

Mayor Tory and Executive Committee
Office of the Mayor City Hall, 2nd Floor
100 Queen St. West
Toronto, ON M5H 2N2

October 19, 2017

Dear Mayor Tory and Executive Committee:

Re: Comments on EX28.13: Toronto's Emergency Management Program and Revisions to the Toronto Municipal Code

I am a family doctor and professor in the Department of Family Medicine at Queen's University in Kingston, Ontario. I would like to make recommendations to the City of Toronto Executive Committee on behalf of the Canadian Association of Physicians for the Environment (**CAPE**) about important revisions that we believe are necessary to attain a world class Provincial Nuclear Emergency Response Plan (**PNERP**). These revisions must occur before the present PNERP is approved by provincial cabinet at the end of 2017.

As a physician's organization, we are particularly concerned about the health implications of a severe nuclear accident in the Greater Toronto Area. Having examined the PNERP and its proposed updates, I conclude that the present Ontario PNERP is not consistent with the goal of protecting the public's health in the event of a severe nuclear accident.

Recommendations from CAPE:

1) CAPE recommends that the Toronto Executive Council insist that the PNERP, in keeping with international best practices, and with the example of other countries such as Switzerland, should be designed with a planning basis of an INES level 7 Fukushima-level accident instead of an INES level 5 accident (similar to Three Mile Island).

The PNERP states that "the amount of detailed planning should decrease as the probability of the accidents' occurrence decreases". As a physician's organization, we believe that the potential severity of the consequences of an event, as well as the probability, should determine the level of preparedness. In this case, the PNERP should plan for a Fukushima-level accident, for the following reasons:

- unlike almost anywhere else in the world, Ontario has built its reactors in the most populated region of the country; half of Ontarians live near one of the province's nuclear reactors;
- unlike almost anywhere else in the world, Ontario has built its reactors on the shores of large bodies of fresh water (Lake Ontario and Lake Huron); forty million people depend on the Great Lakes for their drinking water;
- Canadian reactors are old, and therefore prone to dysfunction, increasing the chance of an accident; and
- unlike most reactors in other countries, they are multi-unit plants with a single containment structure, therefore the risk is greater in the event of an accident.

It is a significant omission in the PNERP that contingency planning for the real possibility of radioactive contamination of the Great Lakes is not addressed. The density and size of population living so close to large nuclear stations and the inherent risks of aging multi-unit reactors with shared containment structures translate to greater health risks for local communities (including the entire GTA as well as communities downwind and downstream from the reactors) requiring a world class emergency response plan.

2) Extend the pre-distribution of KI pills beyond 10 kilometres. The decision about the distance of pre-distribution of KI pills should be based on rigorous science, and should be in keeping with international best practices. In Switzerland, pre-distribution occurs to all residents living within a radius of 50 kilometres from a nuclear reactor.

4) The PNERP should allow for realistic scenarios during a severe nuclear accident. The present PNERP makes some unrealistic assumptions about the unfolding of events during a nuclear accident. For instance it assumes a delay of 24 hours between an accident and any radioactive releases. It assumes 100% KI ingestion and 100% evacuation within the primary zone during that 24 hours, as well as complete and extensive communication of instructions to the public. It assumes predictable weather patterns and no traffic jams. These are all extremely unlikely in the event of a catastrophic accident. The PNERP should allow for unexpected events, providing alternative plans in the event that scenarios do not unfold as planned.

5) The PNERP should ensure that the healthcare community is prepared for a severe nuclear accident, including plans for evacuation of hospitals, schools, long-term care facilities and daycare centres, and accommodation of vulnerable populations such as elderly shut-ins and the disabled. It should ensure that hospital emergency room staff in the GTA undergo regular drills and exercises in preparation for mass transfer of evacuated patients from hospitals in the primary and secondary zones, multiple casualties, radiation illnesses and radioactive decontamination of incoming patients. It

should implement public education about radiation (health effects and protection) and should ensure backup for all medical records. In Fukushima, there was disorganization, miscommunication and an overall inadequate response on the part of the healthcare community. The Ontario government should learn from these mistakes and should ensure all the above is in place as part of the PNERP.

CAPE recommends to the City of Toronto Executive Committee that it promptly communicate to the Ministry of Community Safety and Correctional Services expectations for a robust world class nuclear emergency response plan that exceeds international best practices, addressing the many deficiencies and omissions in the proposed PNERP that is to be passed by the end of 2017. The present PNERP requires significant revisions, the most important being that the planning basis should be that of an INES level 7 (Fukushima-level) accident.

Thank-you for taking time to address this crucial public health issue.

Sincerely,

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