Deep Geologic Repository Joint Review Panel

Commission d'examen conjoint du projet de stockage dans des couches géologiques profondes

PMD 13-P1.114A

File / dossier : 8.01.07 Date: 2013-08-13 Edocs: 4191246

Supplementary Information Oral intervention

Presentation from Jim & Brenda Preston

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

Renseignements supplémentaires Intervention orale

Présentation de Jim & Brenda Preston

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

Joint Review Panel

Commission d'examen conjoint

September 16 to October 12, 2013

Du 16 septembre au 12 octobre 2013





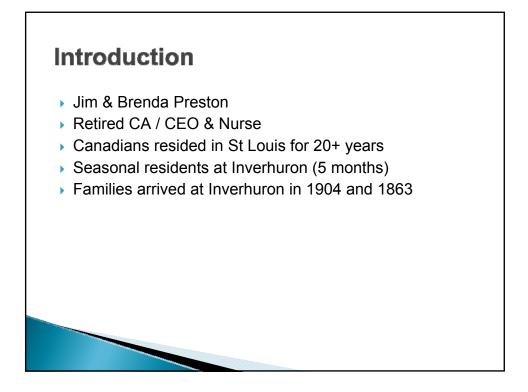
In the Matter of: Ontario Power Generation Inc. Proposed Environmental Impact Statement for OPG's Deep Geological Repository (DGR) Project for Low and Intermediate Level Waste

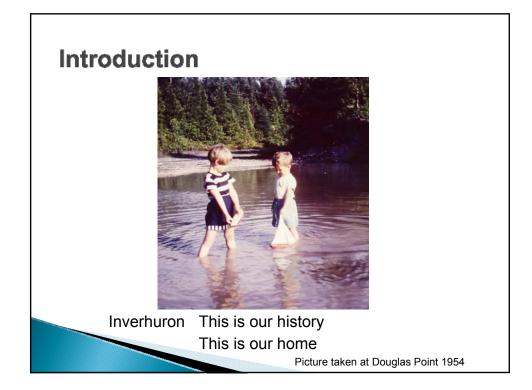
Jim & Brenda Preston

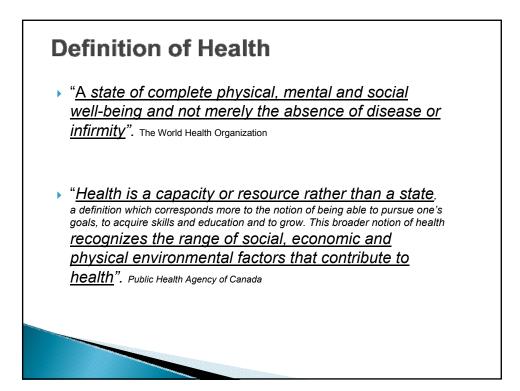
Overview of Topics

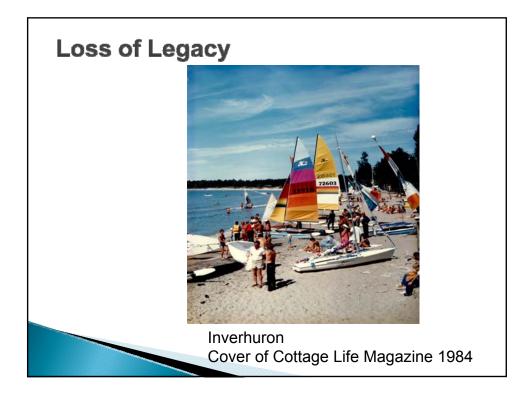
- Introduction
- Definition of Health
- Loss of Legacy
- Water is Life
- Concerns for Health, Safety and Well Being
- Exclusion from Involvement in Process
- Radiation Exposure
- Canadian Manhattan Project

Conclusion

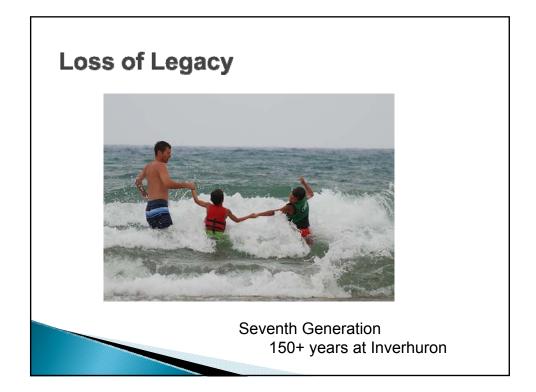


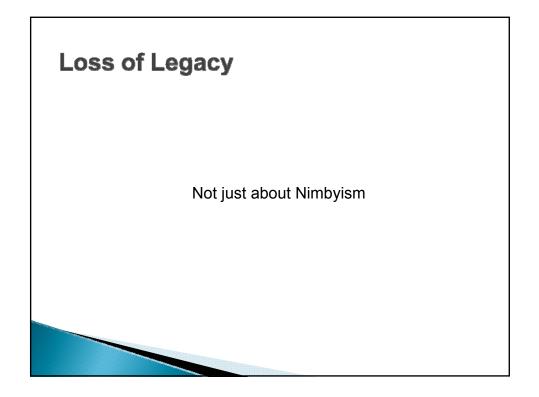


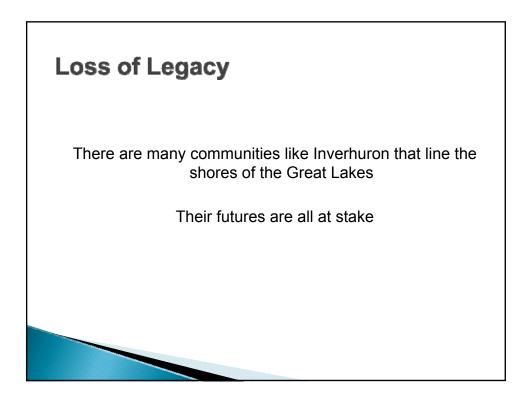


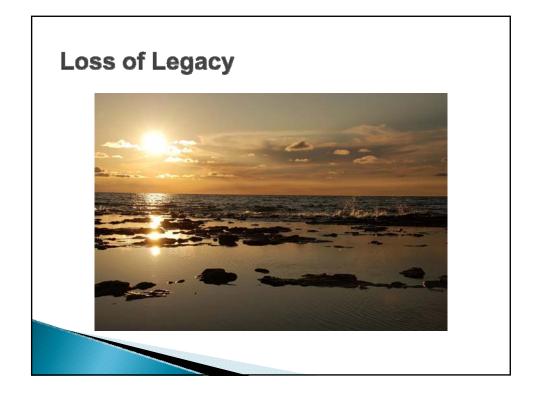


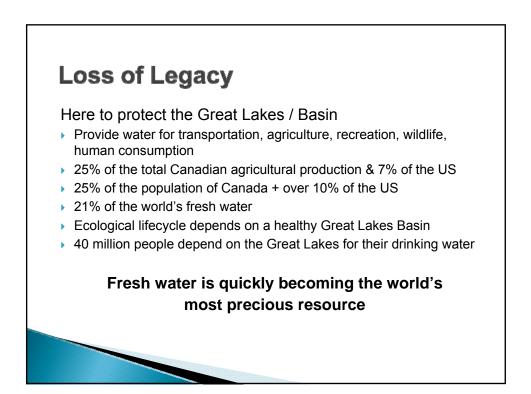


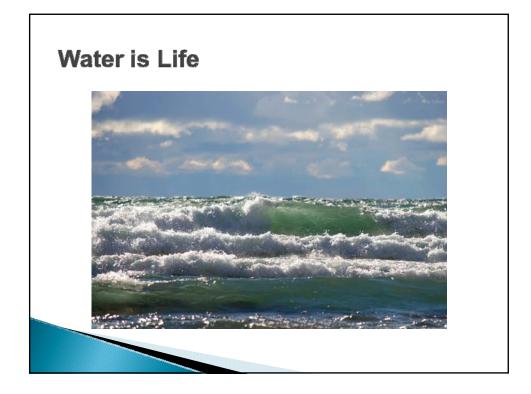








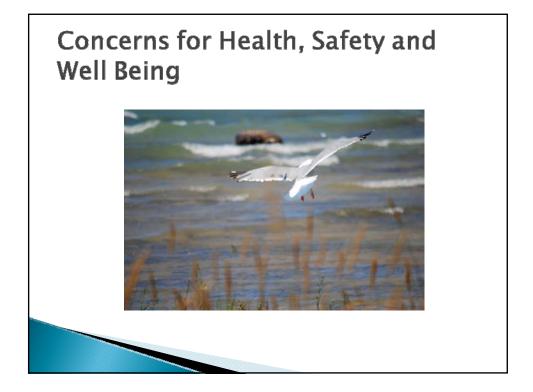




Water is Life:

"Water ...makes the existence of the human race on this planet possible.

- ▶ 80 countries now have water shortages
- > 2 billion people lack access to clean water
- 1 billion people lack enough water to meet basic needs
- In last 100 years population has grown from 1.7 to 6.6 billion people
- Total amount of potable water has slightly decreased
- Water is being consumed at an unsustainable rate."
 (Global Water Crisis Overview by Paul Alois, April 2007)
- The toxic life of the contents of the DGR is 100,000+ yrs
- What will our fresh water needs be over this time period?
- How can we risk 21% of the world's fresh water with this critical projection of need?



Concerns for Health, Safety and Well Being

Stress & health issues of living in a construction zone for many years

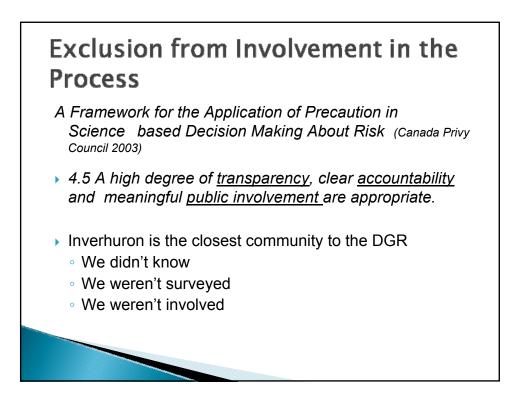
- Rock pile approximately 50+ feet, main shaft 200+ feet and head frame hoist 140+ feet high will appear over the top of the tree line
- Unknown chemicals will be brought to the surface during construction
- What will be the ground water contaminates?
- What will be the airborne contaminates?

Concerns for Health, Safety and Well Being

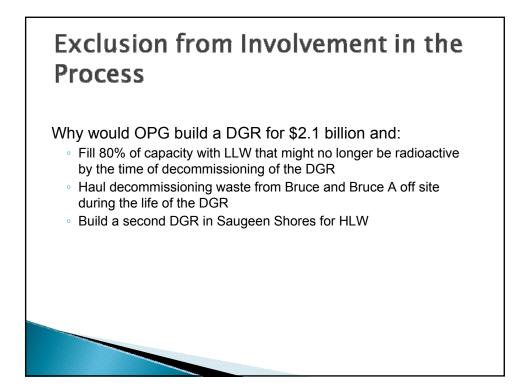
- What will be the noise levels?
 - Elevated noise creates stress it is an irritant that can cause sleep disturbances, inability to concentrate and a general interference with quality of life
 - We will be dealing with increased decibel levels from blasting, excavation and transportation that will be amplified over water
- What are the mitigation plans?
- What is the safety plan for neighbours during construction and operation?
- "Not likely to", "Not expected to", "Therefore it is not expected that" "Based on this it can be estimated" "OPG does not believe" are not finite answers but rather

indicative of an experimental methodology





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Exclusion from Involvement in the Process

How can we be a "Willing Host" when we don't know what we are hosting and we haven't been properly surveyed ?

How can a small municipality such as Kincardine be held forth as an acceptable "Willing Host" for a project with this magnitude of implications?

Radiation Exposure and Unknown Contaminants



Radiation Exposure and Unknown Contaminants

Precautionary Approach Section 2.2

" Demonstrate that all aspects of the project have been examined and planned in a careful and precautionary manner in order to ensure that they do not cause serious or irreversible damage to the environment and/or the human health of current or future generations"

Radiation Exposure and Unknown Contaminants

We believe the methodology and final site selection do not meet these criteria:

- No other sites were considered away from the Great Lakes
- > The proposed site was chosen for convenience
- > The drinking water of 40 million people is placed at risk
- The proposed location presents too many uncertainties for the population who live in the Great Lakes Basin
- > A DGR in argillaceous limestone has never been built
- The proposed DGR is based on modeling and theories not certainties

Radiation Exposure and Unknown Contaminants

Stochastic Health Effects

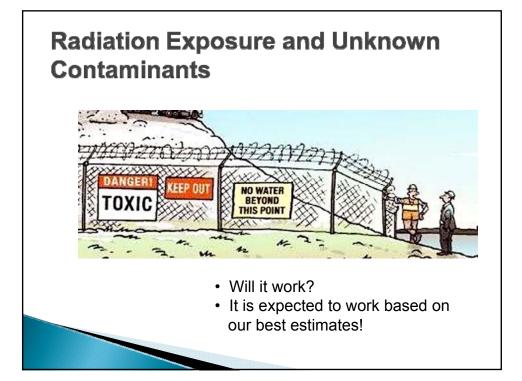
Stochastic effects are associated with long term, low level (chronic) exposure to radiation. (Stochastic refers to the likelihood that something will happen.) Increased levels of exposure make these health effects more likely to occur, but do not influence the type or severity of the effect."

> (U.S. Environmental Protection Agency - Radiation Protection - Health Effects - August 2012)

Radiation Exposure and Unknown Contaminants

"The link between radiation exposure and cancer is becoming increasingly clear and the cellular mechanisms involved in this process are becoming better understood. However we are only beginning to understand the genetic and trans-generational effects of radiation damage. Much of the long lived radioactive contamination we are spreading into our environment now is essentially permanent and irreversible."

> Dr. Kathy Vakil MD CCFP FCFP and Dr Linda Harvey BSc MSc MD Human Health Implications of the Nuclear Energy Industry - 2009





Are We to be Canada's Manhattan Project Experiment?

Coldwater Creek St Louis MO

- Disposal of processed uranium from the Manhattan Project
- Affected citizens are only discovering now the extent of health issues suffered by those who grew up in the area
- Conjoined twins, 30+ appendix cancers, leukemia, rare brain tumours, breast and colon cancers
- > 3 generations impacted in 50 years not 100,000 years!



Are We to be Canada's Manhattan Project Experiment?

DGR

- No studies in place how DGR's impact community health
- > Difficult to monitor cases within a mobile society

- What mechanisms do OPG and Grey Bruce Health Unit have in place to monitor the health impacts on affected workers and citizens
- How will we be notified of results and issues on a timely basis



