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100+ groups call for designation as a “chemical of mutual concern”

## High concentration of nuclear facilities prompts call for action on radionuclides in Great Lakes

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FOR IMMEDIATE RELEASE

**Toronto** - More than 100 organizations from around the Great Lakes are calling on the Canadian and American governments to list radionuclides as a “chemical of mutual concern” under the Great Lakes Water Quality Agreement. The groups’ call is supported by a new report outlining the shortcomings of current efforts to track radionuclides and explaining what needs to be done to properly monitor these dangerous substances in our Great Lakes.

“The Great Lakes basin is a hotbed for nuclear-related activity, with [more than 30 nuclear generating stations, fuel processing facilities, waste disposal and uranium mine tailing sites](#) scattered around the four lower lakes,” points out John Jackson, author of the new report.

“We simply don’t know what the cumulative impact of these nuclear facilities and waste sites is on the lakes because there is no comprehensive monitoring of radionuclides in Great Lake waters,” says Theresa McClenaghan, Executive Director of the Canadian Environmental Law Association.

Meanwhile, the Canadian Nuclear Waste Management Organization (NWMO) continues to search for a long-term high-level radioactive waste disposal site, where highly radioactive fuel bundles from all of Canada’s nuclear facilities, including Ontario’s 20 commercial power reactors, would be permanently buried. Eight of the nine sites being considered by the NWMO are in the Great Lakes Basin.

“The evidence is that even very low levels of radiation can have serious health impacts, from cancer-causing cell damage to genetic mutations that can trigger birth defects,” says Kevin Kamps of Maryland-based Beyond Nuclear. In the U.S., the Biological Effects of Ionizing Radiation panel found that “there is no compelling evidence to indicate a dose threshold below which the risk of tumor induction is zero.”

As well as nuclear power production and its associated supply chain, there are also numerous medical facilities, universities and some industries located in the Great Lakes Basin that work with radioactive substances. On the U.S. side, weapons-related facilities are also potentially significant radionuclide contamination sources.

Concerns regarding radionuclides in the Great Lakes have long been an issue. The Nuclear Task Force of the International Joint Commission highlighted the inconsistency in reporting and monitoring of radionuclides in the Great Lakes basin as far back as 1997.

“What’s important to remember is that radioactive materials are constantly on the move around and across the Great Lakes. Whether it is fuel being shipped from a processing facility to power plants, waste being moved to storage sites, or tritium being shipped to a factory, these materials aren’t just sitting in one place,” says Jackson, adding “this opens up a real risk for accidental releases into the lakes themselves or into waterways that flow into the lakes.”

These movements will increase if the NWMO does develop a long-term storage site for used nuclear fuel. As of 2004, there was 36,000 tonnes of highly radioactive waste sitting in temporary storage at the province’s three nuclear plants. On the American side, there was an estimated 13,825 tonnes of irradiated fuel sitting at nuclear facilities in the Great Lakes basin as of 2011.

“We need to get a better handle on the impact of radionuclides on drinking water quality, fish and wildlife survival and the health of aquatic ecosystems throughout the Great Lakes. Radionuclides are not included in the most comprehensive environmental monitoring programs for the lakes because our governments have not listed them as a chemical of concern. That needs to change so that we start keeping better track of what all of this nuclear activity around the basin means for the health of our lakes and ourselves,” says McClenaghan.

The report is available at [www.cela.ca/publications/radionuclides-chemical-mutual-concern-great-lakes-basin](http://www.cela.ca/publications/radionuclides-chemical-mutual-concern-great-lakes-basin).

The groups’ submission is available at <http://www.cela.ca/publications/Letter-nomination-radionuclides-chemical-mutual-concern-GLWQA>

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## Background:

### Statements supporting need for comprehensive monitoring of radionuclides:

Health Canada's Radiation Protection Bureau:

Comprising one of the world's largest sources of freshwater and supporting a population of over 36 million residents, the [Great Lakes] basin is unique in that it contains nearly all components of the nuclear fuel cycle, from uranium mining to radioactive waste management... As a result of the large inventories of radioactive material at these facilities, there is a potential for a significant accidental release of radionuclides into the environment. Although the probability of such an occurrence is extremely small, the health, social, and economic consequences could be significant.

Brian A. Ahier & Bliss L. Tracy, "Radionuclides in the Great Lakes Basin," *Environmental Health Perspectives*, Vol 103, Supplement 9, December 1995, p. 89.

International Joint Commission's Nuclear Task Force:

...monitoring of radionuclides in the Great Lakes primarily meets the need for compliance by users of radioactive materials with the conditions of the licenses for discharge. This results in differences in the radionuclides reported, how radionuclide levels in the environment are reported, the extent of off-site monitoring, and the specific biological compartments included in monitoring by facilities in Canada and the United States. Very little of the monitoring activities are designed to address or are capable of considering the movement and cycling of radionuclides through environmental compartments and ecosystems.

Nuclear Task Force, International Joint Commission, *Inventory of Radionuclides for the Great Lakes*, December 1997, Overview.

Environment Canada:

...the releases of uranium and uranium compounds contained in effluent from uranium mines and mills are entering the environment [in Canada] in quantities or concentrations that may have a harmful effect on the environment and its biological diversity.

Environment Canada, "Synopsis of PSL2 Assessment Report," September 2006 at <http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=2A379917-1>