| **#** | **Commenter** | **Section** |  **Issues** | **Suggested Change** | **MAJOR / *or*****Clarification** | **Impact**  |
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|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | Overview | Canadian Nuclear Laboratories appreciates the opportunity to comment on this discussion paper for the proposed revisions to the REGDOC-2.12 series of regulatory documents that will support the proposed Nuclear Security Regulations (NSR 2023).This review has proven uniquely challenging given the amount and significance of the comments we recently provided on the NSR 2023 and associated Regulatory Impact Analysis Statement (RIAS) through the Canada Gazette process. For clarity, the review comments provided for this discussion paper will be affected by the disposition of the NSR 2023 and RIAS comments and will generate additional comments. As such, these comments should not be considered exhaustive or final.The discussion paper review has been undertaken by industry personnel familiar with the proposed NSR 2023 changes. Licensees have identified several areas where clarification is required, or misunderstanding may be possible; these are detailed in this table of comments. The feedback is broken in to MAJOR or requests for Clarification comments. Recognizing an industry workshop with CNSC staff is scheduled for late March 2023, we offer additional themes for consideration as discussion topics. Licensees suggest the following topics for discussion:* *NSR 2023 Comment Disposition* – As mentioned above, Industry would like to better understand how the disposition of the comments provided on the NSR 2023 and RIAS will affect the associated regulatory document revisions and their associated timeline for revision.
* *Performance-based Regulations* – the NSR 2023 and the proposed REGDOC revisions continue to have a lack of performance-based requirements e.g., prescription of off-site response force training and equipment requirements. In some instances, it appears new prescriptive requirements will be added.
* *Physical Security versus Cyber Security* – There are many instances where the requirements for Physical Security versus Cyber Security have not been differentiated. The requirements for each element must be clearly identified as well as where the requirements for each element are different.
* *Enhanced Screening* – The discussion paper appears to indicate an enhanced screening for greater volume of personnel. The driver for requiring all employees who require access to vital areas to have an enhanced clearance will result in thousands of additional staff requiring enhanced clearance with significant impact on resources and cost, yet it is not supported by the Design Basis Threat.
* *Declassification* - Industry supports the CNSC exploring declassifying REGDOCs 2.12.1, Volumes I and II and realigning content throughout the entire REGDOC 2.12, Nuclear Security Series to promote clarity, reduce duplication of information and to ensure the series remains fit for purpose. Industry can offer further examples of how and where this declassification can be integrated into the documents.
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|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | General Comment | The CNSC makes reference to moving from prescriptive to performance-based regulations, however the licensee interprets the discussion Paper DIS-22-02 pertaining to the proposed changes to the REGDOC 2.12 series, as prescriptive in nature, thus defeating the purpose of moving the proposed NSR’s to performance based.  | Recommend consistency in the application of performance-based regulations.  | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | Introduction | The Nuclear Security Regulations (NSR) are also supported by REGDOC 2.2.4 Vol. III, which dictates medical, fitness and psychological testing required under NSR 18.2. | Include this reference and identify if REGDOC 2.2.4 will also be revised. | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | Introduction | This section states: “*Please note that the CNSC will also explore declassifying REGDOCs 2.12.1, Volumes I and II and realigning content throughout the entire REGDOC 2.12 Nuclear Security Series to promote clarity, reduce duplication of information and to ensure that the series remains fit for purpose.*”It is unclear how CNSC staff intend to declassify certain REGDOCS to maintain both information security on the prescribed contents of the document while also providing the necessary guidance required of high security sites to comply with the regulation. | Industry supports de-classifying these documents and recommends they be classified as prescribed information.Clarify whether there will be two versions of any 2.12 REGDOCS (public version and licensee version.) | MAJOR | The current Secret classification creates issues working with these documents particularly around providing detailed requirements to design agencies working on security related modifications |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 1 Introduction and section 2.5 | These requirements are the largest monetized cost impact and represent a potential duplication and inconsistency of legislation given the Federal Government’s proposed *Critical Cyber Systems Protection Act* which will prescribe a cyber security program for designated operators. The CNSC would be granted broad powers under the proposed legislation to oversee cyber security practices.The cyber security measures don’t align with the physical security measures prescribed in the NSR and create confusion. | Remove the requirement for a cyber security plan. | MAJOR | These requirements increase the regulatory burden and have potential to create conflicting obligations. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 1.1 Scope | This section states: “*This paper will outline the anticipated changes to the REGDOC 2.12 Nuclear Security Series in order to complement the proposed amendments to the NSR.”* | Industry believes the revision to these documents should be on hold until the proposed revised NSR finalized and issued | MAJOR | This is required to ensure the REGDOCS do not create requirements not supported by the revised NSR. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.1  | This section states: ”…* *The roles and responsibilities, equipment and training required for the off-site response forces* *expected to make and/or support an effective on-site intervention*.”
 | Remove ~~from~~ this line from the REGDOC: Remove a prescriptive approach to the roles and responsibilities, equipment and training required for off-site response forces. The determination of an effective off-site response force is under the jurisdiction of their command organization, not the Licensee.These requirements are already captured in the MOU, SLA and the integrated response plans. | MAJOR | CNSC have proposed to be less prescriptive, and more performance based. The CNSC does not have jurisdiction over off-site response agencies to prescribe their role, responsibilities, equipment or training.Industry does not have the ability to influence outside agencies and will not be able to implement. Furthermore, it will be limiting for future licensees (e.g., SMR operators) in siting new installations due to, potentially, high levels of training and costly equipment associated with off-site response forces. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.1 | This section states: *“The CNSC intends to enhance and update REGDOC-2.12.1.pertaining to the following:** *Minimum qualifications and equipment required for all onsite security personnel including contractors.*

*…** *The secure and constant communication must be maintained between the licensee and the off-site response force*

Without details regarding the specifics of the proposed CNSC changes the impact is concerning and difficult to assess: | * CNSC should continue to maintain a performance-based approach to minimum qualifications and equipment for onsite security personnel and contractors, rather than take a prescriptive approach.
* Clarify what is meant by “secure and constant” communication? The ability does exist to communicate with the off-site response force; however, it is *as required*, **not** *constant*. Continue the performance-based approach, do not become prescriptive in nature.
 | MAJOR | The potential impact, based on the changes that may be prescribed, may involve significant cost increase.. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.1 | This section states: *“2.1.1 Updates to and enhancements of existing content. The CNSC intends to enhance and update REGDOC-2.12.1, Volume I to clarify:**…** *“how to plan, conduct, evaluate drills and exercises...”*

Licensees have robust, well-established drill and exercise programs; recognized as a strength by the CNSC. | Remove this line from the REGDOC:The planning/conduct and evaluation of drills and exercises is a collaborative effort involving multiple parties. Maintain a performance/audit-based approach, rather than prescriptive in nature. | MAJOR | As a result of the CNSC being more prescriptive, licencees are faced with unnecessary regulatory burden, cost and challenges with implementation with no material benefit to Nuclear Security. The effective coordination with off-site response forces may be jeopardized if legislative requirements become too prescriptive or onerous |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.1 | The use of the term ‘sabotage event’ is unclear in its definition.Licensees require additional clarification on preventing a sabotage. Does this mean preventing a sabotage attempt or preventing a sabotage that results in a radiological release? | Suggest altering this to the IAEA definition of sabotage.  | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.1 | Applicants and licensees will be required to test and demonstrate to the CNSC the combination of measures they have proposed and implemented in their nuclear security system (i.e., systems, structures and/or components for security by design) will prevent a sabotage event or the unauthorized removal of nuclear material or nuclear substances.Industry does not understand the validation criteria that CNSC use to accept test results and demonstrative results and subjective measures would challenge licensees. For example, the licensees are currently in the process of testing and demonstrating the robustness of canisters though a technical analysis using Government of Canada subject matter experts, however CNSC NSD are challenging the methodology of these experts. This could result in lengthy delays and multiple, costly technical analysis that may not be accepted by the regulator.  | Remove requirements to demonstrate the combination of measures that will prevent a sabotage event or the unauthorized removal of nuclear material or nuclear substances. | MAJOR | The REGDOC alternates between being performance based and prescriptive. Without clear guidance and understanding of how this process will be applied it could become a very costly and labor-intensive exercise for the licensees to demonstrate proposed new measures to the CNSC.  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.1  | This section states: *“The CNSC intends to enhance and update REGDOC-2.12.1, Volume I to clarify:** *the minimum qualifications and equipment required for all on-site security personnel, including contractors*
* *the requirements surrounding the use of various combinations of response forces (on and offsite) to respond to acts of sabotage and unauthorized removal of nuclear material*
* *the roles, responsibilities, equipment and training required for the off-site response forces expected to make and/or support an effective on-site intervention….*”

Licensees contend that any changes to equipment or qualifications as well as any changes to response force requirements should only be based on changes in DBT adversarial profiles and/or changes in the NSRs | ~~OPG contends that any changes to equipment or qualifications should only be based on changes in DBT adversarial profiles and/or changes in the NSRs~~~~OPG contends that any changes to response force requirements should only be based on changes in DBT adversarial profiles and/or changes in the NSRs.~~Recommended Change:the roles~~,~~ and responsibilities, ~~equipment and training~~ required for the off-site response forces expected to make and/or support an effective on-site intervention | MAJOR | Equipment and training of off-site response forces is outside the control of licensees. Training, equipment and qualifications for police agencies is prescribed by the Federal or Provincial Acts or Regulations they operate under. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.2 | This section states: “*In the proposed amendments to the NSR, the CNSC proposed to revise the definition of “effective intervention” to allow for “…nuclear security measures, including detection, delay or response, or any combination thereof that are timely and powerful enough to prevent a sabotage event or the unauthorized removal of nuclear material or nuclear substances.”* | Recommended Change:“…nuclear security measures, including detection, delay or response, or any combination thereof that are timely and powerful enough to prevent a sabotage event or the unauthorized removal of nuclear material or nuclear substances against the Design Basis Threat (DBT)”. | MAJOR | The requirement to protect against sabotage must be linked to the DBT to prevent scenario creep where adversary attributes exceed the attributes attributed to the adversary profile documented in the DBT  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.2  | The definition of “Effective intervention” presented in this section is different from the one proposed in the draft NSRs. The proposed definition in the discussion paper is an improvement over the existing one in the current regulations, and in the draft NSR. Two comments:* The definition of effective intervention introduces the concept of prevention of theft of nuclear substances (vs nuclear material). This is a new aspect and an incremental requirement that is not present in the current and draft NSR.

The ultimate objective of the effective intervention remains unclear, particularly for sabotage events. DIS-21-02 stated “The current requirement to prevent sabotage (as defined in the current NSR) by way of an effective intervention (as defined in the current NSR) will be revised. The proposed revised requirement will be to prevent radiological consequences stemming from the sabotage of nuclear facilities”. The proposed definition in the draft NSR 2023 and in the new discussion paper does not refer to the performance objective related to radiological consequences. The objective of the effective intervention needs to be clear to allow proper implementation of security by design for new reactor facilities.  | Clarify objective of the effective intervention, in the proposed regulations and the supporting regulatory documents | MAJOR | It will be very challenging to implement security by design provisions without clarity on the definition of effective intervention. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.1.2 | Note, an on –site response force may not be necessary depending on how security by design is implemented at new facilities. The reference to the current NSR wording suggests this requirement may be maintained.  | Seeking recognition that an on-site response may not be deemed necessary, and the focus remain on outcomes rather than presence of personnel - security by design may preclude this need in the future | MAJOR | The requirement for an on-site response force for all HSS may pose an undue burden for lower risk facilities. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.2.1 | This section states: *“The CNSC intends to update the content of REGDOC-2.12.1, Volume II to align with the performance-based requirements set out in the proposed NSR.”* | Licensees suggest the revision to REGDOC 2.12.1 be placed on hold until the proposed revised NSRs are issued. The proposed NSR text is prescriptive rather than performance based in many areas. | MAJOR | This is required to ensure the REGDOCs do not create requirements not supported by the Regulations (proposed NSR 2023) |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.2.1 | This section states: “*In addition to the above, the CNSC intends to reinforce the current requirement that on-site security measures be actively managed in accordance with the preventative maintenance concepts established in REGDOC-2.6.2…”*The proposed NSR 2023 introduce the requirement for an extensive use of technology to mitigate/assess/respond to CEA’s/Vital Areas, etc. With the addition of these newly added technology systems, spread across the entire site, the impact on the preventable maintenance (PM) program will be significant; resulting in staffing increases which will be prohibitive to implement. | Amend the intention to reinforce the requirement for-site security measures to be actively managed in accordance with the PM concepts to allow for the incorporation of a performance-based and graded approaches.  | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.2.1 | This section states: “*In addition to the above, the CNSC intends to reinforce the current requirement that on-site security measures be actively managed in accordance with the preventative maintenance concepts established in REGDOC-2.6.2, Maintenance Programs for Nuclear Power Plants*.” | Seeking the following recommended change:In addition to the above, the CNSC intends to reinforce the current requirement that on-sitesecurity measures operated under station engineering control be actively managed in accordance with the preventative maintenance concepts established in REGDOC-2.6.2, Maintenance Programs for Nuclear Power Plant  | MAJOR | Equipment falling under the definition of security measures may include off the shelf devices or components that do not require the same program rigor. Not practical to apply REGDOC 2.6.2 to vendor-maintained equipment. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.2.2  | This section states: …* *Staffing of the CAS – introduces a new two-person rule…*
* *Considering cyber-attacks in threat and risk assessment for the CAS*

*…** *clarify how to adequately identify and protect vital areas at HSS…*
* *expanding the section on key controls to include other access control measures that are used at HSS…”*

The proposed NSR 2023 already detail significant enhancements to Vital Area requirements which are estimated to cost in the range of $250 million. The potential requirement to expand key control to include other access control measures would require a significant infrastructure investment, involving a networked solution (i.e.) fibre to communicate with Entry Control Systems from individual locations within the station. The number of these locations are significant at several facilities and would be in the millions of dollars to implement.Licensees will be responsible for outlining within their security program how they define the boundary of vital areas and how they intend to protect (i.e., security measures and tactical deployment plans) each vital area against threats identified in the DBT”.Furthermore, staffing of the CAS and how to meet the new two-person rule should allow the licensee to propose equally effective alternatives that would achieve the same objective. | Seeking removal of these new elements.Licensees have robust security clearance protocols as well as fitness for duty and Continuous Behaviour Observation Programs to mitigate potential Security Insider threats. The vital areas have already been identified by the licensee years ago and accepted by the CNSC. The licensees identify security threats through the TRA as well as the DBT and have deployment plans already in place and accepted by the CNSC.Licensees have the ability to staff up to 2 members in the CAS when required, on an as needed basis. The new "two-person rule" would suggest that this is a requirement (rule) and it is unknown what alternatives that achieve the same objective would be accepted by the CNSC. Licensees would like to know how the DBT has increased to warrant such drastic changes? | MAJOR | CNSC have proposed to be less prescriptive, and more performance based. Licensees feel these additional measures are unnecessary requirements to an already robust nuclear security program.Additional operators required in the CAS will require hiring additional resources and significantly increase operating costs. Resourcing should be based on the Licensees TRVA or through increased workload, responsibilities that require the additional resources. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.2.2 | It is challenging to "incorporate security principles early in the design phase" when the source material for requirements is confidential. | Please make every effort to de-classify this material as noted in Section 1 (Introduction). | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 - TableIntroduction paragraph | It is unclear from the table whether the CNSC intends to enforce the fingerprinting and financial inquiry which are required under Standard on Security Screening (SSS) for non-HSS facilities. The table states the screening is applicable to a “nuclear facility subject to the NSR”. | Seeking clarification to the Table to clearly indicate that SSS requirements for fingerprinting and credit checks do not apply to non-HSS sites.  | MAJOR | Fingerprinting and financial checks will have a major impact on some licensees in terms of cost and employee relations, without any corresponding safety benefit.This was not understood during the consultation rounds, and therefore, were not accounted for in the costing analysis.**These requirements would not withstand a privacy challenge** |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 - Table | As it relates to the 1st column – 2nd row of the table:* *Access provided*

CNSC indicates that the tiered model suggested on the Treasury Board Standard on Security Screening (SSS) follows those in the proposed NSR 2023.This is confusing as the standard and the proposed NSR 2023 do not align. | Seeking amendment to the proposed tiered model of security screening to allow the Licensee to determine the level of screening based on the area access and duties to be assigned to the individual being screened. | MAJOR | As written, this creates regulatory uncertainty related to CNSC expectations around implementation of the standard and revised REGDOC. There may be additional costs depending on which requirements from the SSS are required. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | This section states: *“The CNSC will include new guidance to expand on the tiered model suggested in the Standard on Security Screening (SSS) sections Site Access Status, Site Access Clearance and Enhanced Site Access Clearance (see table below).*  *Licensees will be responsible for assigning the appropriate level to their employees, workers, contractors, etc. and conducting the appropriate checks.”* | Align the REGDOC with the proposed NSR 2023.DIS 22-02 suggests that the proposed changes to the Site Access Security Screening is guidance however the changes in the proposed NSR 2023 suggest that it is mandatory.Per proposed NSR 2023: ***Enhanced security clearance required*** *(2) The licensee must not grant a person an authorization to enter a vital area unless the person has an enhanced security clearance.*  | MAJOR | The proposed NSR 2023 and the REGDOC are not aligned or consistent and create confusion and regulatory burden that does not materially improve Nuclear Security.  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | The driver behind the requirement for an enhanced screening to be obtained for general staff to access vital areas and the benefit of conducting this level of screening for staff is not well understood. Vital area clearance access is currently set at the SASC level and has remained effective in maintaining security since the current NSRs went into force. | Request removal of the enhanced clearance requirement for vital area access and align it with the current Protected Area access Site Access Security Clearance process. | MAJOR | This change would be an unreasonable burden on clearance staff to manage clearance levels for staff requiring routine access into vital areas. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | The driver behind the requirement for an enhanced screening to be obtained for ‘security personnel’ and the benefit of conducting this level of screening for staff is not well understood.  | Seeking to maintain the current requirement under NSR s. 18 (2) and (3). The additional CAS operators is also appropriate with this change as it would remain consistent with the requirements for NSOs. | MAJOR | The inclusion of ‘nuclear support personnel’ who do not have decision making authorities without several layers of oversight seems like an unnecessary requirement to maintain nuclear security. Additionally, including this requirement to anyone who accesses prescribed information may impact a licensee’s ability to provide security updates to senior leadership staff or others who may need to access said information to better understand those requirements, but who would not routinely have access that information. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | This section states: “*The CNSC will include new guidance to expand on the tiered model suggested in the Standard on Security Screening (SSS) sections Site Access Status, Site Access Clearance and Enhanced Site Access Clearance (see table below). Licensees will be responsible for assigning the appropriate level to their employees, workers, contractors, etc. and conducting the appropriate checks.”* | Seeking clarification on whether adherence to the model in the SSS be guidance or prescribed?The regulatory text in the proposed NSR 2023 define the levels of security clearance as they are described in the SSS, whereas the discussion paper appears to say the requirements in SSS is guidance | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | As it relates to the Table in this section under the following columns:*Screening Type**Access provided (enhanced)**Enhanced Site Access Clearance**Access to* ***vital areas or inner areas*** *and security personnel1* | Recommending the following change:Access to ~~vital areas or~~ inner areas andSecurity personnel1 | MAJOR | Requiring all employees who require access to vital areas to have an enhanced clearance will result in thousands of additional staff requiring enhanced clearance with significant impact on resources and cost not supported by the DBT. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | As it relates to the Table in this section under the following columns:*Screening Type**Validity period* | Seeking confirmation the validity period relates to all components of the clearance. | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | As it relates to the Table in this section under the following columns:*Screening Type**Law enforcement inquiry (criminal record check) or fingerprinting**Site Access Status/Site Access Security Clearance/Enhanced Site Access Clearance**Mandatory*Note: Fingerprinting is mandatory under SSS | Seeking clarification whether Is fingerprinting is mandatory and if so for what clearance type? | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | This section states: “*In addition to the above, the CNSC intends to incorporate and provide new guidance on the following elements of the SSS** *Using open-source information during security screening and after-care activities*
* *Conducting after-care activities as defined in Appendix F of the SSS…”*

For context, one Licensee clears approximately 4000 people/year, and has approximately 20 000 active clearances in the system at any given time. Once an individual leaves the employment of a Licensee, there is no certainty that the individual will return to work in the Nuclear Sector, so on what basis is aftercare required. | Seeking amendment to the proposed changes to remove any additional obligations on after-care. | MAJOR | Conducting after care activities on this volume of individuals is prohibitive and would introduce additional staffing and cost to the Licensees with minimal benefit to nuclear security. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | This section states: *“In addition to the above, the CNSC intends to incorporate and provide new guidance on the following elements of the SSS:** *using open-source information during security screening and aftercare activities”*
 | Seeking clarification the use of open-source information is optional during screening and aftercare. Licensees recommend the use of open-source information be optional and based on cause during screening and aftercare. | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.3.2 | This section states in footnote 1: ““*Security personnel” will include nuclear security officers, nuclear security support persons, central alarm station operators and their supervisors. This term also includes personnel who have access to prescribed information, who maintain and repair nuclear security systems or devices and who perform security clearance, intelligence, firearms maintenance or security training work.”* | Recommending the following change:Security Personnel *means the* nuclear security officers, nuclear security support persons and central alarmstation operators *of a nuclear facility and* their supervisors.~~This term also includes personnel who have access to prescribed information, who maintain and repair nuclear security systems or devices and who perform security clearance, intelligence, firearms maintenance or security training work.”~~ | MAJOR | The definition should be consistent with the definition in the proposed NSR 2023. Including persons who have access to prescribed information in the definition would require significant changes to the number of persons requiring enhanced clearance. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.1 | This section states: *“to note that applicants and licensees are required to notify the CNSC of final transportation**plans 48 hours before the shipment will be removed”* | Requesting clarification whether this applies to Category I and II shipments or if it also includes Category III shipment. | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.1 | This section states: “*The CNSC intends to update Part A of REGDOC 2.12.3:** *To clarify the aggregation concept – specifically regarding how to aggregate multiple and different radioactive sources for the purpose of identifying the appropriate security level and the assignment of security measures*

*…** *To note that application and licensees are required to notify the CNSC of final transportation plans 48hrs before the shipment will be removed*

The requirement to notify the CNSC 48hrs before the shipment is a new requirement, and is prescriptive in nature, rather than performance based. Any additional requirements are unnecessary and any requirement around transportation in Part A is confusing as all requirements regarding transportation are detailed in Part B of 2.12.3 rather than Part A. | Seeking amendment to the proposed REGDOC - remove the prescriptive nature of security controls required for Part A. | MAJOR | There is a significant cost associated with the aggregation concept with minimal benefit to nuclear security.This would include costs associated with securing the substance, alarming/monitoring/recording access controls etc. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.1 | This section states: *“The CNSC intends to update Part A of REGDOC-2.12.3:* *…** *To clarify security expectations and provide examples of good practices for sealed sources that are used and stored at HSS…”*
 | It is unclear what this may entail & what impacts will result from using HSS sites to benchmark security expectations at a Non-HSS site, for which Part A is directed. | MAJOR | Holding non-HSS sites to the same standard, from a security risk perspective, as HSS sites may increase cost and impacts operations that were not recognized or accounted for during the costing analysis exercise during consultation with CNSC. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.1 | This section states: *“The CNSC intends to update Part A of REGDOC-2.12.3:** *To clarify the aggregation concept– specifically regarding how to aggregate multiple and different radioactive sources for the purpose of identifying the appropriate security level and assignment of security measures…”*

Updates to existing requirements and guidance is an issue. | Seeking removal of this line from the REGDOC for High Security Sites (HSS).Further clarify if HSS will be credited for the multiple Security layers already in place as it pertains to the REGDOC-2.12.3, Security of Nuclear Substances: Sealed Sources and Category I, II and III Nuclear Material, Version 2.1? HSS already have multiple layers of Security, access control and detection in place for the protection of Nuclear Substances inside the Protected Area. | MAJOR | This requirement would create additional measures and costs that are not necessary and provide minimal benefit to nuclear security.  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.1 | It is noted that the CNSC intends to clarify the aggregation concept.  | Clarification as follows is requested: Does the aggregation apply to Cat II materials i.e. are there limits to the amount of nuclear material that ca be transported at time within a specified distance (i.e. convoy shipments) | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.1 | This section states: “*The CNSC intends to update Part B of REGDOC 2.12.3:**…** *to clarify the requirements for escorts and security arrangements to ensure that shipments are appropriately protected at all times and that an effective intervention can be provided to ensure the prevention of theft and sabotage during transport”*

This is a new regulatory requirement and it is prescriptive in nature. Licensees currently have no authority to act as a Public Agent when not on their sites.  | Seeking removal of the requirement for escorting and providing offsite security arrangements; Licensees cannot transfer these requirements to the offsite force of jurisdiction across Canada. | MAJOR | This requirement needs legislative changes which would be extremely cost prohibitive, requiring additional staffing/training/vehicles/travel.  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.1 | It is noted that the CNSC intends to update Part B of REGDOC-2.12.3 to “*clarify the requirements for escorts and security arrangements to ensure that shipments are appropriately protected at all times and that an effective intervention can be provided to ensure the prevention of theft and sabotage during transport”*This statement, as noted here is ambiguous.  | We are requesting once this documentation is updated that appropriate context and detailed requirements are provided. | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 | This section states: *“The CNSC intends to update Part A of REGDOC 2.12.3 with new guidance:** *regarding the use of security zones to protect sealed sources*
* *recommending the hardening of security measures deployed by the Licensee to ensure they remain effective …*

The suggestion around the use of security zones is extremely vague and troublesome. The implications of the proposed changes in the REGDOC 2.12.3 is worrisome as it is vague in what is intended. | Seeking amendment of the proposed REGDOC to remove the prescriptive nature of hardening of security measures associated with sealed sources. Continue with performance-based assessments. | MAJOR | Any implementation of security zones, and hardening of security measures adds cost, which due to the location of sealed sources across site, would be significant. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 | This section states: *“The CNSC intends to update Part B of REGDOC-2.12.3 with the following new guidance:* * *“how to conduct a TRA for a nuclear facility...”*
 | Seeking removal of this from the REGDOC. Licensees have been submitting TRAs annually for many years and the CNSC have accepted the TRAs. Licensees have members who are trained to conduct TRAs and they follow the HTRVA model. | MAJOR | If the new requirements differ from the current requirements licensees would have to re-train and re-certify staff. The benefits do not exceed the cost and licensees face unnecessary regulatory burden.  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 | The proposed requirement:* “*requiring licensees to use armed response forces and escorts for the transport of Category I and II nuclear material or to make appropriate arrangements with local police forces that have jurisdiction and/or other armed response capabilities in circumstances where armed response forces and escorts cannot be made available by licensees*”

references a capability that is not currently an option for licensees under Canadian law. Notedly, many licensees have conducted multiple nuclear material transportation activities over the previous 20 years safely and securely. | Suggesting removal of:“…*use armed response forces and escorts for the transport of Category I and II nuclear material”*. | MAJOR | Licensees currently are not legally entitled to carry and use firearms to protect material outside the confines of their licensed sites. In some instances, it may also not be achievable to contract Police or other resources to provide this capability. Implementing this new requirement without the supporting legislative changes may significantly impact licensees’ ability to operate. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 | We note that the CNSC is now including provisions * “*requiring licensees to use armed response forces and escorts for the transport of Cat I or Cat II nuclear material OR make appropriate arrangements with local police forces that have jurisdiction and/or other armed response capabilities in circumstances where armed response forces and escorts cannot be made available by the licensees*”
 | Explicit requirement for armed response seems like a new requirement for Cat II and not clearly outlined in the proposed NSR 2023. | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 | This section states: “*The CNSC intends to update Part B of REGDOC 2.12.3 with the following new guidance:**…** *How to conduct and evaluate security exercises for nuclear facilities subject to the NSR which will also include guidance for carriers and freight forwarders that transport Category I, II and III nuclear material…”*

The implications of the proposed changes in REGDOC 2.12.3 are worrisome as it is vague in what is intended. Any implementation of additional requirements for carriers and freight forwarders adds burden to the Licensees and third party shippers. | Seeking amendment of the proposed REGDOC to remove the prescriptive nature of conducting and evaluating security exercises including guidance for carriers and freight forwarders. | MAJOR | It is logistically difficult for Licensees to require carriers and freight forwarders to participate in drills and exercises due to the economic impacts these requirements would have on business owners/operators. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 | This section states: “*In addition to the above, the CNSC intends to include provisions:** *Requiring Licensees to use armed response forces and escorts for the transport of Category I, II nuclear material or to make appropriate arrangements with local police forces that have jurisdiction and/or other armed response capabilities in circumstances where armed response forces and escorts cannot be made available by Licensees…”*

This provision is prescriptive in nature, and not based on performance-based measures. What is the basis for this change? | Seeking amendment of the proposed REGDOC to remove the prescriptive nature of armed escorts by the Licensee or police forces of jurisdiction. | MAJOR | The requirement for armed response for Category II is not clearly outlined in the proposed NSR 2023. Including a provision for armed response capabilities with local police forces and/or other armed response capabilities will add significant cost and administrative burden. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 Part B | The requirements for security culture are already found in REGDOC-2.1.2 Safety Culture. No need for additional guidance.  | Seeking removal of additional guidance on safety and security interface and security culture in REGDOC 2.12.3.  | MAJOR | Causes confusion with already existing regulatory documents. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 Part B | Requiring transport security exercises for Category III material is not required by any other jurisdiction. The CNSC did not benchmark this with any other competent authority. This will be very impractical to implement and seems excessive. | Security exercise for carriers and freight forwarders should be limited to Category I and II material. | MAJOR | Very burdensome and appears not to be a requirement in any other jurisdiction for Category III material. This requirement will impact the transport of 30B cylinders in Canada and fuel for SMRs. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 | This section states: *“The CNSC intends to update Part A of REGDOC-2.12.3 with new guidance:* * *“Regarding the use of security zones to protect sealed sources…”*
 | Recommending careful consideration be made when drafting guidance on security zones. In some cases, there are physical, operational and safety constraints that make the implementation of some zoning separations impractical, if not impossible. | MAJOR | Drafting prescriptive security zoning into regulatory documents may create operational and business impact for some licensees. Additionally, any costs associated with physically implementing security zones barrier separations will not be reflective of the cost analysis exercise with CNSC. In some cases, these zones may create safety and security concerns to workers. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.4.2 | This section states: *“In addition to the above, the CNSC intends to include provisions:** *requiring Licensees to use armed response forces and escorts for the transport of Category I, II nuclear material or to make appropriate arrangements with local police forces that have jurisdiction and/or other armed response capabilities in circumstances where armed response forces and escorts cannot be made available by licensees”*
 | Please confirm that this requirement is applicable to nuclear material only and not nuclear substances. As noted in the proposed NSR 2023 submissions, there is ambiguity on this topic and clarity is required.  | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.5.1.1 & 2.5.2 | This sections states: *“The CNSC intends to include the following elements for HSS licensees:** *Cyber security information in the licensees’ TRA’s regarding all computer-based systems and components that uphold or impact nuclear safety, nuclear security, emergency preparedness and safeguards*

If it is a nuclear security based TRA, the Licensee agrees to focus on these CEA’s; including all CEA’s makes the list too vast. This provision is prescriptive in nature, and not performance-based.Completing a TRA and sustaining it against **all** computer-based systems that impact SSEPS will require resources over $1 million. For example, a Licensee recently completed a POC on four asset groups with a methodology that was ~$275,000. Clarity on the definition of sensitive information is required. Subsequently, a resource cost as well as a business impact may result. Depending on the clarification, changes to how groups operate may be required. It may require the implementation of new technologies such as Data Loss Prevention (DLP) and Identity Access Management (IAM) along with the already funded security enclave project. | Seeking amendments to the requirements for Cyber Security for HSS Licensees to be more focused on nuclear security. | MAJOR | The scope of the requirement extends beyond the scope of Nuclear Security, and the additional scope should not be captured in a nuclear security TRA. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.5.1.2 | This section states: *“The CNSC intends to include the following elements for research reactors and class IB nuclear facilities subject to the NSR:* * *cyber security information in the licensee’s TRAs regarding all computer-based systems and components that uphold or impact nuclear safety, nuclear security, emergency preparedness and safeguards…”*
 | Please confirm that REGDOCs will allow Licensees the option of having a standalone cyber TRA to allow for the protection of prescribed information. This will prevent Physical and IT teams from being presented with Prescribed Information (risks, vulnerabilities & countermeasures) that would normally not be shared between departments. | MAJOR | Potential oversharing of prescribed information regarding critical security safeguards between departments may introduce internal risk to certain Licensees that do not have a matrixed IT/Physical Security department. |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.5.1.2 | This section states: *“The CNSC intends to include the following elements for research reactors and class IB nuclear facilities subject to the NSR:* *…** *requirement to design, implement and maintain a cyber security program using a risk informed, graded approach*

Licensees are supportive of a risk-informed, graded approach. However, we are concerned for the potential of inconsistency among CNSC inspectors’ opinions of whether Licensees appropriately justify their risk informed, graded approach to security control implementation.  | It is recommended the proposed requirement will provide further detail on how the CNSC will evaluate a licensee’s approach and how they will be consistent over time and between inspectors. | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.5.1.3 | This section states: *“The CNSC intends to include the following elements for licensees and entities that transport category I, II or III nuclear material: …”* | Please confirm that this requirement is applicable to nuclear material only and not nuclear substances. As noted in the proposed NSR 2023 submissions, there is ambiguity on this topic and clarity is required.  | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.5.2 1st bullet | The first bullet defining the protection of sensitive information - this definition as currently written is too broad and unclear, which will cause subjective interpretations of what is / what is not considered to be sensitive information. The definition must be more specific to the information that needs to be protected and should align with the current prescribed information definition. It is not feasible to protect all “sensitive” information on site. Information, including sensitive information, is required daily for the proper and safe operation of a facility. | Seeking redefining of the protection of sensitive information to address "Prescribed Information". This allows for proper alignment with current safeguarding of information being implemented by Non-HSS licensees and recognized by CNSC as requiring protection measures.  | MAJOR | This may lead to over-classifying security documents and cause unintended interruption to operations/business, with no nuclear safety benefits.Protecting all sensitive information is an increase in the regulatory burden with no additional safety benefit |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.5.23rd bullet | Is the intent to include IT systems that house and / or touch, sensitive information as part of TRAs? If yes, this requirement should apply to only Prescribed Information. | Recommending the following change:*Based on these proposed requirements, the CNSC intends to expand the content of the REGDOC**2.12 Nuclear Security Series to state the following:** *…*
* *TRAs must include threats that could lead to unauthorized disclosure, modification,*

*destruction and/or denial of use of ~~sensitive~~ prescribed information ….* | MAJOR | If this applies to IT systems, CORP workstations and other assets that touch sensitive information (not just prescribed information), then this will have a huge impact on the IT Systems, resources and regulatory compliance efforts to report on regularly.  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.5.25th bullet | *“…Security measures should be implemented using a graded approach based on the classification of the information. …*” – Licensees are supportive of a risk-informed, graded approach. However, we are concerned for the potential for inconsistency among CNSC inspectors’ of whether Licensees appropriately justify their risk informed, graded approach in their implementation of security controls. | It is recommended the CNSC provide detail on how they will offer a consistent and objective approach towards regulatory enforcement/compliance with Licensees, under a system that supports a graded approach. | Clarification |  |
|  | CNL, CNA, NB Power, OPG, Nordion, Bruce Power, NWMO, Global First Power | 2.5.2 | Is there an expectation that moving forward “Enhanced Clearances” will be required for accessing sensitive information, or just Prescribed Information? Does this imply all personnel who have access to the above will require Level 2 Security Clearance? | Security Clearance requirements for individuals will be commensurate with the sensitivity level of the highest level of information required for their specific position. | Clarification |  |
|  | Nordion | 2.4.1 | This section states: “The CNSC intends to update Part A of REGDOC-2.12.3: … * To clarify security expectations and provide examples of good practices for sealed sources that are used and stored at HSS…”
 | It is unclear what this may entail & what impacts will result from using HSS sites to benchmark security expectations at a Non-HSS site, for which Part A is directed | MAJOR | Holding non-HSS sites to the same standard, from a security risk perspective, as HSS sites may increase cost and impacts operations that were not recognized or accounted for during the costing analysis exercise during consultation with CNSC. |
|  | Nordion | 2.4.2 | This section states: “The CNSC intends to update Part A of REGDOC-2.12.3 with new guidance: * “Regarding the use of security zones to protect sealed sources…”
 | Recommending careful consideration be made when drafting guidance on security zones. In some cases, there are physical, operational and safety constraints that make the implementation of some zoning separations impractical, if not impossible. | MAJOR | Drafting prescriptive security zoning into regulatory documents may create operational and business impact for some licensees. Additionally, any costs associated with implementing changing security zones barrier separations will not be reflective of the cost analysis exercise with CNSC. In some cases, these zones may create safety and security concerns to workers. |
|  | Nordion | 2.4.2 | This section states: “In addition to the above, the CNSC intends to include provisions: * requiring Licensees to use armed response forces and escorts for the transport of Category I, II nuclear material or to make appropriate arrangements with local police forces that have jurisdiction and/or other armed response capabilities in circumstances where armed response forces and escorts cannot be made available by licensees”
 | Please confirm that this requirement is applicable to nuclear material only and not nuclear substances. As noted in the proposed NSR 2023 submissions, there is ambiguity on this topic and clarity is required. | Clarification |  |
|  | Nordion | 2.5.1.2 | This section states: “The CNSC intends to include the following elements for research reactors and class IB nuclear facilities subject to the NSR: * cyber security information in the licensee’s TRAs regarding all computer-based systems and components that uphold or impact nuclear safety, nuclear security, emergency preparedness and safeguards…”
 | Please confirm that REGDOCs will allow Licensees the option of having a standalone cyber TRA to allow for the protection of prescribed information. This will prevent Physical and IT teams from being presented with Prescribed Information (risks, vulnerabilities & countermeasures) that would normally not be shared between departments. | MAJOR | Potential oversharing of prescribed information regarding critical security safeguards between departments may introduce internal risk to certain Licensees that do not have a matrixed IT/Physical Security department |
|  | Nordion | 2.5.1.2 | This section states: “The CNSC intends to include the following elements for research reactors and class IB nuclear facilities subject to the NSR: …* requirement to design, implement and maintain a cyber security program using a risk informed, graded approach Licensees are supportive of a risk-informed, graded approach. However, we are concerned for the potential of inconsistency among CNSC inspectors’ opinions of whether Licensees appropriately justify their risk informed, graded approach to security control implementation.
 | It is recommended the proposed requirement will provide further detail on how the CNSC will evaluate a licensee’s approach and how they will be consistent over time and between inspectors. | Clarification |  |
|  | Nordion | 2.5.1.3 | This section states: “The CNSC intends to include the following elements for licensees and entities that transport category I, II or III nuclear material: …” | Please confirm that this requirement is applicable to nuclear material only and not nuclear substances. As noted in the proposed NSR 2023 submissions, there is ambiguity on this topic and clarity is required. | Clarification |  |
|  | Nordion | 2.5.2 1st bullet | The first bullet defining the protection of sensitive information - this definition as currently written is broad and unclear, which may cause subjective interpretations of what is / what is not considered to be sensitive information. | Seeking redefining of the protection of sensitive information to address "Prescribed Information". This allows for proper alignment with current safeguarding of information being implemented by Non-HSS licensees and recognized by CNSC as requiring protection measures. | MAJOR | This may lead to over-classifying security documents and cause unintended interruption to operations/business, with no nuclear safety benefits. Protecting all sensitive information is an increase in the regulatory burden with no additional safety benefit |
|  | Nordion | 2.5.2 5th bullet | “…Security measures should be implemented using a graded approach based on the classification of the information. …” – Licensees are supportive of a risk-informed, graded approach. However, we are concerned for the potential for inconsistency among CNSC inspectors’ of whether Licensees appropriately justify their risk informed, graded approach in their implementation of security controls | It is recommended that the CNSC provide detail on how the CNSC will offer a consistent and objective towards regulatory enforcement/compliance with licensees, under a system that supports a graded approach. | Clarification |  |
|  | Cameco | Introduction | The cyber security component would have a large cost impact and could duplicate or conflict with the proposed federal Critical Cyber Systems Protection Act, which will prescribe a cyber security program for designated operators and under which the Canadian Nuclear Safety Commission (CNSC) would be granted broad powers to oversee cyber security practices. We believe that this part of the Discussion Paper should recognize other federal developments in cyber security and reduce overlap and duplication as much as possible. |  |  |  |
|  | Cameco | 1.1 Scope | This section states changes to the REGDOC 2.12 Nuclear Security Series (the REGDOCs) will complement proposed amendments t the NSR 2023. We believe revision to the REGDOCs should not move forward until the proposed revisions to the NSR 2023 are finalized so that the REGDOCs are not only complementary to the legislative requirements but also do not create requirements that are not supported by the NSR 2023. |  |  |  |
|  | Cameco | 2.3.2  | Introduction of new elements and Proposed Tiered Model to be Inserted into REGDOC-2.12.2 Version 2This section provides that new guidance will expand in the Tiered model suggested in the Treasury Board’s Standard on Security Screening (SSS). The proposed tiered model of security screening should be clarified to allow the licensee to determine the level of screening based on area access and duties assigned. The table states that the screening is applicable to a “nuclear facility subject to the NSR”. Cameco is concerned this will be broadly applied to include non-high security sites and the language should be adjusted to apply only to high security sites (HSS). Further, the administrative burden and significant cost that would be required to collect, use and disclosure financial information and to conduct fingerprinting, will have no corresponding safety benefit. As well, these requirements would not be justified if they were challenged under existing federal privacy legislation.This section also states that open-source information should be used during screening and additional obligations will be imposed on aftercare obligations on every security screened individual introduces additional costs with no additional benefits to nuclear security. Cameco believes that open-source information for screening should be optional and aftercare activities, such as formal, planned security briefings or continued open-source checks should be left to the discretion of the individual licensee based on the level of screening, area access and duties of the individual being screened.Finally, it is unclear on whether the validity periods in the table in this section relate to all components of the clearance or just the verification of background information. We believe that all screening requirements should be captured within the validity periods.  |  |  |  |
|  | Cameco | 2.4.1 | Updates to existing requirements and guidanceProposed revisions to the REGDOCs would require licensee to notify to notify CNSC of final transportation plans, 48 hours in advance of a shipment. This is an example of a new requirement that is prescriptive in nature rather than performance based. Further if implemented, this requirement should be limited to Category I and II material and exclude Category III material, which as written, is not clearly articulated.The proposal to clarify security expectations and provide examples of good practices for sealed sources that are used and stored at HSS also concerns Cameco because HSS security expectations as a benchmark at non-HSS will impact operations and increase costs that were not considered in the costing analysis during consultation with the CNSC.This section also states the CNSC intends to “clarify the aggregation concept – specifically regarding how to aggregate multiple and different radioactive sources for the purpose of identifying the appropriate security level and the assignment of security measures”. There is a significant cost associated with the aggregation concept, including securing the substance, alarming, monitoring, and recording access controls, etc., with minimal benefit to nuclear security. It is Cameco’s view that this is another example of prescriptive security controls, rather than a performance-based approach to controlling hazards that is more appropriate and should be utilized here. |  |  |  |
|  | Cameco | 2.4.2 | Introduction of new elementsThe introduction security zones to protect sealed sources and hardening security measures is vague and adds additional costs, which can be significant due to the location of sealed sources across sites. In some cases, there are physical, operational and safety constraints that make the implementation of zoning separations unachievable. Drafting prescriptive security zoning into regulatory documents will create unintended operational and business impacts.The proposed revisions further state the CNSC intends to include provisions requiring armed response forces and escorts for Category I and II nuclear material. As noted in the proposed NSR 2023 submissions, there needs to be clarification that these provisions will only apply to nuclear material and not nuclear substances. With respect to adding measures to promote and support security culture, Cameco considers the compliance with REGDOC 2.12, Safety Culture, to meet the requirements for security culture. Adding additional guidance in this document suite creates confusion with existing regulatory documents.The CNSC intention to include guidance on how to conduct and evaluate security exercises, including guidance for carriers and freight forwarders that transport Category I, II and III nuclear material is both prescriptive and would be logistically and economically challenging to require carriers or freight forwarders to participate in drills and exercises. Further, requiring transport security exercises for Category III material is not required by any other jurisdiction and will impact the transport of 30B cylinders in Canada and fuel transport for SMRs. |  |  |  |
|  | Cameco | 2.5.1.2 | Cyber security for non-HSS licensed activities subject to the NSRThis section states the CNSC will require cyber security information in the Threat and Risk Assessment (TRA). It is not clear that the REGDOCs will permit a stand alone cyber TRA to allow for protection of prescribed information. Combining a TRA with Physical and IT teams creates the risk of oversharing prescribed information between departments regarding critical security safeguards.Cameco is supportive of the risk informed, graded approach proposed for the requirement to design, implement, and maintain a cyber security program. However, we are concerned there is potential for inconsistency among CNSC inspectors’ evaluations of a licensee’s approach to security control implementation and suggest details on how a consistent and objective approach towards regulatory enforcement and compliance will support a graded approach. |  |  |  |
|  | Cameco | 2.5.1.3 | Cyber security for entities that transport or arrange the transport of Category I, II, or III nuclear materialThis section states the CNSC intends to include elements for licensee transporting nuclear material. Similar to our comment above with regard to armed response forces an escorts, and as noted in submissions made previously on NSR 2023, it is unclear whether this will include nuclear substances, which we believe it should not apply to. |  |  |  |
|  | Cameco | 2.5.2 | Protection of sensitive informationThe definition of sensitive information is too broad and unclear. This definition should be revised to protect “prescribed” information. Further, the proposed expansion to require TRAs to consider threats to sensitive information should be restricted to “prescribed” information. This aligns with current safeguarding of information at non-HSS sites. Protecting *all* sensitive information increases the regulatory burden and will have a significant impact on resources and regulatory compliance if it applies to IT systems, with no additional safety benefit.Finally, the proposal to add additional content that specifically ensures people with access to sensitive information have the appropriate site access status, site access clearance or enhanced security clearance creates concern that these requirements will force all personnel with access to sensitive information to ultimately obtain enhanced clearance, rather than clearance that is commensurate with the information specific to their position. In sum, we are concerned about timing, increased prescriptiveness and a lack of a risk graded approach for non-HSS facilities specifically but throughout the document generally. While we support a rigorous approach to the regulatory oversight to this aspect of the nuclear industry, we think that both the benefits and costs must be better understood and reflected in what is provided as guidance in any proposed revisions to the relevant REGDOCs. |  |  |  |
|  | Mamdooh Abdelbaky, PhD, P. Eng. | Overall Impact | Canada has been a member state of the IAEA since inception. We incorporate IAEA safeguards and non-proliferation standards into our own regulations and policies. It is important for the Canadian Nuclear Safety Commission (CNSC) to revise its regulatory documents to align with the International Atomic Energy Agency (IAEA) on nuclear security and cyber security. This helps ensure the safety and security of nuclear facilities and materials in Canada and aligns the country with international standards and best practices in the industry. To this end, the IAEA has developed relevant Technical Guidance and Implementation Guides on Nuclear Security in its Nuclear Security series. Among these IAEA guidance, I highly recommend the review and implementation of the following in the proposed update of the CNSC series, DIS-22-02s: 1. National Nuclear Security Threat Assessment, Design Basis Threats and Representative Threat Statements,, No. 10G, Rev. 1 2, Self-assessment of Nuclear Security Culture in Facilities and Activities. No. 28T 3, Computer Security Techniques for Nuclear Facilities, No.17T, Rev. 1 4. Model Academic Curriculum in Nuclear Security, No. 12T, Rev. 1 5. Radiological Crime Scene Management, No. 22G 6. Nuclear Forensics in Support of Investigations, No. 2G, Rev.1 By aligning with IAEA guidelines, the CNSC can ensure that the regulatory framework for nuclear facilities in Canada is robust and effective in addressing the evolving security threats to the nuclear industry. |  |  |  |
|  | Charles Rhodes, P.Eng. | Overall Impact | FNR POWER SODIUM COOLED FAST NEUTRON REACTORThe FNR Power Fast Neutron Reactor (FNR) is a low pressure 200 MWe to 300 MWe naturally circulated sodium cooled reactor. It is described in detail in numerous files which may be accessed at [www.xylenepower.com](http://www.xylenepower.com/) > Nuclear Power. From a fuel perspective this FNR consists of an assembly of vertical fuel bundles.The fuel bundles are preasembled, transported to the reactor site, installed, used, cooled, removed and transported back to a fuel reprocessing facility. The fuel has a sufficiently large concentration of Pu-240 that it is of no interest for military purposes. Both new and used fuel bundles have gamma outputs that are sufficiently large that no one is going to try to steal naked fuel bundles. The fuel bundle transport containers weigh in excess of 60 tonnes.At the reactor the fuel is in an environment of argon at 460 degrees C. When the reactor is operating the sodium pool contains Na-24 which has a half life of about 15 hours. Normally extraction and replacement of fuel bundles requires a prior reactor shutdown of about a week to allow the Na-24 to decay and to allow the Na pool to cool from 460 degrees C to about 120 degrees C. In short, while the reactor is operating autonomously there is no practical way to steal a fuel bundle,Likewise, when the fuel bundles are in transit the only practical way to steal a fuel bundle is to highjack the transit vehicle. Then an isotopic analysis will reveal that the fissile Pu has too high a Pu-240 fraction for military use.The fuel bundles are changed once every five to six years. The reactor shutdown period for fuel bundle changes is anticipated to be about one month. It is only during a reactor shutdown period that a phyical assult on the reactor facility might be a viable proposition. Hence the security regulations should focus primarily on the shutdown period. At other times it is a remote supervisory alarm exercise.This FNR contains proprietary technology to prevent a military or like attack tripping a reactor blowup comparable to the blowup at Chernobyl in 1984.A number of relatively small future design changes are contemplated.eg The fuel tube wall thickness will likely go from 0.035 inch to 0.049 inch. |  |  |  |
|  | Jacques PlourdePresident & Nuclear Engineering ConsultantJ.A. Plourde Performance Ltd | Section 2 | Based on my experience on the CSA-N291 (Cyber Security team) and with facility surveys of Cyber Security provisions, I strongly recommend that the topics of (1) Cyber Security and (2) Protection of Sensitive Information be addressed in separate sections of REGDOC 2.12. Although some overlap does exist between the two (especially in IT), we have found it less confusing and most effective to deal with the cyber part separately from the document protection part. |  |  |  |
|  | Association québécoise des physiciens médicaux cliniques (AQPMC) | Overall Impact | Nous sommes favorables à l’ensemble des ajouts et clarifications proposées qui touchent directement nos sphères de pratique et nous sommes généralement en accord avec les justifications qui les sous-tendent. Par contre, nous nous jugeons incapables, à ce stade-ci, d’apporter des commentaires plus précis puisque nous n’avons pas accès aux formulations finales des textes qui seront introduits pour chacune de ces modifications. Nous sommes favorables à l’ensemble des ajouts et clarifications proposées qui touchent directement nos sphères de pratique et nous sommes généralement en accord avec les justifications qui les sous-tendent. Par contre, nous nous jugeons incapables, à ce stade-ci, d’apporter des commentaires plus précis puisque nous n’avons pas accès aux formulations finales des textes qui seront introduits pour chacune de ces modifications. Nous nous attendons donc à ce que la CCSN entreprenne un autre processus de consultation au moment de proposer les versions révisées des documents d’application de la réglementation (RegDoc). Ainsi, à titre d’exemple, nous sommes favorables à la clarification du concept de regroupement suggéré à la section 2.4.1, mais nous serions défavorables à une formulation finale de ce concept qui se traduirait par un resserrement des mesures de sécurité exigées dans le contexte de nos installations de curiethérapie à haut débit de dose (HDR).Nous suggérons de clarifier les sections 2.5.1.4 et 2.5.1.5 puisque nous avons de la difficulté à bien comprendre à quel contexte ces changements s’adressent. Est-il approprié d’assumer que l'expression "substances nucléaires de catégories 1 et 2" réfère aux sources scellées de catégorie 1 et 2?Enfin, nous espérons que ces quelques commentaires constructifs vous permettront de mieux vous orienter au moment d’entreprendre la rédaction finale des versions révisées de ces documents d’application de la réglementation.  |  |  |  |