

REGDOC-2.12.3, Security of Nuclear Substances: Sealed Sources / La sécurité des substances nucléaires : sources scellées

(consulted as RD/GD-338, Security Measures for Sealed Sources / Mesures de sécurité pour les sources scellées)

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

Comments received:

- during public consultation (March 21 to June 8, 2012) : 127 comments from 22 reviewers; including (four) 4 classified comments were received
- during “feedback on the comments received” (June 27 to July 19, 2012): 7 comments were received from 4 reviewers

Commentaires reçus :

- lors de la période de consultation (du 21 mars au 8 juin, 2012): 127 commentaires reçus de 22 examinateurs, dont 4 commentaires confidentiels.
- lors de la période d’observations sur les commentaires reçus (du 27 juin au 19 juillet 2012) : 7 commentaires reçus de 4 examinateurs

Comments received during public consultation / Commentaires reçus lors de la période de consultation:

	Section	Name	Organization	Organization Type	Comment	CNSC Response
1	General	Richard Wassenaar, Director of Compliance	Best Theratronics Ltd.	Industry	Best Theratronics has reviewed the CNSC’s proposed RD/GD-338 draft document, <i>Security Measures for Sealed Sources</i> . We believe the document is well laid out and addresses the safety and security concerns surrounding the handling, usage, storage, and transportation of sealed sources. Although Best Theratronics believes RD-338 to be a well researched and thought-out document, we have several comments that we believe will help to clarify and strengthening the proposed document.	Thank you for reviewing the document.
2	General	LiHeng Liang, Clinical Physicist	Hôpital général juif / Jewish General Hospital	Industry	Note: I am working as a medical physicist and a RSO in a radiation oncology department of a hospital. All the comments are based my personal working environment. It is a very good document regarding to the safety measures for sealed radioactive sources/materials.	Thank you for reviewing the document.

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3	General	Richard Wassenaar, Director of Compliance	Best Theratronics Ltd.	Industry	To facilitate Best Theratronics' business in the USA, Best Theratronics possesses a USNRC Materials license. As part of this license, Best Theratronics is required to follow USNRC security orders. We are pleased that, overall, document RD-338 is consistent with the USNRC security orders.	Thank you for your comment.
4		[5 physiciens/ physiciennes] Aimée Lauzon Normand Frenière, Marie-Joëlle Bertrand Camille Pacher Caroline Duchesne	AQPMC (Association québécoise des physiciens médicaux cliniques) Centre de santé et de services sociaux (CSSS) de Laval CSSS Trois-Rivières – CHRTR CSSS de Chicoutimi CSSS Champlain-Charles LeMoynes L'hôpital Maisonneuve- Rosemont	Industrie	Nous vous soumettons nos commentaires sur le projet de document d'application de la réglementation GD-338, <i>Mesures de sécurité pour les sources scellées</i> . Nous remercions la CCSN de nous offrir l'opportunité de commenter tout projet de publication. En tant que titulaires de permis, nous pouvons poser un regard critique sur les implications que pose une mise en œuvre de nouvelles directives ou exigences réglementaires. Notre souci est d'assurer une utilisation sécuritaire de l'énergie nucléaire dans un environnement hospitalier. Nos commentaires seront donc teintés par la mise en application du GD-338 dans un milieu hospitalier. Nous reconnaissons la nécessité de prendre des mesures minimales de sécurité pour prévenir la perte, le sabotage, l'utilisation illégale, la possession illégale et l'enlèvement illégal des sources scellées, tant lors du stockage sur le site d'une activité autorisée que lors du transport ou stockage en transit. La rédaction d'un guide d'application de la réglementation en la matière aidera grandement le titulaire de permis dans l'élaboration de ses mesures de sécurité.	Nous vous remercions pour les commentaires que vous avez soumis. Pour clarification, le document n'est pas seulement un guide (GD), c'est aussi un document d'application de la réglementation (RD) qui inclut des exigences et des conseils pour rencontrer ces exigences.

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5	General	Kari Toews, Program Manager, Occupational Safety	Cameco Corporation	Industry	Cameco Corporation (Cameco) appreciates the opportunity to comment on RD/GD-338 Security Measures for Sealed Sources... One general comment we would like to make is that the detail and rigor of the requirements for security high risk sources seems generally reasonable, however, for operations such as ours who possess only category 4 and 5 sources it is not entirely clear in all cases what the expectations are. It is stated that for Category 4 and 5 sources this document represents prudent management practices, however, this wording leaves open the possibility of misinterpretation; specifically, the misinterpretation that the full rigor of the requirements of the high-risk sources would be appropriate for low-risk sources. It is recommended that the application of this document be further clarified to indicate, for example, that with a lower risk the rigor of application of these practices should also be reduced.	<p>Thank you for reviewing the document. Text has been revised to include a glossary entry for “prudent management practices”, and text in sections 2.1 and 2.2 has been revised and/or expanded for clarity.</p> <p>prudent management practices Include ensuring that sealed sources are secured to prevent illegal use, theft or sabotage, and that a periodic inventory is carried out to ensure sealed sources are at their designated location and are secure.</p> <p>Additional guidance on prudent management practices may be found in section 2.34 of the IAEA Safety Standard “<i>International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources</i>” (Safety Series No. 115).</p>
6	General	Alan Brady, Director	TISI Canada Inc.	Industry	We find the guide to include requirements and guidelines that we in our company already have in place for category 2 sources and devices.	Thank you for reviewing the document. For clarification please note that <i>Security Measures for Sealed Sources</i> is not strictly a “guide”, but is a “regulatory document/ guidance document” that includes both requirements and guidance on how to implement applicable requirements.

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7	General comment	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	<p>The term Category 1, 2, 3, 4 and 5 as it relates to sealed sources is easily confused with Category I, II, III nuclear material as defined in schedule 1 of the Nuclear Security Regulations.</p> <p>Bruce Power recommends using the “security group” terminology outlined in IAEA-TECDOC-1355 Table 2 (e.g. Security Group A, B, C, D) to eliminate confusion.</p>	<p>No change. The categorization of radioactive sources has been established by the IAEA (reference IAEA Safety Standard Series No. RS-G-1.9 “<i>Categorization of Radioactive Sources</i>”). Canada has agreed as an IAEA member state to use the IAEA categories (1, 2, 3, 4, 5) to ensure consistency with IAEA standards, recommendations and guidance. Section 2.2 and the glossary both provide explanations of categories 1 through 5.</p>
8	General comment	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	<p>This Regulatory Document is intended to govern security for sealed sources used in a variety of facilities, industries and environments. High security sites already comply with the <i>Nuclear Security Regulations</i> and related standards to protect Category I, II, III nuclear material against theft or sabotage. This includes access controls, physical barriers, intrusion detection systems, personnel and vehicle search, security clearance and an on-site armed nuclear response force capable of defending against the Design Basis Threat and any other credible threat identified by a threat risk assessment.</p> <p>Bruce Power requests confirmation from the CNSC that requirements in this RD related to access controls, detection of unauthorized access, physical barriers and intrusion detection systems are covered by existing measures implemented by licensees at high-security sites.</p>	<p>No change. If high-risk radioactive sources are stored at a high-security nuclear site (e.g., nuclear power plant) some of the security requirements that are in place will provide the required level of protection as outlined in <i>Security Measures for Sealed Sources</i>. In cases of high-security nuclear sites the expectation is that the licensee would provide the required details as to how they meet all of the applicable requirements.</p>

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					<p>As an alternative, the CNSC could consider making this RD applicable to non high-security sites only and create a guidance document specific to high-security sites taking into account security measures already required by the NSRs. This would eliminate confusion and the need for interpretation.</p> <p>Confirmation on interpretation requested.</p>	
9	General comment	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	<p>The format of RD-338 is confusing in that it moves between “requirements” and “guidance”.</p> <p>Bruce Power recommends RD-338 be formatted similar to other regulatory documents which better streamlined and read more easily.</p>	No change. <i>Security Measures for Sealed Sources</i> is formatted similarly to other CNSC Regulatory Documents (e.g., RD/GD-210). The “guidance” is clearly marked as such, which was previously requested by a number of stakeholders.
10	Throughout	Security division	Ontario Power Generation (OPG)	Industry	Recommend changing Category 1, 2, 3 to another scheme as use of this language may be confused with Category I, II, III nuclear material stored in high security areas.	No change. The categorization of radioactive sources has been established by the IAEA (reference IAEA Safety Standard Series No. RS-G-1.9 “ <i>Categorization of Radioactive Sources</i> ”). Canada has agreed as an IAEA member state to use the IAEA categories (1, 2, 3, 4, 5) to ensure consistency with IAEA standards, recommendations and guidance. Section 2.2 and the glossary both provide explanations of categories 1 through 5.

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11	Commentaires généraux	[5 physiciens/physiennes]	AQPMC (Association québécoise des physiciens médicaux cliniques)	Industrie	<p>La plupart des transporteurs privés de matières dangereuses nucléaires au Canada ne sont pas assujettis aux règlements de la CCSN. Cette situation a toujours imputé aux titulaires de permis canadien les responsabilités réglementaires lors du transport, même s'ils n'ont aucun lien hiérarchique et d'autorité envers le transporteur, outre un pouvoir économique d'octroi d'un contrat de transport. Le présent guide vise à aider les titulaires de permis canadien à clarifier cette situation. En plus de soutenir le titulaire de permis, pourquoi la CCSN ne remet-elle pas en question la prémisse ? L'assujettissement complet de tous les transporteurs en sol canadien aux règlements de la CCSN dégagerait le titulaire de permis canadien d'une responsabilité lors du transport, qui lui est impossible de contrôler pleinement. Nous sommes conscients que ce sujet va au-delà de la portée du guide.</p>	<p>Pour clarification, le document n'est pas seulement un guide (GD), c'est aussi un document d'application de la réglementation (RD) qui inclut des exigences et des conseils pour rencontrer ces exigences.</p> <p>Il incombe au détenteur de permis de s'assurer qu'il y ait un processus lors de la réception de matières radioactives et pour contrôler les inventaires afin de s'assurer que ces matières ne soient pas perdues ou égarées. Le détenteur est aussi responsable d'utiliser des transporteurs privés qui remplissent les obligations du document <i>Mesures de sécurité pour les sources scellées</i>.</p> <p>Bien que les activités de transport ne requièrent majoritairement pas de permis elles sont néanmoins assujetties aux exigences du <i>Règlement sur l'emballage et le transport des substances nucléaires</i> et les transporteurs doivent également s'y soumettre. Une des exigences réglementaires est que les transporteurs transportent la matière conformément aux instructions de l'expéditeur. Les exigences demandent également que les transporteurs développent et implémentent un programme de radioprotection et qu'ils mettent en œuvre des procédures de travail pour assurer la conformité au règlement.</p>

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12	Commentaires généraux	[5 physiciens/physiciennes]	AQPMC (Association québécoise des médecins cliniques)	Industrie	La lecture du guide peut nous faire craindre une application sans discernement qui ne tient pas compte de la réalité d'un hôpital où le public y circule. Les ressources matérielles et humaines étant généralement limitées, il serait opportun d'accepter une documentation réglementaire succincte et un processus de contrôle simple, mais efficace.	Pour clarification, le document n'est pas seulement un guide (GD), c'est aussi un document d'application de la réglementation (RD) qui inclut des exigences et des conseils pour rencontrer ces exigences.
13	Throughout	Wade Parker, Station Director, Point Lepreau Generating Station	NB Power	Industry	RD/GD-338 was found to be very confusing to follow as it was not clear in many areas. It would appear that most, if not all, requirements are met through the NSRs for nuclear sites however some of the wording in RD/GD-338 seems to contradict that appearance.	No change. If high-risk radioactive sources are stored at a high-security nuclear site (e.g., nuclear power plant) some of the security requirements that are in place will provide the required level of protection as outlined in <i>Security Measures for Sealed Sources</i> . In cases of high-security nuclear sites the expectation is that the licensee would provide the required details as to how they meet the applicable requirements. Also, if sources leave the site, the requirements in <i>Security Measures for Sealed Sources</i> apply.
14	Vérification antécédents + casier judiciaire :?	Marie-Joëlle Bertrand, physicienne médicale	CSSS de Chicoutimi	Industrie	Vérification antécédents + casier judiciaire : qu'advient-il des accompagnateurs et même des patients eux-mêmes pour un traitement de curiethérapie ?	Les accompagnateurs et les patients n'ont pas besoin de se soumettre à cette exigence puisqu'ils sont généralement escortés ou sont sous la surveillance d'un membre du personnel hospitalier. Cette exigence s'applique au personnel autorisé qui ont un accès « sans escorte » et qui ne sont pas surveillés.

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15	Vérification antécédents + casier judiciaire :?	Marie-Joëlle Bertrand, physicienne médicale	CSSS de Chicoutimi	Industrie	Vérification antécédents + casier judiciaire : pourrait limiter l'embauche ou l'avancement (par exemple la proposition d'une spécialisation à un technologue) pour une faute passée légère et non liée à l'emploi, ce qui est discriminatoire et contraire à la Charte des droits de la personne du Québec. Ceci pourrait impliquer des employés d'autres départements (réception des marchandises, par exemple).	<p>Nous avons modifié cette section et ajouté des alternatives à la vérification de casier judiciaire et plus d'informations dans la section-conseil 3.3.4 pour aider les titulaires de permis.</p> <p>Un nouveau diagramme a été ajouté en annexe B pour expliquer les étapes à suivre lors de la vérification de casiers judiciaires.</p> <p>Cette exigence s'applique au personnel qui ont un accès « sans escorte » aux sources scellées à haut risque pour s'assurer que ces individus ne représentent pas un risque déraisonnable pour la santé et la sécurité des personnes, ni la sécurité de l'installation. Cette mesure s'applique au personnel d'entretien ou à des contacteurs qui ont un accès « sans escorte ». Sinon, celles-ci doivent être escortées par une personne autorisée.</p> <p>Cette mesure ne doit pas, dans aucun cas, être utilisée de manière discriminatoire à l'embauche du personnel ou lors de l'avancement de carrière lié à l'emploi.</p> <p>Si un individu qui a commis une faute légère ou a été accusé d'un délit mineur dans le passé, le titulaire de permis est responsable d'évaluer si l'individu peut représenter un risque déraisonnable pour la santé et la sécurité des personnes et/ou la sécurité de l'installation.</p>

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16	Overall (Scope, 1.2)	Richard Wassenaar, Director of Compliance	Best Theratronics Ltd.	Industry	The document seems to be geared towards users of radiography devices, or other small packages of sealed sources. This seems evident in the sections describing the requirements for secure containers (3.2.5). We believe further considerations should be given to the requirements and guidelines for Cat 1 and 2 quantities of Co60 and Cs137. The types of containers used to store/transport a Cat 1 Co60 source are very different than for a Ir192 source. As such, the requirements to define a container as secure are different. We also wonder how such a security program would look in a hospital with a Co60 teletherapy unit, which is a Cat 1 source. There seems to be a need for more guidance as to how the requirements set out in RD338 could be applied to such a situation.	Section 3.2.5 amended with new text for sources stored in pools and for large containers. The various devices used to store and transport nuclear substances are approved under a separate certification program; the principals for securing these devices in storage are generally the same. Text was added in section 3.2.5 for containers over 500 kg that are typically used for category 1 and 2 quantities of Co60 and Cs137.
17	1.3	Alan Brady, Director	TISI Canada Inc.	Industry	Page 2 (j). Typo. Should be the word “workers”.	Comment noted, text in Section 1.3 has been amended.
18	Section 2, contexte	[5 physiciens/ physiciennes]	AQPMC (Association québécoise des physiciens médicaux cliniques)	Industrie	Nous appuyons la reconnaissance que toutes les sources radioactives ne peuvent et doivent être traitées de la même manière à l’égard des risques qu’elles posent.	Merci pour votre commentaire.
19	Section 2, contexte	Aimée Lauzon, Laval Normand Frenière, CHRTR	AQPMC (Association québécoise des physiciens médicaux cliniques)	Industrie	Nous appuyons le traitement de plusieurs sources individuelles en un même lieu de stockage ou d’utilisation comme une source unique aux fins de catégorisation du niveau de dangerosité.	Merci pour votre commentaire.

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20	2.0	Jeanne Miller	Shlumberger Canada Limited	Industry	<p>Aggregation of source activities was not formally addressed prior to this document.</p> <p>If multiple sources are in storage at the same site, or being transported on the same vehicle, will aggregation of activities still be applied if there are two barriers for each individual source (envelopes of security): ie sources are locked in a secure source shield/pig with an approved, unique lock, the source source shields are chained and locked individually to an integral part of the storage area or truck and/or sources are locked within individual pits or storage areas, or compartments on the vehicle?</p> <p>The NRC currently accepts these means to not apply aggregation to the calculation of total source activity and categorization.</p>	<p>Additional text added in section 2.2.2 to include aggregation of various radionuclides and A/D ratio:</p> <p>“The A/D ratio for a single radionuclide is the activity (A) of the source compared to the activity determined to define a threshold of danger (D). For the aggregation of various radionuclides, the sum of the A/D ratios is used to determine a final category as described in TECDOC-1344, <i>Categorization of Radioactive Sources</i> [2] and RS-G-1.9, <i>Categorization of Radioactive Sources</i> [5]. If multiple sources from different categories are stored, the highest category should suffice (e.g., storage of category 2, 3 and 4 sources would meet the security requirements for category 2).”</p>
21	2.1	Michael James, Radiation Safety Officer	Canadian Light Source	Industry	<p>Does the document apply <i>only</i> to the substances identified in Table A? (TECDOC-1344 refers to several other radioisotopes).</p>	<p>No change to text. This document applies to all substances identified in Table A which is based on TECDOC-1344.</p> <p>The categorization of radioactive sources has been established by the IAEA (reference IAEA Safety Standard Series No. RS-G-1.9 “<i>Categorization of Radioactive Sources</i>”). Canada has agreed as an IAEA member state to use the IAEA categories (1, 2, 3, 4, 5) to ensure consistency with IAEA standards, recommendations and guidance. If additional information is required in the case of any</p>

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99	3.3.6.2	Michael Epp, Manager, Corporate Security	Nordion	Industry	<p>Regarding the text « Inventory control guidance: ...Such measures could include physical checks that the source is in place.....” and “process for inventory control should be in place, to ensure a robust verification process.”</p> <p>Regular inventory checks are verified during use of the material as sources are manufactured, stored and transferred. This requirement is problematic for longer term storage of a large number of sources in secure environments. Other existing and new security requirements and controls account for security during storage. Suggest that regular verification of secure systems (larger containers, tamper seals, CCTV) is adequate to ensure security during storage.</p>	<p>No change to text.</p> <p>See response to comment #98.</p>
100	4	Marie-Joëlle Bertrand, physicienne médicale	CSSS de Chicoutimi	Industrie	<p>Toute la section 4 (transport), plusieurs mesures sont très sévères et on met sur le titulaire de permis qui n’a pas un pouvoir législatif sur les compagnies de transport l’odieux de leur faire respecter la loi. Il faudrait plutôt légiférer les compagnies de transport...</p>	<p>Il incombe au titulaire de permis de s’assurer qu’il y ait en place un processus pour la réception de matières radioactives et le contrôle de l’inventaire afin de s’assurer que les matières ne soient pas perdues ou égarées. Le titulaire de permis a aussi la responsabilité d’utiliser les services de transporteurs privés qui répondent aux exigences du document <i>Security Measures for Sealed Sources</i>.</p> <p>Bien que la majeure partie des activités de transport ne requière pas de permis, ces activités sont néanmoins assujetties aux exigences du <i>Règlement sur l’emballage et le transport des substances nucléaires</i>, tout comme les transporteurs. Une des exigences</p>

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						réglementaires est que les transporteurs doivent transporter les matières conformément aux instructions de l'expéditeur. Les transporteurs ont aussi l'obligation d'élaborer et de mettre en œuvre un programme de radioprotection et de mettre en place des procédures de travail pour assurer la conformité au Règlement.
101	4	Security division	Ontario Power Generation (OPG)	Industry	n/a - OPG contracts with qualified vendors to conduct all transport of sealed sources stated in Table A.	No comments.
102	4	NWMD	Ontario Power Generation (OPG)	Industry	Use of the word "vehicle" is somewhat ambiguous. In section 4.1.1, does the requirement apply to the tractor, the trailer or both? Suggestion: Define vehicle consistent with IAEA TS-R-1, paragraph 247.	The term "Vehicle" has been added in Glossary, using the definition from the <i>Nuclear Safety and Control Act</i> , with additional text from IAEA TS-R-1 to clarify the requested information.
103	4	LiHeng Liang, Clinical Physicist	Hôpital général juif / Jewish General Hospital	Industry	Some security measures can be implemented by our efforts supported by the hospital, but a few measures are out of our control (transportation of sealed source) and are not practical (criminal record name check for staff, constructors, and vehicle driver). As mentioned in the draft document, most source carrier are not licensed by the CNSC, therefore, they will not enforce this document during their transportation of radioactive materials (class 7) and they will not follow our instruction as well. So we can not control any transportation procedure for transportation of radioactive materials. Based on my experiences on importing and	No change – until such time as commercial carriers are subject to CNSC licensing the licensee is responsible for the security when using commercial carriers until the nuclear substances reaches its licensed destination. The licensee is responsible for the security of licensed radioactive sources including when using commercial carriers until the source reaches its destination. Transport activities are regulated by both Transport Canada TDG regulations

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					<p>exporting Ir-192 source from and to the US, we can not control US Customs to open a secured package by cutting a security seal; source carrier delivery a radioactive materials based on building to building basis, and without identifying dangerous goods with regular packages, meaning that they treat class 7 packages (at least) as regular packages to delivery to a hospital receiving department only, not to final users.</p> <p>Suggestion: The CNSC should work with Transportation Canada and Transportation of US to achieve an agreement enforcing source carrier to follow the CNSC regulations.</p>	<p>and CNSC <i>Packaging and Transport of Nuclear Substances Regulations</i>. Under the CNSC <i>Packaging and Transport of Nuclear Substances Regulations</i>, carriers shall transport the material in accordance with the consignor's instructions. They shall also implement and maintain a radiation protection program as well as work procedures to ensure compliance with the regulation.</p> <p>CNSC staff is continuing to work with Transport Canada to identify any potential security gaps and develop agreements to enforce regulations.</p>
104	4.1.1 Requirements for vehicle security	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	<p>Bruce Power requests clarification on Section 4. Are there any requirements for sources that are shipped by other means of transport (via air, sea, rail, etc)?</p> <p>Bruce Power recommends the RD be updated to include requirements for all modes of transport.</p>	<p>No change to text. This document covers transportation by land only.</p> <p>The International Maritime Organization (IMO), the International Civil Aviation Organization (ICAO) and other intergovernmental organizations such as the International Carriage by Rail –have taken similar steps to provide improved security in the transport of dangerous goods carried by sea, air and rail.</p>

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105	4.1.1	Michael Epp, Manager, Corporate Security	Nordion	Industry	<p>Regarding the text “Requirement for anti-theft devices on Cat 1,2 &3 transports, including vehicle disabling device and intrusion detection”</p> <p>Please ensure that licensees are afforded a reasonable implementation schedule in order for them to work with their contracted carriers to make required changes.</p>	No change to text. Comment noted and the CNSC will provide sufficient time to the licensees during the implementation period.
106	4.2.1	Michael Epp, Manager, Corporate Security	Nordion	Industry	<p>[See also comment #nn, about section 3.2.5.1]</p> <p>Regarding the text “For a container to be considered secure, it must be:....fitted with a key or combination padlock or similar lock, that can resist surreptitious or forced attack using handheld tools”</p> <p>In this section it states that “packages over 500 kg are considered secure” but then goes on to locking requirements above.</p> <p>Clarification in the wording of the secure container requirements is required. In this section it states that “packages over 500 kg are considered secure” but then it goes on to state the requirements needed to be considered a secure container, including locking requirements, etc. It would be clearer if the wording about packages over 500 kg was simply noted in the a, b, c, d requirement list as item a, for example.</p> <p>Alternatively, perhaps the section could be clarified by stating the requirements to be considered secure for containers greater than 500kg and then for containers less than 500kg.</p>	<p>Text added in section 3.2.5 regarding “containers over 500 kg”.</p> <p>During transport, the large transport containers over 500 kg are secured with several bolts and the container is chained and locked to the deck of the transport vehicles which is considered equivalent.</p>

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107	4.2.1	NWMD	Ontario Power Generation (OPG)	Industry	<p>A relatively low-mass container should likely be fixed to the vehicle, to prevent it from being carried off easily. A vehicle could be broken into and a relatively light container stolen before the operator of the vehicle could respond to the alarm.</p> <p>Suggestion: Determine a mass (100 kg?) under which the container must be secured to the vehicle.</p>	Text added in section 3.2.5 regarding “containers over 500 kg” – see response to comment #106.
108	4.2.1	Alan Brady, Director	TISI Canada Inc.	Industry	<p>Request a clarification of the CNSC expectation for licensees responsibilities when using courier services. Specifically for category 2 sources, section 4.2.1 page 22 speaks of a verification process. Verifications also include background screening of carrier personnel.</p> <p>It is a normal and acceptable industry practice for a company to verify client and regulatory compliance of its suppliers and subcontractors. However, in the case of couriers or third party carriers, the end result may be meaningless if these (Couriers/carriers), are not licensed or regulated the same way. It MAY be possible that carriers/couriers may simply choose not to service this industry. It may also prove to be difficult to verify or for the couriers to implement unless they put an id system in place or are willing to spend that extra expense to service our industry.</p> <p>Our industry would be reluctant to be responsible for sources and devices once out of our control. Security regulations must apply and be consistent throughout the supply</p>	<p>No change– Commercial carriers are subject to CNSC licensing the licensee is responsible for the security when using commercial carriers until the nuclear substances reaches its licensed destination. The licensee should implement a verification process as part of the procurement/purchasing.</p> <p>Transport activities are regulated by both Transport Canada TDG regulations and CNSC <i>Packaging and Transport of Nuclear Substances Regulations</i>. Carriers are regulated under PTNS Regulations and are required to develop and implement a radiation protection program as well as work procedures to ensure compliance with the regulation and transport the material in accordance with the consignors instructions.</p>

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					<p>chain in order to maintain control of sources and devices. There are already requirements in place for transfer and direct observation of devices and sources. However, transport within and unregulated industry appears to be a weak link in the chain.</p> <p>If the expectation is for a licensee to simply implement a documented verification process as part of the procurement/purchasing of courier/carrier services, then this would be an acceptable expectation.</p>	
109	4.2.1	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	Is the shipping document describing the security measures for sealed source in addition to the current shipping document required ?	<p>The current regulations require that every consignor provide in the transport document a statement regarding actions, if any, to be taken by the carrier.</p> <p>Section 4.2.1 was amended to state the following: “The shipping documents shall include a statement regarding actions, if any, to be taken by the carrier which contain a description of security measures for sealed sources. Where more than one category of sources is included in the consignment, the applicable measures shall be based on the more restrictive category.”</p>
110	4.2.1	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	Please clarify “more than one radionuclide” does this mean a single sealed source containing multiple nuclides, or if there are multiple radionuclide per consignment (i.e. multiple packages in one shipment?)	Multiple sources per consignment. Text has been revised for clarity.

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111	4.2.1	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	This section is vague as to what the paperwork should specify. It must be more detailed and should be cross-referenced in the Packaging and Transport of Nuclear Substances Regulations. Perhaps there should be a section for “Transport documents” if security measures document is mandatory.	The transport shipping document is controlled under the <i>Packaging and Transport of Nuclear Substances Regulations</i> and therefore outside the control of this document. Section 4.2.1 revised; see response to comment #109.
112	4.2.1	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	Section 4.2.1: “the consignor, shall contract a carrier with a proven record for the safety and security of dangerous goods”. If the shipment is not exclusive use, more than one carrier can be used without the knowledge of the consignor or consignee. How is this expected to be handled? This needs to be more closely aligned with the P&TNSR.	No change to text. The licensee is responsible to ensure that they contract carriers that meet the applicable requirements. If multiple carriers are used, the licensee shall ensure that the authorized carrier is capable of providing physical security measures for sealed sources while they are in transport or being stored during transportation.
113	4.2.1	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	Section 4.2.1: Is there a certification a consignor can use to ensure carriers have a proven record for safety and security?	No change to text. The CNSC is not aware of any certification of this type.
114	4.2.1	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	Bruce Power recommends Para. 2 be reworded to align with the wording in the P&TNSR For example: “ As required by the <i>Packaging and Transport of Nuclear Substances Regulations</i> , the consignor shall provide the carrier with the appropriate transport documents relating to the shipment. In addition to the transport documents, the consignor shall include the corresponding description of security measures for sealed sources....”	Section 4.2.1 revised; see response to comment #109.

	Section	Name	Organization	Organization Type	Comment	CNSC Response
115	4.2.1	Richard Wassenaar, Director of Compliance	Best Theratronics Ltd.	Industry	The document lists a requirement that secure containers “shall be equipped with a key, combination padlock or similar locking device that is resistant to an attack using handheld tools”. We believe this requirement is excessive in many instances. In particular, all of Best Theratronics’ containers are Type B(U) containers used to transport Cat 1 or 2 quantities of Co60 or Cs137. The containers are significant in weight and cannot be opened using standard handheld tools. Also, the weight of the lids and other container components are such that they already provide protection against theft of the sources. Finally, this requirement is for sources in transit. Best Theratronics requires that a driver be within view of the truck at all times. For any shipment over 10 hours, Best Theratronics uses a 2 driver system. This allows for 1 driver to remain with the truck at all times. The addition of a locking device on the container would not provide any additional security. The addition of a locking device would require a modification to all of our transport containers. This would be a significant undertaking.	Comment noted, Text added in section 3.2.5 regarding “containers over 500 kg”. During transport, the large transport containers over 500 kg are secured with several bolts and the container is chained and locked to the deck of the transport vehicles which is considered equivalent.
116	4.2.1.3	David Knight	DND/CF DGNS	Government	For Category 1 or 2 sealed sources the requirement for the licensee to verify that the carrier: maintains constant control and/or surveillance ... This requirement will be difficult to comply with by a licensee unless the licensee is overseeing the carrier 24/7. A better action may be to verify the establishment of constant control and/or surveillance.	Text revised, from “maintains”” to “establishes”.

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117	4.2.2	NWMD	Ontario Power Generation (OPG)	Industry	If a licensee uses an external carrier, does the licensee have to provide the security awareness training or is it the responsibility of the carrier? Please clarify.	Section 4.2.2 amended to remove reference to the licensee. “Security awareness should be provided to all individuals engaged in the handling or transport of sealed source. “
118	4.2.2	NWMD	Ontario Power Generation (OPG)	Industry	Awkward wording in “verify that . . . all persons employed by the carrier transporting the sealed sources have successfully completed security screening”. Suggestion: Reword to say “all persons employed by the carrier and who will be involved in transporting the sealed sources . . . “	Section 4.2.2 amended to specify “all of the carrier’s employees who are involved in transporting the sealed sources...”.
119	4.2.2	NWMD	Ontario Power Generation (OPG)	Industry	Specifies inspection and testing requirements for licensee’s transport vehicles. However, a license is not required to transport most sealed sources. A licensee could hire a carrier to transport their material in the carrier’s vehicle, and that vehicle would not have any requirement for the security devices to be inspected or tested. Suggestion: Add wording to address this scenario.	Text in section 4.2.2 amended to address this scenario.
120	4.3.1	Joe Boyadjian, Murray S. Morison	Bruce Power	Industry	Requirements for review of transportation security plan for Category 2 is unclear. Bruce Power recommends the RD be revised to be clear regarding who must review the Category 2 transportation security plan; is it the CNSC or the licensee? And, define what is meant to “regular basis” for the review of Category 2 sealed source response plans.	Agree –section 4.3.1 amended. The transport security plan should be reviewed annually and updated if required. A category 2 transport security plan will be retained by the licensee for inspection while category 1 security plans will be approved by CNSC staff.

	Section	Name	Organization	Organization Type	Comment	CNSC Response
121	4.3.1	Richard Wassenaar, Director of Compliance	Best Theratronics Ltd.	Industry	<p>This section describes the requirement for a transportation security plan. Best Theratronics is in full agreement for the need for licenses to implement a Transport Security Plan. Best Theratronics has had such a plan since 2008 as required to meet the security orders set out in our USNRC license. This security plan has been reviewed and audited on several occasions by the USNRC. However, RD/GC-338 requires that a transport security plan be developed for each shipment and submitted to the CSNC at least 60 days prior to the anticipated shipment date. The draft document lists the planned route and alternate routes be listed in the submitted transportation security plan. This requirement would not be practical given the number of Category 1 and 2 shipments Best Theratronics makes. This would significantly, and we believe, unnecessarily, increase the workload for both Best Theratronics and the CNSC. As well, the proposed ship date is typically only known approximately 2 weeks before the date. Routes and shipping dates are not finalized until a week or two prior to shipment. It is not possible to submit this information 60 days prior to the expected ship date. Best Theratronics recommends that a general Transport Security Plan be implemented and approved by the CNSC. The information in the Transport Security Plan would be items a. through h. of section 4.3.2. This information would not change from shipment to shipment, and so it makes little sense to continue to submit this to the CNSC for review. Given the number of shipments Best Theratronics undertakes, the CNSC could potentially be reviewing the same information 3 or 4 times a</p>	<p>Comment noted and text amended in section 4.3.1.</p> <p>For transport of Category 1 sources,</p> <ul style="list-style-type: none"> ▪ the licensee shall implement enhanced security measures and submit a preliminary Transport Security Plan to the CNSC at least 60 days before the anticipated date of shipment, providing all available information, for approval by the Commission Tribunal or a designated officer authorized by the Commission Tribunal ▪ the preliminary Transport Security Plan shall be reviewed annually and updated if required ▪ a final Transport Security Plan, including the supplementary information unique to each shipment, shall be submitted to CNSC 48 hours before the shipment

	Section	Name	Organization	Organization Type	Comment	CNSC Response
					month, on average. The additional information that is unique to each shipment is regarding the planned route (items i. and j. of section 4.3.2). This information can be submitted 48 hours prior to shipment. This would be consistent with the requirements for transportation of Category 1 or 2 sources through the US, as required by individual states.	
122	4.3.1	Michael Epp, Manager, Corporate Security	Nordion	Industry	<p>Regarding the text « For Cat 1 shipments, shall implement enhanced security measures and submit a specific Transport Security Plan to the CNSC at least 60 days before the anticipated shipment, for approval...»</p> <p>Includes a requirement for route and schedule submission.</p> <p>The requirement to submit the security plan for each shipment 60 days in advance, as outlined in the draft, is not practical and introduces OPSEC risks.</p> <p>Much of the required information is not firmed up until a few weeks in advance of the shipment date. This is particularly true for shipments into the USA where coordination with various state agencies is required and routing and itinerary plans change frequently. The USNRC only requires submission of advanced notice 7 days in advance of the shipment.</p> <p>The draft does not include a mechanism for revisions to the submitted plan. Changes even in the days leading up to the shipment occur and there must be a means to revise the plan.</p>	<p>Comment noted and text amended in section 4.3.1.</p> <p>See response to comment #121.</p>

	Section	Name	Organization	Organization Type	Comment	CNSC Response
					<p>Much of the information required to be submitted as per the draft will be the same for each shipment. Why does it need approval each shipment? This may make sense for a licensee who does infrequent shipments, but for one that ship regularly it doesn't.</p> <p>Lastly, this requirement introduces risks to operations security because of the increase in the amount and frequency of sensitive information transmitted / couriered and the length of time it exists in advance of the actual shipment.</p> <p>We suggest that a better approach may be for licensees to submit a generic transportation security plan for review and approval annually and then submit route, driver, shipment and itinerary information to CNSC 7 days in advance of the shipment date. This would mirror the NRC process which has been proven effective and will be a more efficient process for sharing accurate information with both regulators.</p>	
123	Lexique	[5 physiciens/ physiciennes]	AQPMC (Association québécoise des physiciens médicaux cliniques)	Industrie	La définition d'une « source de catégorie 2 » donne en exemple une source employée dans le cadre de la curiethérapie à débit de dose élevé ou moyen. Selon le tableau A, cet exemple appartient plutôt à la catégorie 3. Une correction est de mise.	Merci . Correction effectuée.

Summary: 123 comments from 21 reviewers. There are also 4 classified comments received from one reviewer (total 127 comments from 22 reviewers)
End of table for consultation

Comments received during « feedback on the comments received » / Commentaires reçus lors de la période d'observations sur les commentaires reçus :

	Section	Name	Organization	Organization Type	Comment	CNSC Response
A	All	Barry Fleet, Manager, Nuclear Regulatory Affairs	Ontario Power Generation (OPG)	Industry	OPG reviewed the comments provided by other licensed nuclear power plant operators. No issues or concerns were identified with any of those comments.	Thank you for reviewing the comments and providing feedback.
B	All	Chantal Blais, Spécialist conformité	Héma-Québec	Industrie	Pourriez-vous svp m'informer la date prévue de la mise en vigueur du document officiel « Mesures de sécurité pour les sources scellées » ?	Il est planifié que le document <i>Mesures de sécurité pour les sources scellées</i> sera publié officiellement à la fin de l'hiver 2012/13.
C	All	Patrick Harder, Radiation Safety Officer	University of Calgary	Industry	The University of Calgary understands the need for a graded level of security for Higher Activity radioactive sources, the document has been a long time in coming. There are specific issues that the University has identified based upon the comments of others.	Thank you for reviewing the document and providing feedback on the comments.
D	All	Barry Fleet, Manager, Nuclear Regulatory Affairs	Ontario Power Generation (OPG)	Industry	OPG would like to take this opportunity to reiterate a key assumption that forms the basis for all of our comments provided in Reference 1 (attached [note: see Detailed Comments Table, above]). The key assumption is that OPG has taken credit for the extensive security measures implemented at protected area boundaries of the Pickering and Darlington Nuclear Generating Stations to meet the requirements of the Nuclear Security Regulations for high security sites. These measures include, but are not limited to, ongoing protected area patrols, site intrusion detection, assessment, and alarm systems, and access/egress control practices currently in place. Given that the applicable nuclear materials, i.e., sealed sources addressed by RD-338 lie within the protected area of OPG high security sites, the requirements of RD-338 are considered to be met without the need to	This will require a specific assessment for each unique situation. If high-risk radioactive sources are stored at a high-security nuclear site (e.g., nuclear power plant) some of the security requirements that are in place will provide the required level of protection as outlined in <i>Security Measures for Sealed Sources</i> . In cases of high-security nuclear sites, the expectation is that the licensee would provide the required details as to how they meet all of the applicable the requirements.

	Section	Name	Organization	Organization Type	Comment	CNSC Response
					<p>undertake any significant projects or modifications to achieve compliance.</p> <p>Should this key assumption not be considered appropriate, OPG's response to this draft regulatory document would be drastically different and require significant further review.</p>	
E	2.2	Patrick Harder, Radiation Safety Officer	University of Calgary	Industry	<p>Cameco response to item 2.2 - Though source categories 4 and 5 are mentioned, the threshold between these categories is never specified</p> <p>The CNSC document should actually REPRODUCE the values and table from the reference IAEA TECDOC-1344 and list some of the device usage and practices (page 8) along with the activity limits for each isotope (pages 15 and 20 along with the table of relative ranking of practices based upon A/D page 21). The inclusion of that information will help to actual then define the requirements for RD/GD-338 Table B – instead of the wording “best practice” which with most of the Category 4 and 5 common use are not practical as the radiation source is a component that is bolted on or is a component the fits within a device (the device is not typically a portable unit).</p>	<p>From a security perspective category 4 and 5 are considered to be the least dangerous. Table A applies to radioactive sources that may pose a significant risk to individuals, society and the environment (i.e. Category 1-3).</p> <p>A new table was added in Appendix C to provide clarification on the category of most commonly used radioactive sources including category 4 and 5.</p>

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F	Table B	Patrick Harder, Radiation Safety Officer	University of Calgary	Industry	Dave Griffith response to Table B item about “good quality padlock” -- his suggestion to use the lock standard as a level of minimum requirement is takes the ambiguity out of the table.	<p>Comments noted. Section 3.2.4.2 was amended to replace “good” with “high” and “high-security series”</p> <p>However, because <i>Security Measures for Sealed Sources</i> applies the concept of the graded approach, it is up to the licensee to use a high security lock or high security padlock that is commensurate with the category of their source. CNSC’s approach is performance based for this requirement.</p> <p>CNSC staff is available to provide additional guidance in this area if required.</p>
G	Tableau B (3.1.2)	Chantal Blais, Spécialist conformité	Héma-Québec	Industrie	<p>...j’aurais des questionnements entourant les informations retrouvées au point « Entretien et essais » du tableau B de la page 10.</p> <ul style="list-style-type: none"> - J’aimerais svp connaitre quels sont les essais et les entretiens visés par votre délai de réalisation « au moins tous les 6 mois »? - Est-ce que tous les entretiens/essais sont concernés par ce délai? - N’y aurait-il pas des essais/entretiens ayant un délai de réalisation « au moins tous les 12 mois »? Comme par exemple l’essais de fuite(mesure du débit de dose extérieur)? - Quel est le délai de jeu acceptable que sous entend le « au moins » du point de vue du règlement? - Et pourriez-vous aussi svp m’indiquer la justification de ce délai de 6 mois? Et 12 mois? 	<p>Les détecteurs et/ou composants du système de sécurité doivent êtres testé à chaque 6 mois pour vérifier leur performance. Ce délai est le seuil minimal. Le titulaire de permis peut choisir de tester ces systèmes à l’intérieur de ces 6 mois (ex : à chaque mois, ou trimestre), 12 mois est un délai trop long pour s’assurer que les systèmes de détection d’intrusion fonctionnent adéquatement.</p> <p>Le personnel de la CCSN est disponible pour offrir plus d’information si nécessaire.</p>

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H	3.3.6.1	Michael Epp, Greg Fulford	Nordion Inc.	Industry	<p>Proposed new wording:</p> <p>3.3.6.1 Requirements for inventory control As required, The licensee shall conduct inventory checks , to verify that the source(s) are secure and have not been altered or subject to illegal access or unauthorized removal. These inventory checks shall comply with section 36(1)(a) of the Nuclear Substances and Radiation Devices Regulations.</p>	<p>No change.</p> <p>The licensee is required to establish and maintain a list or inventory of radioactive source (s) under its responsibility. CNSC uses a performance based approach to ensure the licensee conducts “regular” verification that the radioactive source(s) are present in its authorized location. The frequency and method to do this verification depends on the nature and operations of the licensee.</p> <p>If a license wishes to propose an alternative method of carrying an inventory check, they are free to do so. CNSC staff will evaluate the proposed procedure to ensure it provides necessary security.</p>

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I	3.3.6.2	Michael Epp, Greg Fulford	Nordion Inc.	Industry	<p>Proposed new wording:</p> <p>3.3.6.2 Guidance for inventory control The operator should establish and maintain a list of sealed sources under their responsibility. Inventory verification can be used as part of detection measures. Regular inventory checking should consist of measures to ensure that the sources are present and have not been tampered with. Such measures could include physical checks that the source is in place, verification during on-site movement or transfer, remote observation through closed circuit television (CCTV), or verification of seals or other tamper devices on storage containers and facilities. A process for inventory control should be in place, to ensure a robust verification process.</p>	Comment noted and text in section 3.3.6.2 amended.

Summary: 7 feedback comments from 4 reviewers.
End of table for feedback