

Public Consultation Comment Table for Class II Prescribed Equipment Service Technician Competency Guidance Document

#	Section	Commenter	Comment	Suggested Change	MAJOR or Clarification	Impact
1.	Corps principal du document	Association québécoise des physiciens médicaux cliniques (AQPMC)	<p>La présente a pour but de fournir des commentaires sur le Guide de compétences des techniciens d'entretien d'équipement réglementé de catégorie II. Nous apprécions grandement l'opportunité de consultation que nous offre la CCSN. Le travail de révision présenté ici a été fait par les membres du sous-comité radioprotection de l'association québécoise des physiciens médicaux cliniques (AQPMC). Ce sous-comité, composé de physiciens médicaux ayant un rôle actif en radioprotection, compte 20 membres répartis dans 15 centres hospitaliers de la province.</p> <p>Nous espérons que nos commentaires constructifs vous permettront de bonifier ce nouveau document et nous demeurons disponibles pour collaborer aux ajustements que vous pourriez vouloir y apporter. Nous sommes toujours favorables à la mise en place de documents qui permettent de mieux encadrer notre domaine de façon à assurer une uniformité de nos pratiques et des exigences qui les encadrent.</p> <p>Commentaires généraux</p> <ul style="list-style-type: none"> • Il nous apparaît important que le document clarifie le rôle des physiciens médicaux pour les activités d'entretien effectuées sur les appareils de catégorie II qui sont utilisés dans le domaine médical (appareils de téléthérapie, appareils de curiethérapie à projecteur de source télécommandé, etc). La responsabilité de s'assurer que l'équipement est sécuritaire pour les patients est la responsabilité des physiciens médicaux et ceux-ci doivent être avisés suite à toute intervention effectuée sur ces appareils de façon à déterminer les contrôles de qualité qui doivent être effectués avant de remettre l'appareil en service clinique. • Le document devrait éviter de traiter des sujets qui relèvent de la gestion administrative des employés de service puisque cela ne relève pas du mandat de la CCSN. • La distinction entre deux niveaux de compétences nous semble causer de la confusion dans le document. Nous recommandons de retirer la catégorie avancée puisque l'objectif du document est de fournir un seuil de compétence minimal garantissant la sécurité. La façon dont cette seconde catégorie est actuellement intégrée au document nous semble 			

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			<p>plus propice à soutenir des revendications syndicales qu'à servir l'objectif du document.</p> <ul style="list-style-type: none"> Dans le domaine médical, plusieurs tâches ou actions listées dans les profils de compétence du document (particulièrement dans la colonne avancée) relèvent plutôt des médecins médicaux. Le document devrait laisser la possibilité aux titulaires de confier la responsabilité de certaines actions à d'autres professionnels à l'intérieur de l'organisation. 			
2.	Introduction	Association québécoise des médecins cliniques (AQPMC)	Il est mentionné qu'un rapport détaillé sur la formation, l'expérience, les risques pour la sûreté, la législation pertinente, les incidents et les événements de l'industrie, de même que les possibilités de réseautage des techniciens d'entretien a été réalisé. Il serait intéressant de rendre disponible ce rapport.			
3.	Principaux termes	Association québécoise des médecins cliniques (AQPMC)	<ul style="list-style-type: none"> Le tableau inclut 2 définitions pour le terme entretien. Cela vient de la traduction des deux termes anglais Maintenance et Servicing par le même terme français Entretien. Le terme Maintenance devrait être traduit autrement. Nous suggérons d'utiliser le terme Maintenance qui est également valide dans la langue française. La seconde définition du terme Entretien devrait préciser que cela exclut les opérations de maintenance (par exemple les ajustements et les calibrations visant à maintenir la qualité et la précision du faisceau ou des mouvements mécaniques de l'appareil) et ce, même si les procédures permettant de réaliser ces interventions ne figurent pas dans les manuels de fonctionnement de l'équipement. Ces interventions peuvent être faites par les techniciens d'entretien ou les médecins médicaux, mais les contrôles de qualité subséquents permettant de s'assurer que l'équipement est sécuritaire pour les patients sont la responsabilité des médecins médicaux. Dans la définition du terme compétence il vaudrait mieux utiliser le terme habileté plutôt que compétence pour éviter une redondance. 			
4.	Dossiers de formation	Association québécoise des médecins médicaux	La tenue du dossier de formation inclut-elle les formations relatives à l'ensemble des risques listés à l'annexe B ou se limite-t-elle au risque relatif au rayonnement?			

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		cliniques (AQPMC)				
5.	Cadre du profil de compétences	Association québécoise des médecins médicaux cliniques (AQPMC)	<p>À notre avis, il est faux de dire que les compétences listées dans le profil avancé s'acquièrent uniquement sur la base de l'expérience. Cela requiert souvent des formations additionnelles et spécifiques à certaines activités.</p> <p>Quelle est la bonne interprétation de cette phrase? « Il est recommandé aux titulaires de permis d'acquérir certaines compétences supplémentaires pour appuyer la formation des techniciens d'entretien. » Est-ce qu'il est souhaité d'exprimer que les titulaires de permis devraient encourager le développement d'autres compétences par leurs techniciens d'entretien? Si oui, il faudrait revoir la formulation pour éviter de sous-entendre que l'organisation doit acquérir ces compétences.</p>			
6.	Profil de compétences 1.0 Compétences axées sur la technologie	Association québécoise des médecins médicaux cliniques (AQPMC)	<p>Planifier l'EP et s'assurer de la disponibilité des ressources appropriées pour l'exécuter.</p> <p>La planification des ressources ne relève pas nécessairement du technicien de service et ne nous semble pas une compétence essentielle pour permettre à un technicien de faire son travail en sécurité.</p> <ul style="list-style-type: none"> - Recueillir et analyser ou interpréter les renseignements pour mieux comprendre la nature du problème. Cet élément devrait être dans la catégorie du profil de base. - Effectuer des étalonnages, le cas échéant. Cet élément devrait être dans la catégorie du profil de base. - Participer à l'acquisition de services externes, le cas échéant. Cet élément ne relève pas nécessairement du technicien de service et ne nous semble pas une compétence essentielle pour permettre à un technicien de faire son travail en sécurité. 			

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			<p>- Exécuter des procédures de dépannage pendant l’EC. Cet élément nous semble mal traduit. Il faudrait plus introduire la notion de résolution de problèmes.</p> <p>- Vérifier et revérifier les travaux d’EC effectués par d’autres techniciens d’entretien en tenant compte de leur conformité aux normes et aux codes. Pour les appareils utilisés dans un contexte médical, il est important d’introduire la notion de contrôles de qualité par les médecins médicaux qui nous apparaît plus importante que la contre-vérification par un second technicien puisque celle-ci pourrait ne pas être possible dans les plus petits centres.</p> <p>- Appliquer la procédure appropriée pour établir l’ordre de priorité des travaux d’entretien. Nous suggérons de reformuler comme suit : Applique la priorité établie pour les travaux d’entretien.</p> <p>- Analyser les données du système de gestion de l’entretien de l’installation pour recenser les problèmes récurrents. Cet élément devrait être dans la catégorie du profil de base.</p> <p>- Élaborer de manière proactive des procédures pour atténuer les problèmes récurrents. Cet élément devrait être dans la catégorie du profil de base.</p> <p>- Assurer la disponibilité et l’exactitude des pièces requises pour les activités d’entretien correctif et systématique.</p> <ul style="list-style-type: none"> • Les éléments listés ici relèvent plus de la description de tâche que du profil de compétences. • Tous les éléments listés dans la catégorie avancée devraient être dans la catégorie du profil de base. <p>- Effectuer les contrôles de sûreté et d’exploitation applicables (assurance de la qualité ou AQ), conformément aux documents de permis.</p>			

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			<ul style="list-style-type: none"> • Nous suggérons de revoir la formulation comme suit : Effectuer les contrôles de sûreté applicables conformément aux documents de permis. • L'expression assurance de la qualité ne devrait pas être utilisée dans ce contexte puisque cela peut introduire de la confusion avec le rôle des physiciens médicaux dans les installations médicales. <p>- Dans le contexte de ces deux éléments,</p> <ul style="list-style-type: none"> • Respecter les politiques ou procédures d'AQ de l'installation. • Mener à bien les activités d'AQ de l'installation quand il le faut. <p>l'expression "Assurance Qualité" devrait être retirée au profit de Contrôles de sûreté.</p> <p>- Analyser les données découlant des procédures d'AQ de l'installation pour cerner les problèmes éventuels. Cet élément dépasse le rôle du technicien de service et relève plutôt de celui du physicien médical pour les installations médicales.</p> <p>- Analyser les procédures d'AQ de l'installation pour s'assurer qu'elles fournissent les résultats voulus. Cet élément dépasse le rôle du technicien de service et relève plutôt de celui du physicien médical pour les installations médicales.</p> <p>- Instaurer de manière proactive des améliorations aux procédures et politiques de l'installation afin d'atténuer les problèmes éventuels et d'améliorer les résultats. Cet élément devrait être dans la catégorie du profil de base et le terme « Instauration » devrait être modifié par « Suggérer ».</p> <p>- Ces deux éléments dépassent le rôle du technicien de service et ne nous semblent pas des compétences essentielles pour permettre à un technicien de faire son travail en sécurité. Un titulaire de permis pourrait choisir de confier ces</p>			

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			<p>tâches à d'autres membres de son organisation. Cela est d'autant plus vrai en ce qui concerne les déchets radioactifs.</p> <ul style="list-style-type: none"> • Analyser les procédures de gestion des déchets de l'installation pour s'assurer qu'elles sont conformes à l'ensemble des lois et règlements en vigueur. • Apporter des améliorations aux procédures de gestion des déchets de l'installation, le cas échéant. <p>- Analyser les procédures de sécurité de l'installation pour s'assurer qu'elles sont conformes à l'ensemble des lois et règlements en vigueur. Cet élément dépasse le rôle du technicien de service et relève d'autres professions selon les procédures dont il est question.</p> <p>- Apporter des améliorations aux procédures de sécurité de l'installation, le cas échéant. Cet élément devrait être dans la catégorie du profil de base et le terme « Apporter » devait être modifié par « Suggérer ».</p>			
7.	Profil de compétences 2.0 Réglementation	Association québécoise des médecins cliniques (AQPMC)	<p>Déterminer toutes les exigences légales et réglementaires relatives à l'entretien de l'équipement réglementé de l'installation.</p> <p>Le terme « Déterminer » devait être modifié par « Connaître », autrement cet élément dépasse le rôle du technicien de service et relève d'autres professions. Nous suggérons l'ajout de la compétence suivante : « Connaître les personnes responsables de l'application des lois et règlements fédéraux, provinciaux et municipaux applicables dans l'établissement ».</p> <p>Réviser les politiques du milieu de travail afin d'en assurer la conformité aux lois et règlements fédéraux, provinciaux et municipaux, le cas échéant. Nous suggérons de reformuler comme suit : « Adhérer aux politiques du milieu</p>			

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			de travail et contribuer à leur révision périodique afin d'en assurer la conformité aux lois et règlements fédéraux, provinciaux et municipaux, le cas échéant.»			
8.	Profil de compétences 3.0 Sûreté	Association québécoise des médecins médicaux cliniques (AQPMC)	<p>À notre avis, le seul élément qui devrait être dans la catégorie avancée, s'il doit y en avoir une, est le suivant :</p> <ul style="list-style-type: none"> Analyser les accidents ou les quasi-accidents impliquant l'entretien de l'équipement réglementé de l'installation. <p>Tous les autres éléments devraient être ramenés au niveau des compétences de base.</p> <p>- Pour ces deux éléments :</p> <ul style="list-style-type: none"> Élaborer des procédures ou des pratiques pour éviter de futurs accidents ou quasi-accidents. Élaborer des procédures d'urgence qui pourraient découler de l'exposition à des dangers liés à l'équipement réglementé de l'installation. <p>le terme « Élaborer » devait être modifié par « Collaborer à l'élaboration ».</p> <p>Nous suggérons l'ajout de la compétence de base suivante : « Appliquer les procédures du milieu pour la notification du personnel de l'installation après une intervention d'entretien de l'installation réglementée. »</p>			
9.	Références	Association québécoise des médecins médicaux cliniques (AQPMC)	<p>Cette référence devrait être retirée ou précisée :</p> <p>Matériel du cours de formation sur la technologie des accélérateurs, 2014-03-06</p>			
10.	Annexe D	Association québécoise des médecins	- Au premier élément, nous suggérons de remplacer « Déterminer chaque composant... » par « Savoir identifier chaque composant... ».			

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		médicaux cliniques (AQPMC)	<p>- Dans les éléments suivants :</p> <ul style="list-style-type: none"> • Connaître la fréquence des essais d'AQ de chaque système. • Effectuer les essais d'AQ pour chaque composant du système. <p>l'expression "Assurance Qualité" devrait être retirée au profit de Contrôles de sûreté.</p>			
11.	General	Radiotherapy Service Engineers Association (RSEA)	The RSEA sincerely appreciates the CNSC's commitment to provide clarity on this matter. We share the belief that clearly defining a standard competency framework for service technicians is critical to ensure safe operations of Class II equipment, such as medical linear accelerators. There is currently a situation in Canada where the workforce that is qualified to service such equipment is retiring and the generation behind them is not filling the void left. Bringing new people into this workforce safely is of paramount importance. We believe that the competency profile provides helpful guidance to ensure the safe operation and maintenance of Class II medical accelerators in Canada.			
12.	Key Terms – Manufacturer's Training	Radiotherapy Service Engineers Association (RSEA)	There is a reference to "manufacturer's training" in the key terms. This is not referenced anywhere else in the document.	We believe the verbiage should be removed / deleted.		Creating a reliance on OEM intervention for training is a limiting factor to the safe and effective development of service technicians.
13.	General	Radiotherapy Service Engineers Association (RSEA)	Ensuring that all service technicians have access to manufacturer information / materials necessary to safely maintain equipment is integral to a successful service model and is foundational to patient safety. The OEMs should be required to provide equipment owners with all available documentation needed to effectively and safely maintain their Class II equipment. This may be digital, print, or both and should be included in the machine purchase. Additionally, the CNSC's acknowledgement of the need to develop this guidance is confirmation			

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			that the OEM's are not providing an adequate and accessible training program, which has a direct negative impact on the development of service technicians.			
14.	Section: 1.0	Radiotherapy Service Engineers Association (RSEA)	<p>Technical Framework Competency: Maintains PE following licensee's preventative maintenance (PM) schedule, policies or procedures.</p> <p>Activity: Performs equipment control software updates.</p> <p>Comment: We request this activity be either reworded or removed as it must be provided by the OEM and is not applicable to a service technicians competency to maintain the equipment. If reworded, we request that it aligns with "Coordinates with OEM to ensure equipment control software versions are up-to-date with any safety related requirements as determined by any applicable regulatory body."</p>			
15.	Annexe B	Radiotherapy Service Engineers Association (RSEA)	<p>List of Hazards Associated with CIPE</p> <p>Comment: The guidance references "Licensees should review the manufacturer's maintenance instruction to ensure all hazards are identified."</p>	Request that it is stated that the manufacturer is required to provide a complete set of this information to the equipment owner.		
16.	General - Overview	CancerCare Manitoba	<p>Several members of the CancerCare Manitoba Department of Medical Physics have reviewed the proposed Class II Prescribed Equipment Service Technician Competency Guidelines (hereafter referred to as "the guidelines" for brevity) and have a mixed reaction to the document in its current form.</p> <p>To begin, we agree that there is a need to recognize the unique skillset of service technicians/engineers/technologists that work on Class II prescribed equipment. As of this writing, Class II equipment is not included in college or technical school electronic engineering technology programs . The guidelines provided by the CNSC provide a starting point for the development of internal training programs for those who work on Class II prescribed equipment, and we appreciate that the current draft guidelines recognize some of the unique circumstances faced by departments who have service personnel on site.</p>			

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			We do have some serious concerns about the guidelines in their current state. While the intent of these guidelines, as a guidance document rather than strict regulations or requirements, was made explicit at the Town Hall meeting held on 20 June 2022, the way that the document is written does not clearly convey that. The overall tone of the document comes across as prescriptive, as though the listed competencies are requirements.			
17.	General	CancerCare Manitoba	A great deal of text in the document is dedicated to safety and competency standards that are unrelated to ionizing radiation safety. We believe that it is beyond the CNSC's mandate to make recommendations or requirements on these workplace health and safety issues, and that these issues could be better dealt with by collaborating with a professional body to create a competency standard that adequately addresses these issues.			
18.	General	CancerCare Manitoba	The document uses the term "competency" to describe what may more be accurately referred to as "course content" rather than an actual, testable skill. There is a difference, and testing of competencies will likely become critical to any future national certification process.			
19.	General	CancerCare Manitoba	The difference between "core" and "advanced" competency for safety appears to recognize different skills needed for senior technologists who have managerial responsibilities in their department. However, we recommend dropping the two separate categories of "core" and "advanced" since the purpose of the guidance document is for the safe servicing and operation of Class II prescribed equipment. These suggest categories of "safe" and "safer," and should be left as requirements for promotion to a senior role by the hiring organization. We suggest only one level of competency which is tied to a basic level of expected safe practice.			
20.	General	CancerCare Manitoba	The original report that the guidelines are based on was written by a single person, and the inappropriate use of some of the references cited casts some doubt on the value of the report. Some examples found during our review were:			

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			<ul style="list-style-type: none"> Reference 5, used at the bottom of page 2-1, is a paper describing induced activity in components in the European Spallation Source which is a 2 GeV proton beam line. While there is indeed induced activity in Class II medical LINACS and cyclotrons, this reference is not directly applicable to this particular context. Similarly, Reference 1 (bottom of 2-2 and top of 2-3) is a publication related to the Stanford Linear Accelerator (SLAC), another 1 GeV+ very high energy beam line. Reference 6 quotes a dose rate quoted after 30 minutes of 18 MV irradiation which is not a routine clinical or QA irradiation time length. The reference also mentions that the aluminum couch is a large contributor to dose from activated materials, however these couches are no longer used in practice. 			
21.	General	CancerCare Manitoba	Currently, physicists and radiation therapy technologists have their practice and competency set by COMP and CAMRT respectively. The CNSC does not give them guidance for their competence. We believe that the best outcome for Class II service standards is a national certification process for Class II service personnel that is developed by a grassroots effort within the service community, leading to a harmonized standard across all provinces that the CNSC can recognize. This would lead to a separate accreditation body to test individual competency against expected and well-defined standards that recognize the unique skills that Class II service personnel require compared to other medical equipment.			
22.	General	CancerCare Manitoba	The guidelines include knowledge of QA procedures in the list of competencies necessary for a person servicing Class II prescribed equipment, however the prescription, performance, and analysis of QA procedures should be done in consultation with a Medical Physicist. Some of these competencies are also performed by Physics staff. Comments made during the Town Hall implied that these competencies must be held jointly by staff members on site rather than being required in one staff member. The guidelines should reflect this.			

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23.	1.0	Ontario Power Generation (OPG)	Are these all technology based competencies? Some do not seem to be related to technology (e.g. complies with facility's waste procedures).	Clarify terminology.	Clarification	
24.	General	Ontario Power Generation (OPG)	The distinction between core and advanced competencies and their role descriptions are too general and make the document more confusing than necessary.	Merge core and advanced competency levels. Licensees can gauge the proficiency of their technicians based on their own criteria.	Major	Evaluating a technician's core or advanced competencies will not be possible for some of the competencies described in this document because they are too generic or do not accurately reflect how roles are established at OPG. This may subject OPG to future misalignment with the CNSC's expectations.
25.	2.0	Ontario Power Generation (OPG)	Are technicians required to be familiar with the regulations? Or is it sufficient for technicians to be familiar with internal policies and procedures that incorporate the regulations?	Clarify that servicing technicians do not have to read or be trained on the applicable regulations. It is more important that they understand and follow the licensee's requirements which must incorporate the applicable regulations.	Clarification	
26.	General - Overview	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	<p>Industry appreciates the opportunity to provide comments on this proposed guidance document for establishing a common set of service technician competencies for Class II Prescribed Equipment (CIIPE). The intent of this feedback is to improve the clarity and usefulness of the document in support of its application and implementation.</p> <p>Integration with existing Licensees' Management Systems and Systematic Approach (SAT) to Training based programs:</p> <ul style="list-style-type: none"> This document does not recognize the existence of Class I Licensees' established management systems including SAT-based programs for the management of Class II prescribed equipment, thus its integration may 	Based on our concerns highlighted above and supported by our comments below, Industry recommends this version of the document be revised and reissued for public comment.		

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			<p>require unwarranted changes to existing programs solely to meet the intent of this guidance document. We recognize this document is written for a wide range of users and licensees; however, our SAT-based programs already meet all the safety requirements of the regulations.</p> <ul style="list-style-type: none"> This document makes reference to service technicians interacting directly with, and responsible for, the interpretation of legal, regulatory, code and standards requirements. The document does not recognize how Class I licensees' management systems integrate these activities into the development of internal policies and procedures and responsibility for the development of the policies and procedures are assigned to roles beyond service technicians. <p>Ambiguity of guidance document's application:</p> <ul style="list-style-type: none"> This document contains conflicting statements representing different applications of this document. Portions of the document indicate it will be used as guidance for facilities to develop competency profiles for their program while other portions indicate it will be used to establish baseline criteria and benchmarks, which could be used by CNSC inspectors to evaluate licensee programs. Consistent with our first comment, if the existing Class I program does not align with the guideline then the licensee could be required to revise their program for the sole purpose of satisfying the guidance document with no additional safety benefit. <p>Identification of Core and Advanced Competencies:</p> <ul style="list-style-type: none"> This document describes a Competency Profile Framework, which does not align with existing Class I SAT-based programs, roles, responsibilities and qualifications. As written, this document creates added confusion. It is not clear whether these profile descriptions, key competencies and competency activities are provided as examples of one method for developing a framework <u>or</u> provided as requirements needed to be integrated into existing programs; this document should explicitly state this guidance is for example purposes only. The framework further describes the service technician role by Core and Advanced Competency profiles, Key Competencies for each profile and further identifies specific activities related to each key competency; however existing SAT-based programs for CIPE 			

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			<p>service technicians may not have been developed using this terminology or framework, but still provide the training and skills needed for personnel to perform the job safely.</p> <p>Apparent Expansion of the definition of “servicing”:</p> <ul style="list-style-type: none"> This document uses the term “servicing” in a broader capacity than the definition provided in the Class II Nuclear Facilities and Prescribed Equipment Regulations (SOR/2000-205). The expanded definition includes ancillary systems and maintenance of non-radiation parts of prescribed equipment. The terminology in this document should use terminology defined by the Nuclear Safety and Control Act (NSCA) and the associated regulations. Licensee’s existing management systems have been developed to be consistent with the NSCA; the use of inconsistent definitions within this document could require the Licensees to revise their programs for the sole purpose of satisfying the guidance document with no additional safety benefit. 			
27.	General	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	Facilities assign maintenance work differently to how it is described in this document. It is not clear how this guidance would be applied and could be interpreted as any task on PE requires qualification; e.g., in facilities where trades with different expertise are available, the current practice is to use them for maintenance of the non-radiation parts of the equipment, such as – millwrights, electrical technicians.	<p>The document should include provisions to address the possibility for general trades to maintain the conventional parts of Class-II equipment.</p> <p>Specify which maintenance elements require Class II PE service technician qualifications, whether these elements can be grouped into separate qualifications, and specify if there are elements of the maintenance that can be exempt from qualifications.</p>	MAJOR	The proposed text as currently written does not differentiate amongst trades’ roles and responsibilities; inferring anyone interacting with CIPE must be qualified as a CIPE service technician. Lack of differentiation increases: 1) the quantity of personnel requiring training, and 2) the associated administration
28.	General	Nordion, NB Power, Canadian Nuclear	As stipulated in the introduction of the document, according to the General Nuclear Safety and Control Regulations (GNSCR) licensees shall ensure the presence of a sufficient number of qualified workers to carry out licensed activities and train them. The ‘Class II Prescribed Equipment Service Technician	The document should clarify if there is any requirement with regard to establishing a set of needed competencies for	Clarification	

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		Laboratories (CNL)	Competency Guidance' document should include a situation where a licensee is compliant with the requirements of GNSCR with regard to operations staff, and the maintenance [Preventative Maintenance (PM) and Corrective Maintenance (CM)] is performed by external (contracted) Class II PE service technicians.	externally contracted Class II PE service technicians.		
29.	General	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	For a facility entirely reliant on external services for PM and CM, there could be simple ongoing maintenance tasks performed by the facility's operations staff, e.g., a replacement of a filter. The document should specify if any specific competencies and training would be required for such tasks.	The document should specify if any specific competencies and training would be required for maintenance of simple tasks.	Clarification	
30.	General	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	For facilities using externally contracted Class II PE service technicians, it is not feasible to require the external contractor to possess facility-specific knowledge as it is unlikely the same contractors' staff are servicing the same facility on an ongoing basis.	The document should clarify if/what requirements would apply in such situations.	Clarification	
31.	General	Ontario Power Generation (OPG), Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	<p>This document does not adequately distinguish between maintenance and servicing. Although they are uniquely defined, they appear to be used interchangeably in this document. It is unclear if the intent is to limit the scope to "servicing" performed by servicing technicians or more broadly to all maintenance.</p> <p>It is unclear how this document will be used by the CNSC (e.g., added as a licence requirement).</p>	<p>Remove preventative maintenance from the scope of this document.</p> <p>Clarify this document is only applicable to service technicians performing corrective maintenance and extensive servicing. It does not include preventative maintenance, routine operation procedures as indicated in the manufacturer's operating manual for the equipment, or as authorized in the licence issued for possession or use of the equipment per SOR/2000-205.</p>	MAJOR	Preventative maintenance, will add administrative burden without adding safety benefits to the program.
32.	Introduction 3rd paragraph, page 1	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	The document states: "CNSC staff employed the results of the study and report to establish a common set of service technician competencies (competency profile) which can be used by licensees to create ...". This text suggests the competency profiles described in this document are guidance only and not a regulatory requirement. In addition, outside of direct quotes from current CNSC regulations,	CNSC should state more clearly that this document is provided for guidance in assisting licensees to develop a competency framework.	MAJOR	Many licensees have comprehensive and robust - competency and training programs as part of their Class 1 license that are

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			<p>the document does not contain any “shall” statements; further supporting this is a guidance only document.</p> <p>However, the Purpose section of this document suggests that this document provides baseline criteria and benchmarks for assessing a Class II program, which indicates that CNSC inspectors will be assessing Class II programs against the framework defined in this guidance document.</p>			also used for Class II competency and training of service staff. There would be significant work if the licensee had to modify a portion of their current SAT-based programs to match the framework outlined in this guidance document with no additional safety benefit.
33.	Key Terms - Page 3, table, row #2 - (CM) Corrective Maintenance	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	<p>Incorrect statement, text in brackets: “(Sometimes called extensive maintenance.)”</p> <p>Note: ‘Extensive’ as opposed to ‘minimum’ maintenance.</p>	Suggested edit: <i>Activities performed to return prescribed equipment to its safe operating condition in response to random failures.</i>	Clarification	
34.	Key Terms - Page 3, table, row #4 - Occupational Hazards	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	<p>The word ‘conventional’ is misleading as the health, and occupational hazards related to the CIPE Technicians’ work do include radiation safety as well.</p> <p>The provided examples are limited subset and are not contributing to the definition of occupational hazards.</p>	<p>Note – the term is not used in the document – delete the term or revise the definition to “A variety of conventional and radiological hazards that may be encountered during the course of repair and maintenance work with Class II Prescribed Equipment as listed in Appendix B”</p> <p>Delete the word ‘conventional’.</p> <p>Delete the examples: “<i>physical lifting objects; climbing ladders; crushing hazards; etc.</i>”</p>	Clarification	
35.	Key Terms - Page 3, table, row #7 - (PM)	Nordion, NB Power, Canadian Nuclear	Routine maintenance falls under periodic. In fact, the only word that should stay in this definition is ‘planned’; both periodic and predictive are types of planned maintenance.	Delete the word: ‘routine’ .	Clarification	

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	Preventive Maintenance	Laboratories (CNL)				
36.	Competency Profile Framework - Page 4, 1st paragraph	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	The introductory paragraph is unclear. Second sentence – misleading statement; ‘likely’ implies it is not required and therefore not necessary to mention, should delete.	Suggested edit: <i>Service technicians are generally hired into the <u>Class II PE</u> service technician role with pre-existing knowledge, skills, and abilities in conventional mechanical or electrical devices and their repairs. They have likely completed some relevant training through a college or university program or gained on-the-job experience in a previous work role. With diverse educational and experiential backgrounds, newly hired service technicians <u>should</u> have <u>the</u> foundation for learning the specialized methods and procedures to safely repair and maintain Class II PE <u>at their licensed facility.</u></i>	Clarification	
37.	“Competency Profile Framework”, Third and fourth paragraphs, page 4	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	With respect to, “...the CNSC has developed a “general, high-level competency profile which outlines the tasks ...”. In the next paragraph, the profile is further divided into core and advanced competencies; however, the distinction between core and advanced competencies and their role descriptions are too general and make the document more confusing. Many current SAT-based programs for Class II servicing technicians may not be developed using this terminology or framework, but still provide the training and skills needed for personnel to perform the job safely.	This section should be further clarified to indicate the proposed framework is guidance and may be used in developing a program; as follows: <i>Understanding that service technicians come to the role from a diversity of backgrounds, the CNSC has developed a general, high-level, competency profile <u>that may be used as guidance by licensees in</u></i>	MAJOR	Evaluating a technician’s core or advanced competencies will not be possible for some of the competencies described in this document because they are too generic or do not accurately reflect how roles are established within licensees’ management systems.

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				<p><i>developing a Class II service technician program. This competency profile outlines the tasks a technician will be able to perform safely and independently when they have achieved competence in the maintenance of their specific Class II PE.</i></p> <p>Furthermore, it is recommended to merge core and advanced competency levels. Licensees can gauge the proficiency of their technicians according to an SAT-based process.</p>		<p>Many licences have comprehensive and robust competency and training programs as part of their Class 1 licence that are also used for Class II competency and training of service staff. There would be significant work if the licensee had to modify a portion of their SAT-based programs to match the framework outlined in this guidance document with no additional safety benefit.</p>
38.	Competency Profile Framework - Page 5, table	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	<p>The title of the table “Service technician role descriptions by competency level” doesn’t match the content.</p> <p>One of the most important categorizations is whether the Core level requires supervision.</p> <p>The suggested qualification ‘independently’ covers the notion of a “fully functioning specialist” in a non-ambiguous way.</p>	<p>Suggest change to: <i>‘Service technician competency levels’</i>.</p> <p>Replace ‘fully functioning’ with <i>‘independently functioning’</i>.</p>	Clarification	
39.	Competency Profile Framework - Page 5 – Paragraph starting with “Consider the following principles...” and ending at the end of the page.	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	<p>This paragraph (including the bullets) is an elaborate way to say that the descriptions of the competency profiles should not be considered exhaustive.</p>	<p>Suggest replacing the whole paragraph with a simple statement along the lines: <i>‘The licensees should consider the competencies in the table as basis for creating competencies tailored to their needs.’</i></p>	Clarification	

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40.	Competency Profile - 1.0 Technology based competencies	Ontario Power Generation (OPG), Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	With respect to "...servicing activities on Class II PE and their related ancillary systems." The SOR/2000-205 definition of servicing is limited to Class II PE. This implies it is being expanded more broadly.	Ancillary systems are ambiguous and not included in the definition in the regulations. This creates regulatory confusion. Related ancillary systems that are part of the prescribed equipment would be defined in the Class II PE certificate and are already covered by the term "Class II PE". The addition of "and their related ancillary systems" is redundant and potentially expands the scope of what is covered under Class II servicing. Do not expand the use of "servicing" to include ancillary systems.	Clarification	
41.	Competency Profile - 1.0 Technology based competencies	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	Are these Key Competencies all technology-based competencies? Some do not seem to be related to technology (e.g., complies with the facility's waste procedures).	Remove or clarify terminology for technology-based.	Clarification	
42.	Technology based competencies, table, column "Key Competency", Pages 6 to 7	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	The first column "Key Competency" should only contain the name of the Key Competency and everything else should be deleted; verbs describing the actions related to the key competencies are part of the descriptions in columns 2 and 3.	For example, substitute: "Maintains PE following licensee's preventative maintenance (PM) schedule, policies or procedures" with simply the term describing the competency, in this case: " <i>Preventative Maintenance (PM)</i> ".	Clarification	
43.	Technology based	Nordion, NB Power, Canadian	It is important to clarify if the Core level may require supervision.	Indicate appropriately, if any of the suggested tasks for the Core	Clarification	

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#	Section	Commenter	Comment	Suggested Change	MAJOR or Clarification	Impact
	competencies, table, column "Core", Pages 6 to 7	Nuclear Laboratories (CNL)		level may require supervision by an Advanced level.		
44.	Technology based competencies, table, column "Advanced", Pages 6 to 7	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	Expectations about supervision requirements must be clear.	Indicate appropriately if the Advanced level is to provide supervision for any of the suggested tasks.	Clarification	
45.	Technology based competencies, table, column "Advanced", Pages 6 to 7	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	Expectations about the development of operating and maintenance procedures must be clear.	<p>"Advanced" level should be expected to follow Licensees' procedures and only in a small number of situations, they could be expected to contribute to the development of these.</p> <p>-----</p> <p>Identify the Advanced level to be expected to develop and/or update facility-specific operating and maintenance procedures.</p> <p>Clarify what competencies are required.</p>	Clarification	
46.	Technology based competencies, table, column "Advanced", Pages 6 to 7	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	<p>Several activities in the Key Competency table refer to developing, reviewing and/or improving procedures to comply with federal/provincial/municipal regulatory requirements. These activities are often the responsibility of Licensees' Safety and Control Area/Program Specialists, Regulatory and/or Environment/Health & Safety departments in many facilities, and in particular, is a key role for the RSO.</p> <p>Servicing staff only need to follow procedures that have been developed.</p>	Reviewing and improving procedures where applicable, is everyone's (Core and Advanced) responsibility. The CNSC should clarify what the additional expectation for "Advanced" competency is.	MAJOR	Several activities described under the two competency levels including the developing, reviewing and improving procedures are performed by other roles within the Class I licensees' management system.

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						Significant work would be required to further modify these programs for a small portion of staff to meet the CNSC expectations outlined in this section and would provide no additional safety benefit.
47.	Technology based competencies, table, column “Core” – row 1, Page 6	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	With respect to: “Ensures all PM work meets and/or exceeds <u>applicable codes and standards</u> ”; Core level technicians should not be expected to verify every task against “applicable codes and standards”. Technicians will follow the requirements of applicable procedures and/or maintenance sheets where the “applicable codes and standards” should have already been reflected.	Suggest a change to: “ <i>Ensures that all PM work meets and/or exceeds the applicable licensee’s procedures</i> ”.	Clarification	
48.	Technology based competencies, table, column “Advanced” – row 1, Pages 6	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	With respect to: “Checks and re-checks PM work of others considering accuracy with respect to standards and codes” If codes and standards are to be requirements, they must be listed in the licence or the LCH.	Suggested edit: “ <i>Checks and verifies PM work of others considering accuracy with respect to the requirements of the Licensee’s procedures.</i> ”	Clarification	
49.	Technology based competencies, table, column “Advanced” – row 2, Pages 6	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	With respect to: “Checks and re-checks CM work of others considering accuracy with respect to standards and codes” If codes and standards are a requirement, they must be listed in the licence or the LCH.	Suggested edit: “ <i>Checks and verifies CM work of others considering accuracy with respect to requirements of the Licensee’s procedures.</i> ”	Clarification	
50.	Technology based competencies, table, column “Core” – last row 1, Page 6	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	With respect to: “Describe the facility’s maintenance management system”. ‘Describe’ has the potential to be misinterpreted.	Suggested edit: “ <i>Understands the facility’s maintenance management system</i> ”.	Clarification	

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51.	Table - Service technician role descriptions by competency	Ontario Power Generation (OPG), Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	The service technician Core role description does not accurately reflect operators and maintenance personnel who perform preventative maintenance (basic servicing activities and periodic inspections).	Remove preventative maintenance from the scope of this document. Clarify this document is only applicable to service technicians performing corrective maintenance and extensive servicing. It does not include preventative maintenance, or routine operation procedures as indicated in the manufacturer's operating manual for the equipment or as authorized in the licence issued for possession or use of the equipment.	Clarification	
52.	Regulatory, table, column "Core", Page 8	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	With respect to: "Identifies all legal and regulatory requirements pertaining to maintenance of the facility's PE."; 'Identifies' has a much broader meaning, thus a higher potential to be misinterpreted. Are technicians required to be familiar with the regulations? Or is it sufficient for technicians to be familiar with internal policies and procedures that incorporate the regulations?	Clarify in the document; that servicing technicians do not have to read or be trained on the applicable regulations. It is more important that they understand and follow the licensee's requirements described in internal policies and procedures, which must incorporate the applicable regulations. No knowledge beyond the applicable Licensee's procedures should be required for Class II technicians.	MAJOR	Many Class I licensees' management systems include the incorporation of legal and regulatory requirements within the development of their policies and procedures, thus these activities would not be included in the responsibilities of CIPE service technicians. Significant work would be required to further modify these programs for a small portion of staff to meet the CNSC expectations outlined in this section and would provide no additional safety benefit.

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53.	Safety, table, column “Core”, Page 8	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	With respect to: “Identifies workplace hazards pertaining to the facility’s PE.”; ‘Identifies’ has a much broader meaning, thus a higher potential to be misinterpreted.	Suggested edit (edit and combine with the third bullet in the same cell), as follows: <i>“Recognizes (or Acknowledges) workplace hazards pertaining to the facility’s PE and uses appropriate protective devices, equipment and apparel.”</i>	Clarification	
54.	Section 4.0	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	<p>This section provides an exhaustive list of attributes that the CNSC has determined contributes to a technician’s ability to work safely. The list is essentially a list of soft skills or interpersonal skills. The CNSC states in the first paragraph of this section it is provided for “licensees to consider these attributes when hiring and training service technicians.” It is not clear what the CNSC expectation is for licensees in incorporating this list of attributes or how inspectors will consider this list during inspections.</p> <p>The second paragraph provides more context on these attributes are related to promoting a healthy safety culture.</p> <p>However, there is already a safety culture document (REGDOC 2.1.2) that can be used by licensees as guidance.</p>	Remove this section and instead provide a paragraph noting a healthy safety culture among service technicians is important in reducing the likelihood of safety-significant events and point to REGDOC 2.1.2 for further guidance.	MAJOR	Safety culture programs are an integral part of the Class I licensees’ program. Significant work would be required to further modify these programs for a small portion of staff to meet the CNSC expectations outlined in this section and would provide no additional safety benefit.
55.	Appendix B	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	Appendix B provides a list of potential hazards that may be encountered by service technicians. This is referenced in the table in Section 3. However, it is not clear what the intent of this list is and how licensees should be using this list with respect to defining competencies.	Provide clarification on the expectations of CNSC for use of the list by licensees	Clarification	
56.	Page 18 SF6 Handling	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	Typo	Typo: “Identifies the hazard and its by-products that may be produced by the PE.”	Clarification	
57.	Appendix D	Nordion, NB Power, Canadian Nuclear Laboratories (CNL)	Not referenced in the document	Remove appendix or reference in the body of the text.	Clarification	