



CNSC Management Response to CNSC Fukushima Task Force Recommendations

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Message from the Executive Vice-President and Chief Regulatory Operations Officer

The *CNSC Fukushima Task Force Report* constitutes the Canadian “stress test” applied to Canadian operating nuclear reactors. The results of this stress test confirm the safe operation of nuclear power reactors in Canada.

This proposed *CNSC Management Response to the CNSC Fukushima Task Force Recommendations* outlines the framework that the CNSC intends to follow in implementing the recommendations of the Task Force in a timely and transparent manner. The framework builds upon the conclusions and recommendations of the Task Force’s review of the Canadian nuclear power plant operators’ responses to the CNSC request, under subsection 12(2) of the *General Nuclear Safety and Control Regulations*, to re-examine the safety cases of their nuclear power plants. Many of these recommendations were already being considered and implemented by the CNSC and licensees as part of normal regulatory oversight.

I accept the conclusions and recommendations of the Task Force report. I believe that the proposed improvements will further strengthen the safety case of Canadian nuclear power plants.

Ramzi Jammal
Executive Vice-President and
Chief Regulatory Operations Officer
Canadian Nuclear Safety Commission

Overview

On March 11, 2011, a magnitude 9.0 earthquake, followed by a devastating tsunami, struck Japan. The combined impact of the earthquake and tsunami on the Fukushima Daiichi nuclear power plant caused a severe nuclear accident. In response to these events, the Canadian Nuclear Safety Commission (CNSC) established the CNSC Fukushima Task Force (the “Task Force”) to evaluate operational, technical and regulatory implications for Canadian nuclear power plants.

On September 30, 2011, the Task Force completed its review of the lessons learned from the accident and presented its findings in the *CNSC Fukushima Task Force Report*. The report particularly emphasizes:

- the capability of Canadian nuclear power plants to withstand conditions similar to those that triggered the Fukushima nuclear accident
- emergency preparedness and response in Canada
- the effectiveness of the CNSC’s regulatory framework

The Task Force concluded that Canadian nuclear power plants are safe and pose a very small risk to the health and safety of Canadians and the environment. The Task Force made 13 recommendations to further enhance the safety of nuclear power plants in Canada. These are presented in section 10 of the Task Force report.

Recommendations

For the purpose of this Management Response, the Task Force recommendations can be divided into two broad categories:

- **Technical and operational recommendations**, which pertain to design and operational enhancements to strengthen reactor defence in depth and technical cooperation at the international level.
- **Regulatory recommendations**, which require Commission approval to amend the CNSC regulatory framework and processes and the Commission approval and direction to enhance emergency preparedness.

Technical and operational recommendations

The Task Force confirmed that Canadian nuclear power plants are safe and have a strong design relying on multiple layers of defence. Nevertheless, the Task Force recommended strengthening the safety case of nuclear power plants as it relates to the lessons learned from the Fukushima accident. The review findings, upon which these recommendations are based, have been determined through comparison with the *Nuclear Power Plant Safety Review Criteria*. These criteria exceed the applicable requirements and expectations of the current CNSC regulatory framework. A mapping of the recommendations to each finding is included as Appendix D of the CNSC Task Force report.

These recommendations are technical and operational in nature, and CNSC staff will implement them through normal regulatory oversight of the current CANDU fleet. Consequently, CNSC management has been instructed by the Executive Vice-President and Chief Regulatory Operations Officer to address each recommendation in the form of a comprehensive action plan that details measures required of licensees to strengthen reactor defence in depth.

Regulatory recommendations

The Task Force performed a detailed review of the CNSC regulatory framework and processes and confirmed that the Canadian regulatory framework is strong, comprehensive and effectively applied to the whole range of plant conditions. In recognition of the results of this review, the Executive Vice-President and Chief Regulatory Operations Officer will refer these recommendations to the Commission as part of the detailed CNSC Action Plan.

In addition, the Task Force concluded that the emergency preparedness and response measures in Canada, both onsite and offsite, are adequate. Nevertheless, the Task Force identified further improvements through streamlining emergency preparedness between onsite and offsite authorities. This conclusion is accepted by the Executive Vice-President and Chief Regulatory Operations Officer, and this recommendation is referred to the Commission for direction.

Implementation

The implementation plan of the technical and operational recommendations will consist of action items that take into consideration differences in reactor designs and locations, and that identify lead CNSC directorates, completion dates and closure criteria.

The regulatory recommendations that deal with amendments to existing licences or CNSC regulations and regulatory documents will be referred to the Commission for approval or direction.

This Management Response establishes the following general guidance for implementing these recommendations, consistent with risk-informed considerations and related cost-benefit implications:

- Short term – **by December 31, 2012**
- Medium term – **by December 31, 2013**
- Long term – **by December 31, 2015**

The public and stakeholders are invited to provide their written comments on the Task Force Report and proposed Management Response. This input will be incorporated into a comprehensive CNSC Action Plan that will be presented to the Commission at a public Commission meeting on February 15, 2012.

Next Steps

To ensure transparency and public input to the process, the following actions will be undertaken:

October 28, 2011 – December 1, 2011

Posting of the Task Force report and CNSC Management Response for public comment

December 15, 2011 – January 20, 2012 (tentative)

Posting of Commission Member Document (CMD) for public comment on the:

- CNSC Action Plan, and
- Disposition Report of comments received from the first public and stakeholder review

January 20, 2012 – February 8, 2012 (tentative)

Disposition of comments received from the second public and stakeholder review and revisions to the CNSC Action Plan as required

February 15, 2012 (tentative)

Commission public meeting on the revised CNSC Action Plan

Conclusion

This CNSC Management Response describes the basis upon which the Task Force recommendations will be implemented in a timely and transparent manner. These actions, together with comments from the public and stakeholders, demonstrate CNSC management's commitment to ensure the robustness of Canada's regulatory framework and safety of nuclear power plants in Canada.

In addition, the CNSC has agreed to undergo international peer reviews, first by participating in an Integrated Regulatory Review Service mission led by the International Atomic Energy Agency and, subsequently, by fulfilling its obligation to the Convention on Nuclear Safety by submitting a national report on the lessons learned from the Fukushima accident for an Extraordinary Meeting to be held in Vienna, Austria, in August 2012.

Acknowledgements

I commend the hard work and dedication of the CNSC Fukushima Task Force members who worked diligently and relentlessly in preparing this report to ensure that the safety of the public and the environment is never compromised:

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Vice-Chair:

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