



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

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Ottawa, Canada
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Your file *Notre référence*

Our file *Notre référence*

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Dr. Gordon Edwards, Ph.D.
53 Dufferin Road
Hampstead QC H3X 2X8

Dear Dr. Edwards:

Subject: Tritium Awareness Project (TAP)

In your letter of February 16, 2009 (enclosed), you make a number of points that I feel I must respond to. First, statements by the Minister of Natural Resources are correct. There was no leak of radioactivity to the river as a result of the heavy water spill inside the NRU building. Both the Canadian Nuclear Safety Commission (CNSC) and Atomic Energy of Canada Limited (AECL) have been clear that the water released within the NRU building was collected and contained, and that any subsequent releases of tritium to the river have been controlled and monitored through the Waste Treatment Centre. Planned operational tritium releases that are controlled and monitored within environmental standards are not leaks and it is incorrect to suggest so.

I am happy to provide you with the number of becquerels released but it is important to put these numbers in context. The calculated release of tritium through the NRU stack was 4.5 TBq. The scientific community understands that such an airborne release could only result in an extremely small dose of radiation to the public, with a maximum dose being about one ten-thousandth of the CNSC regulatory maximum public dose of 1 mSv. In comparison, the average Canadian receives about 2.5 mSv from natural background radiation.

The total amount of tritium sent to the Waste Treatment Centre was 25.5 TBq. In accordance with its licence, AECL is keeping waterborne releases within their monthly administrative limits of 15.7 TBq of tritium per month. As mentioned above, releases to the river are being controlled within AECL's operational administrative limits which are a small fraction (less than 0.1%) of the regulatory limit. Hence, releases fall within a significant safety margin equal to a factor of 1000

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times below the internationally accepted public limit as recommended by the International Commission on Radiological Protection (ICRP) and adopted by the International Atomic Energy Agency (IAEA) in its safety standards.

I strongly disagree with your claim that CNSC staff is misleading the Commission. The measurements upstream of Chalk River are about 4 Bq/L and those of Petawawa are about 8 Bq/L. I would point out to you that the numbers are well below any comparable standard including the Canadian drinking water guideline of 7,000 Bq/L (based on recommendations from the World Health Organization and adopted by Health Canada), the US drinking water standard of 740 Bq/L or the California Public Health Goal of 15 Bq/L.

Furthermore, CNSC staff has provided detailed information on tritium levels in the Ottawa River at public meetings and CNSC hearings. It is the role of the CNSC to put these numbers in context and disseminate scientific information to the public. The CNSC is mandated to protect the health, safety and security of Canadians and the environment and takes the mandate very seriously.

In closing, I would like to reiterate that the small leak of heavy water was contained. At no time was the public or the environment at risk.

Yours sincerely,



Michael Binder

Enclosure: (1)

c.c.: The Honourable Lisa Raitt, P.C., M.P., Minister of Natural Resources
Mayor Larry O'Brien, City of Ottawa
Mayor Ed Jacyno, City of Pembroke
Mayor Bob Sweet, City of Petawawa