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**UNRESTRICTED**

2013 October 16

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1.03.02

FILE DOSSIER	1-8-8-0
REFERRED TO / REFERE A	Dallaire, M.

Dear Mr. Dallaire:

### **AECL's Comments on REGDOC-2.10.1 – Nuclear Emergency Preparedness and Response**

The purpose of this letter is to provide AECL's comments on CNSC Regulatory Document REGDOC-2.10.1 – Nuclear Emergency Preparedness and Response.

AECL has collaborated with Bruce Power, New Brunswick Power Nuclear, and Ontario Power Generation to review the proposed REGDOC in detail and these comments are provided in Attachment A.

There are nineteen comments of significant concern that are identified in the attachment. These need resolution to ensure consistent application and alignment with current industry practices.

In addition, AECL has the following major comments that are unique to the situation at the Chalk River Laboratories.

**Section 2.3.4 (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".

**Section 2.3.4 (11; 12; 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."

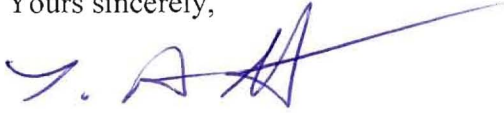
AECL is prepared to meet co-operatively with the CNSC to clarify any comments or concerns.

If you require further information or have any questions regarding details of this submission, please contact me as below.

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Yours sincerely,



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## Attachment A

**Industry Comments on REGDOC-2.10.1, Nuclear Emergency Preparedness and Response**

#	Document section	Industry issue	Suggested change (if applicable )	Major Comment/ request for clarification	Impact on industry if major comment
1.	General	<p>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.</p> <p>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> <p>Licensees should describe the methods and procedures for the continual assessment of the following pertinent conditions and parameters:</p> <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>	See specific suggestions	Major Comment	Level of detail leads to jurisdictional issues and conflicts with existing legislation, resulting in non-compliance with licence conditions.

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2.	General)	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.	Clarification	
3.	General	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 <b>EP program</b> " can be used in places where it is referring to the separate program that each licensee must have.	Clarification	
4.	General	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.	Clarification	

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5.	1.2	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.	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.	Clarification	
6.	1.2	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.	It is recommended that a note be added where appropriate that non-radioactive hazardous releases may be addressed by a separate plan.  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.	Clarification	
7.	1.3	<b>The definition of "Accident Management" in this document (and in REGDOC 2.3.2) is not consistent with the IAEA definition. "</b>	<b>Define and use terms consistent with IAEA definition. (Refer to comments for Regdoc 2.3.2)</b>	<b>Major Comment</b>	<b>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.</b>

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8.	1.3	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."	Clarification	
9.	1.3	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 emphasise the scope of this document.	<b>Revise order</b> of the text to emphasise the scope of this document.	Clarification	
10.	1.3	"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"	Clarification	
11.	<b>Figure 1</b>	<b>Offsite Emergency Response on Diagram</b>	<b>Offsite ER is currently noted only at the level of BDBA.</b> <b>Offsite Emergency Response occurs within a DBA</b> <b>Concept of "on-site" and "off-site" should be defined.</b>	<b>Major Comment</b>	<b>Lack of clarity could potentially result in difference in interpretation and implementation</b>
12.	1.5 3 <sup>rd</sup> para	Paragraph 3(1.1)(b) is incorrect	Replace with 3(1)(n)	Correction	
13.	2.1	Response to criminal or malicious activity (theft, sabotage, hostile action) may be considered under a separate program.	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"	Clarification	

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14.	2.2 Guidance	Redundant information found in licences and LCHs.	Delete: <ul style="list-style-type: none"> <li>submit all EP program changes to the CNSC at least 30 days before implementing “</li> </ul>	Major Comment	This requirement should be in the LCH for the facility, to ensure it is captured in licensee management systems.
15.	2.3.1	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.”	Clarification	
16.	2.3.2 Bullet 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.	Major Comment	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.
17.	2.3.2 Guidance	Note that the categories listed do not match NBEMO offsite classification terminology.		Clarification	
18.	2.3.3 - 5. & 6.	Some licensees are planning to 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	5. have <i>sufficient capacity and capability for radiological detection and monitoring including real-time or mobile off-site monitoring</i> 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.	Major Comment	The current wording is too restrictive and discounts an option to have real time off site monitoring.

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19.	2.3.3 Items 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.	Clarification	
20.	2.3.3	Meaning of the affected facilities and their components is unclear		Clarification	
21.	2.3.3 (#5)	Clarification of "station perimeter" is requested.	Suggest replacing with "station perimeter (or near site boundary)" for clarity and alignment with industry nomenclature.	Clarification	
22.	2.3.3 Guidance Par(3) Bul(3)	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....." Remove 'national security'	Clarification	
23.	2.3.4 Item 5	<b>Inconsistency with other legislation</b>	<b>Suggest rewording 5. As follows:</b> <b>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.</b> <b>Or</b> <b>Remove from this REGDOC, as this is not within the authority of the Utility. Licensee provides data only.</b>	<b>Major Comment</b>	<b>This is not consistent with current legislation, and leads to jurisdictional issues and conflicts with existing legislation, resulting in non-compliance with licence conditions.</b> <b>Provincial accountability is provided to ensure decision making for public protective actions is done independent of the utility.</b>
24.	2.3.4 (6)	Interface and support for offsite response organizations	Provide clarification on "other information"	Clarification	



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25.	2.3.4 (#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>Suggest reword for 11 &amp; 12 as follows:</p> <p>11. ....and ensure, <i>that where practicable</i>, notification is made ...</p> <p>12. ...and ensure, <i>that where practicable</i>, consultation ....</p> <p>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>	Major Comment	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.
26.	2.3.4 (#11/12)	Definitions of nominal venting and alternate venting in footnote 2 are not aligned with industry practice.	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.	Clarification	
27.	2.3.4 page 11 footnotes	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.	Editorial	
28.	2.3.4 (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).	Define what an abnormal incident is or remove this point.	Clarification	

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29.	2.3.5 Guidance Par 2)	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.”	Clarification	
30.	2.3.5 Guidance #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.	Clarification	
31.	2.3.6 (2)	Clarity requested for term “Emergency response facilities”	Define emergency response facility	Clarification	
32.	2.3.6 Bullet 4	<b>Licensees should not be responsible for CNSC emergency response equipment.</b>	<b>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.</b>	<b>Major Comment</b>	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. This level of detail may be at too low a level for a REGDOC.
33.	2.3.6 (#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.	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).”	Major Comment	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).

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34.	2.3.8 (3)	This is an unreasonable requirement as some recovery efforts will commence as soon as the event/accident is under control.	Suggest rewording as follows: <b>3. As recovery plans become available, submit to CNSC., with the understanding those recovery efforts already in progress will be noted.</b>	Major Comment	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.
35.	2.3.9	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. 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	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"	Major Comment	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.
36.	2.4.1, Bullet 1	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: <b>1. "ensure the organization responsible, provides" ... and delete "must be submitted to CNSC ...."</b> <b>2. as defined in REGDOC 3.1..1, develop ....</b> <b>3. Remove reference to REGDOC 2.2.2 as it is not yet available for review and comment</b>	Major Comment	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.
37.	2.4.1 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	Delete Bullet 2 This requirement should be considered for inclusion in REGDOC 3.1.1 instead of in this REGDOC	Major Comment	Will result in confusion in compliance, as requirement does not occur in reference document.

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38.	2.4.1 Bullet 3	The training development requirements are already covered in the operating licence under CSA N286.	Delete Bullet 3	Major Comment	There is no need to have this requirement as it already exists through the operating licence covered by CSA N286. (It is assumed REGDOC 2.2.2 will be referenced in the future thus making this require redundant).
39.	2.4.1 (4) Guidance	Define EROs. Unclear if this refers to multiple Emergency Response Organizations or to the ERO Roles.		Clarification	
40.	2.4.1 Guidance	Define physical competence		Clarification	
41.	2.4.2	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.)	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."	Clarification	
42.	Section 2.4.3, Bullet 6.	6 <sup>th</sup> Bullet: 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"	Minor Comment	

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43.	2.4.3	<p><b>Public Education Program – Title refers to “education”, text refers to “information”</b></p> <p><b>Educating the public about what to do at the time of a nuclear emergency is the responsibility of the province</b></p>	<p>Differentiate from terms “public education program” vs. “public information program”.</p> <p>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.</p> <p>Suggest that this section should direct to REGDOC/GD 99.3. where the intention is “information”</p>	<b>Major Comment</b>	<p><b>Terminology between documents needs to be consistent for appropriate compliance.</b></p> <p><b>Public education is the responsibility of the province. There is a potential for jurisdictional conflict.</b></p>
44.	2.4.4 (7)	Drills and Exercise	Define “full-scale integrated emergency testing exercise”	Clarification	
45.	2.4.4 (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	<p><b>Suggest adding:</b></p> <p><i>“It is understood that small changes may be required up to, and including, exercise day.”</i></p> <p>Or</p> <p>Referencing REGDOC 3.1.1</p>	<b>Major Comment</b>	<b>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.</b>
46.	2.4.4	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.	<b>Major Comment</b>	<b>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.</b>

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47.	2.4.4 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.	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".	Clarification.	
48.	Item 2.4.4 Page 21. Second 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"	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.	Minor Comment	
49.	Appendix A	<b>Figure 2 – Title does not reflect reality</b>	<b>Suggest change of Title to "Accident Control and Management". Align with request made under review of REGDOC 2.3.2 to revise definitions</b>	<b>Major Comment</b>	<b>Ensure consistency of understanding and requirements for licensees and the members of the public.</b>

ATTACHMENT B

Revised Figure 2

