Tritium Awareness Project

Media Release **June 9, 2009**

For Immediate Release

The dark ages in radiation protection

Canada is in the dark ages when it comes to radiation protection thanks to its deeply flawed nuclear regulatory agency, the Canadian Nuclear Safety Commission (CNSC). Four breaking news stories highlight these flaws:

Story 1. Tritium-contaminated water from the NRU reactor at Chalk River, currently stored in hundreds of barrels on-site, may soon end up in the Ottawa River – a decision by AECL, sanctioned by CNSC, is imminent.

Story 2. Tomorrow, Wednesday, CNSC will decide on the licence renewal of a plant in Peterborough that has caused widespread radioactive contamination of its environment (this plant manufactures tritium-filled glow-in-the-dark signs);

Story 3. The day after tomorrow, on Thursday, CNSC Commissioners will be asked to approve a document that uses invalid methods to deny that the health problems documented among the citizens of Port Hope are radiation-related;

Story 4. At the end of the week, on Friday, a team of 20 investigators from the International Atomic Energy Agency will conclude their 10-day review of CNSC compliance or non-compliance with international guidelines.

We don't know what IAEA may find, but the Tritium Awareness Project (TAP) has identified six fatal flaws in the CNSC.

Flaw 1. Meaningless Release Limits. If the speed limit were 1000 km/hr, drivers would never get a speeding ticket, and they could go as fast as they want. In a similar vein, the CNSC allows its nuclear industry licensees to set their radiation release limits so high that those limits cannot possibly be violated. A case in point: the Shield-Source Incorporated (SSI) plant in Peterborough has a tritium release limit of 34 million trillion becquerels per year (34,000,000,000,000,000,000 = 34×10^{18} becquerels per year). Ole Hendrickson of Concerned Citizens of Renfrew County points out, "According to an IAEA safety standard, regulatory limits on radioactive emissions should be close to actual releases. The CNSC is clearly not following IAEA guidance."

Flaw 2. No Medical Studies. The CNSC has declared that it will no longer do medical studies on communities exposed to radioactivity from nuclear facilities. The Tritium Awareness Project sees this as an abdication of the regulator's responsibility to protect the health and safety of Canadians. In Port Hope, disturbing increases in such diseases as childhood leukemia and brain cancer have been documented, but CNSC dismisses these as "statistically insignificant" instead of doing followup studies to learn more. An international study of atomic workers in 15 countries has shown statistically significant increases in radiation-induced cancers, and revealed that Canadian workers have a much higher risk than workers in other countries. Yet the CNSC has done nothing to investigate the reasons for this elevated risk factor among Canadian atomic workers. Robert Del Tredici of the Atomic Photographers' Guild asks, "Is it possible that the extra risk for Canadian workers is due to the high levels of tritium they are exposed to? No other atomic workers get so much tritium exposure – shouldn't the CNSC be checking this out?"

Flaw 3: No Protection for Populations. The damage caused by atomic radiation is directly related to the total dose delivered to an entire population. For example, if you double the number of people exposed to a given radiation dose, you double the number of cancers that result. The CNSC ignores this fundamental principle underlying radiation protection by looking only at individual doses, not population doses. So when it allows tritium to be dumped into the Ottawa River, which becomes drinking water for a million people, the CNSC insists there is no problem because individual doses are small. But as Gordon Edwards of the Canadian Coalition for Nuclear Responsibility points out, "The CNSC refuses to acknowledge that the public health burden is greater when the population exposed is larger. It is irresponsible to subject thousands of men, women, children , and foetuses to unnecessary radiation exposures." Exactly the same principles apply to the Port Hope situation. You cannot use individual doses as a yardstick to measure radiation impacts on a whole community.

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Flaw 4: No Safe Dose. All independent scientific bodies – such as the International Commission on Radiological Protection, the United Nations Scientific Committee on the Effects of Atomic Radiation, and the US National Academy of Sciences, as well as the IAEA – agree that there is no such thing as a safe dose of atomic radiation. Yet the CNSC steadfastly maintains that "permissible doses" of radiation are safe. This is wrong. Accordingly, CNSC shows little concern with radioactive pollution of the environment and of people as long as their exposures are within the limits set by the regulator. Lynn Jones of the Tritium Awareness Project said, "In effect, this is a licence to pollute." CNSC President Binder has said that dumping tritium into the Ottawa river within regulatory guidelines is absolutely safe. Such a statement is inconsistent with the CNSC mandate to protect the health and safety of Canadians, and contrary to its own ALARA principle: to keep radiation exposures "as low as reasonably achievable". Speaking of the SSI plant, Jeff Brackett of Safe and Green Energy (SAGE) from Peterborough observes that "Soil contaminated with tritium in concentrations averaging several hundred thousands of becquerels per kilogram occurred while the CNSC was supposed to be on watch to prevent such problems." Tritium levels in a well sixteen kilometres away from the plant measure 100 becquerels per litre – that's about 15 times greater than the already elevated tritium levels measured in the Ottawa River.

Flaw 5. No Independence. The CNSC reports to the Minister of Natural Resources – a Minister committed to the promotion and expansion of the nuclear industry in Canada. As Ole Hendrickson remarks, "This flies in the face of IAEA guidance that the regulator 'should be independent of any government department and agencies that are responsible for the promotion and development of the practices being regulated'." Just 18 months ago, Linda Keen was fired as President of the CNSC for refusing to condone the restart of the NRU reactor, which was out of compliance with its licensing requirements. The Minister insisted that the CNSC defer to the needs for AECL to produce medical isotopes. As Gordon Edwards observes, "These actions by the government deprive the CNSC of any independent status and reinforce its role as an integral part of the nuclear industry. The conflict of interest could not be clearer."

Flaw 6. No Health Expertise. The CNSC is obligated by law to protect the health and safety of Canadians and to disseminate objective scientific information on the nature of the risks associated with the operation of its licensed facilities. However, it has no health department, nor does it have a cadre of well-trained bio-medical professionals capable of assessing the radiation risks and providing accurate information on health risks to workers and the public.

Conclusion. The Tritium Awareness Project believes that CNSC cannot fulfill its legal health-related obligations under existing circumstances. Two recommendations that can help steer this agency onto a better path are:

Recommendation 1*: Eliminate all ties between the CNSC and the Ministry of Natural Resources. As long as CNSC reports to the same minister as AECL does, the regulatory agency will not be independent of the nuclear industry. This change will not require any amendment to existing law.*

Recommendation 2*: Require CNSC to establish a world-class health department with a cadre of well-trained professionals in the biomedical field who are not linked to the nuclear industry or to agencies promoting nuclear power.*

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