term “full-scale exercise” was clarified in the requirements and guidance sections to indicate that it is necessary to include primary regional and provincial emergency response organizations in the exercises. As a result a full-scale exercise need not be as complex as Operation Unified Response in May 2014.</p> <p>CNSC staff view the three-year requirement as reasonable and necessary. Over a three year period there can be significant changes in plant operations such as: staff turn-over, modified procedures or policies and modified training programs. The three year interval ensures that should an actual emergency arise, those responsible for responding will have had experience with being involved in a full-scale exercise.</p> <p>Modified text:</p> <p>Requirement:</p> <p>16.test all requirements listed in this document over a five-year period, with a full-scale integrated emergency testing exercise at least once every three years involving, at a minimum, regional and provincial offsite authorities</p> <p>Guidance</p> <p>A full-scale integrated exercise tests the capacity of onsite and offsite agencies to respond to an emergency that results in a release of nuclear substances from the affected unit(s). Full-scale emergency exercises normally involve, at minimum, several onsite and provincial and regional offsite stakeholders. Larger full-scale exercises can include federal and – where appropriate – international authorities and agencies. Emergency</p>

	Section	Organization	Comment	CNSC Response
				exercises do not always need to be full-scale.
172.	2.3.3	OPG	<p>The mandated timeframes in items (7) and (14) are regulatory burden. CNSC staff should be performing independent assessment of both the scenario development and the exercise. The licensee self-assessment should not be required to be submitted as it should be very self-critical. If it is required to be submitted the reports will be sanitized for public consumption, this is not ideal. CNSC should independently assess the exercise.</p> <p>Delete items 7 and 14.</p> <p>Unnecessary regulatory burden.</p>	<p>While the comments were noted, the text was not modified.</p> <p>As noted in comments 113 and 114 the draft text was adapted to respond to industry concerns regarding the submitting of emergency exercise plans and post-exercise reports, allowing flexibility should licensees require additional time to provide the submissions.</p> <p>Provisions 7 and 14 are necessary for the CNSC to maintain confidence in a licensee's preparedness to respond to emergencies should an unlikely event occur. Furthermore, the CNSC expects full, accurate and timely post-exercise reports to be submitted which include the elements listed in the associated guidance section.</p>
173.	2.3.4	OPG	<p>This section is mandating off site protection measures that are outside of the CNSC's jurisdiction.</p> <p>Suggested change:</p> <p>These licensees shall collaborate with offsite authorities to:</p> <ol style="list-style-type: none"> <li>1. ensure that a sufficient quantity of iodine thyroid blocking (ITB) agents is pre-distributed to all residences, businesses and institutions within the designated plume exposure planning zone (if determined necessary by the offsite authority)</li> <li>2. ensure that a sufficient quantity of ITB agent is pre-stocked and ready for prompt distribution beyond the designated plume exposure planning zone(if determined necessary by the offsite authority)</li> <li>3. ensure that the pre-distributed and pre-stocked ITB agents are maintained within expiry date(if determined necessary by the offsite authority)</li> <li>4. ensure that all residences, businesses and institutions within the designated plume exposure planning zone are provided with public emergency preparedness information detailing how to they should prepare for a nuclear emergency and what they should do or expect during a nuclear emergency</li> <li>5. ensure that this public emergency preparedness information is readily</li> </ol>	<p>CNSC staff acknowledges the concern over potential jurisdictional confusion related to ITB pre-distribution. To further clarify responsibility while illustrating the key role played by the offsite authority the requirement was changed to read: "These licensees shall, or in collaboration with offsite authorities:..."</p> <p>In addition the following was added to the guidance section: "The pre-distribution of ITB agents should be undertaken by the licensee, or by representatives of the Health and/or Emergency Management authorities of the province or region/municipality, with support from the licensee."</p> <p>As noted in comment 158, the CNSC requirements outlined in the document may go beyond provincial expectations in order to ensure that a NPP can be safely operated in a manner that ensures the public are protected.</p> <p>With respect to distribution of ITB agents and provision of emergency planning information to members of the public, the CNSC has determined that these measures are necessary to ensure an adequate level of preparedness for nuclear emergencies.</p>

	Section	Organization	Comment	CNSC Response
			available online	
174.	2.3.4	OPG	<p>Public education is a joint venture with licensees supporting municipalities. As written the following transfers this responsibility solely to the licensee: "To ensure the public have easy access to the required emergency information and that this is available online for those in the secondary zone, licensees should:"</p> <p>Recommended revision;                      "To ensure the public have easy access to the required emergency information and that this is available online for those in the secondary zone, licensees should collaborate with municipalities to:"</p> <p>As written the guidance transfers the responsibility for public education to the licensee and ignores the role of the municipalities. For OPG, additional costs of 800k/yr with limited benefit</p>	The suggested wording change was accepted as it improves clarity without affecting the intent of the text.
175.	2.4	OPG	<p>The CNSC should not be dictating the content of the licensee management systems. The licensee should determine these requirements. Most of the requirements are already captured by N286 (Items 2 to 5) however they are good guidance. Item 1 is captured by most licensees nuclear safety policy and there should not be a requirement for a separate policy for ER.</p> <p>Delete item 1 and move the remaining to guidance.</p> <p>Unnecessary regulatory burden, ER is already captured in Nuclear Safety Policies.</p>	<p>While the comments were noted, the text was not modified.</p> <p>CNSC staff acknowledges that the requirements specified the Program Management section of REGDOC-2.10.1 have already largely been built into the licensees' existing management system documentation.</p> <p>Licensees are not required to create new documents; however a systematic gap analysis may be requested to demonstrate the existence of all requisite components.</p>
<b>Issues raised at meeting with stakeholders held on June 23, 2014</b>				
176.	2.1 (bullet 4) - Emergency planning basis information	Stakeholder Workshop	<p>Comments received on emergency planning basis information:</p> <ul style="list-style-type: none"> <li>• Scope of offsite authorities needs to be considered                             <ul style="list-style-type: none"> <li>– Municipal, federal, provincial</li> <li>– Process should be transparent</li> <li>– Need to be able to validate plans</li> </ul> </li> </ul>	<p>The text was clarified to indicate that information is to be provided to provincial and regional offsite authorities. Federal authorities would be provided emergency planning information through the CNSC.</p> <p>Revised wording: Requirement:</p> <p>4. provide regional and provincial offsite authorities with sufficient information to allow for effective emergency planning policies and procedures to be established and</p>

	Section	Organization	Comment	CNSC Response
				<p>modified, if needed, periodically.</p> <p>Guidance:</p> <p>The information to be provided to regional and provincial offsite authorities should provide sufficient detail for the offsite authorities to make informed decision on the size of emergency planning zones and the level of preparedness required. This should include:</p> <ul style="list-style-type: none"> <li>• possible accidents that cannot be practically eliminated</li> <li>• an estimate of the probability of such accidents occurring</li> <li>• an estimate of the associated radiological consequences, including isotopic release quantities, possible release start time and duration and the geographical area potentially affected</li> </ul> <p>Federal authorities would be provided emergency planning information through the CNSC.</p>
177.	2.3.4 – ITBs Distribution	Stakeholder Workshop	<ul style="list-style-type: none"> <li>• There is a universal agreement that Canada should be moving towards having ITB pills on hand when needed.               <ul style="list-style-type: none"> <li>– Distribution needs to be thorough</li> <li>– Should be followed up on (i.e. evaluate effectiveness)</li> </ul> </li> <li>• There are differing opinions on what is the best way to meet this objective               <ul style="list-style-type: none"> <li>– Direct mail</li> <li>– Door to door</li> <li>– Coupons for KI Pills</li> <li>– Pickup at designated facility</li> <li>– Could come from a credible source (e.g. pharmacist, physician or other trusted persons)</li> </ul> </li> <li>• Communication and education is critical               <ul style="list-style-type: none"> <li>– Should be accompanied by information on usage</li> </ul> </li> </ul>	<p>In REGDOC-2.10.1 licensees are given latitude to develop the most effective means of distribution of ITBs to local populations. As what works in one region may not be directly applicable to another, to require a standard approach would not be the most effective regulatory approach.</p> <p>Through the licensing and reporting process licensees will inform the CNSC of the status of pre-distribution activities.</p> <p>Wording was added to the guidance section concerning the need for periodic reviews to assess adequacy of distribution efforts.</p> <p>Guidance wording was also added explaining that the provision of ITB should be accompanied by the public preparedness information that is also required.</p> <p>Revised wording:</p> <p>The pre-distribution of ITB agents should be done in a carefully planned and coordinated manner, to ensure that the public receives the appropriate information and</p>

	Section	Organization	Comment	CNSC Response
				<p>education related to the benefits, risks and usage instructions of ITB agents. Following the completion of pre-distribution activities, licensees should periodic reviews with the local populations to assess the adequacy of pre-distribution programs. [...]</p> <p>In discussion with local authorities, licensees should consider providing public preparedness information together with ITB packages when distributing to local populations. The purpose of the public emergency preparedness information is to provide residents with useful information on how they should prepare, what they should expect and how they should respond to an emergency at the nuclear facility. ...</p>
178.	2.3.4 – ITBs	Stakeholder Workshop	<p>Comments received on KI Pill Distribution (continued)</p> <ul style="list-style-type: none"> <li>• Geographical and legislative differences should be considered</li> <li>• Need to sort out jurisdictional issues <ul style="list-style-type: none"> <li>– Stop playing ‘football’ with the issue</li> </ul> </li> </ul>	<p>While the comment was accepted, the text was not modified.</p> <p>The proposed requirements would ensure that local populations have easy access to ITBs regardless of geographic or jurisdictional issues particular to a specific plant area. The guidance section provides sufficient flexibility to enable licensees to develop, implement and report upon effective strategies to meet the requirements.</p> <p>See comment 177 for further information on allowing licensees the flexibility to develop the most appropriate approach for the local populations and on the need for periodic reviews of the adequacy of pre-distribution efforts.</p>
179.	2.3.4 – ITBs	Stakeholder Workshop	<p>Comments received on KI Pill Distribution (continued)</p> <ul style="list-style-type: none"> <li>• Should evaluate the need for distribution beyond the primary zone</li> </ul>	<p>While the comment was considered the text was not modified.</p> <p>REGDOC-2.10.1 notes the importance of considerations of prompt distribution beyond the primary zone. As the document applies to all licensees operating in various geographic and demographic settings discussions of the optimal approach beyond the primary zone is best left to discussions between licensees and the local/regional and provincial offsite emergency response organizations.</p>

	Section	Organization	Comment	CNSC Response
180.	2.3.4 – ITBs	Stakeholder Workshop	<p>Comments received on KI Pill Distribution (continued)</p> <ul style="list-style-type: none"> <li>• Should benchmark against international and domestic successes and best practices</li> </ul>	<p>While the comment was accepted the text was not modified.</p> <p>In developing regulatory instruments, such as this REGDOC, the CNSC is cognizant of international best practices and, when appropriate, incorporates approaches and standards from international organizations such as the International Atomic Energy Agency (IAEA), the National Fire Protection Association (NFPA).</p> <p>Internationally, there are varying approaches to distribution of ITB agents ranging from the stockpiling of ITB tablets at central locations such as pharmacies to the mailing out of packets to individual households.</p> <p>Application of these approaches internationally and within Canada has shown that each has its own challenges. Ultimately, the requirement outlined in REGDOC-2.10.1 reflect the most appropriate strategy, in the Canadian context, to ensure ITB agents are readily available to the public in the vicinity of the NPP, should they have need to use them.</p>
181.	2.3.4 – ITBs	Stakeholder Workshop	<p>Comments received on KI Pill Distribution (continued)</p> <ul style="list-style-type: none"> <li>• All three additional requirements (public information, emergency planning and KI distribution) are linked and need to be considered together</li> </ul>	<p>While the comment was accepted, the text was not modified.</p> <p>The CNSC acknowledges the close link between the three proposed requirements.</p>
182.	2.3.4 – Public information	Stakeholder Workshop	<p>Comments received on public information:</p> <ul style="list-style-type: none"> <li>• Universal agreement on the importance of public information <ul style="list-style-type: none"> <li>– Two-way street</li> <li>– Should include mechanisms to evaluate effectiveness of communications</li> <li>– Health professionals may require additional information and education</li> </ul> </li> <li>• Consideration of alignment with provincial requirements (PNERP has some public information provisions as well) while maintaining regulatory requirement</li> <li>• Need to collaborate with other authorities and to leverage existing</li> </ul>	<p>To improve clarity, the requirement applying to all licensees now reads:</p> <p>Incorporate information on public emergency preparedness into their public information program (established as per RD/GD-99.3, <i>Public Information and Disclosure</i>).</p> <p>In addition, the guidance section related to public information has been modified to improve clarity:</p> <p>The public information program is established as per RD/GD-99.3, <i>Public Information and Disclosure</i>.</p> <p>...</p> <p>To ensure the public have easy access to the required</p>

	Section	Organization	Comment	CNSC Response
			<p>communications (e.g. municipal)</p>	<p>emergency preparedness information, licensees should collaborate with municipalities to provide residents with useful information on how they should prepare, what they should expect and how they should respond to an emergency at the nuclear facility.</p> <p>An emergency preparedness information product should be distributed in hard copy annually to every residence, business and institution within the plume exposure planning zone, and posted on a variety of websites, including those of the licensees, municipalities and provincial EMOs,</p> <p>This should include information on:</p> <ul style="list-style-type: none"> <li>• how they will be alerted</li> <li>• how they will be notified or informed on what to do</li> <li>• sheltering-in-place instructions</li> <li>• evacuation orders</li> <li>• how/when to take ITB agents, and where to get them if not pre-distributed</li> <li>• contact details for where to obtain additional information, such as websites and social media sites</li> </ul> <p>Licensees may, where possible, leverage existing communication channels (such as those used by local municipalities or those identified in the public information program).</p> <p>In discussion with local authorities, licensees should consider providing public preparedness information with ITB packages when distributing to local populations.</p> <p>Licensees should periodically assess the adequacy of public emergency preparedness information.</p>

	Section	Organization	Comment	CNSC Response
183.	2.3.4 - Emergency planning information	Stakeholder Workshop	<p>Comments received on emergency planning information:</p> <ul style="list-style-type: none"> <li>• Everybody agrees emergency planning information is important</li> <li>• The term “practically eliminated” to define scenarios that are included should be clarified but there was no clear consensus on how to do this <ul style="list-style-type: none"> <li>– Difficult to quantify</li> <li>– May want to use other defined terms like Beyond Design Basis Accident, defined pathways, etc.</li> <li>– Need to ensure worst case scenarios are considered (e.g failure of existing barriers)</li> <li>– Scenarios should be credible</li> </ul> </li> <li>• Clarity of terms (e.g., sufficient/necessary)</li> </ul>	<p>While the comment was accepted the text was not modified.</p> <p>The use of the term “practically eliminated” is meant to bridge a gap between highly unlikely accident scenarios (which go beyond design-basis accidents) and scenarios which are fantastical in nature. Scenarios involving multi-unit events and the loss of multiple levels of defense in depth would be included within the realm of events that could not be practically eliminated.</p> <p>CNSC staff does not expect the same level of rigor in the development and implementation of emergency measures to combat highly unlikely scenarios. However, staff does require evidence that such scenarios have been duly considered and provisional plans are in place explaining how such situations would be addressed.</p>