

# CNSC Safety Concerns About CANDUs

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*Observations by Michel Duguay, Ph.D., March 31 2011:*

The sequence of severe nuclear accidents in Japan has prompted the Canadian Nuclear Safety Commission (CNSC) to issue a number of publications dealing with the worrisome situation. On March 17<sup>th</sup> an urgent letter was sent to Canadian companies operating CANDU reactors. In this letter CNSC Executive Vice-President Ramzi Jammal urges the Canadian electronuclear companies to complete the following actions by April 29, 2011 (CNSC E-Docs # 3694385, quoting):

- *“review initial lessons learned from the earthquake in Japan and re-examine the safety cases of nuclear power plants, in particular the underlying defence-in-depth concept, with focus on:*
  - *external hazards such as seismic, flooding, fire & extreme weather;*
  - *measures for prevention and mitigation of severe accidents;*
  - *emergency preparedness; and*
- *report on implementation plans for short-term and long-term measures to address any significant gaps.”*

Regarding the lessons to be learned from the Fukushima nuclear disaster CNSC Staff has published in late March a document entitled *“Implications of Japanese Earthquake and Tsunami”* (CNSC E-DOCS- # 3692259). In this document CNSC staff repeats a number of times the necessity for a nuclear power plant to “mitigate severe accidents”.

This publication reinforces what CNSC staff had broadly documented in numerous previous reports, namely that CANDU nuclear reactors are indeed subject to the possibility of *“severe accidents”*. One class of severe accidents is a partial core meltdown, which can potentially lead to a rupture of physical containment and a release of radioactive elements into the environment, as has been happening in Fukushima.

In view of the very serious change of perception throughout the world regarding the safety of nuclear power reactors following the Fukushima events, our broad-based alliance urges the federal government to immediately take steps to set up a Royal Commission whose mission would include the following tasks:

- 1. Establish the range of severe accidents that can potentially occur at CANDU nuclear power plants, and ascertain the range of potential consequences;
- 2. As CNSC Vice-President Ramzi Jammal wrote on March 17<sup>th</sup>, determine what mitigation measures should be put in place now, and in the near future, for a broad range of severe accidents, including those caused by malevolent actions;
- 3. Make recommendations for improving the CNSC’s ability to intervene in all nuclear situations without undue influence from designers, manufacturers and users of nuclear power plants.
- 4. Make recommendations for federal structural changes to improve the CNSC’s ability to inform the public in a timely fashion about all nuclear matters, especially in cases where the nuclear industry seeks to minimize the shortcomings of nuclear power.