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Oral intervention from

Joanne Martin

In the Matter of

Ontario Power Generation Inc.

Proposed Environmental Impact Statement
for OPG's Deep Geological Repository
(DGR) Project for Low and Intermediate
Level Waste

Joint Review Panel

September 16 to October 12, 2013

Intervention orale par

Joanne Martin

À l'égard de

Ontario Power Generation Inc.

Étude proposée pour l'énoncé des incidences
environnementales pour l'Installation de
stockage de déchets radioactifs à faible et
moyenne activité dans des couches géologiques
profondes

Commission d'examen conjoint

16 septembre au 12 octobre 2013

DGR Joint Review Panel Hearing Written Submission

in Support of an Oral Intervention

Resiliency and Principles

By Joanne Martin

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Resiliency and Principles

Introduction

“The National Strategy and Action Plan for Critical Infrastructure” issued by Public Safety Canada establishes “ a risk-based approach for strengthening the resiliency of Canada’s vital assets and systems.” The goal of this strategy and action plan is to work with partners to **“manage risks, reduce vulnerabilities and strengthen the resiliency of critical infrastructure across the ten sectors.”**

The proposed Ontario Power Generation (OPG) DGR (Deep Geologic Repository) could adversely impact at least six of the ten identified critical sectors; these are **Health, Food, Water, Safety, Energy and utilities and Transportation**. The other four critical sectors are Finance, Information and Communication Technology, Manufacturing and Government.

“Resiliency includes consideration of unforeseen events such as terrorism, equipment failure and catastrophic human error as well as natural disasters such as fires, floods, hurricanes, tornados, earthquakes, sinkholes etc., which are all becoming more the norm lately,” said Robert Burak, P.Eng., President of Canadian Precast/Prestressed Concrete Institute.

A principle is a fundamental truth, law or proposition that serves as the foundation for a system of belief or behavior or for a chain of reasoning.

According to “The Dublin Principles of Water”, by Miquel Solanes & Fernando Gonzalez, 1999, important principles of water are as follows:

- 1. Fresh water is a finite and valuable resource, essential to sustain life, development and the environments;**
- 2. Water development and management should be based on a participatory approach, involving users, planners and policy makers; and**
- 3. Water has an economic value in all its competing uses and should be recognized as an economic good.**

By the year **2025**, there will be an **unprecedented increase in world population** to between **7.9 and 9.1 billion people** (Engelman and LeRoy, 1993) according to the document *“Principles of Water Management for People and the Environment.”* Usage of water varies greatly around the world based on availability and cost. The average US citizen uses 700 litres per day just for domestic tasks, whereas in Senegal, the average usage is 29 litres per day. Haitians spend 20 % of their income on buying water, a far cry from the cost to Canadians at this time.

The Great Lakes currently provide 21 % of the world’s fresh drinking water. The proposed site for OPGs DGR is like playing **Russian Roulette** with our lives and those of future generations. Imagine if the proposed DGR contaminated this life-giving force. There would not be enough money, time or resources to mitigate the disastrous results despite numerous assurances in OPGs Environmental Impact Study (EIS). Minor mitigation for seepage may be reasonable and possible, major mitigation will not be and that is the dilemma. There would not be enough water to survive the way we do now. Where would we buy water? And for how much?

The most surefire way to avoid this terrible outcome would be to outlaw burying nuclear waste anywhere close to our precious and irreplaceable water. It is simple commonsense and as basic as that!

Long-term Safety of the DGR

In March 2012, Japanese Prime Minister Noda said of the Fukushima nuclear disaster said, **“Government officials had been blinded by a false belief in the country’s technology infallibility and were too steeped in a safety myth !”**

This Joint Review Panel and the various Government Departments involved must not succumb to the same disastrous malady! The future of our following generations, our health and welfare depend on this!

When a mission suddenly goes wrong, the decision makers must give the “abort” command. In the case of the proposed DGR, on the shore of Lake Huron, thousands of people worldwide are yelling “abort the mission,” and people in

authority have to have the courage, ethics and integrity to make the hard decision, abandon this flawed plan and look diligently for other solutions and other sites.

This is a perfect opportunity to set a brilliant example for the world and to avoid setting a dangerous precedent for other nuclear plants clustered beside the shared US and Canadian Great Lakes!

It is an old adage that you “cannot make a silk purse out of a sow’s ear.” No matter how much modeling, justifying graphs, scientific backup, shiny brochures and paid lackeys OPG trots forth, the decision to “buy a willing community” and invest so much time, money and manpower in the current site is critically flawed.

The last 10 or so years has been an expensive and perverse exercise in trying to build a case to buttress a poor business and environmental decision that should never been made in the first place. The investigation into the geology of the site alone is dependent on only 6 deep bore holes and many modeling assumptions. Why test only 6 deep bore holes, and why did viewers notice that these core samples were cracked and crumbling? Is it because the water actually present throughout the limestone that far down had dried up when exposed to the surface air?

Apparently in the 1970s, when Ontario Hydro/Bruce Power were drilling, they discovered a great number of karsts, so much so that a drill bit flew off and was lost as the drill encountered air instead of rock.

The guiding principle at the onset for choosing a site for a DGR should have been to research the most appropriate and safest site, far from significant water and the large Toronto population, as well as the best containment method. Are we certain that this proposal is it? No, we certainly are not! What site is out there that would be less problematic and less prone to seepage and degradation?

This site selection was not done with proper due diligence, and despite the fact that the “willing community” exercise was not properly carried out, this claimed willingness carried a great deal of weight in siting the DGR. In OPG’s response to

IR EIS-02-40, OPG looked “conceptually at the alternative of locating the DGR Project on the Bruce nuclear site versus seeking a greenfield site off the Bruce nuclear site.” This unknown site idea was not pursued or investigated according to OPG officials during the recent site visit by The Inverhuron Committee but was abandoned out of hand in favour of the current site.

Siting the DGR beside a large and important life-giving body of fresh water, may leave the proposed DGR more vulnerable to tornados and hurricanes due to the lake effect, as well as being affected by cyclical and dramatic changes, natural and otherwise, in the level of the Lake.

The DGR site is virtually undefended; OPG plans to construct it under and beside the world’s largest nuclear power plant, in a rural small-town setting that is easily accessed from Toronto, the rest of Canada or the United States by highway or air or up the Great Lakes by boat. There is only a volunteer fire department, a handful of OPP officers and a small, understaffed area hospital.

These factors could make the DGR an easy and perhaps more attractive terrorist attack target, resulting in maximum destruction, massive loss of life and mayhem. How do these facts align with Public Safety Canada’s mandate to “manage risks, reduce vulnerabilities and strengthen resiliency of the critical infrastructure,” particularly Health, Food, Water, Safety, Energy and utilities and Transportation? OPG may say, “That won’t ever happen,” but how do we know and why take a chance that we do not in all good conscience and intelligent judgment have to take?

Project Justification:

In principle, siting the DGR on their property right by and under the Bruce Power Plant, seems like an efficient, cost effective and in fact, **very convenient decision** for OPG to make, as they themselves admitted. Management felt no necessity to search for a safer site far away from the fresh water source of 40 million Canadians and Americans because even better, the Mayor of Kincardine, a former

Bruce Power (BP) employee, signed a hosting agreement with OPG with an eye to harvesting the financial benefits being a “welcoming community” would entail.

Facts: An agreement of intention was signed by the Kincardine Mayor and OPG in 2002 before approval by the municipal council.

OPD failed to perform due diligence by neglecting to investigate alternate sites other than perhaps fleetingly, in a conceptual way. A willing community and the financial benefit of the convenience became the most crucial criteria.

OPG agreed to pay a millions of dollars to Kincardine Municipality to assure the approval the DGR and ongoing support. **Ethical business practice would deem this a “conflict of interest.”**

The Municipality of Kincardine **unduly influenced** a “so called peer survey” in order to “prove an informed and welcoming community.” The survey, actually referred to as a census or poll by the survey company, ignored the accepted principles and guidelines necessary to conduct an honest, unbiased and credible survey in the following ways:

- a) **They did not disqualify** OPG and Bruce Power employees or their families from the survey sample;
- b) **They failed to include** approximately 2,000 seasonal tax paying residents that make up the bulk of Inverhuron, the closest community to Bruce Power, as the survey company conducted the poll by phone in January and February 2005;
- c) They included the following **prejudicial preamble** which stated that the proposed site categorically “**provides the highest level of safety of ANY OPTION**” and promises “**significant economic benefit to the residents of the municipality.**” The poll failed to offer any alternative site options because none were investigated, while making it appear that other sites had been conscientiously considered and discarded before the proposed site was chosen;
- d) They asked an deliberately **ambiguous** question “**Do you support the establishment of a facility for the long-term management of low-level and intermediate-level waste in the Western Waste Management Facility? ”**

The question did not explain that they were talking about “radioactive nuclear” waste, exactly which types and percentages of each nor where the facility would be, i.e., so perilously close to Lake Huron, or that it would be left in the ground and unmonitored for 100,000 unless inadvertently excavated by our grandchildren and great grandchildren; and

e) **They eliminated** all “ no or don’t know” answers received from the final calculation of the so called survey results, which gave a false result of 73 % in favour of being welcoming, although certainly not informed.

As shown by the **Public Attitude Research in 2009**, the general population is not informed about the possible negative ramifications of the proposed DGR because of the rigorous, one-sided public relations campaign OPG and Bruce Power continue to wage and also because there is no independent media in the area that does not depend on generous and powerful OPG and Bruce Power advertising dollars. Therefore, there are no negative, controversial, thought-provoking or balanced editorials, articles or radio and television pointing out the valid concerns, just a steady diet of OPG propaganda and numerous photos of cheque presentations.

There was a bright light in the community. ***The Kincardine Independent*** newspaper mounted their own poll in April 2013 asking if people were in favour of the DGR. Of the close to 400 people who voted, **86 % were against the DGR**. It is interesting to note that the front desk newspaper staff expressed surprise to see this result as they had believed the local story of a completely willing community.

The former Editor of The Kincardine News, Marie Wilson, an employee of NWMO, is currently under contract with OPG as Media Relations Manager for the DGR project and churns out slanted and self-serving materials to bolster the OPG position. This forms the basis for OPGs “public information” campaign that has been quietly kept to the immediate locale. However, it is important to note, that decisions relating to water as per The Canadian Water Act, are of wider concern with many (40) million stakeholders than the 4,000 people this decision has been based on.

There is justification for dealing intelligently with the major challenge that the nuclear industry obviously has around the world, that of safely disposing of the huge amount of radioactive waste. So far, the industry, in so many countries around the world, **has not scored** an enviable record. In fact, that may be why OPG decided to experiment with a new, not yet proven solution, trying to bury the waste in porous limestone beside a large body of water. The hope may be that such a volume of water may dilute the inevitable radioactive seepage to a certain degree. Unfortunately, Japan's crippled Fukushima nuclear plant is currently spewing illegal amounts of contaminated groundwater into the ocean, as the operator struggles unsuccessfully to contain this emergency. **This is in spite of Fukushima's EIS mitigation plan that presumably everyone bought into.**

As technology and science make new discoveries every year, it would be prudent to shelve this Bruce DGR plan right now in favour of a safer, less expensive and more elegant solution that may present itself in the near future.

Effects Prediction, Mitigation Measures and Significance of Residual Effects

Shame on the Canadian Nuclear Safety Commission (CSNA), who in their document CEAR# 1251 Long-term Safety Case for the DGR Project, stated in the Executive Summary, "Overall, CNSC staff have concluded that, with respect to long-term safety, the DGR Project is '**unlikely to cause significant adverse environmental effects** under the CEAA 2012, taking into account mitigation measures, OPG commitments, and the recommendations outlined in the PMD"...even though " **some uncertainties exist in the long-term safety case to be addressed later by OPG in a Geoscientific Verification Program**" and that OPG is advised to "review and revise the long-term geomechanical model and the safety assessment." How is "unlikely" and "some uncertainties" acceptable?

Shall we judge a company's future performance based on past performance? Bruce Power (previously Ontario Hydro)/OPG is the same company that **failed to mitigate** catastrophic toxic emissions starting in 1985, which killed a local farmer's baby lambs, contaminated their crops and caused serious health issues for the

family and close neighbours without warning. The same company that did not take comprehensive preventative or mitigating measures to correct or “mitigate” the toxic Hydrogen Sulphide effects or effectively regulate their timing to avoid causing harm. **The residual effects are still affecting this family many years later.**

This is the same company who has not required the local Ministry of Health to do baseline health studies investigating increased cancer and MS incidence, baseline testing of residents, let alone well testing at Inverhuron for air and groundwater transport of dangerous nuclear elements such as increased Tritium, Strontium-90 etc. levels. The resiliency principles established by Public Safety Canada seem to be of no consequence to Bruce Power/OPG where local communities are concerned.

And the same company that recently had to fire a number of workers for drinking on the job while they were in charge of the proper and safe functioning of Bruce Power.

Also the same company who has “quietly shelved it’s widely opposed and controversial plan to ship 16 huge radioactive steam generators out the Great Lakes and St. Lawrence Seaway to the Atlantic and across to Sweden.” They received permission for this shipment from the Canadian Nuclear Safety Commission (CNSC) following a two-day public hearing in Ottawa in September 2010. At that time Bruce Power stated, “If the very **unlikely scenario** occurred where the ship sank and the (generator) vessels were somehow breached, the very low levels of radiation would be diluted even further by the large volume of water and would result in a level **that we believe** would not even be measurable.”

The previous examples do not fall in line with Canada’s desire to strengthen resiliency vis-à-vis health, food, water, safety and transportation if this method of sending radioactive generators to Sweden was allowed. Some people contend that Bruce Power is just delaying for a time but still plans to push forward with this initiative.

Environmental Assessment Boundaries

OPG, in its Environmental Impact Statement (EIS) makes thousands of **commitments** concerning the DGR. These include attesting to the wonderful stability of the limestone geology and discounting the prevalent karsts formation, prevailing winds of acid rain from the US and characteristic limestone porosity, not to mention that the site is an **unproven experiment as a DGR has never been buried in this environment anywhere in the world**. These commitments are meant to support OPG's claim of supposed **low likelihood** of the DGR leaking into the ground water and the Great Lakes Basin through anywhere in the whole structure whatsoever for 100,000 years, and as well its claims of the **unlikely chance of significant damage** to humans, fish, birds, wildlife, flora and fauna nearby or thousands of nautical miles away on our common waterway, based on their own studies. **This fails to reassure me as OPG can promise no guarantees.**

In "Nuclear Fuel Waste in Canada, (Watershed Sentinel, Jan/Feb 2013)" Anna Tilman wrote, ***"There is no assurance that this waste could be safely and permanently contained in DGRs. No computer models can accurately take into account all the complexities that could be encountered from burying this deadly waste deep underground. Nothing is immutable, not even rocks. Containers will eventually erode. Groundwater will seep in. Water and gas contaminated with radionuclides will penetrate the barriers in the repository."***

Nor does it impress me to read the superficial submission to the Joint Review Panel (JRP) on July 23, 2013 of **Health Canada** (HC), who states the following limitations:

1. Health Canada comments are limited to issues for which the Department has possession of specialist or expert information or knowledge;
2. Health Canada is assisting the JRP with its evaluation of the potential human health impacts of the proposed project by providing specialist or expert information or knowledge...to the JRP and to the Responsible Authority (the Canadian Nuclear Safety Commission, CNSC).

3. As a Federal Authority, Health Canada does not assess the significance of the human health effects related to the project as this responsibility rests with the Responsible Authority.
4. Rather, Health Canada's comments focus on the accuracy, scientific validity and completeness of assessments concerning human health effects documented in the EIS.
5. Health Canada will not be granting any approvals or making any regulatory decisions with respect to this project.

Yet, in point 7.9 Human Health and Quality of Life in OPG's written submission # 1246, it states that "**Residual adverse effects** are predicted on the overall health of local residents and members of First Nation and Metis communities during site preparation and construction and decommissioning as a result of changes to air quality. " **So this is presumably not of concern to Health Canada although certainly of concern to local residents!**

Then Health Canada states it does not "verify air quality (acrolein) modeling results," that its conclusions are dependent on the validity of the environmental concentrations **predicted** by the **proponent**. In terms of reviewing predicted radionuclide emissions, noise pollution, contamination of country foods and drinking and recreational water, **HC again relies on assumptions** put forward by OPG in the EIS. So although HC is not "granting any approvals," it bases its closing remarks on "conformity" with the EIS Guidelines, verifying that human health impacts have been "properly characterized by the proponent," and "identifying whether the mitigation measures proposed are appropriate," again based on information furnished by the proponent, OPG. So Health Canada has blind faith?

This is analogous to letting the fox in the hen house set the menu for dinner. You can guess it's going to be chicken. Health Canada's submission constituted an exercise in sitting on the fence instead of providing an in-depth report that really looked at cogent and serious health issues that could affect Canadians in the short- and long-terms. The likelihood of contaminating our fresh drinking water and air would certainly be health relevant issues.

When so called experts say there's no risk for 100,000 years, it's only an opinion, not a proven fact. The long-term results are only proven when that long term has passed.

Existing Environment

The proposed DGR is to be sited close to the shore of Lake Huron. In looking at issues of resiliency and principles, we should take note of the following:

1. The force of water is relentless:
2. Ground water moves from one region to another to eliminate energy differentials;
3. The flow of ground water is controlled by the law of physics and thermodynamics;
4. Outside forces such as gravity pulls ground water downward: and
5. Ground water flows through porous media.

The proposed host rock formation is some shale and mostly limestone. According to the Canadian Encyclopedia, typical karst forms, i.e., sinkholes and sinking streams, are limited to areas where comparatively soluble rocks, principally limestone, occur. There are 1.2 million km² of karst rock outcroppings in Canada. These are common in all geological regions **except the Canadian Shield**. This is the site that the Seaborn Commission strongly recommended.

Limestone is dissolved chiefly by carbonic acid produced by the solution of atmospheric carbon dioxide (acid rain) in water. Global rates of limestone solution are determined by the amount of water and carbon dioxide available in the environment. In building a Wind Rose to measure prevailing winds near Bruce Power, one would find that the prevailing winds are north from the US and therefore bring abundant acid rain north to Lake Huron. The solubility of limestone in water and weak acid solution leads to karst landscapes.

That is why "limestone pavement" is particularly well developed in the Bruce Peninsula and why drilling at Bruce Power in the 70s encountered many drill holes

with large voids at depth in the limestone. **Also that is why their 6 deep core samples are cracked now that they have dried out and are no longer wet.**

It is distressing to read the following information from Ken Cory of Oshawa, signee #10,510 who wrote, ***“I live downstream from Lake Huron, so this threatens my water supply directly. I did some work on seismic assessment of deep repositories for waste disposal, and I know that water moves within all rocks at the depths you’re considering. It’s irremediably stupid to locate a toxic dump so near a large body of fresh water, regardless of the proximity to the source.”***

“Unlikely” hazard, consequences or unexpected risk is not good enough given what is at stake and the potential disaster that could arise and could not be properly mitigated despite OPG’s claims to the contrary.

The formation and modification of sinkholes is a natural process in areas underlain by limestone and other soluble rocks. A huge sinkhole just developed in Orlando near Disney World in the underlying limestone. The location and rate of karsts and sinkholes can be affected by man’s activities such as excavation and blasting as proposed for forming the OPG DGR.

Charles Rhodes of Xylene Power Ltd. says that the main problem with the Bruce DGR is that it is far below the water table. ***“When the Bruce DGR is open there will be a large locally concentrated hydraulic pressure gradient radially around the DGR. Hence there are severe constraints on exploratory core drilling in the proximately of the DGR. Absent such drill cores there is no certainty as to the exact character of the subsurface rock adjacent to the Bruce DGR.”***

Rhodes says that ***“Due to the issues related to ion diffusion the wet storage concept at the Bruce DGR is completely wrong. The key issue is to keep the radioactive material dry so that there is no water borne ion diffusion.***

The solution to these problems is simple. Choose an existing lower cost more flexible DGR located in Canada which is far above the local water table in crack free granite and hence is inherently dry.”

Former Deputy Minister of the Environment, Rod McLeod petition signee #960 agrees with Rhodes in his comment, ***“The OPG proposal is very unwise.”***

In January 2013, the Cumbria County Council rejected the UK Central Government proposals to start work on an underground nuclear waste storage dump near the Lake District National Park. The reason for rejection was due to **“hearing evidence from independent geologists that the fractured strata of the county was impossible to trust with such dangerous material and a hazard lasting millennia.”**

The Lake District geology is primarily limestone and granite. Perhaps we need to contact those independent geologists before a decision is made based on the wonders of computer modeling and geologists who work for OPG.

Malfunctions, Accidents and Malevolent Acts

Petition signee # 18,630 Crystal Miron of Acworth, Georgia wrote the following on July 28, 2013.

“Storing nuclear waste near the Great Lakes is a terrible, shortsighted, nonsensical idea. Residents and political officials in the region need look no further than the continuing saga of nuclear waste leaks in Washington State for a cautionary tale for why this would be bad policy. If the nuclear industry has done such a terrible job on monitoring and securing nuclear waste in the past 50 years, I am skeptical of the industry’s ability to safeguard the Great Lakes from similar contamination risks for 1,000 years to come.”

How about 100,000 years? No matter how well prepared and safe OPG’s EIS and Environmental Assessment (EA) documents claim its proposed site is, that is simply conjecture and perhaps best guesses, **but not reality, not a guarantee, not proven or a sure thing.** There are hundreds of pertinent examples of malfunctions, accidents and malevolent acts to support this statement.

To sight a few, BP thought it’s oil rig wouldn’t explode, Germany thought ASSE II wouldn’t leak but it is 30 years later and the scientific computer modeling of the

rate of travel for nuclear waste in ground water at Maxey Flatts, Kentucky was proven completely off target by 23,090 years.

Chubu Electric, who built the Hamaoka Nuclear Power Plants in Japan, ignored Dr Kiyoo Mogi, a former University of Tokyo Professor, and his advice that “the siting of these power plants needs a drastic review.” They whined, “But we do not have a good place for siting nuclear power plants” and went ahead and built in the centre of a focal earthquake region.

The plants were built in compliance with government guidelines, but still could not withstand expected and unexpected but inevitable forces of nature. Currently, Japan’s nuclear body says highly radioactive water from Japan’s crippled Fukushima nuclear plant is leaking into the ocean and creating an “emergency” that the operator is struggling to contain. This is another example of planned mitigation measures failing to be effective despite all the computer modeling and best technology available.

The analogy should be crystal clear; **Japan** - don’t build where you might experience an earthquake, and **Canada** - don’t built where you could contaminate your drinking water.

How about the increase of malevolent acts in recent history? There was the 1993 bombing of the World Trade Centre, then the 9/11 terrorist attack and more recently the Boston Marathon bombing. As well, the RCMP foiled a terror plot in BC to target the provincial legislature on Canada Day 2013 as well as a plot in April 2013 to bomb the Via Rail train from Toronto to NYC.

William Frye, a retired University of Western Ontario professor who is an international consultant on nuclear waste has this advice. He states, ***“You do not put nuclear waste near things like the Great Lakes or the great rivers in case there’s a leakage you haven’t expected.”***

That being the case and as **it is a law of nature that the unexpected and unthinkable will happen**, 4,054 people in a little sleepy farming and beach community and local politicians anxious to feather their treasury nest **should NOT be allowed to decide** to build a DGR beside our precious fresh water source based

on their self-serving interests and lack of awareness of the looming and irreversible consequences. Many of the people polled just wanted to keep their job but these few people do not have the right to speak for 40 million people.

Sondra Proctor, #18,551 of Holt, Michigan writes, ***“Nothing, absolutely NOTHING justifies the possible and likely contamination of our precious fresh water, aka, the GREAT LAKES. Find some other place far away from our Lakes to bury nuclear waste.”***

Carol Bradshaw, #18,553 of Broadlands, IL reminds us, ***“The Great Lakes don’t belong to you alone. You have no right to despoil them.”***

The decision is too important to be made so casually, **based on such flimsy and absurd reasons as a supposedly willing community, money hungry politicians and a convenient location, already owned by OPG instead of best practices in diligently seeking the safest site.**

Signee # 19,756, Bob Baxter of Gainesville, Florida says, ***“This idea on its face is ridiculous. The nuclear waste dump in Nevada is the only place to store it. There is nothing to contaminate anywhere near the site in Nevada plus it’s already built.”***

Alternately, choose a site in Canada that is far above the local water table in crack free granite and hence is inherently dry.

I do not believe, along with over 20,000 other aware and concerned people, that creating a DGR on the shore of Lake Huron is acceptable, wise, responsible or in line with the national strategy issued by Public Safety Canada.

Neither does Dr. Amy Dean, President of the American Academy of Environmental Medicine, who wrote, ***“The health and wellness of citizens in the United States and Canada depend on clean water, air and food. Placing a nuclear waste on the shore of Lake Huron puts all our health at risk.”***

Summary

We are not here to move a flawed process along just because there has been much time and money invested along the way. This is a moot point and one that cannot tip the balance.

Given the numerous reasons sighted in this submission, the resiliency factor and the principles that mitigate against the success and safety of this DGR on the shore of Lake Huron, the real threat to 21 % of the world's fresh drinking water, I strongly recommend that the Joint Review Panel denies approval of the proposed Bruce DGR site and further directs OPG to do the following:

- 1. Explore other sites far away from the Great Lakes Basin;**
- 2. Look for a stable granite or a desert home that does not impact the US directly; and**
- 3. Explore alternate methods of storing or actually using the waste (i.e., see writings of Dr. Peter Ottensmeyer).**

I also recommend that the whole process for choosing a “willing community” and site be redefined so that a small minority with a vested interest does not overrule the common good and usurp the rights of the majority of stakeholders.

At the end of the day, this Panel is faced with a momentous decision that is a potentially far-reaching and serious threat to millions of people and the economy in Canada and the United States.

A decision of this importance must be courageous and, with the well-being of the majority of people at stake, must be the right decision. This decision will either reflect the right thing to do or the wrong thing to do; please rule that going forward with this DGR is the WRONG thing to do.

Thank you.

From: on behalf of OPG DGRP-OPG ISDR

Subject: FW: Sinkhole swallows part of Florida resort villa; visitors describe the building 'just snapping' - Yahoo! News Canada

Please attach this clip and article concerning sinkholes in limestone as an addendum to my written submission to the Joint Review Panel Hearing concerning the DGR.

Regards, Joanne Martin

YAHOO!

Your friend djoannestuart@yahoo.ca has shared a link with you.

Personal message: _____
See reference to Florida's limestone geology.

Sinkhole swallows part of Florida resort villa; visitors describe the building 'just snapping' - Yahoo! News Canada

<http://ca.news.yahoo.com/authorities-evacuate-florida-resort-villas-one-starts-sink-062452482.html>



CLERMONT, Fla. - It sounded like a thunderstorm as windows broke and the ground shook, but vacationers who were awakened from their rooms at a villa near Orlando, Fla., soon realized that the building was starting to collapse — parts of it swallowed by a 100-foot sinkhole that also endangered two neighbouring resort buildings.

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