July 28, 2017

Ministry of Community Safety and Correctional Services
Community Safety and Intergovernmental Policy Branch
25 Grosvenor Street, 9th FL
Toronto, ON M7A 1Y6
Attention: Leslie Coleman, Manager

RE: EBR Registry Number: 013-560
Provincial Nuclear Emergency Response Plan/Master Plan
Public Comments Period

Dear Ms. Coleman:

SOS Great Lakes is a non-profit organization that represents the rapidly growing opposition to the plans by OPG to build a Deep Geological Repository for Low and Intermediate Level Nuclear Waste (L&ILW DGR) on the shore of Lake Huron, at the Bruce Nuclear Plant. That proposal is nearing the final stages of its review by the CEAA and the Minister of Environment and Climate Change. We are among the 40 million people who get their drinking water from the Great Lakes. Since 2012, we have worked to bring the voices of Ontarians, Canadians and Americans from across the Great Lakes Basin who are appalled at the notion of nuclear waste so close to world's largest supply of fresh drinking water, to federal and provincial government attention so that the DGR 1 will be stopped.

We are not anti-nuclear. We realize that the province's energy policy must include nuclear power until a more sustainable and truly clean energy future can be achieved. Our mandate is to oppose the L&ILW DGR in Kincardine because of its fundamental flaws, and to oppose the irresponsible approach that is contemplated by OPG and NWMO to bury Intermediate and High Level nuclear waste within the Great Lakes Basin. We are also opposed to any irresponsible approach to the safety and security of our environment or human health that is posed by the provincial or federal governments or its operators in the nuclear industry.

As informed citizens who live within the Great Lakes Basin, we are writing to react to the inadequate updates to the Provincial Nuclear Emergency Response Plan (PNERP) / Master Plan. While our comments relate to our experiences as neighbors of the Bruce Nuclear Plant, they also reflect the grave concerns shared by supporters who reside on other Great Lakes, near the province's other 17 nuclear reactors (including those in Darlington, Pickering and at Chalk River), the concerns of those who live within the wide danger zones of storage sites, and along the transportation routes where nuclear waste is moved across Ontario. The province's nuclear operator has facilities, both existing and planned, that must respond to the real and growing incidence of risk, malfunction and accident; the province and its operator must reassess its overly optimistic projections of the potential for

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accidents singly or in cumulative scenarios, and recognize these scenarios to be real. The accidents that have happened in Ontario and across the globe must be recognized as the warning to the leaders of our province that lack of diligence in the first place, and lack of preparedness in the second, poses the single greatest risk to human health and the environment faced by Ontario and the Great Lakes. The issue of cumulative effects caused by nuclear accident is of increasing significance as the province discusses the one hundred year plans for convergence and overlap of out of date nuclear generating plants, construction activities during decommissioning and rebuild, and the ill-conceived plans for intermediate and high level waste storage in the Great Lakes Basin.

We can see this Plan only as an early draft that needs significant revision by independent advisors and new peer experts. The Plan at this early stage lacks precautionary thinking, lacks precision in analysis, lacks clear examination and acceptance of best international practice in risk assessment and safety measures, lacks convincing reference cases, lacks examination and assessment of global failures to derive lessons learned: all these are significant flaws of the Plan. The reliance on models that are overly confident, and rely on the CNSC for regulation and advice are inadequate to protect provincial environment, society, resources and people.

Whether in Ontario, or along the St. Lawrence River, or on the American side of the Great Lakes, our supporters are immediately affected now, and will be in the future by the action that this provincial government takes to protect against emergencies that will occur in the production of nuclear power and its byproducts.

As noted by others in our group and by our allied groups, the following points are of great importance to the effectiveness of the provincial plan, and have not been adequately addressed:

- The Plan is over reliant on the industry for framing of accidents, risk assessment modelling, standards of practice and advice. This has prejudiced the Plan.
- We have learned through our work that the industry and its regulators are not precautionary in their assessment of risk, are overconfident and that they are predisposed to minimize significance of effect.
- Risk assessment models are not best practice models, or up to date by international standards.
- The descriptions of distance from accident as zones of contamination (immediate and longer term) are insufficient to account for severity of a major accident, or for cumulative effects, geographic or climatic effects in combination in lesser accidents.
- The extents of damage zone during accident are inadequate and do not target the significance of contamination of the Great Lakes and drinking water for 40 million people.
- There has never been a study of the short or long-term effect of radionuclide release (major of minor) into the Great Lakes, the source of drinking water of 40 million people; yet the reason for this review is the potential of a major accident to occur.
- OPG still affirms that dilution of radionuclides in water sources is the solution to contaminant release, and this has not been challenged by this report.
- There is little to no account for the transport of radionuclide contamination to hot spots downstream of the nuclear emergency, where the contamination will be transferred by air, water, severe storm and precipitation or through explosion and fire.
- There are insufficient base health studies on the effects of radionuclide contamination for the Plan's conclusions to be valid.
- Current risks to populations from so called normal activities at the plants have not been accounted for nor reports of ongoing local emergencies and health effects.

- We know from our own experience in the municipalities adjacent to the Bruce Nuclear Plant that there is entirely inadequate knowledge, resources or planning for even the most modest emergency or accident related to nuclear release.
- There is no adequate mechanism for informing the public within the danger zone of an accident.
- There is no emergency evacuation plan for the people in our towns, nor an acknowledged best practice for 'staying in place' or 'leaving the emergency zone'.
- There are insufficient hospitals and emergency facilities proximate to the Bruce Nuclear Plant for treatment of accident victims for immediate or later care.
- The public is unaware of risk and has been lulled into complacency for preparedness by the industry whitewashing issues relating to release or other accident.
- Emergency preparedness is 'not talked about' in communities proximate nuclear sites, for fear of stigmatization and lowering of property value assessment and due to economic impact; this is the opposite of what should be the case in an aware and prepared public who have the capacity to act alone or together in case of emergency.
- Complaints about safety by the public are routinely marginalized by the industry, by associated municipal councils, by the county council and by the province; complainants are stigmatized within the nuclear community.
- The Office of the Fire Marshal and OFMEM are ill equipped to comment on any document of this nature, and are reliant on information put forward to them by the operator, regulator and industry.
- The cumulative effects analysis of multiple failures is not sufficient, although the potential for multiple failures in combination has been proven to be the case at international nuclear facilities, including at nuclear waste storage sites.
- There has been an insufficient accounting for climate change in the prediction of nuclear emergencies including in the prediction of climate induced fires, stalled weather systems, tornado, hurricane, floods, rising water levels at nuclear sites and accident related to transportation of waste on worsening roads conditions in adverse weather.
- Hostile action has been not been significantly accounted for in terms of effect.
- The rise in rates of nuclear accident and emergency has not been accounted for sufficiently.
- The health effects of ionizing radiation on vulnerable sectors of society, such as women, children and the elderly has been ignored.

Recommendations:

- The assessment of risk and effect and Plans for mitigation must be independent from industry and its current regulator at CNSC.
- The public must have a more significant part to play in determination of emergency preparedness and mitigation.
- The health effects of all levels of ionizing radiation on vulnerable sectors of society such as women, children and the elderly must be recognized and immediate new research including baseline health studies be conducted.
- Industry must not intimidate or discourage the public from speaking out over issues of safety and security in relation to nuclear emergency preparedness and precaution; the province should not pander to the nuclear operators and its industry, and must change its approach to public protection, putting the public and environment first in its assessment and response to risk.
- The minimum standards for the province of Ontario for environmental and public safety should be the highest and international best practice; this is especially the case because of the number and size of nuclear generating and waste storage facilities within sensitive

environmental features, the Great Lakes and the dense population of southern Ontario and its U.S. neighbours.

- Municipalities and counties should be clearly equipped to enable emergency evacuation and mitigation, including provision of medical support.
- The Plan must recognize and plan for the risk of contamination of the Great Lakes in the event of one or a cumulative effects emergency scenario, and plan for the least as well as the worst case scenario (in a full range of scenarios and modelling).
- Emergency mitigation measures as a result of the failure of the storage of nuclear waste facilities must be factored into the Plan.
- Planning for nuclear facilities, their maintenance, their decommissioning, construction and the construction of waste storage must be precautionary and consider the full range of significance of adverse effects before decisions are made that make matters singly or in combination, much worse than they are now.

Yours very truly,

Jill Taylor, President
On behalf of the Board of Directors of SOS Great Lakes

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