**Stakeholder Workshop Report: Follow-up on Canada Gazette, Part I Industry Comments on the Proposed *Nuclear Security Regulations 2023***

## Preamble

The Canadian Nuclear Safety Commission (CNSC) uses workshops to better understand the potential impacts of regulatory proposals and the impacts and effects of the proposed regulatory requirements on stakeholders. These workshops provide the opportunity for stakeholders to have open conversations with the CNSC. Feedback from stakeholders at such workshops are taken into consideration when determining potential revisions to proposed policies and/or regulatory requirements.

## Introduction

Modernizing the Nuclear Security Regulatory Framework is a project that the CNSC is undertaking to repeal the *Nuclear Security Regulations* (NSR) and replace them with the *Nuclear Security Regulations 2023* (NSR 2023). The CNSC proposes to take a performance-based[[1]](#footnote-1) approach to regulating nuclear security where appropriate. The approach provides applicants and licensees greater adaptability and flexibility in the measures and approaches they can use to meet regulatory requirements. In addition, the proposed regulations would ensure the continued security of nuclear facilities in the modern threat and risk environment, and implement international recommendations, guidance, and best practices for nuclear security. Early engagement on the proposed regulations was performed through discussion papers and workshops as detailed in [*Stakeholder Workshop Report: Periodic Review of the Nuclear Security Regulations*](https://nuclearsafety.gc.ca/eng/acts-and-regulations/consultation/history-regs/stakeholder-workhop-report-periodic.cfm#appA) and in [*What We Heard Report: DIS-21-02 and DIS-21-03*](http://nuclearsafety.gc.ca/eng/acts-and-regulations/consultation/history/wwhr-modernizing-nuclear-security-regulatory-framework.cfm).

The regulatory documents (REGDOC-2.12 series) will be revised concurrently with the regulations to clarify requirements and provide guidance on how the requirements of the proposed NSR 2023 can be met. Early consultation on the revised REGDOCs was performed via CNSC discussion paper [DIS-22-02, *Proposals to Amend the REGDOC-2.12 Nuclear Security Series*.](http://nuclearsafety.gc.ca/eng/acts-and-regulations/consultation/DIS-22-02.cfm)

## Canada Gazette, Part I Consultation

The proposed NSR 2023 were pre-published in the [*Canada Gazette,* Part I](https://gazette.gc.ca/rp-pr/p1/2022/2022-11-12/html/reg1-eng.html) (CG I) for a 60-day consultation (Nov. 12, 2022 – Jan. 11, 2023). CNSC received over 150 unique comments from industry stakeholders and members of the public during this consultation period, especially for certain proposed requirements of specific interest and concern. Following the closure of the CG I consultation, CNSC reviewed the comments from industry, and determined several themes of specific concern for these stakeholders. To clarify and gain a better understanding on industry concerns, CNSC planned for workshops on the main themes of industry comments from the CG I consultation.

All comments received on the proposed regulations were posted on the [CG I website](https://gazette.gc.ca/rp-pr/p1/2022/2022-11-12/html/reg1-eng.html), as per the requirements for federal regulators. A summary of the main themes of stakeholder comments and of how the CNSC addressed those themes will be included in the Regulatory Impact Analysis Statement (RIAS) in the future *Canada Gazette,* Part II publication of these regulations. All comments received during the CG I consultation will be reviewed and considered during the refinements to the proposed regulations.

## Workshops

After reviewing the CG I comments, CNSC staff identified several main themes of stakeholder interest and concerns that would require additional discussions[[2]](#footnote-2). From March 22-24, 2023, CNSC staff held hybrid workshops at the CNSC office[[3]](#footnote-3) in Ottawa with affected licensees, reactor vendors and transport organizations. These consultation sessions included a brief presentation on the status of the regulatory proposal, the regulatory development process, the main goals/objectives of the workshops and the proposed path forward afterwards. Following the presentations, industry representatives were invited to speak on their questions and concerns for each theme, and a dialog with CNSC staff on those themes occurred to ensure industry stakeholders and CNSC had an improved understanding of the proposed impacts and the rationale for each theme/proposed requirement. This dialog allowed industry stakeholders to get a better understanding of the proposed changes to security requirements and clarify expectations.

## Discussions

The following sections outline the discussions on the themes at the workshops, including clarification and additional information on areas of concern, as well as the potential path forward on each theme. Several themes were common to both High Security Site (HSS) and non-HSS stakeholders, and other themes were only of relevance to either non-HSS or HSS stakeholders.

## Common themes (Non-HSS and HSS)

### Cybersecurity and the Protection of Sensitive Information (Sections 16 and 17)

Participants expressed certain concerns over the specific items listed in 16(2)(a)-(e), as they may not be applicable or practical to consider for all facilities[[4]](#footnote-4). Participants stated their support to relocate paragraphs 16(2)(a)-(e)[[5]](#footnote-5) to the REGDOCs, where these points could be expanded on and provide additional guidance on cybersecurity provisions where appropriate. Participants also stated there was potential for overlap or duplication with these provisions and the provisions of the proposed [Bill C-26, *Critical Cyber Systems Protection Act*](https://www.parl.ca/legisinfo/en/bill/44-1/c-26)*.*

The main point of concern for participants was related to the proposed definition of sensitive information, as stating this definition was unclear and overly broad and could include a large amount and variety of information. Participants also expressed concern regarding the potential for differences in opinion on exactly what information would be subject to this new definition. Participants discussed several suggestions, including keeping the existing definition of prescribed information,[[6]](#footnote-6) or by revising the proposal such that sensitive information would be identified in the licensee’s TRA.

Participants were informed that the definition of sensitive information in the proposed regulations was based on the International Atomic Energy Agency (IAEA) definition,[[7]](#footnote-7) and would be needed to ensure the protection of all information important to nuclear security[[8]](#footnote-8), including but not limited to prescribed information. Participants discussed that the regulations were intended to provide high-level performance-based requirements that would be applied using a risk-informed approach[[9]](#footnote-9), with REGDOCs and existing standards providing additional clarification and guidance to comply with the regulations. Further, participants stated that the TRA, once accepted, would become the basis for the facility security program, and CNSC compliance verification activities (for cybersecurity and for the protection of sensitive information) would be performed with respect to that program.[[10]](#footnote-10)

The proposed requirements in the NSR 2023 will be reviewed based on the comments and discussions with workshop participants. Further, the content of the revised REGDOCs will be reviewed to ensure that they contain the appropriate guidance to comply with the proposed provisions. Preliminary guidance on potential sensitive information classification frameworks was provided in CNSC discussion paper [DIS-21-03, *Cyber Security and the Protection of Digital Information*](http://nuclearsafety.gc.ca/eng/acts-and-regulations/consultation/history/cyber-security-and-the-protection-of-digital-information-dis-21-03.cfm).

### Storage of Nuclear Substances (Section 22)

Participants expressed several concerns over this proposed requirement, stating it was too prescriptive and would have significant cost and operational impacts. In addition, the clause regarding equipment in section 22(2) would not be practical to detect certain substances using equipment and suggested that administrative or process controls could be used. Participants asked for additional clarity on the two-factor authorization requirements, and noted they were currently complying with the Customs Trade Partnership Against Terrorism (CTPAT).[[11]](#footnote-11)

Participants further expressed that the protected area barriers and other security measures should be credited for the security of stored nuclear substances, as HSS stakeholders have significantly more security measures in place than non-HSS stakeholders, and the proposed requirement should be more flexible to allow for the proposal of alterative approaches and be applied using a risk-informed approach. Participants discussed proposed alternate outcome-based requirements for this item, which will be reviewed and considered following the workshop.

The objective of this proposed requirement was to apply a standard approach to the security of nuclear substances at all relevant facilities. The information provided by stakeholders will be reviewed to determine if further revisions to this proposed requirement are needed, as well as to determine the appropriate guidance for the revised REGDOC.

### Security Exercises and Transport Security Exercises (Sections 15, 47-49, 116)

Participants noted the proposed timeframes for security exercises were prescriptive and recommended allowing more flexibility to align with licensee’s existing programs. It was confirmed that these drills and exercises could involve physical security, cybersecurity, or both. Regarding transport security exercises, stakeholders detailed that transport licences are generally issued for short time frames such that the licence may expire before the 5-year threshold for transport security exercises are reached.

The proposed requirements for security exercises will be reviewed to confirm they are suitable for the intended objective and will also include additional guidance for exercises (physical, cyber, and blended) in the revised REGDOCs.

### Transport Security for Nuclear Materials (Part III – New Proposal)

In response to comments made by members of the public related to clarifying and strengthening provisions for the transport of Category I, II and III nuclear material, the CNSC is proposing to incorporate-by-reference section 6 on transport security recommendations in the IAEA [*Convention on the Physical Protection of Nuclear Materials*](https://www.iaea.org/publications/documents/conventions/convention-physical-protection-nuclear-material-and-its-amendment#:~:text=The%20CPPNM%20establishes%20legal%20obligations,theft%2C%20robbery%20or%20any%20other) (CPPNM) into the proposed NSR 2023. Further the CNSC would propose to use incorporation-by-reference in the security REGOCs as well, to incorporate IAEA [NSS No. 13, *Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities*](https://www.iaea.org/publications/8629/nuclear-security-recommendations-on-physical-protection-of-nuclear-material-and-nuclear-facilities-infcirc225revision-5), which would provide guidance on meeting the requirements of the CPPNM.

Most non-HSS facilities do not have Category I, II or III nuclear material and as such would not be impacted by this proposed provision. HSS stakeholders stated this proposed requirement could require additional staffing or training but did not have estimates at this time. HSS stakeholders also noted there could be jurisdictional issues with armed escorts of nuclear material, and that in certain countries it was the responsibly of the military to provide such escorts. Overall HSS stakeholders added they had developed good relationships with police forces, who may be able to provide the escorts for this proposed requirement.

Overall, participants appreciate further discussions on this item as the CNSC continues to refine the proposal for this new requirement.

### Transitional Provisions/Coming into Force (Section 123)

Participants expressed concerns with the proposed coming into force timelines for the proposed regulations (1-year for HSS and 2-years for non-HSS), stating at an implementation of 5-10 years would be needed. Participants detailed the proposed NSR 2023 would impose significant costs on existing facilities, and would disrupt other existing/planned projects, including projects important to safety. Participants also recognized that the coming into force timelines could be staggered for certain provisions, allowing additional time for licensees to come into compliance with the more impactful provisions in the proposed regulations. The proposed coming into force timelines will be reviewed and discussed to ensure the proposed regulations can be implemented in a reasonable time frame.

## Non-HSS themes

### Application of the NSR 2023 (Section 2)

Participants expressed concern over the lack of clarity in the application of the NSR, as it was unclear which facilities/sites would be subject to the proposed regulations. The use of terms nuclear materials and nuclear substances used throughout the proposed regulation also caused confusion over which requirements would apply to certain facilities.

Further, participants enquired about the source of certain definitions and for the facilities subject to the proposed regulations, as well whether the cybersecurity and physical security plans could be separate plans/documents. It was confirmed this information originated from the [*Nuclear Safety and Control Act*](https://laws-lois.justice.gc.ca/eng/acts/n-28.3/index.html) (NSCA), and that the cyber and physical security plans could be separate. Some stakeholders suggested aligning the information for nuclear substances with the Environment and Climate Change Canada [*Physical Activities Regulations*](https://laws.justice.gc.ca/eng/regulations/SOR-2019-285/FullText.html).

Overall, the wording and types of facilities in this section should be clarified and will reviewed to ensure the application of the regulations is clear in the final regulations.

### Security Interfaces (Section 9)

Participants voiced some concern over potential duplication of requirements in this section, as well as if the nuclear material accountancy (safeguards) requirements would apply to all facilities and asked if this requirement would also be covered by their existing management systems.

It was confirmed that the use of an integrated management system would address this requirement and added that the objective here was to ensure there were no conflict between safety, security, and safeguards practices at nuclear facilities. Clarification was provided that nuclear material accountancy only applies to facilities with Category I, II or III nuclear material, but not to facilities with other nuclear substances, and that the revised REGDOCs will include guidance on establishing interfaces for safety, security, and safeguards.

### Compensatory Measures (Sections 10 and 11)

Participants stated concerns over the prescriptiveness of the proposed requirements, as well as the practicality of them, as in some cases there are lead times for certain replacement components or services. Participants recommended applying these requirements on a risk-informed approach, where compensatory measures would be in place in the event of the failure of a critical device, and an immediate replacement and reporting would occur if no compensatory measures were in place. The proposed requirements will be reviewed to ensure it is applied using a risk-informed approach and that it is achievable for all facilities.

### Site Access Status/Screening and access to non-HSS sites (Sections 23 and 28)

Participants expressed their concern over the incorporate-by-reference of the Treasury Board of Canada Secretariat (TBS) [*Standard on Security Screening*](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjNmr7R2cr-AhXvmmoFHXl9DCQQFnoECA4QAQ&url=https%3A%2F%2Fwww.tbs-sct.canada.ca%2Fpol%2Fdoc-eng.aspx%3Fid%3D28115&usg=AOvVaw03Rgak-fimKLwW69n_mAF1), as the new requirements for credit checks would not be actionable. It was confirmed that the reference to the [*Standard on Security Screening*](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjNmr7R2cr-AhXvmmoFHXl9DCQQFnoECA4QAQ&url=https%3A%2F%2Fwww.tbs-sct.canada.ca%2Fpol%2Fdoc-eng.aspx%3Fid%3D28115&usg=AOvVaw03Rgak-fimKLwW69n_mAF1) would be removed from this requirement for non-HSS to avoid confusion with government security clearance requirements.

Participants also stated their concerns for the proposed requirement for 2 pieces of ID for visitors (such as for delivery drivers), as it was a challenging requirement, detailing that visitor have one piece of photo ID and are always under escort by staff with appropriate clearances. Thus, participants recommended revising the requirement to include one piece of ID along in combination with other security processes. This proposed requirement will be reviewed to provide more flexibility in the access control processes for non-HSS.

### Signs and Searches for Nuclear Material and Nuclear Substances (Sections 32-34)

Participants expressed their concern over the proposed requirements to have signage for Category I, II and III nuclear facilities, at facilities that do not have such materials, and it was clarified that the wording would be adjusted to make this distinction between nuclear material and more substances clearer. Participants asked for clarity on the scope of the proposed requirement, such as which nuclear substances it would apply to, and which personnel would need to be searched, as searching all staff would have significant operational impacts. It was also suggested the proposed requirement be limited to only facilities with Category I, II or III nuclear material, or that this provision may already be covered by section 29[[12]](#footnote-12) of the proposed regulations (with additional requirements for facilities with nuclear material).

Participants were informed that this proposed requirement was intended to ensure that nuclear substances are not removed from facilities without authorization. The proposed requirement will be reviewed to ensure the scope and the requirements are clear and will include the appropriate guidance in the revised security REGDOCs.

## HSS themes

### Vital Area Identification (Section 73)

Participants expressed significant concerns regarding the definition and interpretation of the vital area,[[13]](#footnote-13) as they do not have a means to know what dose or release limits would constitute an unreasonable risk. Participants suggested using limits for unacceptable radiological consequences (URC) to be consistent with IAEA recommendations and practices.[[14]](#footnote-14) Participants further stated that existing mitigation measures should be credited for vital area protections, and licensees should be able to propose their measures to meet the security objectives based on their TRAs.

Participants also voiced specific concern with respect to proposed new facilities such as SMRs in that there would need to be a performance-based risk-informed approach with clear objectives/outcomes and which would accommodate mitigation measures such as security-by-design.

Participants discussed the proposal to use the dose acceptance criteria for safety objectives stated in [CNSC REGDOC-2.5.2, *Design of Reactor Facilities*](http://nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/history/regdoc2-5-2.cfm) as potential guidance for vital area identification. Stakeholders were supportive of using the existing document for such guidance, as this would also harmonize safety and security criteria. Participants acknowledged this is an item of significant concern. To that end, the proposal to utilize the dose acceptance criteria from REGDOC-2.5.2 will be further reviewed, and additional guidance on vital area identification and security-by-design considerations will be developed for the revised REGDOCs.

### Vital Area Security Measures (Section 75)

Participants expressed significant concerns with these proposed physical protection requirements, stating they were too prescriptive and would have significant cost and operational impacts on their facilities. Participants stated that existing security measures were sufficient and did not see new threats or risks that would require new security measures and noted that different facilities would have different risk profiles and would require different security measures. Thus, there is a need for applicants and licensees to propose their methods to ensure the continued security of vital areas. Participants also echoed their concerns regarding SMRs discussed in the previous theme.

All participants acknowledged the significant challenges and concerns posed by these proposed requirements. Participants were informed that the intent was to align with international obligations in the CPPNM/NSS13 and international good practices, as well as to ensure consistency in the security measures implemented at all relevant facilities. However, all participants acknowledged the need to provide more outcome-based requirements and for more flexibility for this item, and alternative proposals were submitted and discussed following the workshop. The proposed requirements will be reviewed to ensure they are applied using a performance-based risk-informed approach and will include additional guidance on vital area security measures in the revised REGDOCs.

### Physical Barriers for the Protected Area (Section 67)

Participants expressed their concern this proposed requirement for two barriers[[15]](#footnote-15) was too prescriptive and would require significant investment and work at certain facilities that currently utilize one barrier alongside other means, as per the requirements of existing NSR. In addition, this proposed requirement would impact and complicate potential expansions to existing facilities. CNSC staff informed stakeholders the objective was to include physical barriers as a means to delay unauthorized entry into the protected area. Clarification was provided to participants that a barrier is not necessarily a fence, and different combinations of potential barriers could satisfy this requirement. It was also clarified that the intent behind the proposed paragraph 67(2)(a)[[16]](#footnote-16) was to require two different security measures, an amendment to the requirement of two independent systems in the existing NSR. Participants also expressed concerns over the cost and operational impacts of the proposed changes to the security measures.

Participants recommended revising these requirements to be performance-based. This would provide for applicants and licensees to make the assessment on the number of barriers and security measures, based of factors such as delay times and response times. The information and comments from participants will be reviewed to determine whether further revisions are needed to this proposed requirement. Further. the proposed REGDOC guidance will be reviewed to ensure in contains the requisite guidance for protected area security measures and delay time calculations.

### Uninterruptable Power Supply (Section 66)

Participants their concerns that the proposed requirement to have an uninterruptable power supply (UPS) for all security measures would be too broad, and that not all security measures are currently on the UPS as per the requirements in the existing NSR. Participants provided examples where certain facility lighting was on a backup generator, and that if systems such as vehicle barriers lost power there would not be an impact to safety.

Participants were informed that this requirement applies to critical security measures and not all security measures at the facility. This proposed requirement will be reviewed considering the additional information provided participants to determine whether revisions to this proposed requirement are needed.

### Vehicle Portals (Definitions and Section 90)

Participants voiced their concerns over the proposed amendment to the definition of “vehicle portals”, as this would entail significant construction work to reconfigure the vehicle portals and barriers, which were implemented based on the existing requirements.

Participants were informed that the intent of the requirements is for licensees to demonstrate their means to secure vehicle portals at the site and would review the proposed change in the definition to determine if further revisions would be needed.

Refer to “Physical Barriers for the Protected Area (Section 67)” for additional discussion on physical barriers for the protected area.

### Authorizations and Clearances for the Vital Area (Sections 52, 53, 83 and 84)

Participants voiced concern regarding the potential requirement for staff to have Top Secret Clearance to enter the vital area, given the number of staff with vital area access, and were informed that the reference to the top secret clearance [*Standard on Security Screening*](https://www.tbs-sct.canada.ca/pol/doc-eng.aspx?id=28115) would be removed, as the intent of the requirement was not to require top secret clearance but to allow licensee to recognize government top-secret clearance as an equivalent. Participants received clarification that the only proposed change to vital area access in the enhanced clearance was the credit check, which is aligned with the [*Standard on Security Screening*](https://www.tbs-sct.canada.ca/pol/doc-eng.aspx?id=28115)and industry good practices Participants were informed s that conducting a credit check as part of a security assessment helps determine an individual's reliability, particularly as it relates to their security roles and responsibilities, as financial obligations or pressures could pose a security risk and should be part of the overall assessment. Participants heard that this would be low-cost, although some administrative costs would be incurred due to programmatic changes.

Participants stated there would still be the need for large numbers of staff to enter the vital areas in certain emergency situations, and voiced concerns over potential privacy issues or labour issues due to new credit checks. Further, participants stated that credit checks may have a limited value for secret-level clearances and may not provide the necessary information to assess insider threats.

The proposed regulations will be reviewed to ensure clarity on the proposed new screening requirements, and additional clarification and guidance on site access status and clearance would be included in the revised REGDOCs. Preliminary guidance on those items was posted in CNSC discussion paper [DIS-22-02, *Proposals to Amend the REGDOC-2.12 Nuclear Security Series*.](http://nuclearsafety.gc.ca/eng/acts-and-regulations/consultation/DIS-22-02.cfm)

### Authorizations for Nuclear Security Support Persons (Section 61)

Participants raised several concerns regarding the proposed requirements related to nuclear security support persons (NSSPs), such as the broad definition for the position, that this term could apply to a large variety of licensee staff, and there were numerous physical, psychological, and medical requirements that may be unnecessary. It was confirmed that the aforementioned physical, psychological and medical requirements would be removed from this provision.

Participants enquired how this proposed requirement would apply to staff from a parent country that may be visiting from a different country, and whether cybersecurity personnel would be included. Participants were informed that cybersecurity staff may be included, and it would be the responsibility of the licensees to identify/determine which people/job tasks should be included. Participants suggested to remove certain job descriptions such as construction support personnel and asked how this proposed requirement would apply to staff from vendors. Participants were informed that this proposal would apply only to staff at the facility.

The scope of the proposed requirements will be reviewed to ensure the scope is practical and fit-for-purpose, and that additional clarification and guidance on the scope of NSSP positions/authorisations would be included in the revised REGDOCs. Specific review and consideration will be given to determine whether construction support positions should be excluded from this requirement.

### Inner Area Security Measures and Escorts (Sections 72 and 81)

Participants expressed their concern that this was a very prescriptive increase in the existing escorting requirements. Specifically, the proposed requirement for a nuclear security officer (NSO) to always act as one of the escorts would have operational impacts with the need to permanently staff additional NSOs, as participants did not see the security benefit due to the existing security measures/screenings.

Participants were informed the intent of the proposed requirement was to ensure communications and response in the event of an insider event or medical emergency for workers in the inner area. Participants indicated that they were currently following the guidance on the “two-person rule”[[17]](#footnote-17) detailed in IAEA [NSS No. 13, *Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities*](https://www.iaea.org/publications/8629/nuclear-security-recommendations-on-physical-protection-of-nuclear-material-and-nuclear-facilities-infcirc225revision-5) regarding escorts into the inner area, to ensure protection from insider threats in the event of medical emergencies. Participants suggested a potential revision to ensure that one of the two escorts is equipped with a communication device in case such event(s) occurred. Participants further suggested that the proposed requirement for an “access control system” be revised to an “access control process”, to allow for alternative processes to be implemented for access control.

The comments and suggestions from participants will be reviewed to determine whether further revisions would be necessary for these proposed requirements.

### Central Alarm Station and Secondary Alarm Station (Sections 50 and 51)

Two main items of concern were identified regarding this theme; the proposed requirement for the two-person rule in the central alarm station (CAS), and the proposed requirement for a secondary alarm station (SAS) located in a separate location as the CAS.

Two-Person Rule:

Participants expressed their concern on the proposed implementation of the two-person rule for the CAS due to the increased staffing needs and did not see the security benefit in this proposed new requirement. Participants were informed the intent was to prevent/mitigate insider tampering of the CAS and to reduce the overall insider threat to nuclear facilities. Participants also heard this proposed requirement was a suggestion from the IAEA International Physical Protection Advisory Service (IPPAS)[[18]](#footnote-18) mission, as discussed in the [mission report](http://www.nuclearsafety.gc.ca/eng/pdfs/IPPAS/Canadas-IPPAS-Mission-Report-2015-eng.pdf). Participants in general understood the need for insider threat mitigation at nuclear facilities and stated there are existing processes in place to prevent CAS tampering and to mitigate the effects of insider threats/events. The proposed requirements would be reviewed to provide for more flexibility in the processes used in mitigating insider threats.

Secondary Alarm Station:

Participants stated the construction of a separate SAS was not practical at certain facilities, due to space considerations or decommissioning plans. Participants also stated specific concerns with respect to the impacts and burden on potential new SMR facilities, as this proposed requirement would not represent a risk-informed approach.

Participants were informed the intent of the proposed requirement was to provide redundancy for the alarm stations, as well as improve the continuity of operations and avoid a single point of failure (reduced vulnerability) in the event of an emergency or security event. Participants noted there is the existing requirement in subsection 15(3)[[19]](#footnote-19) of the current NSR to have a back-up for CAS functions.

Participants provided the suggestions to allow for other security/emergency processes that could provide the effective intervention in the event the CAS was lost. This proposed requirement will be reviewed to ensure it would provide for some flexibility in means to accomplish the security objective.

## Additional discussions

There were additional discussions regarding topics such as reviews/updates to TRAs, performance testing, limited access areas, unobstructed areas, and other topics. All discussions will be considered when reviewing the proposed regulations and REGDOCs.

## Main Areas of Concern

Overall, the main items of interest and concern in the proposed regulations were:

* Several of the proposed requirements were still too prescriptive
* The establishment of a threshold for Unacceptable Radiological Consequence as a basis for the performance-based requirements
* The application of the proposed regulations and the CNSC’s nuclear security regulatory framework to SMRs using a risk-informed performance-based approach
* Proposed requirements related to security of nuclear substances, protected area barriers, vital area security measures and secondary alarm stations were seen as most burdensome
* Guidance for the proposed regulations to be included in the revised nuclear security REGDOCs

The above points will be considered with respect to CNSC’s commitments in the [*SMR Roadmap*](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwi5pPCr-db-AhWvmmoFHYWcBTYQFnoECAsQAQ&url=https%3A%2F%2Fsmrroadmap.ca%2F&usg=AOvVaw3_R5hfNS7B5oqocptxs6HG)and the [*SMR Action Plan*](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjquMOw-db-AhWZk2oFHYjPAEoQFnoECAYQAQ&url=https%3A%2F%2Fsmractionplan.ca%2F&usg=AOvVaw0-Sy2BAMkV59dk_AS5OfZ1) during the CNSC’s review of potential policy refinements to the proposed regulations to ensure they are effective, practical, and fit-for-purpose for all nuclear facilities subject to these regulations.

## Conclusion and Next Steps

The CNSC will review all comments, discussions, and points of clarification from the workshops, and determine whether revisions to the regulatory policy or proposed requirements are to be made. In addition, CNSC will ensure that the revised security REGDOCs will include the necessary clarification and guidance to support the proposed NSR 2023. Further follow-up discussions on the proposed regulations will occur at a later date as needed., Once completed, the draft REGDOCs will be posted for consultation as per the CNSC’s usual process, and additional workshops on the REGDOCs would be held if necessary.

## Appendix A: Workshop Participants (Industry)

Table 1: Non-HSS Workshop Participants (March 22, 2023)

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| --- | --- |
| **Organization** | **Number of Participants** |
| Canadian Nuclear Association | 2 |
| CANDU Owner’s Group | 2 |
| Bruce Power | 3 |
| Ontario Power Generation | 5 |
| New Brunswick Power | 1 |
| Canadian Nuclear Laboratories | 1 |
| Cameco | 4 |
| Nordion | 4 |
| SRBT | 2 |
| Global First Power | 1 |
| BWXT | 1 |
| BWXT Medical | 1 |
| Royal Military College | 1 |
| RSB | 1 |
| TAM | 2 |
| Sotera Health | 1 |

Table 2: HSS Workshop Participants (March 23-24, 2023)

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| **Organization** | **Number of Participants** |
| Canadian Nuclear Association | 2 |
| CANDU Owner’s Group | 2 |
| Bruce Power | 9 |
| Ontario Power Generation | 12 |
| New Brunswick Power | 4 |
| Canadian Nuclear Laboratories | 4 |
| Hydro Quebec | 1 |
| NWMO | 1 |
| KINECTRICS | 1 |
| Global First Power | 1 |
| SaskPower | 2 |

## Appendix B: Workshop Agendas

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| NSR 2023 CG I Comments Hybrid Workshop- Non-HSS Facilities |

# Agenda Items

|  |  |  |
| --- | --- | --- |
|  | Time | Subject |
|  | March 22, 2023  0900 - 0930 | Introductions |
|  | 0930 – 1000 | Application of the NSR |
|  | 1000 – 1015 | Health Break |
|  | 1015 – 1045 | Security Interfaces |
|  | 1045 – 1120 | Storage of Nuclear Substances |
|  | 1120 – 1150 | Site Access/Screening |
|  | 1150 – 1230 | Lunch |
|  | 1230 - 1300 | Access to non-HSS |
|  | 1300 - 1330 | Signs/Searches for Nuclear Substances/Nuclear Materials |
|  | 1330 – 1445 | Cybersecurity and Information Protection |
|  | 1445 – 1500 | Health Break |
|  | 1500 – 1530 | Transportation Security for Nuclear Materials |
|  | 1530 – 1550 | Transitional Provisions and Coming into Force |
|  | 1550 – 1600 | Wrap-Up and Next Steps |

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| NSR 2023 CG I Comments Hybrid Workshop- HSS Facilities |

# Agenda Items

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| --- | --- | --- |
|  | Time | **Subject** |
|  | March 23, 2023  0900 - 0930 | Introductions |
|  | 0930 – 1000 | Vital Areas (Themes 1, 5, 6, 8, Industry Theme 3)   * Vital Areas Identification (Theme 5) * Nuclear Security Measures for the Vital Area (Theme 6) * Authorizations for the Vital Areas (Theme 8) * Inner Area Nuclear Security Measures (Industry Theme 3) * Storage and Security of Nuclear Substances at HSS (Theme 1) |
|  | 1000 – 1015 | Health Break |
|  | 1015 – 1200 | Vital Areas Continued |
|  | 1200 - 1300 | Lunch |
|  | 1300 - 1400 | Physical Barriers for the Protected Area (Theme 4) and the Portals for Vehicles at HSS (Theme 9) |
|  | 1400 – 1410 | Health Break |
|  | 1410 - 1440 | Uninterrupted Power Supply (Theme 3) |
|  | 1440 – 1540 | Considerations for the Central Alarm Station (CAS) and Secondary Alarm Station (SAS) (Theme 2) |
|  | 1540 - 1600 | Wrap Up |

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|  | Time | **Subject** |
|  | March 24, 2023  0900 – 0915 | Welcome |
|  | 0915 – 1015 | Cybersecurity and Information Protection (Theme 10) |
|  | 1015 – 1030 | Health Break |
|  | 1030 – 1100 | Authorization Nuclear Security Support Person (Industry Theme 2) |
|  | 1100 – 1130 | Clearance Site Access Clearance and Enhanced Security Clearance (Industry Theme 1) |
|  | 1130 – 1150 | Authorization with Escort (Theme 7) |
|  | 1150 – 1220 | Transport Security for Nuclear Materials (Theme 11) |
|  | 1220 - 1240 | Transitional Provisions (Theme 12) |
|  | 1240 - 1300 | Wrap-up and Next Steps |

1. Performance-based, also known as outcome-based, regulations, specify objectives or required outcomes rather than the means by which they must be achieved. ([*Policy on Regulatory Development*](https://www.canada.ca/en/government/system/laws/developing-improving-federal-regulations/requirements-developing-managing-reviewing-regulations/guidelines-tools/policy-regulatory-development.html)) [↑](#footnote-ref-1)
2. Cost-benefit considerations were not discussed at this workshop. CNSC will engage in further discussions with stakeholders on their costs/benefit concerns at a later date. [↑](#footnote-ref-2)
3. 280 Slater Street, Ottawa, Ontario, Canada, K1P 5S9, [Canadian Nuclear Safety Commission](http://nuclearsafety.gc.ca/) [↑](#footnote-ref-3)
4. HSS stakeholders currently comply with the CSA standard [N290.7, *Cyber Security For Nuclear Power Plants And Small Reactor Facilities*](http://nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/csa-standards.cfm). [↑](#footnote-ref-4)
5. **(2)** A licensee must protect the computer systems and electronic components of the nuclear facility against cybersecurity threats that are identified in the threat and risk assessment if those systems or components being compromised could adversely affect

   **(a)** nuclear safety;

   **(b)** nuclear security;

   **(c)** emergency preparedness and response;

   **(d)** *safeguards*, as defined in section 1 of the *General Nuclear Safety and Control Regulations*, and nuclear material accountancy activities; or

   **(e)** systems that support the functions referred to in paragraphs (a) to (d). [↑](#footnote-ref-5)
6. Defined under subsection 21(1) of the [*General Nuclear Safety and Control Regulations*](https://laws-lois.justice.gc.ca/eng/regulations/SOR-2000-202/page-2.html#h-656599) (SOR/2000-202) [↑](#footnote-ref-6)
7. [IAEA Nuclear Safety and Security Glossary](https://www.iaea.org/resources/publications/iaea-nuclear-safety-and-security-glossary) [↑](#footnote-ref-7)
8. Information such as licensee staff personal information or financial information was not subject to this requirement [↑](#footnote-ref-8)
9. For more information on the CNSC’s risk-informed to regulation refer to CNSC [REGDOC-3.5.3, *Regulatory Fundamentals*](http://www.nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/history/regdoc3-5-3.cfm) [↑](#footnote-ref-9)
10. Information on CNSC compliance activities in found in CNSC [REGDOC-3.5.3, *Regulatory Fundamentals*](http://nuclearsafety.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc3-5-3-v3/index.cfm#sec4-3) [↑](#footnote-ref-10)
11. [CTPAT: Customs Trade Partnership Against Terrorism](https://www.cbp.gov/border-security/ports-entry/cargo-security/CTPAT) [↑](#footnote-ref-11)
12. A licensee must ensure that nuclear substances are not removed from a nuclear facility at which it carries on licensed activities except in accordance with a licence. ([*Nuclear Security Regulations 2023*](https://canadagazette.gc.ca/rp-pr/p1/2022/2022-11-12/html/reg1-eng.html)) [↑](#footnote-ref-12)
13. means an area inside a protected area and containing equipment, systems, structures, components, or nuclear substances whose sabotage could pose an unreasonable risk to the environment, or to the health or safety of persons, arising from exposure to radiation. ([*Nuclear Security Regulations 2023*](https://canadagazette.gc.ca/rp-pr/p1/2022/2022-11-12/html/reg1-eng.html)) [↑](#footnote-ref-13)
14. IAEA [NSS-16, *Identification of Vital Areas at Nuclear Facilities*](https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1505_web.pdf) [↑](#footnote-ref-14)
15. 67 (1) A protected area must be enclosed by at least two physical barriers, including one interior barrier at the perimeter of the protected area and one exterior barrier that encloses the interior barrier ([*Nuclear Security Regulations 2023*](https://gazette.gc.ca/rp-pr/p1/2022/2022-11-12/html/reg1-eng.html)) [↑](#footnote-ref-15)
16. (2) The perimeter of the protected area must

    (a) be equipped with two or more different nuclear security measures that… barrier ([*Nuclear Security Regulations 2023*](https://gazette.gc.ca/rp-pr/p1/2022/2022-11-12/html/reg1-eng.html)) [↑](#footnote-ref-16)
17. A procedure that requires at least two authorized and knowledgeable persons to be present to verify that activities involving nuclear material and nuclear facilities are authorized in order to detect access or actions that are unauthorized ([*IAEA NSS-13*](https://www.iaea.org/publications/8629/nuclear-security-recommendations-on-physical-protection-of-nuclear-material-and-nuclear-facilities-infcirc225revision-5)) [↑](#footnote-ref-17)
18. [International Physical Protection Advisory Service (IPPAS)](https://www.iaea.org/services/review-missions/international-physical-protection-advisory-service-ippas) [↑](#footnote-ref-18)
19. 15 (3) A licensee shall monitor the alarm devices referred to in subparagraphs (1)(c)(iii), 11(a)(iii) and 14(a)(iii) using a primary alarm monitoring system and a backup system. The backup system shall maintain the operation of the alarm monitoring function, including key computer systems, in the event of a failure of equipment essential to the functioning of the primary system ([*Nuclear Security Regulations*](https://laws.justice.gc.ca/eng/regulations/sor-2000-209/FullText.html)). [↑](#footnote-ref-19)