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Our File:

Canadian Nuclear Safety Commission
Regulatory Framework Division
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VIA E-MAIL

Dear Sir/Madam

RE: RD 346-Site Evaluation for New Nuclear Power Plants (RD-346)

I am writing to provide the comments of the Environmental Law Centre (ELC) respecting RD-346. The ELC is an Edmonton-based charitable organization incorporated in 1982 as a public source of information on environmental law and policy in Alberta and Canada. The ELC's mission is to ensure that laws, policies and legal processes protect the environment. A common thread running through the ELC's participation in the development of environmental law and policy in Alberta over the past 25 years has been a consistent emphasis on ensuring that regulatory decisions are made in a manner that is open and transparent and that ensures meaningful opportunities for stakeholder engagement are provided. The comments of the ELC respecting the Canadian Nuclear Safety Commission (CNSC) RD-346 are focused on the extent to which the draft document creates clear, understandable and enforceable requirements for project proponents and facilitates meaningful participation by stakeholders in the licence application review process. The ELC is pleased to have the opportunity to provide these comments.

Summary

RD-346 does not set out the expectations of the CNSC with respect to site evaluations in a clear, understandable way that informs stakeholders as to the requirements to be met by a project proponent seeking a licence to prepare a site. RD-346 states that it is based, in part at least, upon International Atomic Energy Agency (IAEA) documents and refers to such documents as providing "further guidance" in meeting the CNSC's expectations.¹ However, the use that a nuclear power plant (NPP) proponent is to make of these IAEA documents and the standards and recommendations contained therein is unclear.

¹ RD-346 at 1.

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RD-346 should require, as part of its quality assurance discussion, that an application for a licence to prepare a site be substantially complete before it is submitted. Albertans have recently experienced the inconvenience and difficulty of trying to review an incomplete application for an NPP in the Peace River area. Efforts to receive supplementary information were made more difficult given that the CNSC does not post application information on its website.

Background

The CNSC states, on the opening page of its draft guide, that it develops regulatory documents under the authority given to it by paragraphs 9(b) and 21(1)(e) of the *Nuclear Safety and Control Act (NSCA)*². These paragraphs speak to one of the objectives of the CNSC: to disseminate objective scientific, technical and regulatory information to the public concerning the activities of the Commission and the effects, on the environment and on the health and safety of persons, of the development, production, possession and use of nuclear energy, the production, possession and use of nuclear substances, prescribed equipment and prescribed information.

Regulatory documents are generally described by the CNSC as providing “clarifications and additional details to the requirements set out in the *NSCA* and the regulations made under the *NSCA*.” The CNSC describes regulatory documents as an “integral part of the regulatory framework for nuclear activities in Canada”, aimed at disseminating objective regulatory information to stakeholders, including licensees, applicants, public interest groups and the public in order to promote consistency in the interpretation and implementation of regulatory requirements.³

Given the purpose of regulatory documents generally, applicants for a licence to prepare a site would hope, and indeed expect, that RD-346 would provide clear, understandable and specific criteria to be met when evaluating a site and compiling the information required by section 3 of the *NSCA* and Section 4 of the *Class I Nuclear Facilities Regulation*.⁴ Because regulatory documents, or parts of them, become legal requirements when referenced in a licence, applicants and licensees need the requirement in regulatory documents like RD-346 to be clear and understandable.

Similarly, other stakeholders, such as intervenors rely on documents like RD-346 to inform them and prepare for their participation in regulatory hearings in respect of proposed NPPs. The importance of stakeholder participation in the CNSC’s application review process has been noted by the CNSC.⁵ Yet, as was also noted by the CNSC, intervenors are a diverse group of individuals and groups that may, in some cases, have limited financial or human resources to prepare for hearings.⁶ The CNSC does not provide for intervenor funding to enable intervenors to prepare for or attend hearings.⁷ In

² S.C. 1997, c.9.

³ Supra note 1 at first (unnumbered) page.

⁴ S.O.R 2000/204.

⁵ CNSC, *Regulatory Independence: Law, Practice and Perception – A Report to the Canadian Nuclear Safety Commission* at 18.

⁶ *Ibid.* at 15.

⁷ CNSC, “How do I participate in Public Commission Hearings”, online: CNSC

http://www.nuclearsafety.gc.ca/eng/commission/commission_hearings/participation/index.cfm

the interests of achieving easier and more effective participation from intervenors, it is critical that regulatory documents establish criteria and standards that are clear and understandable and that require applicants to provide application materials in a form and manner that enables intervenors to identify in the application all relevant facts that satisfy established CNSC criteria.

Applicants and intervenors do not have a long history of regulatory decisions by the CNSC to guide them in their preparation of and participation in applications for licences to site a facility. Both applicants and intervenors will rely to a large degree on RD-346 to establish, and describe in clear language, what criteria must be satisfied before a licence to prepare a site will be issued.

Unclear relationship to IAEA documents

The purpose of RD-346 is stated to “set out the expectations” of the CNSC with respect to site evaluation for new NPPs.⁸ The site evaluation is a critical early step in the regulatory approval process for NPPs. The licence to prepare the site is the first of five licences required by NPP proponents and the information gathered during the site evaluation may be used during an assessment of the environmental project’s impact on the environment under the *Canadian Environmental Assessment Act (CEAA)*.⁹

Despite stating that it sets out the “technical safety and security criteria” against which the CNSC will review an application, the guide is vague in the criteria it establishes.¹⁰ RD-346 refers to IAEA documents with respect to siting but does not make clear whether these IAEA documents contain requirements to be met or merely provide additional guidance.

RD-346 states that the RD-346 “represents the CNSC’s adoption and, where applicable, adaptation, of the tenets established by the IAEA in safety requirement document NS-R-3, *Site Evaluation for Nuclear Installations*, and in associated IAEA publications” and states that these documents provide “further guidance in meeting the expectations set out herein”.¹¹ This suggests that the IAEA documents do not, themselves, contain the specific criteria, or expectations to be met by NPP proponents in terms of preparing site evaluation plans and undertaking site evaluation processes. But few “expectations” are identified in RD-346.

RD-346 later states, in its general discussion about the site evaluation process, that RD-346 “reflects the present [IAEA] consensus on what is *expected in the site evaluation process*”.¹² This seems to be a reference to IAEA expectations for site evaluation processes. Understanding the use to be made of IAEA documents is important as they

⁸ *Supra* note 1 at 1.

⁹ S.C. 1992, c.37.

¹⁰ *Supra* note 1 at 1.

¹¹ *Ibid.* at 1. Page 27 of RD-346 identifies a number of IAEA documents that discuss, in detail, a number of issues related to site evaluation including: geotechnical aspects of site evaluation, evaluation of seismic hazards, ground motion determination, meteorological events, flood hazards, external human induced events, dispersion of radioactive material and consideration of population distribution, and quality assurance for safety.

¹² *Ibid.* at 4.

are much more detailed than RD-346 is and provide a great deal more helpful explanatory language than RD-346 does. Further, IAEA documents on different siting considerations recommend specific standards for developing a site evaluation plan. Similar standards are not identified in DR -346. An NPP proponent or an intervenor preparing to participate in a hearing needs to know where to find requirements and expectations to be met.

One example of the difference in the depth of discussion between the RD-346 and IAEA documents is found in respect of the issues of developing a baseline for seismotectonic information and identifying potential seismic hazards. It is not the intention of the ELC to comment here on the scientific adequacy of the CNSC's consideration of seismic issues; rather it is to show but one example of the differences of approach between RD-346 and a relevant IAEA document.

RD-346 appears to dedicate less than one page in total to the issue of developing a baseline for seismotectonic information and identifying potential seismic hazards. The CNSC Guide's discussion of gathering baseline geophysical data is limited to the two following sentences "Seismotectonic data includes, without being limited to, information on prehistoric, historic, and instrumentally-recorded seismic activity in the region" and "Information on geophysical hazards include the influence of surface faults on seismic activity in the region".¹³ "Region" is unhelpfully identified in the RD-346 as "a specific area to be studied."¹⁴ The section of RD-346 that discusses seismic hazards amounts to half of page 16 and is similarly lacking in meaningful guidance or specific criteria, providing little more than a three-part definition of a capable fault. It is unclear what the scope of inquiry ought to be or what level of seismic activity might disqualify a site.

Consider in contrast, the "Necessary Information and Investigations (Database)" discussion commencing at page 4 in the 24-page IAEA document "Evaluation of Seismic Hazards for Nuclear Power Plants"¹⁵ In its discussion of compiling baseline database material, the following expectations are expressed:

Investigations should be conducted on four scales - regional, near regional, site vicinity and site area - thus leading to progressively more detailed investigation, data and information... The site area investigations are aimed at developing the geotechnical database. In order to achieve consistency in the presentation of information, data should be compiled in a geographical information system (GIS) whenever possible and all data, evaluations and interpreted products should be displayed on a consistent scale to facilitate comparison. The compilation of the seismological database will normally be less dependent on the regional, near regional and site vicinity scales. That is, the scope and detail of the information to be compiled will be largely independent of scale for the entire region of

¹³ *Ibid.* at 11.

¹⁴ *Ibid.* at 24.

¹⁵ International Atomic Energy Agency, "Evaluation of Seismic Hazards for Nuclear Power Plant – Safety Guide" (No. NS-G-3.3) (Vienna, IAEA, 2002).

the site. However, seismogenic structures in the near region and in the site vicinity will normally be more important for seismic hazard evaluation, depending on the rates of activity, maximum magnitude and regional attenuation. Particularly for intraplate tectonic settings, attention should be paid to compiling seismological data for more distant sources that may be beyond the typical boundaries of the region.

The IAEA document goes on to describe in detail the regional, near-regional, site vicinity and site area investigations with reference to distance criteria, map scales etc. It is clearly far more comprehensive than RD-346, as is the discussion of seismic hazards. Similar examples may be found in respect of different siting issues. Whereas RD-346 presents only high-level discussion about a number of issues relevant to site evaluation, IAEA documents treat these issues in detail. However, it is unhelpful both to applicants and intervenors to have the status of the expectations and recommendations of the IAEA documents remain uncertain.

Completeness of applications

The evaluation of a site is to be conducted by the NPP proponent prior to the filing of an application for a licence to prepare a site. Accordingly, a proponent should have all information required to substantiate its conclusion that the proposed site is acceptable prior to the filing of the application for the licence. While the CNSC will not refer an application for environmental assessment until sufficient information has been received to enable an assessment to be carried out,¹⁶ neither the *NSCA*, nor its associated regulations appear to contain a specific provision requiring substantial completeness of an application by an NPP. Such a requirement is not in RD-346. An application for a licence to prepare a site should not be received unless it contains enough information to allow for a full and comprehensive environmental assessment under the *CEAA* and a review by the CNSC.

The practice of the CNSC not to post licence applications on its website makes the need for complete applications even greater. In August of 2007, Energy Alberta filed an application to prepare a site for a NPP in the Peace River, Alberta area. This application was not made public immediately and was not posted on either the CNSC or Energy Alberta website. Ultimately, with the assistance of Mr. Aurèle Gervais of the CNSC, intervenors were able to obtain copies of the application but, regrettably, attempts to review the application were frustrated by the lack of substantive information contained therein. Supplementary material appeared to come in bits and pieces and the CNSC process for updating identified interested stakeholders was very poor; each interested person was required to repeatedly contact the CNSC to inquire as to whether additional supplementary information had been provided in order to ensure they had a complete copy of the public record.

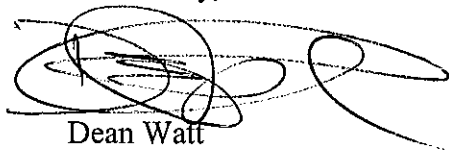
The CNSC, by requiring substantial completeness of an application before it will be received, can improve this situation. This could be done through the *NSCA*, the *Class I*

¹⁶ Personal Conversation, Aurèle Gervais, Senior Advisor, Media and Community Relations, Public Affairs and Media Relations Division, Strategic Communications Directorate, Regulatory Affairs Branch, CNSC, 1 October 2007.

Nuclear Facilities Regulations or through RD-346 in its discussion of quality assurance provisions. In addition, efforts of the CNSC to post application materials on the CNSC website should be increased.

Thank you for the opportunity to provide these comments. As discussion about the possibility of NPPs being used in Alberta grows, intervenors are becoming increasingly interested in the potential risks and benefits associated with NPPs and have been educating themselves on CNSC process and the requirements for NPP licensees. The ELC hopes that these comments are helpful and enable the CNSC to ensure that RD-346 is an effective tool for those preparing for or participating in applications in respect of licences to site a nuclear facility.

Yours truly,

A handwritten signature in black ink, appearing to read 'Dean Watt', is written over a horizontal line. The signature is stylized and somewhat cursive.

Dean Watt
Staff Counsel

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