

**REGDOC-2.2.2, Personnel Training / La formation du personnel**

**Comments received from public consultation / Commentaires reçus dans le cadre du processus de consultation**

Comments received:

- during additional consultation (January 6 to March 6, 2014): 3 comments from 3 reviewers
- during feedback period (July 17 to August 8, 2013): 2 comments from 2 reviewers
- during first round (May 3 to July 4, 2013): 58 comments from 8 reviewers

Commentaires reçus :

- lors de la consultation supplémentaire (du 6 janvier au 6 mars 2014) : 3 commentaires reçus de 3 examinateurs
- lors de la période des observations (du 17 juillet au 8 août 2013) : 2 commentaires reçus de 2 examinateurs
- lors de la première période (du 3 mai au 4 juillet 2013) : 58 commentaires reçus de 8 examinateurs

**Comments received from additional consultation / Commentaires reçus lors de la consultation supplémentaire**

	<b>Section</b>	<b>Organization</b>	<b>Comment</b>	<b>CNSC Response</b>
1.	General	AECL	<p>This e-mail is to inform the CNSC staff that AECL has no further comments on REGDOC 2.2.2 Personnel Training.</p> <p>AECL is pleased with the CNSC's approach of public consultation associated with the proposed REGDOC 2.2.2, Personnel Training. We encourage the CNSC to continue following a similar practice for other REGDOCs as we believe that the collaboration ensures a final product that has clarity and enables a global understanding. We appreciate the opportunity</p>	<b>Response:</b> Thank you for your comment.
2.	General	Bruce Power	<p>This e-mail is to inform the CNSC that Bruce Power has no further comments on REGDOC 2.2.2 Personnel Training.</p> <p>Bruce Power would like to recognize as a particularly good practice the CNSC's approach to the public consultation associated with the proposed REGDOC 2.2.2, Personnel Training. Bruce Power's position is that the resulting product adds clarity to the regulatory</p>	<b>Response:</b> Thank you for your comment.

	Section	Organization	Comment	CNSC Response
			environment and this clarity will assist us in ensuring that we not only have competent staff but with the documentation to ensure ourselves and others that we do. We encourage the CNSC to continue following a similar practice for other REGDOCs as we believe that it results in a stronger and clearer Regulatory Framework.	
3.	General	OPG	<p>The purpose of this e-mail is to inform the CNSC that OPG has no further comments on REGDOC 2.2.2, Personnel Training.</p> <p>OPG would like to recognize as a particularly good practice, the CNSC’s approach to the public consultation associated with the proposed REGDOC 2.2.2, Personnel Training. OPG’s position is that the resulting product adds clarity to the regulatory requirements and will assist OPG in ensuring that OPG has qualified staff and proper training documentation. OPG encourages the CNSC to continue following a similar practice for other REGDOCs, as OPG believes that it results in a stronger and clearer regulatory framework.</p>	<b>Response:</b> Thank you for your comment.

**Comments received from feedback on comments / Commentaires reçus dans les observations sur les commentaires reçus :**

	Section	Organization	Comment	CNSC Response
1.	General	McMaster Nuclear Reactor	<p>Staff at the McMaster Nuclear Reactor (MNR) have reviewed the comments submitted by other nuclear facilities and associations. While MNR generally agrees with the comments provided by AECL, Bruce Power, New Brunswick Power, and Ontario Power Generation, MNR hopes that any process undertaken to revise and incorporate comments will equally consider licensees of all sizes and scopes.</p> <p>Historically, documents and requirements developed to meet the needs of nuclear power plants have been targeted specifically for the nuclear power industry. Smaller, lower risk facilities often used separate regulatory documents whose scope did not include nuclear power plants. The concern at MNR is that the majority of the comments to REGDOC-2.2.2 were submitted by the nuclear power industry. If the draft document undergoes significant change as a result of the comments submitted without ongoing consideration for all types of nuclear facilities, the result may be a document that meets the needs of the nuclear power industry, but that is unnecessarily burdensome for smaller, lower risk facilities.</p>	<p><b>Response:</b> Comment #1 in the table above addresses this issue. REGDOC 2.2.2 states that the level of analysis, documentation and actions associated with each training processes and procedures may vary in proportion to the relative importance to safety, safeguards and security; the magnitude of any hazard involved; the lifecycle stage of the facility; <u>the mission of the facility</u>; <u>the particular characteristics of the facility</u>; and any other relevant factors.</p> <p>The amendments made to REGDOC 2.2.2 resulting from the public consultation do not in any way change this requirement such that it places additional burden on “smaller, low-risk facilities”.</p>
2.	General	Nordion	<p>Upon review of the industry comments on the draft REGDOC - 2.2.2, it is Nordion's position that improvements could be made to the definitions provided in the 'Glossary' section of the document.</p> <p>In particular, clear and prescriptive definitions should be included for the key terms, principles and requirements set out in the REGDOC.</p>	<p><b>Response:</b> The glossary has been amended and the terms 'safety-sensitive occupation' and 'safety-sensitive position' have been removed.</p> <p>The terms “sub-task” and “task element” have also been removed from the document.</p>

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			<p>In particular, the terms 'safety-sensitive occupation' and 'safety-sensitive position' should be better defined if they are ultimately retained in the final version of the document. For some terms, such as 'task element' a definition should be added to the document as none exists at present.</p>	

**Comments received during first round / Commentaires reçus lors de la première période:**

	Section	Organization	Comment	CNSC Response
1.	General	Association québécoise des physiciens médicaux cliniques	<p>Une communication personnelle avec un « Project Officer » de la division des accélérateurs et installations de catégorie II nous a renseignés sur les intentions de la CCSN quant au public vise par REGDOC-2.2.2. Il semblerait que le document d'application de la réglementation vise uniquement les installations de catégorie I. Pour des raisons de clarification, il serait bien que REGDOC-2.2.2 indique clairement les catégories de personne visées. La gestion de la formation du personnel dans les installations de catégorie II et en milieu hospitalier est différente et moins exigeante qu'en centrales nucléaires.</p> <p>Basés sur cette communication personnelle, nous n'avons pas poussé l'étude du document de travail, car il ne s'appliquerait pas en milieu hospitalier. Néanmoins, nous nous permettons de soumettre quelques commentaires spécifiques relevés lors d'une lecture de la version française.</p>	<p><b>Réponse :</b> Le commentaire est noté. Ce document d'application de la réglementation s'applique à toutes les centrales nucléaires, comme il est défini dans la <i>Loi sur la sûreté et la réglementation nucléaires</i>. Toutes les installations nucléaires doivent démontrer que leurs systèmes de formation sont conformes aux exigences de la CCSN et que leurs programmes de formation correspondent aux processus et aux procédures relatives à ces systèmes. De plus, ce document d'application de la réglementation s'applique à tous les travailleurs du secteur nucléaire et à d'autres personnes employées dans des installations où l'on produit, utilise, possède, emballe, stocke ou évacue des substances nucléaires et de l'équipement réglementé qui doivent exploiter ou entretenir l'installation dans toutes les conditions. Cela inclut les personnes dans des postes où l'erreur humaine pose des risques à l'environnement, à la santé et la sécurité des personnes et à la sûreté des centrales et des substances nucléaires.</p> <p>Par conséquent, tous les titulaires de permis doivent respecter les exigences énumérées à la section 3. Autrement dit, tous les titulaires de permis doivent utiliser un système de formation afin de définir, de concevoir, d'élaborer, de mettre en œuvre, d'évaluer, de consigner et de gérer de façon systématique toute la formation, y compris la formation continue, de tous les travailleurs susmentionnés.</p> <p>Cependant, le niveau d'analyse, la documentation et les mesures nécessaires qui ont trait aux processus et procédures de formation doivent être proportionnels à l'importance relative sur le plan de la sûreté, aux garanties et à la sécurité; au degré de tout danger connexe; à l'étape du cycle de vie de l'installation, à la</p>

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				mission de l'installation, aux caractéristiques propres à l'installation et à tout autre facteur pertinent.
2.	General	Nordion	Upon review of the draft REGDOC-2.2.2, Nordion felt that the document was thorough and well thought out, and that CNSC expectations with respect to personnel training were clearly outlined in the document. As such, Nordion has no comments to submit to the CNSC on the draft REGDOC-2.2.2, Personnel Training.	<b>Response:</b> Thank you for your comment.
3.	General	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power General	The industry recommends that the CNSC discontinue the process to create and implement this draft REGDOC. The industry does not accept there is a need for this REGDOC. Our position is that existing REGDOCs, including RD-204, Certification of Persons Working at Nuclear Power Plant, and existing standards, including N286-05 and 12, Management System Requirements for Nuclear Power Plants provide sufficiently detailed regulatory requirements. However, should the Commission elect to move forward with this REGDOC, the industry requests that the items identified in the following pages as Industry Major Comments have a formal related impact analysis conducted by CNSC staff before the items identified become requirements or we request that these items be eliminated from the REGDOC before it is issued. Industry Major Comments all address substantial expansions on regulatory requirements. Industry Major Comments all address items where the industry's position is that they add no measurable safety margin to our operations and will substantially divert talent and resources away from more important work.	<b>Response:</b> Comment noted. Each and every comment, including the Industry Major Comments, will be addressed individually in this table.  CNSC does not have a regulatory document that defines the requirements for licensees' training systems and training programs. Although training is mentioned in many CNSC regulatory instruments and licences, none of these documents include clear requirements and/or guidance. Documenting requirements and guidance is necessary to bring clarity or make unambiguous the criteria that CNSC uses as a basis for assessing licensee training systems and their training programs. Licensees have often criticized the lack of CNSC documentation in this area, despite CNSC many attempts over more than a decade to communicate expectations/recommendations. Consequently, the CNSC's licensee oversight program needs to formalize its basis for assessing licensee adherence/compliance with respect to their training. A regulatory document will help bring clarity to CNSC staff and licensees in their work.  Through the consultation process and meetings with stakeholders, the CNSC has ensured that this document will provide a clear and consistent basis on which to assess licensee training programs without requiring unnecessary changes to current good practice.

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4.	préface	Association québécoise des physiciens médicaux cliniques	« Le présent document <i>se veut un élément du fondement d'autorisation ...</i> » ne donne pas la même intensité d'application que « Ce document <i>peut fa ire partie du fondement d'autorisation ...</i> » situé dans la remarque,	<b>Réponse :</b> Le commentaire est noté. La CCSN considère que la préface est suffisante pour ce document.
5.	1.0  (also see Section: 2 Item 1, 3 Item 4, 5.1.2, 5.1.3, 5.2.1, 5.2.2, 5.3.2, Glossary entry for continuing Training, Job, Learning & teaching points.)	Atomic Energy Canada Limited Bruce Power Canadian Nuclear Association New Brunswick Power Nuclear Ontario Power Generation	<p><b>Issue Discussion:</b> The proposed REGDOC substantially expands regulatory requirements regarding the use of a systematic approach to training (SAT) by requiring (shall) and recommending (may or should) "abilities and attitudes" be added to knowledge &amp; skills attainment expectations throughout all phases of a SAT. This practice is not currently employed by the industry, is not part of current regulatory requirements, adds no measurable safety margin in the industry's opinion, is not practical to implement, and should not be added by this new regulatory document.</p> <p>The cost to the industry of this regulatory expansion from current practice is unpredictable but certain to be enormous as abilities &amp; attitudes would now be required to be identified and addressed for hundreds of task that compose dozens of positions that require a full SAT. Further, the value of this activity is doubtful in the opinion of the industry and is certainly unproven. In fact, the industry believes meeting this requirement may not be possible in that the distinction between Skills and Abilities is not discreet enough (even in the academic literature) to facilitate a distinction in our processes. Rather, we submit that sticking with Skills alone, as is current practice, is appropriate. Additionally, there is no precedent for the addition of Attitudes. The industry does not believe the identification or evaluation of</p>	<p><b>Response:</b> Agree. Document revised as follows:</p> <ol style="list-style-type: none"> <li>1. Remove “abilities”</li> <li>2. Amend the definition of “skills” in the glossary to note that some facilities may use the word “abilities” when referring to “skills”</li> <li>3. Remove “attitudes” in the document and replace with “safety-related attributes”. “Safety-related attributes” are defined as “observable attributes of safety that reflect an organization’s values and behaviors related to safety that each worker is expected to exhibit consistently on the job.”</li> <li>4. Define “safety-related attributes” in the glossary.</li> <li>5. Provide guidance on “safety-related attributes in the guidance portion of the document (section 5).</li> </ol> <p><b>Rationale:</b></p> <ol style="list-style-type: none"> <li>1-2. The rationale for including both “skills” and “abilities” in the document was that they are often used interchangeably and some licensees use the word “skills” while other use the word “abilities”.. To clarify the intention of this provision, the term “abilities” has been removed from the body of the document and added to the definition of “skills” in the glossary.</li> <li>3. The rationale for changing the word “attitudes” to “safety-related attributes” is to ensure that it is very clear that the requirement is only to identify those</li> </ol>

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			<p>Attitudes as proposed in this REGDOC is feasible by the industry.</p> <p>Certainly, some aspects of professionalism and its related attitudes are expected of staff; however this is and can continue to be accomplished without the expansive addition of Attitudes into the SAT process as proposed.</p> <p><b>Suggested Change:</b> We request the deletion of all reference to "abilities and attitudes" in the document. We recommend the document limit all phases of a SAT to Knowledge &amp; Skills identification and attainment by staff.</p>	<p>values and behaviours that could have an impact on the safe performance of the tasks or the jobs. Generally, the licensees already include “attributes” in their training programs. For instance, candidates who fail to display the organization’s values and expected behavior during training or during qualification and/or certification examinations may be deemed to have failed the examination and may be removed from the training program.</p> <p>The CNSC notes that “safety-related attributes” may be identified in existing training programs using a different term, such as “management expectations.” However, regardless of the terminology used, the intention is the same: to instill in candidates values and behavior important to the organization. For example, at all nuclear facilities, the licensees expect their training programs to instill values and behavior such as “conservative decision making,” “a questioning attitude,” “safety first and foremost,” etc.</p> <p>Furthermore, the inclusion of the word “safety-related attributes” is also consistent with IAEA, which states that "Systematic Approach to Training (SAT) for nuclear power plant personnel emphasizes a broader concept of competence which includes not only technical knowledge and skills but also knowledge, skills and attitudes related to human factors".</p> <p>To clarify the intention of this provision, the definition of “safety-related attributes” has been added to the glossary and additional guidance has been added to Section 5 of the REGDOC (Guidance Section) to acknowledge that the “safety-related attributes” need not be developed for each task individually but can be developed collectively and documented. For instance,</p>

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				some licensees publish these requirements as “management expectations.”
6.	1.0  (also 1.1, Section 3 introductory paragraphs, Section 5 introductory paragraphs, and Glossary)	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<p><b>Issue Discussion:</b> The introduction states "training system, as defined in this regulatory document..."however, training system is not defined in this document. Section 1. states that "A training system provides the basis for defining, designing, developing, implementing, evaluating, recording, and managing...". However this is different from the items in the Preface which was "analysis, design, development, implementation, evaluation, documentation and management".</p> <p><b>Suggested Change:</b> Define "training system" in Glossary. Utilize consistent wording from one section to another so that no variance can arise. Suggest using wording from Section 1 in Preface. Full text recommendation adds definition to glossary and moves to consistent wording throughout document.</p>	<p><b>Response:</b> Agree. Add the following definition to the glossary: “Training System A series of training-related processes and procedures that provides the basis for the analysis, design, development, implementation, evaluation, documentation and management of training programs and courses.”</p> <p><b>Rationale:</b> The addition of a definition for training system adds clarity to REGDOC-2.2.2.</p>
7.	1.0	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<p><b>Suggested Change:</b> A training system provides the basis for <del>defining, designing, developing, implementing, evaluating, recording and managing</del> <b>analysis, design, development, implementation, evaluation, documentation and management of</b> training for workers at nuclear facilities. It provides a method for meeting the training needs of workers and ensuring that the right people receive the right training at the right time. With a training system, as defined in this regulatory document, it can be demonstrated that all required knowledge <b>and</b> skills <del>abilities and attitudes</del> have been attained, through the process of performance-based assessment and program evaluation. Without a training system,</p>	<p><b>Response:</b> Agree. Change accepted however the word “attitudes” has been changed to “safety-related attributes”.</p> <p><b>Rationale:</b> See comment #5 above.</p>

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			there is the risk that important elements of training will be omitted and the operating state of the facility will not be reflected in the training programs.	
8.	1.0 and 1.2	McMaster Nuclear Reactor	Section 1 indicates, “As required by the <i>General Nuclear Safety and Control Regulations</i> , workers shall be trained to carry on the licensed activity. Section 1.2 indicates, “This regulatory document applies to all workers in nuclear facilities who are employed in safety-sensitive occupations and/or safety-sensitive positions. A worker trained to carry on a licensed activity may not be employed in a safety-sensitive position/occupation and vice versa. The scope does not match the regulations or the NSCA which are used for the basis of authority for this regulatory document.	<p><b>Response:</b> Agree. The revised text in section 1.2 reads as follows:</p> <p>“This regulatory document applies to workers engaged in licensed activities in nuclear facilities or anywhere that nuclear substances or prescribed equipment are produced, used, possessed, packaged or disposed of. This includes workers in positions where the consequence of human error poses a risk to the environment, the health and safety of persons, or to the security of the nuclear facilities and of nuclear substances. The licensees shall define these positions in their training system governing documents.”</p> <p><b>Rationale:</b> See comment #9 below.</p>
9.	1.2  (also section 3 and glossary entry for safety-sensitive occupations and safety-sensitive positions)	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<p><b>Issue Discussion:</b> Section 1.2 introduces 'safety-sensitive occupations' and 'safety-sensitive positions'. The intent of these terms is to define the scope of workers this REGDOC applies to.</p> <p>Further in Section 3 the proposed REGDOC clearly states that the list of workers in scope shall be proposed by the licensee and approved by the CNSC through the license process. We agree that this process is appropriate in that the licence application certainly addresses this issue. However, we do not support calling out in this REGDOC specific approvals during the licensing process as this adds no value and potentially adds a parallel process and potential confusion. Of important note is that we find the use of these terms (particularly with the</p>	<p><b>Response:</b> Agree. The terms 'safety-sensitive occupations' and 'safety-sensitive positions' have been removed from the document and the document is revised as suggested, The word “plant” has been replaced with “nuclear facilities,” as this regulatory document applies to all nuclear facilities.</p> <p>The revised text in section 1.2 reads as follows:</p> <p>“This regulatory document applies to workers engaged in licensed activities in nuclear facilities or anywhere that nuclear substances or prescribed equipment are produced, used, possessed, packaged or disposed of. This includes workers in positions where the consequence of human error poses a risk to the environment, the health and safety of persons, or to the security of the nuclear facilities and of nuclear</p>

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			<p>expansive definition given in the proposed (Glossary) contradictory to this process and of no value. Rather we request that the terms safety sensitive occupations and/or safety-sensitive positions be eliminated from this REGDOC. In their stead we recommend the scope apply to those positions that directly operate or maintain the plant as these are the positions where the qualification is a significant component of our defence in depth approach to safety.</p> <p>Currently the industry defines its jobs within its management systems as per individual licence applications. At Bruce Power we currently have 317 positions defined in our system. We apply a full SAT to about 10% of these described positions; over 60% of our staff and nearly 100% of staff that work in our Stations hold one of these positions which are called "Key Qualifications" within our documentation. Our Key Qualifications equate closely with "Accredited Positions" regulated by the US NRC and that require a SAT in that system. In fact, our list is larger than the USNRC list. These staff are the people that directly operate and maintain the plant. It is staff in these positions that the industry deems to be staff whose position qualifications form an important part of our defence-in-depth with regard to safety. Introduction of new expansive terminology to define which positions require a SAT be applied to at nuclear facilities adds uncertainty unnecessarily. Current requirements are adequate in the industry's opinion in that they already require a SAT for Certified positions and require that licensee's training shall be systematically developed and</p>	<p>substances. The licensees shall define these positions in their training system governing documents.”</p> <p><b>Rationale:</b> The new wording is aligned with the intent of the regulatory document as it was never the intent to increase the scope of the current training requirements as applied through Objectives and Criteria for Regulatory Evaluations of NPP Operations Personnel Training Programs, Revision 1, January 1997 and Objectives and Criteria for Regulatory Evaluations of Nuclear Facilities Training Programs, Revision 2, February 2005. Furthermore, the requirements defined in REGDOC 2.2.2 will not apply to jobs and job families that are not currently required to have systematically developed training programs. It will continue to apply to workers in nuclear facilities who are in positions where the consequence of human error presents risks to the environment, or to the health and safety of persons or to the security of the nuclear facilities and of nuclear substances.</p>

	Section	Organization	Comment	CNSC Response
			<p>implemented so that the required competency is achieved and maintained.</p> <p>Additionally, current industry standards and CNSC inspection guides provide sufficient aids to the implementation of these requirements. The addition of a new REGDOC with an unclear and expansive scope to safety-sensitive occupations' and 'safety-sensitive positions' as defined in the Glossary of the proposed document could add dozens of positions to the positions currently deemed appropriate for a SAT and is not recommended or valued.</p> <p><b>Suggested Change:</b> We request the replacement of Section 1.2 paragraph 1 with the following: "This regulatory document applies to workers in nuclear facilities who directly operate or maintain the plant during all facility conditions. The licensee shall define these positions in its training system."</p>	
10.	1.2 (also Section 3 and Glossary entry for safety-sensitive occupations' and 'safety-sensitive positions')	Canadian Nuclear Association	<p><b>Issue Discussion:</b> Section 1.2 introduces 'safety-sensitive occupations' and 'safety-sensitive positions'. The intent of these terms is to define the scope of workers this REGDOC applies to. Further in Section 3 the proposed REGDOC clearly states that the list of workers in scope shall be proposed by the licensee and approved by the CNSC through the license process. We agree that this process is appropriate in that the licence application certainly addresses this issue. However, we do not support calling out in this REGDOC specific approvals during the licensing process as this adds no value and potentially adds a parallel process and potential confusion. Of important note is that we find the use of these terms</p>	<p><b>Response:</b> The terms 'safety-sensitive occupations' and 'safety-sensitive positions' have been removed from the document. Section 1.2 has been revised to read as follows:</p> <p>“This regulatory document applies to workers engaged in licensed activities in nuclear facilities or anywhere that nuclear substances or prescribed equipment are produced, used, possessed, packaged or disposed of. This includes workers in positions where the consequence of human error poses a risk to the environment, the health and safety of persons, or to the security of the nuclear facilities and of nuclear substances. The licensees shall define these positions in their training system governing documents.”</p>

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			<p>(particularly with the expansive definition given in the proposed Glossary) contradictory to this process and of no value. Rather we request that the terms safety sensitive occupations and/or safety-sensitive positions be eliminated from this REGDOC In their stead we recommend the scope apply to those positions that directly operate or maintain the plant as these are the positions where the qualification is a significant component of our defence in depth approach to safety.</p> <p>Current regulations are adequate in the industry's opinion in that they already require a SAT for Certified positions and require that licensee's training shall be systematically developed and implemented so that the required competency is achieved and maintained.</p> <p>Additionally, current industry standards and CNSC inspection guides provide sufficient aids to the implementation of these regulations. The addition of a new REGDOC with an unclear and expansive scope to safety-sensitive occupations' and 'safety-sensitive positions' as defined in the Glossary of the proposed document could add dozens of positions to the positions currently deemed appropriate for a SAT and is not recommended or valued.</p> <p><b>Suggested Change:</b> We request the replacement of Section 1.2 paragraph 1 with the following:                      "This regulatory document applies to workers in nuclear facilities who directly operate or maintain the plant during all facility conditions. The licensee shall define these positions in its training system."</p>	<p><b>Rationale:</b> See comment #9 above.</p>

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11.	2.0	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>Suggested Change:</b> The training system developed and implemented by each licensee shall adhere to the following <del>three</del> <b>two</b> fundamental principles:	<b>Response:</b> Agree. Text revised as suggested. The third principle has been removed from section 2 and moved to the section 5 (guidance).  <b>Rationale:</b> The third principle was retained in the guidance section of the document as it is important that training designers take into consideration the learning characteristics of the intended target population when designing new training programs or amending existing training programs.
12.	2.0 Item 1  Performance oriented principle	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>Issue Discussion:</b> Since Section 2 is a "shall" Section, the term "All" is not appropriate and needs to be removed. Not "all" instruction is performance oriented. This REGDOC, if adopted at all, should not address "all" training but rather the training required under the scope of the REGDOC. Further, licensees should not be instructed to preclude additional training that may not be "essential". Additionally, again abilities & attitudes needs to be removed from document. Also "nuclear-safety specific needs" is not defined and not needed as this item is redundant with "essential knowledge and skills".  <b>Suggested Change:</b> Change Principle to read as follows: "Performance oriented: Training is preparation for performance on the job. Instruction shall focus on essential knowledge and skills required to meet job requirements over the lifecycle of the facility."	<b>Response:</b> Agree conceptually. Text revised as follows: "All instruction <i>that is subject to this regulatory document</i> shall focus on essential knowledge, skills and <i>safety related attributes</i> required to meet job requirements and nuclear-safety-specific needs throughout the lifecycle of the facility."  <b>Rationale:</b> The addition of the phrase "...that is subject to this regulatory document" indicates that the principle applies only to the training that is subject to REGDOC-2.2.2, rather than all training conducted by licensees.
13.	2.0 Item 3	Atomic Energy Canada Limited Bruce Power	<b>Issue Discussion:</b> The new requirement proposed is that "Training shall be tailored to the needs and the learning characteristics of the	<b>Response:</b> Agree. See comment #11 above.  <b>Rationale:</b> See comment #11 above.

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		<p>Canadian Nuclear Association New Brunswick Power Nuclear Ontario Power Generation</p>	<p>target population."</p> <p>The industry position is that this needs to be a guiding (should) principle not a "shall" fundamental principle. No requirement to tailor to learning characteristics of audience has existed in prior regulations and compliance is not likely possible since our audiences vary significantly within a single course and from course to course with no time to adjust.</p> <p>The industry has not found any basis in literature, previous legislation, or international standards for this being a "shall" principle. In fact the industry fails to see how this is a regulatory issue at all. There appears to be no safety impact and compliance would be problematic as this is completely new. Certainly, this is a good practice but making a good practice a guiding principle in the "shall" part of the REGDOC with wide application and compliance expectations is a large new burden with no safety value we can see. Cost impact is enormous and safety value is unproven and unlikely. Specific cost impact has not been evaluated as our industry position is that compliance would not be possible at any cost.</p> <p><b>Suggested Change:</b> We request that Section 2 Item 3 be eliminated from the document; this principle should be eliminated from all "shall" aspects of the proposed REG.</p>	
14.	3.0	McMaster Nuclear Reactor	<p>The guidance establishes requirements written from the perspective of developing a new training system where no system exists. There is no guidance for gap fitting an established system which may partially meet requirements</p>	<p><b>Response:</b> Comment noted.</p> <p><b>Rationale:</b> The requirements of the document have been drafted so as to focus on the general requirements of a training system, with the guidance providing a means to accomplish these requirements. Through</p>

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			of this regulatory document.	implementation in licensing, and subsequent compliance activities, specific areas of improvement may be identified. These will be addressed on a case-by-case basis with the licensee(s) in question consistent with the CNSC’s licensing and compliance processes.
15.	3.0 Paragraph 5	McMaster Nuclear Reactor	Paragraph 5, point 9 indicates, “Licensees shall: ensure continuing training is provided to workers and that it includes update training to programs stemming from the change management process.” While update training would obviously be required, continuing training is only required when deemed necessary during the analysis phase of the training program. Modify the sentence to add “as deemed appropriate during task analysis.”	<b>Response:</b> Agree. Document revised to clarify the original intention of point #9:  “ensure continuing training is provided to workers as deemed necessary through the job and task analyses processes and that it includes updates to training programs stemming from the change management process”  <b>Rationale:</b> The intention of the original statement was to require licensees to provide continuing training when necessary as determined through a Difficulty-Importance – Frequency (DIF) analysis conducted during the job and task analyses. The amendment indicated above clarifies this intention.
16.	3.0 Introductory paragraphs	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>Discussion:</b> Section 3 Paragraph 1: Wording used to describe a training system should be consistent with earlier document sections.  Section 3 Paragraph 2: Paragraph should be eliminated and necessary content moved to Section on Scope. See previous Industry Major Comment #1 for specific Scope wording recommendation. Expansion of positions via this paragraph is the subject of Industry Major Comment #1. The licence renewal process is adequate to define licensee systems to address compliance and adding wording in this, or any, specific REGDOC that speaks to approval during this process has the potential to add confusion or create parallel processes.	<b>Response:</b> Agree. Document revised as suggested.  <b>Rationale:</b> The changes are primarily editorial in nature and do not change the intent of the document. The changes will add clarity and remove redundancies that could lead to confusion.

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			<p>Section 3 Paragraph 3: Paragraph should be eliminated and necessary content moved to paragraph one. Reference to vendors and contractors adds confusion, not clarity. Licensees are accountable for meeting REGDOCs implicitly without regard to how suppliers are used to do so and stating this adds confusion in that it may be construed to mean that contractors must use a SAT to qualify their staff. If this REGDOC is meant, in fact, to require that vendors are required to use a SAT to train their staff, this is an substantial expansion of current requirements and deserves far greater clarity in the REGDOC and an additional opportunity for comment.</p> <p>Section 3 Paragraph 4: No comment on the wording of this paragraph which is acceptable to the industry as is. However, the wording of this paragraph (which allows some flexibility on the required details when a SAT is used) does lead to confusion when the "shall" list of 13 items follows. Are these items always "shall" or is flexibility allowed? Is a question that should not result from a new REGDOC. Therefore, the industry has recommended 6 of the 13 items be removed from the "shall" list. The requirement for these items is adequately provided for in the revised introductory paragraphs.</p> <p><b>Suggested Change:</b> Change Section 3 paragraph 1 to read as follows:</p> <p>"Licensees shall ensure workers are competent to do the work assigned to them through the use of a training system to systematically analyze,</p>	

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			<p>design, develop, implement, evaluate, document and manage new training and the revision of existing training, including continuing training, for workers in positions that directly operate or maintain the facility during all facility conditions as identified in the licensing process."</p>	
17.	Section 3 Listed items 1 through 5 plus 11	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power General	<p><b>Discussion:</b> Items 1 through 5 and item 11 should be eliminated from the REGDOC as unnecessary and largely redundant with Principles in Section 2 or the introductory paragraphs to this Section. Meaning, these items are not seen to add clarity or content to the document and are therefore not needed. Further, the "shall" nature of these items is seen as contradictory to introductory paragraph #4 by the industry.</p> <p>Additionally: Item 2 introduces "competencies", which is likely to be interpreted as a new and additional regulatory requirement and this is not likely the intent. This terminology is not commonly used in the industry. We request that should this REGDOC be published, terminology in the document use Qualification or Knowledge &amp; Skills and not use competencies (noun).</p> <p>Item 3 importantly includes the detail within the item that requires a job analysis "to determine all the .... subtasks and task elements involved" and this is not a practice currently done by licensees and represents a substantial increase in regulatory expectations as compared to current Canadian and international practice with little or no expected value as discussed in Industry Major Comment #3.</p>	<p><b>Response:</b> Partially agree. Document revised as follows:</p> <p>Items 1, 2 and 11 have been removed.</p> <p>Items 3, 4 and 5 have been revised as follows to address the concerns raised by the commenters:</p> <p>“3. (now #1) Identify all performance requirements of a capability, job or duty area by conducting a job analysis to determine all of the tasks involved</p> <p>4. (now #2) Define and document the necessary general worker training, initial job training and continuing training requirements for workers, based on a task analysis of the knowledge, skills, and attitudes required to perform the duties of their position</p> <p>5. (now #3) Ensure that appropriate training is designed, developed and implemented to meet the qualification requirements”</p> <p><b>Rationale:</b> The intention of “sub tasks” and “task elements” was not to create an additional requirement to licensees’ training systems that would necessitate the identification of sub tasks and task elements that make up each job or duty area.</p> <p>Rather, by including “sub tasks” and “task elements” to the consultation version of REGDOC-2.2.2, the CNSC</p>

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			<p>Additionally, the term capability is introduced here along with job and duty and adds no value in our opinion but does raise questions and confusion as to what is intended by this additional term's inclusion.</p> <p>Item 5 again refers to "competencies" and we request that should this REGDOC be published, the terminology stay with Qualification or Knowledge &amp; Skills.</p> <p>Item 11 unnecessarily singles out one curriculum content item. We suggest this is inappropriate as content is expected to be systematically derived and the mention of one item and not others may lead to assumptions about content derivation that is inappropriate.</p> <p><b>Suggested Change:</b> Eliminate Section 3 Items 1 through 5 and Item 11.</p>	<p>intended to capture a practice common to the SAT methodology, which is the industry standard for training development and is the most widely practiced model in existence today. Normally within a SAT-based training system, job analyses are conducted which produce lists of tasks that make up the jobs or duty areas. Subsequently, these tasks are further analyzed using various SAT processes to define the training requirements. While sub tasks and task elements are not normally identified and documented during the job analysis process, they often must be identified during the development of training objectives and the preparation of training materials, including lesson plans because they are important in identifying the necessary knowledge, skills and attitudes which are documented during task analysis process.</p> <p>In order to clarify the CNSC's intention for this section, the removal of the words "sub tasks" and "task elements" have been removed from REGDOC-2.2.2.</p> <p>In everyday conversation the words "competency" and "qualification" are often used interchangeably. When a person is said to be "qualified to perform a task", it is assumed to mean that he/she is "competent to perform that task". However, in the training community, competency is sometimes taken to be the abilities beyond just the skills and knowledge that are required to performance a task - it is assumed to involve attitudes as well. In order to be consistent in REGDOC-2.2.2, the CNSC has chosen to use the word "qualification" to denote this. To minimize misinterpretation, "qualification" has been defined to involve knowledge, skills, and safety-related attributes. Skills includes all skills including "hard skills" related to the task as well as "soft skills" often related to personal attributes or abilities such as communication skills, listening skills, patience, ability to handle</p>

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				multiple inputs simultaneously, safety conscientious, etc.
18.	Section 3 Item 3	Atomic Energy Canada Limited Bruce Power Canadian Nuclear Association New Brunswick Power Ontario Power Generation	<p><b>Issue Discussion:</b> Section 3 Item 3 of the proposed REGDOC requires that a job analysis shall "... determine all the .... subtasks and task elements involved". This is not a practice currently done by licensees and represents a substantial increase in regulatory expectations as compared to current Canadian and international practice with, in the opinion of the industry, no expected value. The current practice to identify tasks and task references (which adequately describe the task) has been sufficient for the past ten years and is sufficient internationally. The industry does occasionally document task elements when an adequate reference is not available. However, this is rare and would not meet the regulatory requirements as proposed.</p> <p>The industry has been implementing a SAT for over ten years. The expectation that a job analysis will "determine all the .... subtasks and task elements involved" is not a practice currently done. The impact to go back and re-perform all of our job analysis would cost millions of dollars, divert resources from more important work, and, in our opinion, not discernibly improve our programs.</p> <p>Of additional concern in this Section 3 Item 3 wording is that the term "capability" is introduced in this section along with "job and duty" and adds no value in our opinion. Further its inclusion does raise questions as to what is intended by this additional term's inclusion.</p>	<b>Response:</b> Agree. See comment #17.

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			<p><b>Suggested Change:</b> We request that Section 3 Item 3 be eliminated from the document which will remove the new regulatory requirement to determine subtasks and task elements during job analysis. We suggest that the revised Section 3 introductory paragraph in the full text recommendation at the end of this Attachment sufficiently requires the job analysis aspect of a SAT.</p>	
19.	<p>Section 3 Listed Items 6 through 13 other than item 11</p>	<p>Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation</p>	<p><b>Discussion:</b> We have only small comments on items 6 through 13 other than item 11 (see above). Comments are all incorporated into the suggested wording provided below and in the full text that follows. Mostly we again request the concept and terminology around "competencies" not be used.</p> <p><b>Suggested Change:</b> Replace Items 1 through 13 with revised items 1 through 7 as defined below: Licensees shall: 1. Ensure that trainers meet and maintain documented qualifications, particularly in the areas of subject matter expertise and instructional skills. 2. Ensure that formal evaluations are used to confirm and document that each trained worker is qualified to perform the duties of his or her position. 3. Implement a training change management process that will systematically analyze procedural facility and industry-wide events) in order to identify changes to the tasks and task lists. and to assess potential training implications leading to modifications of training. 4. Ensure continuing training is provided to workers and that it includes updates stemming</p>	<p><b>Response:</b> Agree. See comment #17.</p>

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			<p>from the change management process.</p> <p>5. Evaluate training regularly and incorporate the results of the evaluations into a training improvement process.</p> <p>6. Ensure that workers' records in support of training and qualifications are established and maintained.</p> <p>7. Ensure that workers have a level of training related to nuclear safety including but not limited to radiation safety, fire safety, onsite emergency arrangements, and conventional health and safety corresponding to the duties of their position and employment.</p>	
20.	4.0 (also 1.2)	McMaster Nuclear Reactor	<p>Section 4, paragraph 2 indicates, "Licensees shall also maintain training records on the training and qualifications of all workers." This statement exceeds the scope of the REGDOC which indicates that, "This regulatory document applies to all workers in nuclear facilities who are employed in safety-sensitive occupations and/or safety-sensitive positions.</p>	<p><b>Response:</b> Comment noted. The phrases "safety-sensitive occupations" and "safety-sensitive positions" have been removed from the document.</p> <p><b>Rationale:</b> See comment #9.</p>
21.	4.0 Paragraph 2	McMaster Nuclear Reactor	<p>Section 4, paragraph 2 indicates, "The training record for each worker, including temporary workers and contractors, shall include all qualifications and certifications held, the expiration dates for time-sensitive qualifications and certifications, and all requalification or recertification requirements." This should be restricted to qualifications and certifications relevant to the work to be performed by the employee. A welding certification is irrelevant if the worker is restricted to carpentry. If the requirement is enforced as written, a facility could be cited for not having an employee's certification to perform marriage ceremonies on file, despite the certification having no relevance to any part of a nuclear facility.</p>	<p><b>Response:</b> Agree. See comment #22.</p>

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22.	4.0	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<p><b>Suggested Change:</b> Licensees shall develop and manage documentation related to all phases of their training including <del>but not limited to</del> <b>but not limited to:</b> task lists, task-to-training matrices, training objectives, <del>training plans, training delivery plans, lesson plans, verification tools, program evaluation data and records and decision documents regarding any changes to the training courses and training programs</del> <b>lesson plans, evaluation tools, training evaluation, and changes to training.</b></p> <p>Licensees shall <del>also</del> maintain <del>training</del> records on the training and qualifications of all workers. These records shall be managed and controlled, and may be requested by CNSC staff at any time. <del>Additionally, workers’ supervisors and managers shall have immediate, unencumbered and readily available access to the records.</del> The training record for each worker, including temporary workers and contractors, shall include <del>all qualifications and certifications held, the expiration dates for time sensitive qualifications and certifications, and all requalification or recertification requirements,</del> <b>all qualifications and certifications granted by or relied on by the licensee to fulfill requirements of this document. Records shall include expiration dates for time-sensitive qualifications and certifications, and all requalification or recertification requirements.</b></p>	<p><b>Response:</b> Partially agree. Document revised as follows:</p> <p>1. The list of documents specified in section 4, paragraph 1 have been removed and replaced with a nonspecific statement which states that documentation shall be developed and managed for all phases of their training. The revised text reads as follows:</p> <p>“Licensees shall develop and manage documentation related to all phases of their training including analysis, design, development, implementation and evaluation.”</p> <p>Rationale: The revised text clearly defines the requirement for the licensees to develop documentation to support all phase of their training system without explicitly identifying the numerous documents that they must or could be produce. This change will accommodate different naming nomenclatures for the various training documents.</p> <p>2. Section 4, paragraph 2 has been amended to define that the managers and supervisors need only have access to “workers’ qualification records related to the work that they are assigning or supervising. The revised text reads as follows:</p> <p>“Licensees shall maintain records on the training and qualifications of all workers. These records shall be managed and controlled, and may be requested by CNSC staff at any time. Additionally, workers’ supervisors and managers shall have immediate, unencumbered and readily available access to the workers’ qualification records related to work being assigned or performed. The training record for each worker, including temporary workers and contractors, shall include all qualifications and certifications granted by or relied on by the licensee to fulfill</p>

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				<p>requirements of this document and that are related to the duties of the worker at that facility. Records shall include expiration dates for time-sensitive qualifications and certifications, and all requalification or recertification requirements.”</p> <p><b>Rationale:</b> The statement regarding the requirement for supervisors and managers to have immediate, unencumbered and readily available access to records will be retained because it is important that managers who assign work/tasks to workers have the means by which to quickly verify that the workers hold the appropriate qualifications to do the work being assigned to them and that those qualifications are current. However, the requirement was reworded to explicitly state that the supervisors and managers need only to have access to workers’ qualification records related to work being assigned or performed.</p>
23.	4.0 & 5.0	McMaster Nuclear Reactor	<p>Paragraph 1 lists types of documents related to training and indicates that licensees shall, “develop and maintain,” the various types of documentation. This is restrictive, considering a facility may use different types of documentation that accomplishes the same functions as the types of documents listed. Additionally, several of the required documentation types are not mentioned in section 5, Guidance on the systematic approach to training. Following the guidance in section 5 should allow the user to meet all requirements of the rest of the REGDOC, not only section 3.0 of the document as stated in the first paragraph of section 5.</p>	<p><b>Response:</b> Agree. See comments # 22.</p>
24.	5.0 Guidance	Atomic Energy Canada Limited Bruce Power New Brunswick Power	<p><b>Discussion:</b> Section 5 is a “may” section. Therefore comments are limited to changing terminology to current industry terminology and to carrying forward Industry MAJOR comments</p>	<p><b>Response:</b> Agree. Document revised as suggested.</p> <p><b>Rationale:</b> This change is editorial in nature. It will add clarity to the document by improving the precision</p>

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		<p>Nuclear Ontario Power Generation</p>	<p>made on Sections 1 through 4.</p> <p><b>Suggested Change:</b> <del>Licensees may adopt the systematic approach to training (SAT) methodology to meet the requirements in section 3.0 of this document. SAT is a proven and highly successful education and training methodology, which, when implemented as outlined below, will meet the requirements of this regulatory document. It is also widely known as the instructional systems design model (ISDM).</del></p> <p>Systematic Approach to Training (SAT) is a proven and highly successful education and training methodology, which licensees may adopt to meet the requirements in section 3.0 of this document. SAT is also widely known as the instructional systems design model (ISDM) or Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model.</p> <p>The SAT methodology is the industry standard for training development and is the most widely practiced model in existence today. SAT is a holistic process and a proven best practice for the analysis, design, development, implementation, evaluation and management of training.</p> <p>A SAT-based training system provides interdependent functions consisting of analysis, design, development, implementation and evaluation. It is this cyclic process, as depicted in Figure 1. that enables training to be systematically <del>defined, designed, developed,</del></p>	<p>of the wording and will better align the CNSC’s terminology with current industry terminology. The change does not alter the intent of this section of the document.</p>

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			<p><del>implemented and evaluated</del> analyzed, designed, developed, implemented, evaluated, documented and managed in order to not only meet operational and organization requirements, but also to react quickly to changes in those requirements.</p> <p>Figure 1: Overview of a systematic approach to training (no comment on figure 1)</p>	
25.	5.1	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<p><b>Suggested Change:</b> The analysis phase is the foundation of any training course or training program and includes inputs from operational staff, end-users, subject matter experts (SMEs) and training development experts. Its purpose is to specify the required outcome of the training in terms of essential on-the-job performance as defined by role documents, procedures or written instructions. The analysis should consider the following points:</p> <ul style="list-style-type: none"> <li>• rationale and purpose of training</li> <li>• scope of the training</li> <li>• target audience</li> <li>• training method</li> <li>• location of the training</li> <li>• timeframe by when the training must be complete</li> </ul> <p><del>There are various components required to facilitate a full training analysis as described in the following paragraphs.</del></p> <p><i>The fundamental processes of the analysis phase are briefly described in the following paragraphs.</i></p>	<p><b>Response:</b> Agree. Document revised as suggested.</p> <p><b>Rationale:</b> This is an editorial change. It will add clarity to the document by improving the precision of the CNSC’s wording. The change does not alter the intent of this section of the document.</p>
26.	5.1.2	Atomic Energy Canada Limited Bruce Power	To identify all performance requirements of a <del>capability</del> , job or duty <b>area</b> , a job analysis should be conducted to determine all of the	<p><b>Response:</b> Agree.</p> <p>1. The terms “subtasks” and “task elements” have been</p>

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		New Brunswick Power Nuclear Ontario Power Generation	tasks, <del>subtasks and task elements</del> involved with all states of the nuclear facility, including normal operations, accident conditions and emergency situations. The end result of a job analysis is a list of tasks that should be completed to perform the job correctly. Task difficulty, importance and frequency are considered to determine which tasks need to be part of training and to determine the initial and continuing training content. Task analysis should be conducted to determine the method of task performance and associated knowledge <i>and</i> skills <del>and abilities</del> .	removed from the document. See comment #17.  2. The word “abilities” has been removed from the document. See comments #5.  3. The word “attitudes” has been replaced with “safety-related attributes”. See comment #5.
27.	5.1.3	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>Terminal</b> Learning objectives  <del>Terminal</del> Learning objectives ( <i>TLOs</i> ) are statements of <del>desired knowledge, skills, abilities and attitudes</del> <i>tasks</i> that workers must be able to demonstrate after completing the training. <i>TLOs</i> should be measurable and define exactly when, what and how well the trainee must be capable of performing on the job upon completion of the training. A <b>terminal</b> learning objective should include: <ol style="list-style-type: none"> <li>1. a performance statement: states the task to be performed <del>using one observable verb</del></li> <li>2. a condition statement: describes conditions under which the performance must be completed</li> <li>3. standards: state <del>at least one</del> measurable criterion which describe how well the performance should be completed</li> </ol>	<b>Response:</b> Agree. Document revised as suggested.  <b>Rationale:</b> This is a primarily editorial change. It will add clarity to the document by improving the precision of our wording and will better align the CNSC’s terminology with current industry terminology. The change does not alter the intent of this section of the document.
28.	5.2	Atomic Energy Canada Limited Bruce Power New Brunswick Power	The design phase should include the selection and description of the training and an environment that will enable the trainees to achieve the <i>TLOs</i> determined in the analysis	<b>Response:</b> Agree. The word “attitudes” has been replaced with “safety-related attributes” as discussed in comment #5 above. Document revised as follows:

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		Nuclear Ontario Power Generation	phase. The design phase starts with the results of the analysis phase and ends with a plan for the development of the training. The design phase takes the output from the analysis phase and specifies how the information will be presented and how the knowledge <i>and</i> skills <del>abilities and attitudes</del> will be tested.	<p>“The design phase should include the selection and description of the training and an environment that will enable the trainees to achieve the TLOs determined in the analysis phase. The design phase starts with the results of the analysis phase and ends with a plan for the development of the training. The design phase takes the output from the analysis phase and specifies how the information will be presented and how the knowledge, skills and safety-related attributes will be tested.”</p> <p>The term “Learning Objectives (LOs)” has been changed to “Terminal Learning Objectives (TLOs)” throughout the document.</p> <p><b>Rationale:</b> This is an editorial change. It will add clarity to the document by improving the precision of the CNSC’s wording and will better align the CNSC’s terminology with current industry terminology. The change does not alter the intent of this section of the document.</p>
29.	5.2.2 Paragraphe 2	Association québécoise des médecins cliniciens (AQPMC)	Le paragraphe 2 est incomplet. Il semble avoir été tronqué.	<p><b>Réponse :</b> D’accord. Le texte sera modifié comme suit :</p> <p>« La conception du programme d’enseignement permet de déterminer les connaissances, les compétences et les aptitudes liées à la sûreté requises pour exécuter une tâche. Ces connaissances, compétences et aptitudes servent à définir les objectifs de base qui les documentent. Ces objectifs de base sont ensuite groupés et organisés dans l’ordre qui convient le mieux à l’apprentissage. »</p> <p><b>Justification :</b> Cet ajout fournit des renseignements supplémentaires sur la conception du programme</p>

	Section	Organization	Comment	CNSC Response
				d'enseignement.
30.	5.2.2	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	The instructional program design determines <del>in more detail</del> the knowledge <i>and</i> skills <del>abilities and attitudes</del> required to perform a task <del>which is defined in enabling objectives</del> (EOs). These <i>knowledge and skills lead to</i> enabling objectives (EOs) <i>which document the required knowledge and skill</i> . These enabling objectives are then grouped and sequenced into the order most suitable for learning.	<b>Response:</b> Agree.  1. The word “abilities” has been removed from the document. See comments #5.  2. The word “attitudes” has been replaced with “safety-related attributes”. See comment #5.  3. The editorial changes have been accepted.  Document has been revised as follows:  “The instructional program design determines the knowledge, skills and safety-related attributes required to perform a task. These knowledge, skills and safety related attributes lead to enabling objectives (EOs), which document the knowledge, skills and safety-related attributes. These EOs are then grouped and sequenced into the order most suitable for learning”.
31.	5.2.3	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	EOs are the principal units of learning and constitute a major step towards achieving the associated <i>TLOs</i> . EOs are sub-components of the <i>TLOs</i> . EOs represent manageable units of work: units that are coherent in terms of logic, learning of work, have a suitable scope and are appropriate for testing learning progress. Like the <i>TLOs</i> , the EO is composed of three essential parts:  1. The performance statement; an observable	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> These are editorial changes. They will add clarity to the document by improving the precision of the CNSC’s wording and better align the CNSC’s terminology with current industry terminology. The changes do not alter the intent of this section of the document.

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			<p>action such as “Operate a global positioning system” or “Install the Personnel Record Management software.” It should <i>normally</i> stated as one action associated with a single verb. If the action is complicated or if more than one verb is used, then the <i>task EO</i> needs to be broken down further into other EOs with simple actions.</p> <p>2. The conditions statement; a description of the setting or conditions under which the <i>task action</i> is to be performed (e.g., “<del>given a PC with presentation software, “denied reference” and “without supervision”</del>”). Ideally, the conditions should mirror those in the workplace where the operation is performed.</p> <p>3. The standard; one or more measurable criterion stating the level of acceptable performance of the task in terms of quantity, quality or time limitations. It should answer questions such as: "How many?" "How fast?" or "How well?" (e.g., <del>the italicized portion of “Given a PC with presentation software, create a presentation with at least six slides in less than 30 minutes”</del>).</p>	
32.	5.2.4	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<p>A learning assessment plan describes the use of <del>testing in support of the training and</del> formal evaluations <i>within "a qualification program</i>. The learning assessment plan determines how progress toward, and achievement of, the required performance is checked and verified. While an assessment should be based upon the performance defined in the <i>TLOs and EOs</i>, limiting factors, such as time, may not permit direct observation of the full range of the desired performance. The assessment plan describes how a valid and reliable sample of trainee performance will be measured and evaluated.</p>	<p><b>Response:</b> Agree. Document revised as suggested.</p> <p><b>Rationale:</b> These are editorial changes. They add clarity to the document by improving the precision of the CNSC’s wording and will better align the CNSC’s terminology with current industry terminology. The changes do not alter the intent of this section of the document.</p>

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33.	5.2.5	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	The instructional strategy is the combination of media, methods and environment used in the delivery of training. The advantages and disadvantages of each instructional strategy, as applied to the <i>TLOs and EOs</i> , should be examined to ensure that the most effective solution is selected to ensure task performance as indicated in the <i>TLOs</i>	<b>Response:</b> Agree. Document revised as suggested.  <b>Rationale:</b> These are editorial changes. They will add clarity to the document by improving the precision of the CNSC's wording and will better align the CNSC's terminology with current industry terminology. The changes do not alter the intent of this section of the document.
34.	5.2.7	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	Training <i>development</i> plan  <del>The training plan describes the training and documents the decisions made during the design phase on items such as the EOs, teaching points, method of instruction for each EO, key learning events, sequence of instruction, and assessment procedures.</del>  <i>The training development plan documents the decisions made during the design phase. Outcomes and decisions regarding items covered in sections 5.2.1 through 5.2.6 should be documented and used during the development phase.</i>	<b>Response:</b> Agree. Document revised as suggested.  <b>Rationale:</b> This change will add clarity to the document by improving the precision of the CNSC's wording and will better align the CNSC's terminology with current industry terminology. The change does not alter the intent of this section of the document.
35.	5.3	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	The development phase involves the procurement or production of effective instructional materials in accordance with the training <i>development</i> plan.  <del>The development phase incorporates the following processes.</del>  <i>The fundamental processes of the development phase are briefly described in the following paragraphs.</i>	<b>Response:</b> Agree. Document revised as suggested.  <b>Rationale:</b> This is an editorial change. It will add clarity to the document by improving the precision of the CNSC's wording. The change does not alter the intent of this section of the document.

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36.	5.3.1	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<p><del>The i</del>Instructional materials should support the learning activities. Such items include instructor lesson plans, interactive courseware such as computer-based training (CBT) and training aids of all types including equipment, references, job aids and testing materials. The instructional materials should include the following, where necessary:</p> <ol style="list-style-type: none"> <li>1. Trainee manuals: These are reference handbooks to be used and <i>often</i> retained by the trainees.</li> <li>2. Instructor guides: These are instructional specifications for use by the instructor during training preparation and delivery. They outline the specific training steps that must be provided to satisfy the training <i>development</i> plan. <del>EOs are linked to detailed steps and procedures in the trainee manuals, user guides and any online documentation.</del></li> <li>3. Handouts: These additional aids can supplement the trainee manuals in areas identified as difficult and/or particularly important.</li> <li>4. CBT or other media: These are to be used where they are a recommended solution based on the instructional analysis and the selection of the instructional strategy.</li> <li>5. Question banks and some sample tests <del>in a numbered sequence</del>: When used during the training, these should include guidance on where and when they should be used.</li> </ol>	<p><b>Response:</b> Agree. Document revised as suggested.</p> <p><b>Rationale:</b> These are editorial changes. They will add clarity to the document by improving the precision of the CNSC’s wording. The changes do not alter the intent of this section of the document.</p>
37.	5.4 Paragraph 2	McMaster Nuclear Reactor	The first point of Section 5, paragraph 2 indicates, “It should include: detailed lesson	<b>Response:</b> Agree. Changes have been made as per comment #38 below.

	Section	Organization	Comment	CNSC Response
			plans (produced by the instructor) based on the training plan and the instructor guides prepared during the development phase.” The detailed lesson plan may be fully developed by training staff and not the instructor	<b>Rationale:</b> See comment # 38 below.
38.	5.4	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	The implementation phase is to enable the trainees to successfully perform the tasks to the standards defined in the <i>TLOs</i> . This phase encompasses both the instructor preparation phase as well as the actual delivery of the training. It should include: 1. <del>detailed</del> lesson plans ( <del>produced by the instructors</del> ) based on the training plan and the instructor guides prepared during the development phase.	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> These are editorial changes. They will add clarity to the document by improving the precision of the CNSC’s wording and will better align the CNSC’s terminology with current industry terminology. The changes do not alter the intent of this section of the document.
39.	5.5	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	The evaluation phase includes the following: 1. Formal trainee evaluation: The trainees' abilities to perform the tasks, as defined in the <i>TLOs</i> , should be measured through tests and assessments. This activity can be included as a process within the implementation phase.	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> This is an editorial change. It will add clarity to the document by improving the precision of the CNSC’s wording and will better align the CNSC’s terminology with current industry terminology. The change does not alter the intent of this section of the document.
40.	Abbreviations	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<del>LO learning objective</del> <i>TLO terminal learning objective</i>	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> Change was accepted to align with the changes made to the body of REGDOC-2.2.2.
41.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear	<del>ability</del> <del>The competence or state of being able to perform a task to a specified standard.</del>	<b>Response:</b> Agree. Definition has been removed. <b>Rationale:</b> This definition has been removed from the document. See comment 5.

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		Ontario Power Generation		
42.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>attitude</b>  <del>The personal feelings, perceptions, values and interests of an individual that allow a job or task to be performed safely and in accordance with the ethics of the organization, to the best ability of that individual.</del>	<b>Response:</b> Agree. See comment #5. <b>Rationale:</b> See comment #5.
43.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>continuing training</b>  A structured curriculum that maintains and enhances <del>knowledge, skills, abilities and attitudes</del> <b>knowledge and skills</b> and addresses areas such as equipment changes and procedure changes; skill weaknesses; infrequently used and difficult <del>knowledge, skills and abilities</del> <b>knowledge and skills</b> and lessons learned from operating experiences. Update training, requalification training and refresher training are also considered continuing training.	<b>Response:</b> Agree. See comment #5 above.
44.	Glossaire	Association québécoise des physiciens médicaux cliniques	« diplômes ». Un titulaire de permis peut-il délivrer un diplôme, même si ce dernier n'est pas un établissement d'enseignement reconnu ? L'utilisation de « certificat de compétence » serait-elle plus appropriée ?	<b>Réponse :</b> D'accord. Le terme « diplômes » a été remplacé par « certificat de compétence ».
45.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>duty area</b> One of the job incumbent's main <b>areas of</b> activityties, or a grouping of closely related tasks.	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> These are all editorial changes. They added clarity to the document by improving the precision of the CNSC's wording and will better align the CNSC's terminology with current industry terminology. The changes do not alter the intent of the definition.

	Section	Organization	Comment	CNSC Response
46.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>job</b> The work performed by the incumbent in a position, or by a group of incumbents in a position who perform essentially the same duties and tasks and require similar <del>knowledge, skills, abilities and attitude</del> <b>knowledge and skills</b> to perform those tasks.	<b>Response:</b> Agree. The word “abilities” has been removed from the definition and the word “attitudes” has been replaced with “safety-related attributes” as discussed in comment #5. <b>Rationale:</b> See comment #5.
47.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>learning</b> A change in behaviour that occurs as a result of the acquisition of <del>knowledge, skills, abilities and attitude</del> <b>knowledge and skills</b> .	<b>Response:</b> Agree. The word “abilities” has been removed from the definition and the word “attitudes” has been replaced with “safety-related attributes” as discussed in comment #5. <b>Rationale:</b> See comment #5.
48.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>on-the-job evaluation</b> Performance demonstration by a trainee of knowledge, skills and work practice standards required to perform a task using the approved procedure and the prescribed standards. The evaluation is conducted on the job. <del>as a part of job performance.</del>	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> This is an editorial change. The change was accepted as it will add clarity to the document by improving the precision of the CNSC’s wording. The change does not alter the intent of the definition.
49.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>pilot course</b> A <del>full</del> trial of an instructional program prior to its implementation in training.	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> This is an editorial change. The change was accepted as it will add clarity to the document by improving the precision of the CNSC’s wording. The change does not alter the intent of the definition.
50.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power	<b>qualification</b> A recognized level of <del>ability</del> <b>mastery of task performance</b> in a work-related field, which is normally acquired through successful completion of training.	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> This is an editorial change. The will add clarity to the document by improving the precision of the CNSC’s wording and will better align the CNSC’s terminology with current industry terminology. The change does not alter the intent of the definition.

	Section	Organization	Comment	CNSC Response
		Generation		
51.	Glossary	McMaster Nuclear Reactor	The definitions for safety-sensitive occupation and safety-sensitive position exceeds the provisions of the NSCA and regulations documented in section 1.3 which indicates that, “every licensee shall ‘train the workers to carry out the licensed activity in accordance with the Act...’” A gardener’s impaired performance while working for a nuclear facility could result in a significant incident affecting health and safety of persons or the environment, yet they are not performing work related to any licensed activity.	<b>Response:</b> The phrases “safety-sensitive occupations” and “safety-sensitive positions” have been eliminated from the document. <b>Rationale:</b> See comment #9.
52.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<del><b>safety-sensitive occupation</b> An occupation in a nuclear facility, the impaired performance of which, by any worker in the occupation, could result in a significant incident affecting the health and safety of persons, property or the environment. This occupation also includes all employees who are regularly required to rotate through or regularly provide relief to persons in safety-sensitive positions.</del>	<b>Response:</b> Agree. Definition removed. <b>Rationale:</b> See comments #9 and #10.
53.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<del><b>safety-sensitive position</b> A position in a nuclear facility, the impaired performance of which could result in a significant incident affecting the health and safety of persons, property or the environment.</del>	<b>Response:</b> Agree. Definition removed. <b>Rationale:</b> See comments #9 and #10.
54.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power	<b>task list</b> The list of tasks that make up the requirements in a job <i>or duty area</i> . The list should also include critical supporting <del>elements</del> <i>references</i> that provide insight into the scope and difficulty of the tasks.	<b>Response:</b> Agree. Document revised as suggested. <b>Rationale:</b> These are editorial amendments. They were accepted as they will add clarity to the document by improving the precision of the CNSC’s wording and

	Section	Organization	Comment	CNSC Response
		Generation		will better align the CNSC’s terminology with current industry terminology. The changes do not alter the intent of the definition.
55.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>teaching points</b> The elements that make up an evaluation objective: discrete steps, <del>abilities</del> , factors or concepts requiring separate demonstration or explanation that the trainee must master/learn/do.	<b>Response:</b> Agree. The term “abilities” has been removed from the definition, and replaced with the term “skills.” <b>Rationale:</b> The word “abilities” were removed to avoid any confusion with “skills” as discussed in comment #5.
56.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<b>trainee characteristics</b> The target population for whom the proposed training is intended as well as relevant information about the trainees concerned, such as the aptitudes, special skills, education, previous related training and personal data (e.g., age, <del>rank</del> ). Defining trainee characteristics is a component of <del>the task analysis and instructional analysis processes</del> <i>a SAT</i> .	<b>Response:</b> Agree conceptually. The last portion of the suggested text has been amended slightly to read “a training system” versus “a SAT”. Document revised as follows:  “trainee characteristics The target population for whom the proposed training is intended as well as relevant information about the trainees concerned, such as the aptitudes, special skills, education, previous related training and personal data (e.g., age). Defining trainee characteristics is a component of a training system.”  <b>Rationale:</b> These are editorial amendments. They were accepted as they will add clarity to the document by improving the precision of the CNSC’s wording and will better align the CNSC’s terminology with current industry terminology. The changes do not alter the intent of the definition.
57.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power	<b>training plan</b> <del>A document that describes how a training program is intended to meet the requirements of the learning objectives.</del>  <i>training development plan</i>	<b>Response:</b> Agree. A note has been added to the definition indicating that the “training development plan” is also referred to as the “training plan” <b>Rationale:</b> To avoid confusion.

	Section	Organization	Comment	CNSC Response
		Generation	<i>A document that describes how the output of the analysis and design phases is intended to be used during the development to meet the requirements of the TLOs and EOs.</i>	
58.	Glossary	Atomic Energy Canada Limited Bruce Power New Brunswick Power Nuclear Ontario Power Generation	<i>training system</i> <i>A structured systematic approach to the analysis, design, development, implementation, evaluation, documentation and management of training.</i>	<p><b>Response:</b> Agree. The definition has been revised as follows:</p> <p>“Training System</p> <p>A series of training-related processes and procedures that provides the basis for the analysis, design, development, implementation, evaluation, documentation and management of training programs and courses.”</p> <p><b>Rationale:</b> See comment #6.</p>