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NK21-CORR-00531-12127  
NK29-CORR-00531-12538  
NK37-CORR-00531-02417

Mr. B. Torrie  
Director General, Regulatory Policy Directorate  
Canadian Nuclear Safety Commission  
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Dear Mr. Torrie:

Bruce Power Comments on  
Discussion Paper DIS-14-02: *Modernizing the CNSC's Regulations*

The purpose of this letter is to provide the CNSC with Bruce Power's feedback on the Discussion Paper - DIS-14-02: *Modernizing the CNSC's Regulations*. The regulatory modernization initiative, which began in late 2014, represents the first comprehensive review of the regulations since they were established in 2000. As such, it provides the opportunity to build alignment, improve consistency, and reduce the regulatory burden that may have accumulated over the past decade.

While the Bruce Power review considers all thirteen of the CNSC's regulations, the focus is on those pertaining to Bruce Power's current licences: two Class IA Power Reactor Operating Licences (PROL), a Class II Nuclear Facility and Prescribed Equipment Licence, and Waste Nuclear Substance and Nuclear Substances and Radiation Devices licences. The conclusion of the review is that the regulations would benefit from the following general improvements. A number of more specific recommendations for each of the respective regulations are also identified in Attachment A.

Please note that this is not a complete listing of recommended improvements. Bruce Power has requested clarification in a number of areas where there are questions around the interpretation and application of the regulations, which require further discussion.

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1. *Could the CNSC's regulations be changed to make them more efficient and effective in ensuring protection of the health, safety, security and the environment? How?*

In Bruce Power's opinion, the *Nuclear Safety and Control Act* (NSCA) and supporting regulations are sufficiently protective of human health, safety, security and the environment, as evidenced by Bruce Power's strong performance record. However, there are opportunities to improve the efficiency and effectiveness of the regulations in a number of areas. As a minimum, the regulations would benefit from improved consistency. This would enable the integration and potential consolidation of multiple licences at a single site. Given the rigour of a Class IA licence application, these licensees should not be required to demonstrate the capacity to hold a Class II licence. Further, there should be a means to consolidate all of a site's licences under a single licence, if a licensee chooses.

2. *Is the CNSC striking the right balance between performance-based regulation and prescriptive requirements? Are there specific regulatory requirements that do not seem to have the correct approach?*

Bruce Power is supportive of a performance-based approach that allows licensees to demonstrate how they meet health, safety, security, and environmental objectives. That said, there are instances where the performance-based objectives are unclear, making it difficult to comply with them. There are also instances where the regulations are overly prescriptive, in a manner that does not benefit health, safety, security, or the environment. To ensure that clarity is provided where it is needed, requirements and objectives should be clearly distinguished. Where a specific requirement is necessary, regulations should be developed or amended, and where objectives are appropriate, guidance should be provided in the form of a Regulatory Document (REGDOC) or CSA standard. Also, where there is uncertainty regarding whether a regulation, REGDOC, or other standard is required, a Discussion Paper should be issued to determine the correct path.

3. *Are you aware of opportunities for the CNSC to reduce administrative burden, without compromising safety?*

Given the serious nature the work at Bruce Power, the need to file applications and reports, and to keep records is not considered a burden. That said, there is such a thing as undue burden and there are a number of areas where the CNSC could reduce administrative burden without compromising safety. A key consideration in minimizing administrative burden is the avoidance of duplication. Where requirements already exist in other jurisdictions, equivalency and authorizing regulations should be pursued, as opposed to new regulatory requirements. Care should also be taken to avoid overlap and duplication in the guidance that is provided in REGDOCs, CSA and other standards.

Bruce Power would also like indicate support for documenting the Regulatory Framework through the use of REGDOCs. However, the intent of REGDOCs is to document how to comply with the regulatory requirements rather than to introduce new requirements. Bruce Power has noticed the introduction of a number of new requirements, which create administrative burden without any apparent benefit to the safe operation of the facility.



4. *Is the CNSC making effective use of existing standards? Are there additional opportunities for the CNSC to reference standards in its regulations?*

The CNSC makes some use of existing CSA, IAEA and other standards in the establishment of requirements and guidance. Bruce Power encourages the CNSC to continue the current practice of referencing CSA standards throughout the Licence Condition Handbook, rather than integrating the standards into the licence or regulations. Integrating the standards into the regulations would complicate the practice of systematically updating and continuously improving the referenced standards. It would also make it more difficult to implement the latest versions of the standards and potentially delay the intended improvements.

5. *Is the relationship between CNSC regulations and the obligations set forth in licences clear and straightforward? Would it be clearer to prescribe some standard licence conditions in regulations rather than in licences? If so, which ones?*

Bruce Power sees many opportunities to provide greater clarity in the PROL and in the Licence Conditions Handbook. In recent years, a shift in focus from the requirements in the regulations to the "Performance Objectives", which were established for each of the Safety and Control Areas, has been noticed. This was apparent in how CNSC staff reviewed Bruce Power's recent licence applications. They directed greater attention to the licensee-produced report that described Bruce Power's performance in each of the Safety and Control Areas than to the applications that detailed how the requirements of the NSCA and supporting regulations are met. Because the licence is structured based on the Safety and Control Areas, there are a number of redundant licence conditions that could be removed to improve clarity.

With respect to the licence obligations that are outlined in the regulations, a number of regulations continue to be out of step with the operating regime of a nuclear power plant. A prime example - the *Nuclear Security Regulations* - are out of step with the expected operating security regime of a nuclear power plant despite the considerable time that has passed since the events of 2001. Nuclear operators responded quickly to the increased security requirements, but a number of the required authorities and the limits of those authorities remain unclear despite repeated requests for clarification. To ensure that these gaps are properly addressed, this work should be given a high priority. A workshop should be set up at the earliest possible opportunity to discuss the required changes.



6. *Are there opportunities where the CNSC can provide greater assistance to applicants and licensees understand what they must do to comply with the CNSC's regulatory requirements?*

While Bruce Power appreciates the guidance that REGDOCs provide, it is apparent that they increasingly go beyond the provision of guidance to the establishment of regulatory requirements, and that those requirements are not always consistent with the regulations. There are instances where the REGDOCs go beyond what is required in the regulations, but also where those REGDOCs do not require the same information that is required in the regulations. Bruce Power recommends that regulatory requirements be eliminated from REGDOCs and that they be addressed strictly through regulation. Bruce Power also recommends that the REGDOCs maintain their intended focus on what licensees should do to comply with the regulatory requirements outlined in the regulations.

Bruce Power also believes that the CNSC does not do enough benchmarking across the Canadian industry in developing the Regulatory Documents. This is apparent in the number and nature of the comments that are received on draft REGDOCs. The CNSC has occasionally used workshops to gain a broader industry perspective, which Bruce Power believes is beneficial. In fact, Bruce Power believes that there would be benefit to the more frequent use of workshops, to ensure that all stakeholders have equal opportunity for input and at an early stage in a REGDOCs development.

Finally, Bruce Power encourage the CNSC to review the feedback on the Regulations and REGDOCs that have been provided in the past, particularly concerning the proposed amendments to the *Nuclear Safety and Control Act*<sup>1</sup>, the *Radiation Protection Regulations*<sup>2</sup> and the *Packaging and Transport of Nuclear Substances Regulations*<sup>3</sup>.

If you require further information or have any questions regarding this submission, please contact Mr. Maury Burton, Manager, Nuclear Regulatory Affairs, at 519 361-5291.

Yours truly,

Frank Saunders  
Vice President Nuclear Oversight and Regulatory Affairs  
Bruce Power

cc: CNSC Bruce Site Office  
K. Lafrenière CNSC – Ottawa  
B. Howden CNSC – Ottawa

Attach.



References:

1. Letter, F. Saunders to B. Torrie, "Bruce Power Comments on DIS-13-02: Proposed Amendments to Regulations Made Under the *Nuclear Safety and Control Act*", March 20, 2014, NK21-CORR-00531-11207 / NK29-CORR-00531-11610.
2. Letter, F. Saunders to M. Dallaire, "Bruce Power Comments on Discussion Paper DIS-13-01, Proposals to Amend the *Radiation Protection Regulations*", December 4, 2013, NK21-CORR-00531-10965 / NK29-CORR-00531-11351 / NK37-CORR-00531-02163.
3. E-mail, M. Burton to B. Torrie, "Bruce Power Comments on the Proposed Packaging and Transport of Nuclear Substances Regulations, 2014", September 11, 2014, NK21-CORR-11602 / NK29-CORR-00531-11985 / NK37-CORR-00531-02294.

## **Attachment A**

### **Breakdown of Recommendations by Regulations**

**Attachment A**  
**Breakdown of Recommendations by Regulations**

Bruce Power's recommendations include, but are not limited to the following.

**1. *Nuclear Safety and Control Act***

Environmental protection has always been central to the CNSC's mandate under the *Nuclear Safety and Control Act*. There has, however, been considerable growth in that mandate as a result of the federal Responsible Resource Development initiative. The CNSC has been designated the Best-Placed Regulator under the *Canadian Environmental Assessment Act (CEAA)*. They have also assumed additional responsibilities under the *Fisheries Act*, *Species at Risk Act* and *Canadian Environmental Protection Act* through Memoranda of Understanding with Fisheries and Oceans Canada and Environment Canada.

We support the consolidation of these responsibilities, but believe that care must be taken to ensure the regulatory processes that were previously undertaken by other agencies are adopted rather than duplicated. The MOUs do not relieve the other agencies of their responsibilities under the Acts and Regulations that they are responsible for overseeing. As a consequence, the licensee must satisfy multiple regulatory agencies in areas that were previously addressed by a single agency, placing an additional administrative burden on the licensee.

In the CNSC staff CMD that was recently submitted in support of our licence renewal we were introduced to a new format of Environmental Assessment (EA) reporting. It appeared to be consistent with the draft methodology outlined in REGDOC 2.9.1, which has yet to be approved for use by the CNSC Commission Tribunal. In other licence renewal CMDs we noted that staff had simply concluded that "In accordance with CEAA, 2012 and its regulations, CNSC staff has determined that no environmental assessment is required for this licence renewal to occur." We believe that this latter approach is more in keeping with the outcome of the Statutory Review of CEAA. We recommend that CNSC staff work to ensure a consistent approach and avoid introducing new processes, with no regulatory basis, through CMD's.

It is important not only that the CNSC maintain consistency with existing processes, but also with existing interpretations of the legislation that they now have a mandate to implement. The *Fisheries Act*, despite being over one hundred years old, has had numerous challenges to its interpretation; particularly regarding what constitutes an impact to fish. Court cases such as *Ward v. Canada* have attempted to shed some light on the interpretation of the legislation. These cases assert that according to legislative history, the intent of the Act is to manage fisheries by eliminating large-scale killing, rather than to criminalize their killing.

We noticed in the staff CMD that the CNSC and DFO have determined that the “individual-level” fish losses, and the number and type of fish affected, constitute “serious harm” and that Bruce Power “will require an authorization under section 35”. The document went on to explain that there is a different threshold for effects on fish populations under the *Fisheries Act* and CEAA, where impacts are assessed at the population level, and that the *Fisheries Act* has a lower threshold for effects. We see the interpretation of these two pieces of legislation by the CNSC and DFO as a source of confusion and a potentially duplicative authorization process where the CNSC pre-approve submissions to DFO.

The environment is an area where regulatory requirements are understandably prescriptive. It is also an area where there is a high potential for overlap and duplication. Environment Canada has yet to develop authorizing regulations with limits for discharges from many of Canada’s industrial facilities. Class 1A licensees are, however, subject to provincial discharge limits such as the Ontario Municipal Industrial Strategy for Abatement (MISA) *Effluent Monitoring and Effluent Limits Regulations*. As such, there is no need to establish additional prescriptive limits. In fact, there are new regulations under the *Fisheries Act* that allow the Minister to issue an authorizing regulation where discharges are already subject to adequate federal or provincial guidelines.

With respect to the CNSC’s MOU with Environment Canada, this is an area where the CNSC could take a more active role in reducing overlap and duplication, and the administrative burden that that can cause. While the development of the requirement for pollution prevention (P2) planning for Hydrazine involved industry and CNSC staff, and efforts were made to ensure consistency with existing monitoring and reporting requirements, it caused industry to question why such an obviously duplicative process is required at all. We believe that the CNSC could be of greater assistance in communicating the need, or the absence of the need to establish additional requirements, given their knowledge of nuclear facilities and the regulatory requirements that they are already subject to.

## **2. General Nuclear Safety and Control Regulations**

Licensees are required to demonstrate how they meet the requirements of the regulations every time their licence is renewed, but they are also required to demonstrate compliance on an ongoing basis throughout the licence period. The *General Nuclear Safety and Control Regulations* (GNSCR) should therefore be revised to streamline the licence renewal requirements for licensed facilities.

Improved consistency between the GNSCR and the *Nuclear Substances and Radiation Devices Regulations* (NSRDR) would improve the licence application process for facilities with multiple licences. A number of Class I nuclear facilities are also in possession of nuclear substances and radiation devices licences. Already subject to the GNSCR, these facilities should be well positioned to comply with the licensing requirements of the NSRDR. Unfortunately, there are a number of inconsistencies between the GNSCR, the NSRDR and the regulatory documents that support them.

For example, there are three instances where regulatory documents are used to establish required terms/titles of specific roles and responsibilities for which there is no regulatory basis. These requirements make assumptions about a licensee's organizational structure, roles and responsibilities. The terms are also used inconsistently in the regulatory documents (e.g., those under the Directorate of Power Reactor Operation), creating challenges for holders of multiple licences. The following inconsistencies should be specifically corrected:

- The term "Applicant Authority" is not defined in the GNSCR or the NSRDR. Bruce Power understands that the "Applicant Authority" corresponds to GNSCR s.15(b), but regulatory document RD/GD-371 does not specifically cite GNSCR s.15(b) as the basis for the term/role.
- The "Signing Authority" discussed in RD/GD-371 is not defined in the GNSCR or the NSRDR. Bruce Power understands that the term "Signing Authority" corresponds to GNSCR s.15(a), but RD/GD-371 does not specifically cite GNSCR s.15(a) as the basis for the term/role.
- The "Radiation Safety Officer" (RSO) designation that is described in RD/GD-371 is not defined in the GNSCR, NSRDR or the *Radiation Protection Regulations*. However, RD/GD-371 does discuss the required organizational authority of the RSO.

It is further recommended that the NSRDR be revised in a similar manner to the recent amendments to the *Class II Nuclear Facilities Regulations* if the CNSC believes it is necessary for licensees to have an RSO with defined responsibilities. If this recommendation were adopted, the NSRDR would permit individuals certified as Authorized Health Physicists at Class I facilities per RD-204 to perform the duties of the RSO without the need for additional certification (consistent with s.15.12 of the *Class II Nuclear Facilities Regulations*).

GNSCR s.18 requires the licensee to present the import or export licence to a customs officer when importing or exporting a nuclear substance, prescribed equipment or prescribed information. With respect to electronic transactions involving prescribed information, this requirement is being met (with CNSC agreement) by submitting the licence to Canada Border Services Agency in advance of the first import or export transaction, but not for every transaction under the licence.



Bruce Power recommends that s.18 be amended to be less prescriptive in how these communications are carried out, or to exempt all electronic transactions involving prescribed information from the requirement. For example, GNSCR s.18 could be revised to exempt electronic import and export transactions involving controlled nuclear information under the *Nuclear Non-proliferation Import and Export Control Regulations* and other prescribed information under the NSCA.

The GNSCR or the NSRDR should also be revised to provide a clearer process for the application for a licence to export a nuclear substance. There is currently no clear process for a one-off licence to export nuclear substances (also see Section 9 of Attachment A). The regulations do not adequately address standalone licences for the import or export of nuclear substances. There should be some specific instructions for obtaining a licence of this type under the GNSCR or possibly the NSRDR. The requirements in Section 3(1) of the GNSCR are onerous for a licence of this type and an exemption should be included in subsection (2), or a standalone nuclear substance import or export licence should be established.

Some additional recommendations are as follows:

- It is recommended that Section 12(k) be updated to allow for electronic copies of the Act and regulations to be used for this purpose. For example, the licensee could “keep either a hardcopy or electronic copy of the Act and the regulations made under the Act that apply to the licensed activity readily available for consultation by the workers.”
- It is recommended that Section 14(1) be updated to allow for electronic copies of the licence to be used for this purpose. For example, “Every licensee other than a licensee who is conducting field operations shall post, at the location specified in the licence or, if no location is specified in the licence, in a conspicuous place at the site of the licensed activity, (a) either a hardcopy of the licence or notice of where an electronic copy of the licence is available, with or without the licence number, and a notice indicating the place where any record referred to in the licence may be consulted;”
- Section 21 should be updated to expand the definition of “Prescribed Information” to include information on the storage locations of sealed sources and safety analyses (deterministic and probabilistic) that could be used for malicious purposes. This information is generally treated as prescribed information, but it would be helpful to clarify that in the Regulations.
- Consideration should be given to revising Section 29(1)(i) to clarify that licensees are not required to report a death by natural causes. The text could be reworded as “the death of any person at a nuclear facility as a result of the licensed activity”.

### **3. Radiation Protection Regulations**

The *Radiation Protection Regulations* (RPR) include a requirement to post signs in areas that have a radiation dose rate of 25µSv/h, whereas the NSRDR require posting at 0.1mSv/h for the use of an exposure device. This inconsistency makes the requirements difficult to apply in Nuclear Power Plants (NPPs) where there are changing conditions in areas that are known to have radiation dose rates. There is currently a two tier system for posting: the first tier requires posting dose rates of 25µSv/h in normal radiation areas; and the second tier requires posting dose rates of 0.1mSv/h in areas of exposure device operation (radiography).

Bruce Power recommends that a more consistent approach be applied to NPPs; one that would allow the posting of a 0.1mSv/h dose rate. This would have no impact on worker safety as the NPPs have controlled access and only suitably trained and qualified workers can access the NPP. This would not impact the Radiation Protection Program and would also prevent the frivolous reporting of low-level dose rates that may exceed the dose rates that were posted, due to changing conditions in radiation areas. It would also prevent non-compliances with the regulations that are of no consequence to worker safety and that are potentially subject to Administrative Monetary Penalties.

The concept of an "Unposted Hazard" requires additional clarity in the RPRs. The current interpretation of REGDOC 3.1.1 (formerly S-99) and s.21 of the RPR requires submission of a report to the CNSC if an unposted radiological hazard is discovered whether it is through routine surveys or through changing conditions. The very purpose of routine survey programs is to identify changes and to ensure that the controls that are in place are still adequate. S.21 has good intentions, but operators are being penalised for discovering minor issues during routine survey programs, based on its current interpretation.

The concept of a "Radiation Emergency" would also benefit from some additional clarification. The IAEA and the European Basic Safety Standards (BSS) define a radiation emergency as an event that is likely to cause a dose to a member of the public that is greater than 5mSv in a year. This definition forms the basis of all planning and controls. There would be a benefit to adding a statement on dose to persons under the age of 18 and medical surveillance for nuclear workers would improve regulation and controls in this area. This would also bring the regulation into line with international standards, the BSS and IAEA RS G-1.

The CNSC should consider the possibility of combining the RPR with the NSRDR to create a single set of radiation safety regulations. When applying controls there is often cross referencing between the RPR and NSRDR. The associated logistical challenges would be avoided by combining them and the administrative burden of complying with two sets of regulations would be reduced. As an example, the UK *Ionising Radiations Regulations* are a single regulation, which combines the information contained in the RPR and NSRDR and is very effective.

Further, rather than amending the regulations to be prescriptive enough to support 'small users' and risk making it difficult or inappropriate for other parts of the industry to implement, we would prefer to see a goal/performance based regulation that could be supported by guidelines such as a Canadian version of the European model of approved codes of practice. Another option would be the requirement for small users to attend approved training courses in the same vein as the Ministry of Labour approved courses for fall arrest, etc.

#### **4. Class I Nuclear Facilities Regulations**

There are a number of clauses in the Class I Regulations that deal with environmental protection. As explained above (Attachment A, Section 1), these requirements should be harmonized to the extent possible with the requirements of other federal and provincial agencies (i.e., Environment Canada, Fisheries and Oceans Canada, and the Ontario Ministry of the Environment). Currently there is considerable overlap in the oversight of environmental protection, often with differing administrative requirements between the agencies and ministries involved. This makes compliance more challenging and creates additional regulatory burden. If the requirements were harmonized, it would ease this burden in many areas, particularly reporting.

It is notable that the Regulations require that environmental monitoring plans be submitted under “general requirements” and “at all stages of the life cycle of a nuclear facility”. It is recommended that these requirements be addressed under general requirements and with the supporting guidance of a REGDOC, which would explain what reporting is required at each stage of the lifecycle (i.e., site preparation, construction, operation, and decommissioning), instead of repeating the same requirements in each of the corresponding sections of the regulations.

Other recommended changes:

- Section 3(d) should be updated to take into account the practice of using Management Systems for quality assurance. For example the wording could be updated to state “the proposed management system or quality assurance program for the activity to be licensed”.
- Section 4(d) should be updated to take into account the practice of using Management Systems for quality assurance, for example the wording could be updated to state “the proposed management system or quality assurance program for the design of the nuclear facility; and”.
- Section 5(g) should be updated to take into account the practice of using Management Systems for quality assurance, for example the wording could be updated to state “the proposed management system or quality assurance program for the design of the nuclear facility; and”.

## **5. Class II Nuclear Facilities Regulations**

Recommended changes include:

- Section 3(j) should be updated to take into account the practice of using Management Systems for quality assurance. For example, the wording could be updated to state “the proposed management system or quality assurance program for the design and construction of the nuclear facility”.
- Similarly, Section 4(k) should also be updated with wording such as “the proposed management system or quality assurance program;”
- In Section 8, it is recommended that there be an exemption for a Class II facility licence where the Class II facility is contained within a Class I facility, so long as the Class II activities are contained within the Class I facility licence. For example, “(d) construct, operate, modify, decommission or abandon a Class II nuclear facility that is contained within a Class I nuclear facility and is captured as a licenced activity for that facility”.
- It is suggested that consideration be given to adding an exemption for leak testing in Section 19(3) to include a sealed source containing a nuclear substance as shielding for shielding that is not readily accessible due to the design of the shielding. For example, “(3) Subsection (1) does not apply in respect of a sealed source that is used or stored underwater in a Class II nuclear facility that consists of a pool-type irradiator equipped with a device capable of detecting water-borne contamination of 200 Bq or less of a nuclear substance or a sealed source containing a nuclear substance used as shielding that is not readily accessible due to the design of the nuclear facility or the shielding.”



## **6. Nuclear Substances and Radiation Devices Regulations**

The NSRDR were amended in 2008 to add s.5.1 "Abandonment or Disposal". S.5.1(2)(b)(i) specifies that the exemptions established by s.5.1(1) do not apply to discharges of effluents from Class I nuclear facilities that contain nuclear substances. This implies that a licence is required for the discharge of effluents from Class I nuclear facilities, but Bruce Power's PROLs do not include abandonment or disposal as a licensed activity. This gap does not affect our operations, as we clearly document discharges to the environment within PROL applications and regulatory oversight is also being provided by the province under the MISA regulations (see Attachment A, Section 1). However, it is unclear why the NSRDR were amended to include this language if the corresponding changes were not made to the *Class I Nuclear Facilities Regulations* or the licences issued under those regulations.

Changes are also recommended in s.18 to take into account depleted uranium being used as shielding in Class I facilities in inaccessible areas. Bruce Power also stores depleted Cobalt 60 bundles in its fuel bays. Leak testing of these sealed sources is not desired due to potential dose rates and the fact that they are stored together with irradiated fuel bundles. It is suggested that Section 18(2) include wording such as: "(d) used or stored underwater in a nuclear facility that is equipped with a device or sampling methods capable of detecting waterborne contamination of 200 Bq or less of a nuclear substance" and "(e) a sealed source containing a nuclear substance used as shielding, such as depleted uranium, that is not readily accessible due to the design of the nuclear facility or the shielding."

## **7. Nuclear Security Regulations**

There are a number of areas where the *Nuclear Security Regulations* could be more prescriptive, or specific in how they define terminology. Terms such as “property” and “controlled area” are not clearly defined in the Regulations, even though they dictate where Nuclear Security Officers (NSOs) have the legal authority to protect against death or bodily harm. These terms need to be defined clearly and broadly enough to ensure that NSOs have sufficient authorization to protect themselves and others on all Bruce Power properties where such protection may be necessary.

Similarly, “effective intervention” is not defined clearly enough to communicate what is intended with respect to the protection of oneself and others against death or bodily harm. As a consequence, it is unclear who should be protected, how they should be protected and where they should be offered that protection. Further, the Regulations need to clearly authorize NSOs to protect themselves and others on Bruce Power properties with an appropriate amount of force.

This lack of clarity carries over to the definition of “potential adversary”, which NSOs would consider anyone who could threaten, or attempt to cause death or bodily harm to themselves or others on Bruce Power’s properties. The activities that a potential adversary could undertake should also be expanded upon. They should be specifically expanded to include the potential for sabotage and to include all Bruce Power properties where such activities may be carried out.

In preparing for such a possibility, it is important that design basis threat analyses and threat risk assessment activities be commensurate with the level of risk (e.g., appropriate for a high-security site). Not only should design basis threat analyses and threat risk assessments be commensurate with the risk, they should only be revisited when that risk has, or is expected to change.

Finally, there is an administrative burden associated with the revocation of authorizations under s.21(1) of the Regulations which could be more easily addressed through means other than written correspondence (e.g., by disabling access cards). We note that this was a recent administrative change based on minimal consultation with industry. The change from the word “may” to “shall” creates a significant administrative burden for industry as well as the agencies that support the authorization process. This also demonstrates the importance of ensuring that the wording in the Regulations is correct, so that there are no unintended consequences.

#### **8. *Packaging and Transport of Nuclear Substances Regulations:***

In the revised *Packaging and Transport of Nuclear Substances Regulations*, 2014 (once they are issued) – the CNSC has adopted the IAEA standards with only a few exceptions. However, some additional work needs to be done to eliminate confusing (and perhaps contradictory) overlapping areas in the *Transportation of Dangerous Goods Regulations* (i.e., Proof of Classification and declaration for Dangerous Goods).

## **9. Nuclear Non-proliferation Import and Export Control Regulations**

S. 26(a) of the *Nuclear Safety and Control Act* establishes the following: “26. Subject to the regulations, no person shall, except in accordance with a licence, (a) possess, transfer, import, export, use or abandon a nuclear substance, prescribed equipment or prescribed information.” However, Bruce Power has encountered a situation where the import and export of prescribed information related to a Class IA nuclear facility was not subject to the security measures and requirements of the *Nuclear Non-proliferation Import and Export Control Regulations* (NNIECR). Consequently the licence application requirements for these import and export licences defaulted to the requirements of the GNSCR s.3. The GNSCR s.3 requirements are inconsistent with the information, which we understood was required by the CNSC to process the applications.

The NNIECR licensing requirements are limited to the import and export of controlled nuclear information as defined in s.1(1) of the NNIECR. Bruce Power recommends that the scope of the NNIECR be expanded to include the import and export of all prescribed information under the NSCA so that the licence application requirements are consistent for all such import and export activities.

Bruce Power has also encountered situations concerning the import and export of nuclear substances that exceeded the exemptions established in s.5(1) of the NSRDR and where the requirements of the NNIECR and INFO-0791, Control of the Export and Import of Risk-Significant Radioactive Sources, did not apply. Consequently the licence application requirements for these import and export licences defaulted to the requirements of GNSCR s.3 and NSRDR s.3. GNSCR s.3 and NSRDR s.3 do not establish requirements consistent with the information required by NNIECR s.3, which the CNSC requires to process the applications.

Bruce Power recommends that the scope of the NNIECR be updated to include the import and export of all nuclear substances for which there are no exemptions available under NSRDR s.5 and that the NNIECR licence application requirements to be updated accordingly. Alternatively, the NSRDR could be updated to include the additional information required by the CNSC in respect of applications involving the import or export of non-exempt nuclear substances that are not subject to the NNIECR.

INFO-0791 establishes requirements for licence applications that are inconsistent with and/or exceed the requirements of GNSCR s.3, NSRDR s.3, and go beyond the scope of the NNIECR. Bruce Power believes that it is inappropriate for an INFO document to establish requirements, particularly requirements that are inconsistent with or beyond the requirements outlined in the regulations. According to s.26 (a) of the NSCA, “26. Subject to the regulations, no person shall, except in accordance with a licence, (a), possess, transfer, import, export, use or abandon a nuclear substance, prescribed equipment or prescribed information.”

Bruce Power recommends that the scope of the NNIECR be amended to include the import and export of risk-significant radioactive sources and that the licence application requirements in the NNIECR be updated accordingly. Alternatively, the NSRDR could be updated to include the additional information required by the CNSC in respect of applications involving the import or export of risk-significant radioactive sources (i.e., non-exempt nuclear substances) that are not subject to the NNIECR.

## **10. Canadian Nuclear Safety Commission Cost Recovery Fee Regulations**

There is a lack of transparency around the cost-recovery fees that are charged to licensees. In particular, the regulatory activity plan, the estimated annual fee payable and the quarterly invoices, lack detail. These documents are inconsistent with the level of transparency and therefore accountability that we have become accustomed to in our dealings with the CNSC. This is particularly concerning because we have noticed a dramatic increase in fees not only from year to year, but between the estimated fees at the start of each year and the adjustment based on the actual fees at the end of each year (the true up).

Bruce Power recommends that the CNSC develop fee forecasts looking two to five years ahead and that they provide Class IA licensees with mid-year updates. This would place licensees in a better position to forecast their spending in this area.

The Class IA licensees are subject to some of the most substantive cost recovery fees, which include not only the direct costs associated with each of our specific licences, but the indirect costs of management, training, administration, human resources, finance, information technology services and the preparation of policies, standards, guides, procedures and notices. As such, there is the potential for Class IA licensees to subsidize the broader industry. We would similarly argue that Class IA licensees are also potentially subsidizing the licensees that are exempted from paying fees.

We recommend that the CNSC assess the proportion of expenses incurred in the administration of the various licences against the fees that were charged to each type of licensee. We also recommend that this type of assessment be carried out on a recurring basis.

The above concerns could be readily addressed through the use of a robust internal consulting system. Licensees would be able to request a billing estimate of the expenses associated with restart or other specific activities, for example. We understand that a new reporting system is in place and look forward to the improvements in reporting and communication that it will provide.



## ***11. Canadian Nuclear Safety Commission Rules of Procedure***

The hearing process would be more efficient if the CNSC Rules of Procedure were more prescriptive in limiting submissions to relevant and trustworthy information. The Rules of Procedure reflect the quasi-judicial nature of the Commission Tribunal. Nevertheless, we believe that it would benefit from some additional rigour. For example, additional clarification could be provided regarding who is “a person who has an interest in the matter being heard” and why a person’s interest justifies their intervenor status.

While there are strict guidelines around the process and format of information to be filed, there are no stipulations on the accuracy or relevance of the information to be provided to the Commission. There should be a mechanism for validating the evidence brought before the Commission. Individuals who make oral presentations and written submissions should be called upon to verify the information presented at the request of the Commission through affidavit or other means. Those making submissions to the Commission should be required to attest to the accuracy of the information presented.

The hearing process would also benefit from a mechanism by which matters that have been previously settled, or where a decision has been rendered, could be closed to further discussion rather than revisited year after year. There would also be some benefit to the establishment of a process for the filing of complaints regarding conduct at hearings and other considerations.

### ***Canadian Nuclear Safety Commission By-laws:***

The CNSC has adopted the policy that all documents related to a Commission or Designated Officer decision must be made available to the public. This policy has the potential to create a significant burden on licensees, as they will need to redact (e.g., proprietary and security related information) sections of the documents so that they may be shared with the public. We submit that while there is a need to be transparent, the CNSC as the regulator is not required to release all of the technical documents that they receive.

## **12. Regulatory Documents (REGDOCs) and Other Standards**

The CNSC is increasingly using Regulatory Documents (REGDOCs) to establish new regulatory requirements. It is our view that this bypasses the proper process of setting regulatory requirements through the development of regulations and creates an additional burden on the licensee. If an issue arises that warrants placing new requirements on licensees then it should be implemented through the development of a regulation, rather than through a REGDOC. REGDOCs should be used only to provide guidance on how to meet the specific requirements that are outlined in the regulations.

In the case of regulations, a Regulatory Impact Analysis Statement (RIAS) explains what the regulatory proposal is intended to address, what it is intended to achieve, and what the benefits and costs are. To our knowledge, no such assessment is undertaken in the development of new REGDOCs. We would argue that there should be a demonstrable benefit to health, safety, security, or the environment before any regulatory measure is developed. The relationship between the added safety, or other value and the implementation costs should be clear.

The CNSC acknowledges the need to consider cost-benefit information in support of decision-making on regulatory proposals other than new regulations, some of which cost tens of millions of dollars to implement. However, there appears to be a reliance on external parties for the submission of cost-benefit information through public Commission proceedings. We would recommend that the CNSC develop a cost-benefit analysis methodology in partnership with industry and other key stakeholders.

The use of REGDOCs as a means of establishing additional requirements appears to circumvent the Red Tape Reduction Action Plan and One for One policy. It also greatly complicates the licensees' ability to comply with the requirements, as there could be REGDOCs that are referenced in the licensing basis of a facility that are unattainable.

### 13. Power Reactor Operating Licences and the Licence Condition Handbook

The PROL is structured according to the CNSC Safety and Control Areas. Consequently it contains numerous redundant licence conditions. In our opinion, licence conditions that do not contain specific requirements beyond what is already stated in the regulations do not need to be restated, as a licence cannot be issued without meeting these requirements. Examples of areas where the licence conditions duplicate the regulations include the following:

- measures to ensure compliance with the *Radiation Protection Regulations* and the *Nuclear Security Regulations*; (GNSCR 3(1)(e));
- proposed action levels for the purpose of S.6 of the *Radiation Protection Regulations* (GNSCR 3(1)(f));
- security measures (GNSCR 3(1)(g) & (h)) (Class I 6(l));
- waste handling information (GNSCR 3(1)(j));
- financial guarantees (GNSCR 3(1)(l));
- quality assurance program for the activity to be licensed (Class I 3(d));
- proposed worker health and safety policies and procedures (Class I 3(f));
- environmental protection requirements (Class I 3(g)&(h) and 6 (i)&(j));
- public information program (Class I 3(j));
- decommissioning plans (Class I 3(k));
- measures, policies, methods and procedures for operating and maintaining the nuclear facility (Class I 6(d));
- procedures for handling, storing, loading and transporting nuclear substances and hazardous substances (Class I 6(e) and PTNSR);
- measures to facilitate Canada's compliance with any applicable safeguards agreement (Class I 6(f));
- emergency management (Class I 6(k)); and
- training (Class I 6(m)&(n)).