

October 18, 2013

By email: consultation@cnsccsn.gc.ca

Canadian Nuclear Safety Commission
P.O. Box 1046, Station B
280 Slater Street
Ottawa, Ontario, Canada K1P 5S9

**Re: CNSC Consultation: Emergency Planning RegDoc 2.10.1
Comments Due October 19, 2013**

CELA takes this opportunity to review and comment on the proposed RegDoc 2.10.1 issued by the CNSC titled, Nuclear Emergency Preparedness and Response, Draft dated August 2013. Comments are open until October 19, 2013.

A. Regulatory Authority

CELA agrees that the CNSC has regulatory authority to issue a regulatory document regarding emergency planning. We made submissions on this point in our presentation to the Commission in respect of the Pickering application to extend its operating life. Our conclusion is that not only does the CNSC have authority to require, review and approve emergency plans which are in the purview of its licensees; it also has authority to review emergency plans in place for off-site response and to use its assessment of the adequacy of those plans as part of its determination as to whether a nuclear power plant or other facility may operate, or under what terms and conditions. This extends to the portions of plans which have been undertaken by other authorities external to the plant operator. The reason for this, fundamentally, is that it is the CNSC which is required to assure that public safety and the environment will be protected in the exercise of its discretion to issue operating and other licences to licensees. The CNSC must not limit its review on the topic of emergency planning to plant boundaries or operator action. Rather it must specify its expectations for emergency planning to the fullest extent of potential impact on members of the public or the environment, and must exercise its decision making in the context of requirements respecting those full potential consequences.

CELA urges the CNSC to exercise a stringent oversight role as to whether emergency planning and preparedness have been proven prior to exercising its discretion at all points in its decision making.

This is reinforced by the specifications of IAEA Guide Standard, Preparedness and Response for a Nuclear or Radiological Emergency, Series No. GS-R-2, Safety Standards

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(Vienna: IAEA, 2002) which sets out expectations as to the responsibility of the regulator. A more complete copy of this excerpt is provided as Appendix A to our submission in the Pickering licensing hearing which is attached hereto for reference. It is the regulator's responsibility, among other things, to do the following (excerpts from GS-R-2 paragraphs 3.8 to 3.12:

- The regulatory body shall require that arrangements for preparedness and response be in place for the on-site area for any practice or source that could necessitate an emergency intervention.
- The regulatory body shall ensure that such emergency arrangements are integrated with those of other response organizations.
- The regulatory body shall ensure that such emergency arrangements provide a reasonable assurance of an effective response, in compliance with these requirements, in the case of a nuclear or radiological emergency.
- The regulatory body shall require that the emergency arrangements "shall be tested in an exercise before the commencement of operation [of a new practice]. There shall thereafter at suitable intervals be exercises of the emergency [arrangements], some of which shall be witnessed by the regulatory body."
- In fulfilling its statutory obligations, the regulatory body... shall establish, promote or adopt regulations and guides upon which its regulatory actions are based;... shall provide for issuing, amending, suspending or revoking authorizations, subject to any necessary conditions, that are clear and unambiguous and which shall specify (unless elsewhere specified):... the requirements for incident reporting;... and emergency preparedness arrangements.
- In planning for, and in the event of [a nuclear or radiological emergency], the regulatory body shall act as an adviser to the government.
- The regulatory body shall ensure that the co-ordinated arrangements are implemented adequately by the operators.

Moving ahead to implement a regulation is consistent with the expectations of the IAEA standard, as well as with the external review recommendations of Canada's regulatory system post-Fukushima.

B. Planning Basis

CELA has reviewed the provisions of the proposed regulation with respect to Planning Basis. The proposed regulation in our opinion is inadequate. It states that it is licensees who shall establish the planning basis for emergency planning. In CELA's opinion, it is time for the CNSC itself to establish the planning basis for emergency planning in response to severe or catastrophic accidents at nuclear power plants in Canada. This planning basis must be specified to include severe, catastrophic accidents with extensive offsite consequences including potential early release of radionuclides, as well as geographically extensive release of radionuclides from an accident. This must be done in a manner that does not assume containment will hold; nor assume that controlled venting will proceed as designed. It must not be based on probabilistic accident scenario calculations. As the CNSC president has stated in the past, the thinking must consider "doomsday" scenarios. In other words, while CELA strongly agrees that if nuclear

power plants are going to be operated, there needs to be major investments in avoiding accidents, and in handling and mitigating accidents so that it is to be hoped they don't proceed to major consequences, there also must be a mindset on the emergency planning front that in some cases it may be that nothing in the "defence in depth" scheme has worked and therefore the resources and planning must be in place to respond to that situation extremely quickly, and extremely effectively. While emergency planning and response alone will not be sufficient in such a case to prevent all harm such as damage to property or even to persons, it is well within the realm of appropriate and feasible emergency planning to prevent much harm to people. This will only be the case if the planning basis clearly includes catastrophic accidents; if it does not, then people will be unnecessarily harmed. Examples include scenarios where evacuation takes far too long; where there is massive uncertainty as to evacuation routes; where there is complete inadequacy of medical response and accommodation; and where people have not had access to KI in advance and so its effectiveness, if ingested at all, is needlessly reduced.

In this respect, CELA is extremely disappointed to see that the draft RegDoc 2.10.1 states in the Guidance section to the Planning Basis that "all credible hazards" be identified in the planning, and that "all credible worst-case scenarios and plans should be developed accordingly." (page 6 of the draft).

This is the type of thinking that led to the Fukushima accident in the first place, and it is also the type of thinking that meant that emergency planning at Fukushima was insufficient, a fact which in itself greatly exacerbated the impacts of the accidents on people. The term "credible" should be deleted from the Guidance. This guidance should not encourage continued reliance on arguments that severe or catastrophic nuclear accidents are unlikely; but the inclusion of this term in this context will do just that. This will result in the continued situation of inadequate emergency planning and preparedness that we presently face in the vicinity of Canada's nuclear power plants.

C. Section 2.2.3 Emergency Assessment Requirements

CELA agrees with the draft document provisions for offsite monitoring in the event of an accident (numbers 5 to 6 in section 2.2.3). However, CELA submits that the CNSC should require that this information also be made publicly available in the event of an accident; this is essential to build public trust in the decision making and instructions being provided at such a time. It also provides a mechanism for knowledgeable observers to challenge findings or decisions; in the case of Fukushima such possibilities might have saved a great deal of harm when people were evacuated to an area subsequently found to be severely contaminated, contrary to prior expectations.

In terms of the provisions numbered 1 to 4 in this section, requiring licensees to describe their methods by which they will assess and predict onsite and offsite conditions and parameters, CELA recommends that this must be done by way of public submissions to and approval by the Commission, with opportunity for public input. A mere requirement for a description of the methodology does not provide assurance that this will be a robust approach on which the public should have high confidence. And clearly this must be

done, not in the context of an actual emergency, but in prior thinking and planning. The public has an essential stake in such methods and approaches.

In the Guidance to this section, provision is made that during an emergency ``Source term sampling and estimation shall be determined and reported to the CNSC on a **best efforts** basis...`` (p. 10, emphasis added) CELA recommends that the phrase ``best efforts`` should be deleted.

D. Section 2.3.4 – Interface and Support of Offsite Response Organizations

The components listed in this section are appropriate. However, CELA submits that the CNSC should set requirements for this provisions and should undertake an assessment of the adequacy of these components as against specified requirements, both in terms of the plans, and in terms of the actual on-the-ground resourcing and preparedness associated with these components. This should be done as a condition precedent to any licensing decisions. In other words, the CNSC should not merely require components like maintaining current evacuation time estimates; it should also evaluate those components as part of licensing decisions.

The Guidance to this section speaks of including the nuclear emergency response plans of offsite response organizations including provinces, municipalities and first responders as part of licence applications. CELA strongly agrees with this; however as noted we also submit that the adequacy of those plans, and the issues as to whether they are actually in place and properly resourced must be included and made part of the CNSC licensing decision. In other words, it is the CNSC`s responsibility not to license applicants for operations or continued operations, if it is not convinced on an evidentiary basis that the plans will be effective and can be acted upon. An example of the prior approach, which must not be allowed to continue, is that even basic alerting has not been adequately in place around some of Ontario`s nuclear power plants even though they have been operating for decades. Even worse, after this problem was identified before the Commission, it has still taken years and that alerting is still not fully in place, and this is in respect of one of the most basic and easiest` aspects of emergency response. The Commission should not be sanguine about whether other aspects of plans placed before them as part of licensing applications are operable and sufficient without testing same as part of its licensing process.

E. Section 2.4.3 – Public Information Requirements

The provisions listed in the Draft RegDoc are appropriate as far as they go. However there are many additional issues that should be included in the public education materials, including evacuation and transportation routes; host community information; information about expectations of the public in the case of a severe offsite accident (the current plans expect them to mainly find alternate accommodation and in some cases undertake decontamination themselves); where the radiation-accident equipped medical facilities are; what to do if they have senior residents, hospitalized residents or school age children

in other facilities at the time of an emergency and much else. In addition the expectations of the licensees as to what to communicate should be far more specific and should be tested in consultation with engaged and informed members of the public in the vicinity of the nuclear power plants such as those non-industry members of the public who have attended CNSC hearings and meetings or meetings of agencies such as the Durham Nuclear Health Committee. For example the limitations of sheltering in place must be clear, and the time sensitiveness of ingesting KI pills must also be explained clearly and broadly to the public.

F. Section 2.4.4 – Testing the Implementation of Emergency Measures

It is of course essential to test the emergency plans in a variety of way as outlined in the RegDoc. However, as far as CELA is aware none of the plans have so far included general members of the public and this is an essential aspect of emergency planning. Members of civil society and members of the public in the vicinity of the nuclear power plants should be included in the emergency measures planning testing and drills; both full scale and many smaller scale drills. In the case of the plants in Durham Region, this should include residents of the City of Toronto in addition to Durham Region.

We trust the foregoing is of assistance.

Yours very truly,

A handwritten signature in black ink, appearing to read 'T. McClenaghan', with a large, stylized flourish at the end.

Theresa A. McClenaghan
Executive Director and Counsel
Canadian Environmental Law Association