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Oral intervention from

Siskinds LLP

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

Siskinds LLP

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

Canada

CEAA Registry Reference No.: 06-05-1750

DGR JOINT REVIEW PANEL HEARING WRITTEN SUBMISSION IN SUPPORT OF AN ORAL INTERVENTION

Date: August 13, 2013

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PART I. REQUEST OF THE JRP

1. An environmental assessment for the deep geological repository project ("DGR Project") proposed by Ontario Power Generation ("OPG") must be completed prior to any action being taken that would allow the project to proceed in whole or in part. The purpose of the environmental assessment is to ensure that the DGR Project, over its lifecycle, does not cause significant environmental effects taking proposed mitigation measures into account.

2. We respectfully request that the joint review panel ("JRP") recommend to the Minister of the Environment that OPG's environmental impact assessment ("EIS") is fundamentally deficient and must be rejected. The proposal by OPG for the DGR Project is deficient and fails to meet the minimum requirements of the *Canadian Environmental Assessment Act,* S.C. 1992, c.37 ("CEAA"), both pre- and post the 2012 amendments. The JRP has no alternative but to conclude that the DGR Project is not in the public interest, is not justified in the circumstances, is not cost effective, is not the preferred alternative, is not the preferred means of disposal, fails to comply with international law, and therefore must be rejected.

PART II. OVERVIEW

3. *"The Canadian Environmental Assessment Act ("CEAA") is one of the key federal laws that exist to promote sustainable development across Canada and prevent environmental degradation before it occurs. The key purpose of environmental assessment is to* ***"look before you leap"*** *– that is, to carefully consider the long-term environmental consequences of a development before deciding whether or how to proceed. While other federal laws are often not engaged until damage to the environment has already occurred,* ***environmental assessment under CEAA is one of the few legal mechanisms in place to prevent environmentally harmful***

activities or projects from being approved, and to identify better alternatives." *[emphasis added]*

> ecojustice, Legal Backgrounder, Canadian Environmental Assessment Act, May 2012, http://www.ecojustice.ca/files/ceaa-backgrounder-1/at_download/file

4. *"The present nuclear waste conundrum is a problem that has no simple solution. Whatever the outcome of the current process, the decision taken could impact the health of our planet and all living creatures for many generations."* No statement could be closer to the truth as it applies to Ontario Power Generation's ("OPG") unprecedented proposal, for the deep burial of low and intermediate level nuclear waste.

> Submission 1, United Church of Canada General Comments on Nuclear Wastes and the Work of the Nuclear Waste Management Organisation (NWMO), (December 2004) at p. 11

5. It should be recognized that the approval of the DGR Project can, and will, be used as a precedent for the development of a DGR for high level nuclear waste either at the Bruce site or in another location.

6. The environmental impact statement ("EIS") submitted by OPG for the proposed DGR for low and intermediate level radioactive waste (the "DGR Project") fails to take into account and properly assess:

(i) the precautionary approach;

(ii) the socio-economic impacts from the Project;

(iii) the cumulative effects of the Project;

(iv) all practical alternatives to the Project; and

(v) the environmental effects of the Project outside of Canada.

7. The statutory provision that applies to the analysis of cumulative effects is Section 19(1)(a) of CEAA. With the recent amendments to CEAA, the section that deals with the requirement for an analysis of cumulative effects is section 19(1)(a). Prior to the amendments, cumulative effects were dealt with under section 16(1)(a). The amendments to CEAA did not result in any changes or amendments to the cumulative effects analysis.

8. An environmental assessment is a comprehensive procedure that addresses all fundamental environmental issues associated with proposed development projects. The primary purpose of environmental assessments is to ensure the early identification and evaluation of all potential environmental consequences of a proposed undertaking, and to reconcile development proposals with environmental protection and preservation.

Environmental Law and Policy, at page 190. See also see Environmental Rights in Canada (Toronto: Butterworths, 1981 at p. 247

9. It is recognized that an environmental assessment is a planning and decision-making tool. The objectives of an environmental assessment are to:

- minimize or avoid adverse environmental effects before they occur; and

- incorporate environmental factors into decision making.

CEEA Basics of Environmental Assessment at
http://www.ceaa-acee.gc.ca/default.asp?lang=en&n=B053F859-1#gen02

10. The JRP has an obligation to meet the provisions and intent of CEAA and to make a decision that **avoids adverse environmental effects before they occur**, not to find ways of dealing with adverse environmental effects after they occur but instead to implement the precautionary principle and avoid making decisions where there is a lack of environmental and scientific certainty that may result in adverse environmental effects.

11. The Ontario Ministry of the Environment ("MOE") is looking to the JRP for assurances that the federal environmental assessment process for the DGR provides for the protection, conservation and wise management of Ontario's Environment. The MOE is seeking an environmental assessment that includes hearing public concerns and reflecting environmental, social, cultural and economic views.

Written Submission from the Ontario Ministry of the Environment, July 30, 2013 at page 1

12. For the reasons set out below: OPG has failed to hear and respond to public concerns and, as will be heard through numerous oral submissions; OPG has failed to consult with the public and despite statements to the contrary does not have community support; the DGR project fails from an economic perspective as it represents the least cost effective proposal considered; and,

the environmental concerns relating to the potential for impacts on the Great Lakes have been completely ignored.

13. The JRP has no alternative but to recommend to the Minister of the Environment that the proposal by OPG for the DGR Project not be approved on the basis that it is deficient and fails to meet the minimum requirements of CEAA.

PART III. NATURE OF THE PROJECT

14. In June 2000, OPG entered into a long term lease agreement with the private sector consortium of Bruce Power to take over the operation of the Bruce station. In May 2001, Bruce Power began operations. However, OPG remains responsible for the nuclear legacies including the out-of-service Douglas Point Reactor, the heavy water plants, and all of the waste and waste facilities. The Western Waste Management Facility ("WWMF") is owned and operated by OPG and is situated on lands located within the boundary of the Bruce Power site.

15. All of the low ("LLW") and intermediate level ("ILW") nuclear waste generated by the OPG-owned or operated stations is transported and stored at the WWMF. When the nuclear waste is received at the WWMF it either incinerated or compacted to reduce its volume. After processing, the LLW is stored in above-ground concrete warehouses. ILW from the station operations is not processed. ILW is stored in steel-lined concrete containers and set in the surficial layer of the ground.

> Ontario Power Generation, How Waste is Managed
> http://www.opg.com/power/nuclear/waste/facilities.asp

16. The WWMF has an Environmental Management System ("EMS") that establishes objectives and targets for the facility to improve environmental performance. The EMS is based on the International ISE 14001 Standard, which provides a tool for ensuring and demonstrating a high standard of environmental responsibility. The WWMF was initially certified to the ISO environmental standard in 1999 and has successfully re-certified every year since. OPG has ensured that radioactive waste is managed safely and poses no significant risk to employees, the public or the environment.

> Western Waste Management Facility, Our commitment to safe, responsible management, http://www.opg.com/power/nuclear/waste/pdf/WasteBrochure09a.pdf

17. OPG has proudly stated on numerous occasions that it has been safely storing nuclear wastes from by the Bruce, Pickering, and Darlington generating stations for more than forty (40) years.

18. OPG has submitted an EIS to construct the DGR Project, for low and intermediate level radioactive waste at its Bruce Nuclear Generating Station in the municipality of Kincardine. Some of the waste classified as intermediate level radioactive waste is highly radioactive and will remain toxic for more than one hundred thousand (100,000) years. The proposed location of the DGR is less than one (1) kilometre inland from the shore of Lake Huron.

19. The DGR Project is a repository for what OPG calls low and intermediate level radioactive wastes that are currently stored on site at the WWMF and that will accept similar nuclear wastes produced from the on-going operation of the OPG-owned nuclear generating stations at Bruce, Pickering and Darlington.

20. The EIS completely ignores the continued, and increased, transportation of radioactive wastes from OPG owned generating facilities at Pickering and Darlington to the WWMF at the Bruce Nuclear site, in addition to the additional processing of these nuclear wastes prior to them being transferred to the DGR.

EIS, section 1.2.3.

21. The purpose of the EIS is to assess the environmental effects of the site preparation, construction, operation, decommissioning and abandonment of the above ground and below ground facilities. The operations include all the activities required to operate and maintain the DGR facility, including the transfer of the nuclear waste from the existing and interim storage facility, the receipt of the nuclear waste at the DGR, the emplacement of the wastes in the rooms located within the DGR and the closure of these rooms.

22. In December 2008, the Ministry of the Environment and the Commissioner of the Canadian Nuclear Safety Commission ("CNSC") entered into an Agreement to Establish a Joint Review Panel. The JRP Agreement requires OPG to engage in a thorough analysis of cumulative environmental effects as part of the environmental assessment of the DGR Project. The Terms of Reference attached to the JRP Agreement states, among other requirements, that the review will include a consideration of:

> (a) … any cumulative environmental effects that are likely to result from the Project in combination with other projects that have been or will be carried out;
>
> (f) The need for the Project;
>
> (g) Alternatives to the Project;
>
> (h) Alternative means of carrying out the Project that are technically and economically feasible and the environmental effects of any such alternative means;
>
> (l) The consideration of community knowledge and Aboriginal traditional knowledge.
>
> Agreement to Establish a Joint Review Panel for the Deep Geologic Repository Project by Ontario Power Generation Inc. Within the Municipality of Kincardine, Ontario Between the Minister of the Environment and the Canadian Nuclear Safety Commission (dated January 26, 2009, amended August 3, 2012)

PART IV. PREDETERMINED RESULT AND FAILURE TO CONSIDER ALTERNATIVES

23. According to OPG, in 2001, the Municipality of Kincardine requested that OPG consider options for the long-term management of the WWMF's LLW and ILW. As a result of this request, in 2002, the Municipality of Kincardine ("Kincardine" or "Municipality") and OPG executed a Memorandum of Understanding ("MOU") to outline the terms under which OPG, in consultation with Kincardine would develop a plan for the long term management of the LLW and ILW at the WWMF.

24. The formal environmental assessment process for the Project under the CEAA began with the development of the Terms of Reference that were approved by the Federal Minister of the Environment on January 2009. By the time the Terms of Reference were approved, OPG had already determined that the DGR was required and the preferred alternative. This decision was

made when OPG executed the Hosting Agreement with Kincardine in October, 2004. This decision was made without any community consultation.

EIS, Executive Summary at page v

25. The MOU work plan included a review of the technical feasibility of the long-term management options for LLW and IWL at the WWMF. The options reviewed included: (i) Enhanced Processing and Storage; (ii) Surface Concrete Vaults; and, (iii) Deep Rock Vaults (or what became identified as the DGR). The costs and benefits of maintaining the Status Quo was also conducted as part of the Independent Assessment Study ("IAS"). However, for some unexplained reasons the status quo was never assessed as a viable alternative despite OPG's statements that the WWMF has operated without incident for over 40 years and represents an alternative whose environmental effects are known.

Western Waste Management Facility, OPG, at page1

26. The results of the IAS conducted in September 2003, completed as part of the MOU, concluded that only a minority of those surveyed expressed no concerns, or support, for the long term management of nuclear wastes at the WWMF meaning that a majority of those surveyed did in fact have concerns with the long term management of nuclear wastes being proposed by OPG. Despite knowing that the majority of the community had concerns with the DGR Project, OPG and Kincardine blindly proceeded to pursue the DGR Project.

Independent Assessment Study at page. 3.

27. It is agreed that both domestically and internationally, community support is critical to the success in siting a nuclear waste disposal facility. Despite OPG stating on numerous occasions that a willing host community is the sole reason the DGR Project has been selected for the Bruce Nuclear site rather than anywhere else in Canada. OPG recognized that: *"Experience in other countries has shown that success in siting a waste disposal facility is greatly improved in situations where the community supports the proposal.* However, OPG further states that *"No other sites volunteered to participate in feasibility studies or to host the facility."* This hardly represents a "willing host community" when there were no other alternatives or sites considered.

EIS section 3.4.2. at page 2-78

28. OPG admitted that no other sites volunteered to the host the DGR Project so the only site considered was at the Bruce Nuclear facility. This hardly represents a process that makes a recommendation based on a consideration of the environmental effects, alternative sites, and alternative means to determine the preferable location for such an unprecedented DGR Project.

(A) NWMO Project for High Level Nuclear Waste

29. OPG's admission is contradicted by the enormous success NWMO has had in attracting host communities for the burial of used nuclear fuel wastes, referred to as high level nuclear waste ("HLW") that are far more toxic than the mops and rags described for the DGR Project by OPG.

30. As of August 2012, twenty-one (21) communities are allowing themselves to be studied as possible end points for all of Canada's high level nuclear waste: three in northern Saskatchewan, twelve in northern Ontario, and six in central Ontario. The NWMO has had so much success in attracting interested communities that it suspended the call for expressions of interest on September 30th, 2012, meaning they have at least temporarily closed the list and are concentrating on the communities that have already entered the NWMO process.

Know Nuclear, A Public Interest Information Project, http://knownuclearwaste.ca/

31. The list of communities under investigation as possible nuclear waste burial sites by NWMO include: English River, Pinehouse, and Creighton in Saskatchewan; Saugeen Shores, South Bruce, Brockton, Aaran-Elderslie, Huron Kinloss, Central Huron in Southwestern Ontario; and Ear Falls, Ignace, Nipigon, Schreiber, Manitouwadge, Hirneypayne, White River, Wawa, Blind River, Elliot Lake, Township of the North Shore and Spanish, in Northern Ontario.

32. OPG's lack of success in attracting willing host communities for the proposed DGR Project is evidenced by OPG's failure to take any steps whatsoever to attract a host community. OPG has failed to provide any information to indicate that it canvassed other sites for its DGR Project.

(B) Failure to Justify a Need for the Project

33. Contrary to the requirements of CEAA and the Guidelines there was no "need" or "justification" demonstrated by OPG to pursue this DGR Project. As the proponent of the DGR Project, OPG has failed to describe the need for the proposed DGR Project as required by the Guidelines.

> Guidelines for the Preparation of the Environmental Impact Statement for the Deep Geologic Repository for Low- and Intermediate-Level Radioactive Wastes, dated January 2009 ("Guidelines")

34. The EIS claims that a need for the DGR Project is: (a) demonstrated by OPG's social responsibility but neglects to define what OPG considers to be its social responsibility; (b) a host community willing to implement a long term solution notwithstanding that a long term solution may be premature and contrary to the precautionary principle and the majority of Kincardine residents claiming that it was not made aware of the DGR Project; and, (c) an existing and forecasted waste inventory requiring management even though the EIS fails to take into consideration the cumulative effects of the re-licensing of its Pickering facility and refurbishment of its Darlington facility.

> EIS Summary at page14

(C) Failure to Consider Alternatives

35. OPG acknowledges that it did not consider or assess any alternative sites for the DGR Project. In the volumes of material submitted by OPG including the more than 3,400 pages of the EIS, and the technical documents and responses to information requests, OPG acknowledges that no other alternative sites for the DGR Project were even considered.

36. In OPG's Table of "Comparison of Siting Alternatives off the Bruce Nuclear Site" OPG does not state that an alternative site can be achieved nor does it indicate that an alternative site is not acceptable. Surprisingly, the EIS indicates that in these areas it is "Unknown", confirming that OPG did not look at any other site, even though such sites may be more acceptable for the DGR Project.

> EIS, sections 3.4.2, 3.2.5 and Table 3.4.2-1

37. OPG is requesting that the JRP approve the Project in its chosen form and location despite acknowledging that it failed to conduct any assessments or investigations of possible alternative locations away from the Bruce nuclear site for the DGR Project. Such a request is contrary to the purpose of CEAA and should not be approved until OPG can demonstrate that it considered alternative sites. Based on this alone the JRP must conclude that the EIS is deficient and must be rejected.

38. The current practice is that the majority of LLW is sent to land-based disposal immediately following its packaging for long term management. This type of management for LLW has represented a satisfactory disposal method that has been developed and implemented around the world.

> World Nuclear Association, Storage and Disposal Options, Radioactive Waste Management Appendix 2, Updated August 2013

39. Approximately 84,000 m^3 of waste is stored at the WWMF that will be transported to the DGR. Of the 84,000 m^3 approximately 74,000 m^3 is LLW while 10,000 m^3 represents ILW. According to this information, only 11.9% of the nuclear waste being proposed for the DGR is ILW while an astounding 88.1% of the waste is LLW that, it is generally agreed and accepted, does not require DGR disposal and is effectively handled through current storage practices.

> EIS Summary, March 2011, at page 9

40. If the current practice for the disposal of LLW is acceptable and it represents 88.1% of the nuclear waste to be deposited at the DGR, why would we engage in such a costly and risky enterprise when the status quo for the LLW is obviously acceptable from its proven track record? The majority of all of the waste destined for disposal in the DGR is currently being disposed of in a manner that is proven safe given its historical track record.

41. Internationally, the focus has been on finding a long term waste management option to provide publicly acceptable, safe and environmental sound solutions to the management of ILW and high level ("HLW") nuclear waste.

> World Nuclear Association, Storage and Disposal Options, Radioactive Waste Management Appendix 2, Updated August 2013

42. DGRs are found at depths ranging between 250 metres and 1,000 metres, most countries with HLW and long-lived radioactive waste have investigated the use of a DGR for these types of nuclear waste. DGRs are official policy in various countries and have been implemented by the United States for defence-related ILW, and preferred sites selected for HLW and spent fuel in France, Sweden, Finland and the United States. However, it should be noted that shortly after office, the Barack Obama administration cancelled the proposed DGR at the Yucca Mountain site in Nevada.

> World Nuclear Association, Storage and Disposal Options, Radioactive Waste Management Appendix 2, Updated August 2013
>
> Obama dumps Yucca Mounty, World Nuclear News (27 February 2009); Yucca Mountain 'terminated' World Nuclear News (8 May 2009)

43. There is no dispute and no evidence to the contrary to show that a deep geological disposal is not the preferred option for waste management of long-lived radioactive waste in several countries including: Argentina, Australia, Belgium, Czech Republic, Finland, Japan, Netherlands, Republic of Korea, Russia, Spain, Sweden, Switzerland and United States of America.

44. The only constructed DGR for long-lived ILW that is currently licensed for disposal operations is in the United States of America. Plans for disposal of spent fuel are being advanced in Finland, Sweden and in the United States of America.

> World Nuclear Association, Storage and Disposal Options, Radioactive Waste Management Appendix 2, Updated August 2013

45. The question that OPG fails to answer is whether a DGR is necessary for LLW? And, if not, isn't it more appropriate for the LLW representing less than 12% of the nuclear waste proposed for disposal at the DGR to be categorized with the NWMO' s plans to construct a DGR for HLW?

46. OPG failed to take into account alternatives to, including maintaining the status quo, and alternative means of disposal. Other recognized ideas for the long-term management of nuclear waste includes: long-term above ground storage; rock-melting; disposal at subduction zones; direct injection; among others. It is beyond the scope of these submissions to assess the pros and

cons of each alternative but it is within the mandate of OPG to consider alternatives to the DGR Project and assess alternative means of disposal.

> World Nuclear Association, Storage and Disposal Options, Radioactive Waste Management Appendix 2, Updated August 2013

47. OPG admits that no other sites were considered for the location of the DGR. OPG refers to the possibility of pursing a Greenfield site at a location other than Kincardine but OPG has yet to provide any supporting information for this statement.

> EIS-02-40 where OPG states *"This was not intended to imply that one or more specific greenfield sites were identified and assessed. Rather it refers to the approach that was taken to the assessment of alternative sites. This is described in the EIS; that is, looking conceptually at the alternative of locating the DGR Project on the Bruce nuclear site versus seeking a greenfield site off the Bruce site."*
>
> http:///www.ceaa.gc.ca/50/documents/56805/56805.pdf

48. Surprisingly, the Director of Nuclear Corporation Relations for OPG has also admitted publicly that *"OPG hasn't considered other sites, said Kevin Powers, director of nuclear corporate relations."* this is reiterated by the DGR Manager who stated *"We have a willing host with Kincardine. If that wasn't there, the OPG would do a lot more site investigation work."*

> http://www.theobserver.ca/2012/11/30/environment-canadas-first-underground-respository-is-safe-solution-opg

49. OPG engaged in both a lengthy and costly process and only considered three (3) alternatives to the DGR Project. It is notable that all three alternatives are situated on the Bruce site. In 2001, Kincardine approached OPG to discuss options for the long-term management of LLW and ILW at the Bruce site. OPG and Kincardine signed a Memorandum of Understanding ("MOU") in April 2002 to outline the terms for the development of a long-term management plan for LLW and ILW at the WWMF located on the Bruce site.

50. The MOU work plan included:

(i) A review of the technical feasibility of the long-term management options for low and intermediate level waste at the WWMF

(ii) A socio-economic impact assessment in the Municipality of Kincardine of the existing operation of the WWMF and the potential long-term options

(iii) A review of European and American models for the long-term management of low and intermediate level waste, including site visits to look at issues such as technical infrastructure and community compensation.

http://www.nwmo.ca/dgrmemorandumofunderstanding

51. As part of the MOU, OPG and Kincardine retained Golder Associates to conduct an Independent Assessment Study ("IAS") for three options:

(i) Enhanced processing, treatment and long-term storage: super-compaction followed by secure long-term storage

(ii) Disposal in a repository: Two options were identified as being technically feasible:

(a) covered above-ground concrete vault: similar to the LLW disposal site at Centre de l'Aube in France:

(b) deep rock cavern vault: construction of a vault at an anticipated depth of 425 to 750 metres below ground surface.

The IAS results concluded that each of the three options considered:

- is capable of safely managing some or all of the LLW and ILW;
- is geo-technically feasible
- would have no significant residual environmental impacts;
- would have no adverse impact on tourism or agriculture;
- would provide economic benefits for the community.

All of these conclusions were made outside of the environmental assessment process, without engaging in any meaningful public consultation.

http://www.nwmo.ca/dgrmemorandumofunderstanding

52. The Guidelines for the Preparation of the Environmental Impact Statement for the Deep Geological Repository for Low- and Intermediate-Level Radioactive Waste dated January 2009 ("Guidelines") requires that the EIS identify and describe alternative means to carry out the project that are, from the perspective of the proponent, technically and economically feasible.

Alternative means include, siting of the DGR in a different location within the existing site; siting of the DGR in a location outside the existing site; reduction at source; among others.

> The Guidelines for the Preparation of the Environmental Impact Statement for the Deep Geological Repository for Low- and Intermediate-Level Radioactive Waste, January 2009 at section 7.3

53. The Guidelines also require that OPG conduct an analysis of alternatives to the project that describe functionally different ways to meet the project's need and achieve the projects purpose including consideration of the status quo and surface and near-surface storage.

> The Guidelines for the Preparation of the Environmental Impact Statement for the Deep Geological Repository for Low- and Intermediate-Level Radioactive Waste, January 2009 at section 7.2

54. In *Alberta Wilderness Assn* v. *Cardinal River Coals Ltd.,* known as the Cheviot case because the proposal was to construct a new coal development identified as the Cheviot Mine Project, the court found that although alternative means of underground mining was generally considered, the effects of the alternatives means, as compared to the effects of open-pit mining, were not considered in any meaningful way. The mere identification of alternative means absent a discussion of their comparative environmental effects failed to meet the requirements of section 16 of CEAA.

> *Alberta Wilderness Assn* v. *Cardinal River Coals Ltd.,* [1999] 3 F.C. 425 (T.D.)

55. In the Cheviot case, an open-pit mine proposal identified underground mining as an alternative but failed to consider any of its environmental effects and didn't seriously look into it as an alternative. In the Cheviot case, the court stated:

> Simply identifying potential 'alternative means' without discussing their comparative environmental effects fails to provide any useful information to decision-makers, and fails to meet the requirements of s.16(2)(b).

The Cheviot case has been followed in *Grand Riverkeeper, Labrador Inc. v. Canada (Attorney General),* 2012 225 A.C.W.S. (3d) 134, 2012 FC 1520, 2012 CarswellNat 499.

> *Alberta Wilderness Assn* v. *Cardinal River Coals Ltd.,* [1999] 3 F.C. 425 (T.D.)

56. OPG's failure to assess the status quo despite OPG knowing all of the impacts from the "do nothing" alternative represents a fundamental flaw with OGP's EIS.

57. In light of OPG's failure to consider alternatives to the project, alternative means and to assess the status quo, the JRP has no alternative but to recommend to the federal Minister of the Environment that OPG's plan is fundamentally deficient, fails to meet the requirements of CEAA and therefore must be rejected.

PART V. FAILURE TO APPLY THE PRECAUTIONARY APPROACH

58. OPG's proposed DGR Project is inconsistent with the precautionary principle, which is a principle of international law and policy that has been cited by the Supreme Court of Canada as an appropriate statutory interpretation aid to assist in interpreting the legal context of Canadian environmental statutes. The JRP has an obligation to apply the precautionary approach when evaluating the DGR Project.

> J. Abouchar (2002) "The Precautionary Principle in Canada: The First Decade" 12 *The Environmental Law Reporter, News and Analysis,* (U.S) December 2000 11407 at 11407. See also E. Brandon, "Does International Law Mean Anything in Canadian Courts?" (2002) 11 Journal of Environmental Law and Practice 399 at 424-426 and 441-443

59. In *Spraytech* v. *Hudson (Town)*, the Supreme Court of Canada adopted the definition of the precautionary principle as enunciated in para. 7 of the Bergen Ministerial Declaration on Sustainable Development (1990) which states:

> In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

> *114957 Canada Ltee (*Spraytech, *Societe d'arrosange) v. Hudson (Town),* 2001 SCC 40 at para. 31, [2001] 2 S.C.R. 241

60. Justice L'Heureux Dube in *Spraytech* commented that:

> ... our common future, that of every Canadian community, depends on a healthy environment. ... Today, we are more conscious of what type of environment we wish to live in and what quality of life we wish to expose our children [to] ... This Court has recognized that "[e]veryone is aware that individually and collectively we are responsible for preserving the natural environment ... environment protection [has] emerged as a fundamental value in Canadian society.

The decision before the JRP should not be taken lightly as the disposal of nuclear waste in a deep geological repository is unprecedented in Canada and its environmental effects remain unknown.

> *114957 Canada Ltee (*Spraytech, *Societe d'arrosange) v. Hudson (Town),* 2001 SCC 40 at para. 31, [2001] 2 S.C.R. 241 at page 248

61. Justice LaForest, in *R.* v. *Hydro-Quebec* stated that *"The protection of the environment is a major challenge of our time. It is an international problem, one that requires action by government at all levels."*

> [1997] 3 S.C.R. 213 at para. 217. Note also that Justice LaForest's reasons in the Hydro-Quebec case also quoted with approval a portion from *Our Common Future,* the report produced in 1987 by the United Nations' World Commission on the Environment and Development. The so-called "Brundtland Commission" recommended that *"Local governments [should be] empowered to exceed, but not lower national norms"* at page 220

62. The precautionary principle has been used interchangeably with the term "precautionary approach".

63. The establishment of an evidentiary standard in environmental legislation is one means of ensuring a precautionary approach.

> J. Moffet, "Legislative Options for Implementing the Precautionary Principle" 7 Journal of Environmental Law and Practice 157 at page 163

64. The term "precautionary principle" at its core, calls for preventative, anticipatory measures to be taken when an activity raises threats of harm to the environment, wildlife or human health even if some cause-and-effect relationship has not been fully established.

> Bernie, Boyle, and Redgwell, International Law & the Environment, 3rd ed. (United States: Oxford University Press, 2009 at pages 155-156
>
> C. Smith, "The Precautionary Principle and Environmental Policy, Science Uncertainty and Sustainability" (2000) 6:3, International Journal of Occupational and Environmental Health at page 263

65. The overall aim of the CEAA is to achieve sustainable development by integrating environmental considerations into governmental decision-making at the federal level. "Sustainable development" is defined under the CEAA as *"development that meets the needs of the present, without compromising the ability of future generations to meet their own needs."*

66. CEAA post December 2012 continues to endorse the precautionary principle in section 4(1)(b) to ensure that designated projects *"... are considered in a careful and precautionary manner to avoid significant adverse environmental effects."* and also requires meaningful public participation as set out in section 4(1)(e).

67. In the event of a failure of the DGR Project, resulting in a leak of radioactive material, it will have serious, unprecedented adverse consequences to public health and the natural environment.

68. Federal Court of Appeal in *Canadian Parks & Wilderness Society* v. *Canada* held that *"the precautionary principle states that a project should not be undertaken if it* ***may*** *have serious adverse ecological consequences, even if it is not possible to provide with any degree of certainty that these consequences will in fact materialize."*

> *Canadian Parks & Wilderness Society* v. *Canada,* 2003 FCA at 197

69. The Supreme Court of Canada has held that *"openness and public participation are of fundamental importance under the CEAA"* particularly in light of the public interest nature of environmental disputes.

> *Sierra Club of Canada v. Canada,* 2002 SCC 41

70. The precautionary principle has influenced environmental regulation in Canada and is codified in numerous laws. The Hudson case represented the first time that the Supreme Court endorsed this principle and made a decision based on the implementation of the precautionary principle.

> *114857 Canada Ltee (Spraytech, Societe d'arrosage)* v. *Hudson (Town)*, [2001] 2 S.C.R. 241, [2001] S.C.J. No. 42

71. The precautionary principle was defined in 1992 United Nations Conference on Environment and Development as follows: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." (Rio Declaration, Principle #15).

72. The Supreme Court of Canada in Hudson considered international law's "precautionary principle", which is defined as follows at paragraph 7 of the Bergen Ministerial Declaration on Sustainable Development (1990):

> Scholars have documented the precautionary principle's inclusion "in virtually every recently adopted treaty and policy document related to the protection and preservation of the environment" (D. Freestone and E. Hey, "Origins and Development of the Precautionary Principle", in D. Freestone and E. Hey, eds., The Precautionary Principle and International Law (1996), at p. 41. As a result, there may be "currently sufficient state practice to allow a good argument that the precautionary principle is a principle of customary international law" (J. Cameron and J. Abouchar, "The Status of the Precautionary Principle in International Law", in ibid., at p. 52). See also O. McIntyre and T. Mosedale, "The Precautionary Principle as a Norm of Customary International Law" (1997), 9 J. Env. L. 221, at p. 241 ("the precautionary principle has indeed crystallized into a norm of customary international law"). The Supreme Court of India considers the precautionary principle to be "part of the Customary International Law" (A.P. Pollution Control Board v. Nayudu, 1999 S.O.L. Case No. 53, at para. 27). See also Vellore Citizens Welfare Forum v. Union of India, [1996] Supp. 5 S.C.R. 241.

73. Quite simply, the precautionary principle stands for the "better safe than sorry" approach to environmental protection. The guiding principles of making precautionary decisions and implementing precautionary measures include:

(a) Precautionary decisions should be guided by Canada's chosen level of protection against the potential risk;

(b) Although scientific uncertainty may exist, there must still be some sound scientific basis for a precautionary decision;

(c) The scientific evidence required for a precautionary decision should be relative to the chosen level of protection;

(d) Precautionary measures should be reconsidered in light of evolving scientific knowledge; and

(e) Precautionary measures should generate an overall benefit for society at the least cost and, where more than one precautionary measure is available, the least trade-restrictive option should be chosen.

74. Section 4(2) of CEAA requires OPG to exercise their powers in a manner that protects the environment and human health and applies the "precautionary principle". Therefore, the JRP is not in a position to recommend that the Minister of the Environment approve the proposed DGR Project even if there is no evidence of actual environmental effects. If there is a risk of harm even in circumstances where it is impossible to provide with any degree of certainty that the risks will materialize, the DGR Project must not be approved.

75. Section 4(2) of CEAA pre-December 2012 states: *"In the administration of this Act, the Government of Canada, the Minister, the Agency, and all bodies subject to the provisions of this Act, including federal authorities and responsible authorities,* ***shall exercise their powers in a manner that protects the environment and human health and applies the precautionary principle."***

76. Section 4(2) of CEAA post-December 2012 states: "*The Government of Canada, the Minister, the Agency, federal authorities and responsible authorities, in the administration of this Act* ***must exercise their powers in a manner that protects the environment and human health and applies the precautionary principle."***

77. It is clear that the legislative intent of CEAA reflects the precautionary principle and recognizes that there may be a lack of scientific certainty about the environmental effects of the Project. Adopting a precautionary approach to the interpretation of CEAA is not only consistent with the reasoning in *Spraytech,* it is also in accordance with the intent of CEAA's original legislators whose goal was to create a policy initiative that would be a significant step towards achieving the goal of sustainable development in Canada.

78. The Preamble to CEAA pre-December 2012 acknowledges that the Government of Canada is committed *"to exercising leadership within Canada and internationally in anticipating and preventing degradation of environmental quality and at the same time ensuring that economic development is compatible with the high value Canadians place on environmental quality;"*

79. The goal of the precautionary principle is give government regulators responsible for protecting public health and the environment the ability to be proactive and not reactive in making decisions that reflect the precautionary principle.

80. The precautionary principle acknowledges the inherent limits that exist in accurately determining and predicting the direct impacts of a Project on the environment and human health. Significant scientific uncertainty remains with the DGR Project specifically the causal connection between activities and impacts, thresholds at which damage becomes significant or irreversible, and long term cumulative or combined effects.

> O. McIntyre & T. Moseldale, "The Precautionary Principle *as* a Norm of Customary International Law", (1997) 9 Journal of Environmental Law 221 at 221-222

81. OPG in its introduction to the EIS states:

> The EA is a forward looking planning tool. ... This approach is consistent with Principle 15 of the 1992 Rio Declaration on Environment and Development and the Canadian government's framework for applying precaution in decision-making processes.

EIS p. I-21

82. In light of the inherent risks associated with such an unprecedented project as the DGR Project, the JRP should recommend that the DGR Project not be approved as it fails to take a precautionary approach as required by CEAA and endorsed by Canada's highest Court.

83. OPG has presented voluminous materials from geologists, engineers, hydrologists and others that have explained the selection and location of the 680 metre shaft that ends in a 450 million year old stable rock repository. The question remaining is simple - what is the stability of the rock once it is drilled and manipulated by human intervention to create the caverns and shaft for the DGR?

84. The precautionary principle was established by Principle 15 of the *Rio Declaration on Environment and Development, 1992*, a widely known treaty in international law and applied by countries to ensure that in light of scientific uncertainty no harm is done to the environment. The precautionary principle is used throughout a variety of international treaties and agreements such as the Vienna Convention for the Protection of the Ozone Layer (1985), the United Nations

Framework Convention on Climate Change, and the Cartenga Protocol on Biosafety to the Convention of Biological Diversity.

85. Even if the precautionary principle is not considered to be accepted as customary international law, at a minimum, it should be relied upon as an interpretive tool for the application of CEAA. When the precautionary principle is taken into consideration with the stated purpose of CEAA an EIS that does not address the precautionary principle should be found to be insufficient.

86. Taking into consideration OPG's failure to reconcile the proposed DGR with the precautionary principle that is ingrained throughout CEAA, the JRP has no alternative but to recommend to the federal Minister of the Environment that OPG's plan is fundamentally deficient, fails to meet the requirements of CEAA and therefore must be rejected.

87. Further, the DGR Project is unprecedented in Canada. There are no similar projects that have ever occurred in Canada. There are no DGRs for any type of waste, let alone nuclear waste that have been constructed in Canada. It should be recognized that the approval of the DGR will establish a precedent not only for other low- and intermediate- level nuclear waste sites but also for a high level nuclear waste site. This precedent cannot be set absent the federal government establishing a framework for managing long-lived, non-fuel radioactive wastes in Canada. Canada has a legal obligation under the *1996 Radioactive Waste Policy Framework* that requires:

> (a) The federal government to ensure that radioactive waste disposal is carried out in a safe, environmentally sound, comprehensive, cost-effective and integrated manner.
>
> (b) The federal government to develop policy, to regulate, and to oversee producers and owners to ensure that they comply with legal requirements and meet their funding and operational responsibilities in accordance with approved waste disposal plans.
>
> (c) Waste producers and owners to be responsible in accordance with the principle of "polluter pays", for the funding, organization, management and operation of disposal and other facilities required for their wastes. This recognizes that arrangements may be different for nuclear fuel waste, low-level radioactive waste and uranium mine and mine tailings.

Radioactive Waste Policy Framework, Natural Resources Canada, http://www.nrcan.gc.ca/energy/sources/uranium-nuclear/1423

88. In 1978, the federal government and provincial government of Ontario established the Canadian Nuclear Fuel Waste Management Program to work towards establishing the safe and permanent management of HLW. At that time, a program was announced *"to dispose of radioactive wastes from nuclear power reactors in a deep, underground repository in intrusive igneous rock."* Atomic Energy of Canada Limited ("AECL") and Ontario Hydro, now OPG, were given primary responsibility for developing storage, transportation and deep repository technology. In 1981, the governments of Canada and Ontario announced that site selection from a HLW repository would not be undertaken until after the disposal concept had been accepted. A disposal concept was developed by AECL and deemed technically acceptable, but put on hold because the government did not think that there was sufficient public support.

> Electric Power Research Institute, EPRI Review of Geologic Disposal for Used Fuel and High Level Radioactive Waste, Volume III – Review of National Repository Programs, Final Report, December 2010 at page 3-3

89. Since 1978, OPG has made a determination that a deep geological repository would be utilized for the disposal of nuclear waste. The DGR Project for LLW and ILW will be used by OPG as a precedent to show that a deep geological repository concept has been publicly accepted. Unfortunately, OPG ignores its failure to engage in meaningful public consultation to gain approval for the DGR Project.

90. For more than twenty (20) years before entering into the MOU with Kincardine, OPG had already concluded that a DGR is the preferable approach for the disposal of nuclear waste. This decision was made without public consultation and without canvasing alternative methods of disposal.

91. OPG's proposal for the DGR Project is premature until such time that the federal government has met its legal obligations and established a policy framework and some type of direction to ensure that radioactive waste disposal occurs in a **safe, environmentally sound, comprehensive, cost effective and integrated manner**.

92. The DGR Project has not been proven to be environmentally sound - in fact the contrary is true. Internationally, it has been demonstrated that the use of DGRs for nuclear waste have been controversial and proven to be ineffective for the long term storage of nuclear wastes.

93. At a minimum, the JRP, in recognition of the failure of the federal government to meet its legal obligations, has no alternative but to find that OPG's proposal for a DGR is premature and should be held in abeyance pending the development of a policy framework and until such time that OPG can demonstrate that it meets the federal government's policy framework.

PART VI. THE SOCIO-ECONOMIC IMPACTS FROM THE PROJECT

94. OPG has recognized the significance and importance that an informed and willing host community plays in determining the success of the DGR Project.

95. Kincardine made a decision to host the DGR Project without OPG providing many salient features about it, including the costs and dangers of hosting intermediate level and refurbishment nuclear wastes.

96. Kincardine engaged in a polling of ratepayers without providing any explanation or detail about the impact of the extent of their responses. The poll reached a negligible number of ratepayers. The JRP should be concerned that OPG's public attitudes research ("PAR") poll indicates that despite more than eight years of publicizing the DGR Project, OPG's outreach efforts to the community, and OPG's alleged extensive public consultation period, most of the individuals polled had not heard of the DGR Project. On the basis of these inconclusive and scant results OPG concluded that it had sufficient community support to move forward with the proposed DGR Project. OPG is unable to show the JRP that it has the community support that it states is necessary for a successful DGR Project. Based on this alone the DGR Project should not be allowed to proceed.

97. According to OPG, sixteen meetings of the Community Consultation Advisory Group ("CCAG") occurred between September 13, 2005 and the end of 2012. Surprisingly, OPG has no notes, minutes, agendas or sign-in sheets for the meetings held for the years between 2005 and 2008 representing the period which the support of the community for the DGR Project was allegedly obtained by OPG. We note that a handful of unofficial notes have been provided by OPG for the meetings between the years 2009 and 2012. The notes provided are nothing more than a commentary from one particular attendee and we do not know what information has been

omitted from these notes. Again, similar to the prior years, there are no agendas or attendance sheets produced by OPG for the years between 2009 and 2012.

EIS 09-459 at page 58

98. Despite OPG stating on numerous occasions that community support is key to the success of the DGR Project it failed to create a documentary record of the meetings with CCAG. OPG has produced an EIS that is thousands of pages, includes numerous technical supporting documents, has provided additional documentation in response to the information requests yet it is unable to produce attendance sheets or agendas of meetings held with CCAG. In the notes provided from the February 23, 2012 CCAG meeting the Action notes: *"The mayors will provide written submissions of the JRP panel during the public comment period pending the results of independent peer review currently being conducted by separate consultants on behalf of the Municipality of Kincardine and the County of Bruce."* We are concerned that since authentic community support is not present OPG appears to be attempting to manufacture that consent. In light of the lack of community support the DGR Project should not be approved.

99. Despite OPG failing to consider the status quo as a viable alternative for the long term management of LLW and ILW, the PAR concluded that all of the options including the status quo, enhanced processing and storage and surface concrete vaults were technically feasible and could safely be constructed and operated at the WWMF. The decision to pursue the DGR Project was based entirely on OPG's decision. This decision was made by OPG without public consultation, without community support, without an assessment of environmental effects, without applying the precautionary principle, without considering any alternatives, and without taking into account the cost effectiveness of the proposal.

100. At the socio-economic Technical Session the OPG and JRP discussed the issue of stigma as some hypothetical impact that may occur at some point in the future. OPG concluded that there is not a stigma despite never undertaking a property value assessment or evaluation to determine the impact, if any, on property values in the Study Area after the announcement of the DGR Project.

101. Mr. Bourgeois has made extensive submissions on stigma impacts arising from the DGR Project. Compared with Saugeen Shores in 2012 Kincardine residents have experienced a loss in property value of more than $38,000 since 2001. Between 2010 and 2012, Kincardine property values have decreased by $2,300 while properties in Saugeen Shores have increased by more than $15,000. The only explanation for this difference is the impact of the DGR Project on Kincardine property values

102. OPG acknowledges in the technical supporting document that property represents the most significant and important investment for most people in the area and acknowledges that the DGR Project will in fact result in a negative impact on property values. This is also reflected in the Hosting Agreement in section 7 that indicates the DGR Project will result in a diminution of property values. It is important to note that the risk of property contamination is in addition to the risks linked to the stigma associated with property being situated in close proximity to a nuclear waste disposal site. OPG fails to acknowledge that property contamination and stigma are two separate and distinct impacts arising from the DGR Project.

103. OPG's property value protection plan does not recognize or compensate for the stigma arising simply from the proposed construction and development of the DGR. It is solely focused on contamination making it impossible to prove, absent any baseline testing which has not be conducted, that the contamination was caused by the operation of the DGR Project and not the operation of the Bruce Power facility generally.

104. Cenovus Energy Inc. (previously Encana Corporation) proposed to develop 1,275 shallow gas wells and associated infrastructure over a period of three years within the Canadian Forces Base Suffield National Wildlife Area in southern Ontario. The project was classified as an "infill" project. Upon review of the proposed project, the JRP concluded in its report issued on January 27, 2009 that it was not in the public interest to approve the proposed project.

105. On November 30, 2012 the federal government denied approval for the Cenovus project due to the likelihood of significant environmental effects. The federal government's decision statement being the first one issued under CEAA 2012 stated that, in accordance with section 52 of CEAA 2012, the Minister of the Environment has concluded, after taking into account the JRP's report and the implementation of any mitigation measures considered appropriate, that the

Project is *"likely to cause significant adverse environmental effects."* and that those significant adverse effects are not justified in the circumstances.

> http://www.ceaa-acee.gc.ca/050/document-eng.cfm?document=83803
>
> CEAA Reference Number: 15620

106. Taking into consideration the lack of public consultation coupled with the apparent lack of community support, the JRP has no alternative but to conclude and recommend to the Minister of the Environment that the DGR Project is not in the public interest and should not be approved.

PART VII. THE CUMULATIVE EFFECTS OF THE PROJECT

107. In December 2008, the Ministry of the Environment and the Commissioner of the Canadian Nuclear Safety Commission entered into an Agreement to Establish a Joint Review Panel ("JRP"). The JRP Agreement requires OPG to engage in a thorough analysis of cumulative environmental effects as part of the environmental assessment of the DGR Project.

> Agreement to Establish a Joint Review Panel for the Deep Geologic Repository Project by Ontario Power Generation Inc. Within the Municipality of Kincardine, Ontario Between the Minister of the Environment and the Canadian Nuclear Safety Commission (dated January 26, 2009, amended August 3, 2012).

108. The procedure for evaluating the significance of potential environmental and social impacts of the Project involves the consideration of cumulative effects of other proposed and existing undertakings in a region. An assessment of cumulative effects requires a determination of past, existing and future actions or conditions which may add to the impacts associated with the proposed undertaking. This analysis is required to extend at least as far into the future as the Project will continue to operate.

> The Cumulative Effects Working Group et al., *Cumulative Effects Assessment Practitioners Guide (1999),* prepared for the Canadian Environmental Assessment Agency, February 1999, page 10

109. Since the 1970s, the importance of cumulative effects has been recognized through its incorporation in the Council of Environmental Quality's regulation governing environmental impact assessments. In 1995, cumulative effects analysis became mandatory for all environmental impact assessments conducted under the pre-2012 CEAA. With the enactment of the new CEAA in July 2012 cumulative effects of a project must still be assessed if it is subject to an environmental impact assessment.

B.F. Noble, Introduction to Environmental Impact Assessment: Guide to Principles and Practice (2nd Edition) p. 197 Toronto: Oxford University Press.

110. OPG is required to take into consideration the prescribed factors that include cumulative effects *"likely to result from the project in combination with other projects or activities that* ***have been or will be carried out.***" This statutory requirement is also incorporated into the Final EA Guidelines under CEAA for the DGR Project dated January 2009. The effects of other projects and activities that have been, or will be carried out, with effects that are expected to overlap with the project must be assessed as part of the environmental impact statement.

111. The Terms of Reference for the DGR Project requires an assessment of "cumulative effects" in relation to projects "that have been or will be carried out." On the issue of cumulative effects, the Courts have concluded:

> Only likely cumulative environmental effects must be considered. Projects or activities which have been or will be carried out must be considered. However, only approved projects must be taken into account; uncertain or hypothetical projects or activities need not be considered.

Bow Valley Naturalists Society v. Canada (Minister of Canadian Heritage),[2001] 2 FC 461, para. 41

112. The Pickering Licensing Renewal and the Darlington Refurbishment and continued operation are neither "hypothetical" nor are they uncertain. It has been concluded that these projects are moving forward and their impact on the DGR Project must be taken into consideration and the environmental effects assessed as part of the cumulative effects analysis.

(A) Pickering Licensing Renewal Beyond Design Life

113. OPG neglected to consider the cumulative effects of the numerous projects underway at OPG's other facilities that would result in an increase in the amount of LLW and ILW requiring disposal at the DGR and generates an increase in the amount of transportation of nuclear waste throughout Ontario.

114. OPG has applied to renew and merge operating licences for the Pickering Nuclear Generating Stations A and B. The existing licences authorize OPG to operate Stations A and B consisting of eight nuclear reactors and their associated equipment. Six of these units are operational and two units are in a safe storage area. In July 2012, in the midst of this EIS, OPG

applied to the Canadian Nuclear Safety Commission ("CNSC") for renewal of the Pickering A Power Reactor Operating License ("PROL"), a renewal of the Pickering B PROL and the merger of the two licenses into one operating license for a period of five years expiring on June 30, 2018. One of the key aspects of OPG's application is its request to operate the Pickering reactors beyond their "design life".

115. The public hearing on OPG's Pickering application began on May 29, 2013 in Pickering, Ontario. The hearings were held merely five days after the deadline for submissions on OPG's DGR. The timing of these events has resulted in a division of the meagre resources available to non-governmental organizations and forces them to commit to reviewing and commenting on one project at the expense of being able to comment on the other project (Pickering licensing and this DGR Project).

116. On August 9, 2013 following a two-day public hearing process, the Canadian Nuclear Safety Commission ("CNSC") announced its decision to renew OPG's power reactor operating licence for the Pickering Nuclear Generating Station. The licence will be valid from September 1, 2013 to August 31, 2018.

CNSC Renews Pickering Nuclear Generating Station Operating Licence, info@cnsc-ccsn.gc.ca

117. The continuing and increased transportation of waste from OPG facilities to Bruce has not been considered as part of the DGR Project. CNSC staff are taking the position that transport from OPG facilities to the WWMF is currently approved and outside the scope of the EIS. This position fails to take into account and provide: any analysis of anticipated transportation frequency and volume; a review of historic and proposed shipping containers; current emergency planning measures; past and proposed consultation and training for municipalities along the transportation corridor; regulation and enforcement of transportation standards; and, current and proposed shipping routes; to name a few.

(B) Darlington Refurbishment and Continued Operation

118. On March 14, 2013 the CNSC issued its decision on the environmental assessment for the Darlington Nuclear Generating station Refurbishment and Continued Operation Project. The CNSC agreed with OPG's conclusions that the Darlington Refurbishment project will not result

in any significant adverse effects and enables OPG to start undertaking activities in support of the Darlington Refurbishment. The Darlington Refurbishment Project involves the refurbishment of the four reactors at the Darlington Nuclear Generating Station to enable the continued operations for approximately 25 to 30 additional years until approximately the year 2055. The wastes resulting from the refurbishment will be sent to the DGR for disposal.

119. The cumulative effects associated with the addition of the Darlington Refurbishment wastes have not been assessed as part of this EIS.

120. Similar to the Pickering re-licensing proposal the Darlington Refurbishment project and review was occurring simultaneously as the EIS for the DGR Project. The mammoth amount of documentation and information generated by OPG in support of these three projects – Pickering re-licensing, Darlington Refurbishment, and DGR Project – has made it virtually impossible for any resident, non-governmental organization or simply an interested member of the public to understand the environmental impacts and interrelationship of these three projects.

121. It is clear from the EIS that Pickering and Darlington will ship its low, intermediate and refurbishment nuclear waste to the DGR Project for long term disposal. However, the EIS fails to take into consideration the cumulative effects of the re-licensing to extend Pickering's operations beyond its design life nor does it take into account the continued operation of Darlington and the impact of the refurbishment wastes on the DGR Project. The failure to engage in a proper cumulative effects analysis represents a fundamental flaw in OPG's EIS and therefore the JRP has no alternative but to conclude that it is not in the public interest to approve the proposed DGR Project.

(C) Transportation of Nuclear Waste

122. Surprisingly, OPG fails to assess the cumulative effects of the transportation of the nuclear wastes to the DGR from the EIS. OPG has neglected and completely disregarded any effects on the DGR arising from the transportation of used nuclear fuel wastes or any cumulative effects arising from the transportation of the additional wastes generated by the operation of Pickering beyond its design life and the refurbishment of Darlington.

123. OPG's response to any questions with respect to the transportation of nuclear waste was quite simply *"... The DGR Project will result in no changes to the volumes, means or routes for transport."* This is disconcerting and misleading since OPG is fully aware that its planned re-licensing at Pickering and the refurbishment of Darlington will result in an increase in the amount of nuclear wastes to be deposited at the DGR and fails to assess any cumulative effects of wastes transported from outside facilities.

> One of the common concerns raised at OPG's public sessions was the issue of the transportation of nuclear wastes. One of the most "Frequently Asked Questions" during OPG's open house meetings concerned the transportation of nuclear wastes to the site. EIS page 6-269

124. The JRP, in recognition of the failure of OPG to consider the cumulative effects of the transportation of nuclear waste from the Darlington and Pickering facilities has no alternative but to recommend to the federal Minister of the Environment that OPG's plan is fundamentally deficient, fails to meet the requirements of CEAA and therefore must be rejected.

(D) DGR Relationship to NWMO and High Level Nuclear Waste Disposal

125. In 1996, the federal government accepted a legal obligation to establish a framework for managing long-lived non-fuel radioactive waste in Canada ("1996 Policy"). The federal government has created a structure of policies, legislation and organizations to govern the management of radioactive waste in Canada. Under this framework, waste producers and owners are responsible for the funding, management and operation of waste management facilities.

> CNSC, Who Looks After Radioactive Waste? Policy and legislative framework

126. The 1996 Policy states:

> The federal government has the responsibility to develop policy, to regulate, and to oversee producers and owners to ensure that they comply with legal requirements and meet their funding and operational responsibilities in accordance with approved waste management disposal plans.

The creation and establishment of a long term management framework of all radioactive waste, fuel and non-fuel related should take precedence over any steps to create a DGR. Absent a long

term management framework where the federal government has regulatory oversight any proposal for the long term management of nuclear waste is premature.

127. In June 2007 the federal government selected Canada's plan for the long term management of used nuclear fuel. The plan is referred to as "Adaptive Phased Management" ("Plan") and involves the construction of a large infrastructure project, being a deep geological repository, in an informed willing host community. The Plan is for used nuclear fuel to be contained and isolated in a deep geological repository in a suitable rock formation.

http://www.nwmo.ca/sitingprocess_theprocess

128. On January 1, 2009, OPG contracted with Nuclear Waste Management Organization ("NWMO") to manage the development of the DGR. The NWMO has been given the responsibility for taking the DGR Project through the regulatory approvals process.

http://www.nwmo.ca/dgrtransitiontonwmo, DGR Transition to NWMO.

129. The NWMO is a private organization of owners and producers of nuclear fuel wastes and its members include Ontario Power Generation, Hydro Quebec and New Brunswick Hydro and are incorporated under the federal *Nuclear Waste Act*. The NWMO board consists of only nuclear industry representatives who strongly support "deep geological disposal" of radioactive waste, an option that was rejected by the Seaborn Panel.

http://www.sierraclub.ca/national/programs/atmosphere-energy/nuclear-free/reactors/high-level-waste.shtml

130. OPG has gone to herculean lengths to distance itself from the NWMO and its proposal for a high level nuclear waste DGR, in spite of employing the very same people and using the very same vehicle for promotional efforts. OPG's consistent response is that no used fuel will be placed in the DGR Project and that the DGR Project and the proposed disposal of high level nuclear waste are separate and distinct projects. The NWMO is mandated by the *Nuclear Fuel Waste Act* ("NFWA") to develop, propose and implement a long-term project for the management of nuclear fuel wastes currently stored in interim facilities throughout Canada.

Nuclear Fuel Waste *Act*, S.C. 2002, c.23, section 6

131. The NWMO by virtue of the application of the NFWA is not subject to public oversight providing little or no transparency of its actions to the public. The NWMO is not subject to the provisions of the *Access to Information Act* nor is it subject to investigation by the Auditor General. This is far from a publicly accessible process.

132. NWMO has been working for over a decade on high-level nuclear waste storage (used fuel) and states that low and intermediate waste storage is not part of the NWMO's mandate. This statement is made despite its contract with OPG to manage the development of the DGR.

> John Spears, "Nuclear waste: Are two storage sites one too many?" Toronto Star, Business, March 13, 2013.

133. OPG itself recognizes that it is in a minority position internationally when it proposes to store these long-lived radioactive wastes with short lived ones. This is recognized in EIS 08-336, at p. 27 where OPG describes how other countries classify and store nuclear waste streams. Of the eight (8) examples cited, France, Sweden, Finland, the UK, U.S. Civilian Wastes and Switzerland all of them separate low level wastes in part on the basis of whether the waste is short-lived or long-lived, Germany's Konrad Mine and the U.S. WIPP sites do not classify the wastes separately. Where the wastes are classified on the basis of radioactivity, short-lived wastes are stored separately from long-lived wastes and, except for Switzerland; all of them store this waste in a near surface repository. Approximately seventy-five percent (75%) of best practices internationally separate long-lived from short-lived wastes and have separate facilities for the waste streams. It should be noted that none are in sedimentary rock.

134. According to OPG, low-level nuclear waste includes items like clothing, rags, and mops used by workers in radioactive areas and no special shielding is required by the workers who handle this type of waste. Intermediate level nuclear waste consists of radioactive metal fittings from reactor cores, refurbishment wastes that remain dangerous for centuries and requires the same careful protection measures as used fuel. Used nuclear fuel is classified as high level waste. OPG has gone to great lengths to manipulate the public into thinking that "intermediate" level waste is something that is less harmful than the used nuclear fuel despite knowing that this is not necessarily the case.

135. Currently a classification system for non-fuel radioactive wastes fails to exist. The classification proposed by OPG for the low and intermediate level wastes is simply a "name." These nuclear wastes could just as easily be referred to as "Peter" and "John." There is no scientific basis nor any broad acceptance in the international community for OPG's arbitrary classification of what constitutes intermediate wastes. OPG takes the position that radionuclides in low and intermediate level waste to be deposited at the Project have *"half lives generally equally to or less than 30 years."*

> Independent Assessment of Long-Term Management Options for Low and Intermediate Level Wastes at OPG's Western Waste Management Facility prepared by Golder Associates (February 2004), page 4

136. However, the ILW currently stored at the WWMF include many long-lived radio-isotopes including but not limited to *"Plutonium-239, with a half life of approximately 24,000 years meaning that PU239 will remain hazardous for approximately 240,000 years."* It is unclear as to how OPG can reconcile these contradictory statements. What is most disconcerting is that OPG fails to acknowledge that it is setting a precedent and paving the way for the deep geological disposal of high level nuclear waste and that high level nuclear waste could be accepted at the DGR at some point in the future since the radioactivity levels of intermediate and high level waste are similar.

> Quintessa, Preliminary Safety Assessments of Concepts for a Permanent Waste Repository at the WWMF Bruce Site, Report No. QRS-1127B-1 v.10, March 2003, Table 24, Appendix F

137. International Atomic Energy has noted that radioactive waste in Canada is only *"informally classified according to its radiological hazard and mass into one of three categories: (1) nuclear fuel waste; (2) waste derived from* uranium *mining and milling; (3) low-level radioactive waste (everything except nuclear fuel and uranium waste)."*

> John Rowat, International Atomic Energy Agency, Panel Discussion on *"The Need for a National Classification System for Radioactive Wastes"* (Abstract for presentation to the Canadian Nuclear Society, May 8-11 2005

138. From a radiological perspective, refurbishment waste contains radioactive elements that are identical to used fuel wastes and their half-lives, the very characteristics that are used to define high level nuclear wastes.

139. OPG's classification of low and intermediate waste is arbitrary without justification and does nothing more than confuse the public about the nature of waste being disposed of at the DGR Project.

140. In the likely event that a nuclear facility is shut down, their radioactive components and structural elements must be disposed of as radioactive waste in order to return the site to greenfield status.

141. OPG anticipates that decommissioning waste from its nuclear facilities will be disposed of at the DGR. The potential capacity of the DGR has been designed 35% greater than what is needed to contain the planned volume of 160,000 m^3 of the low and intermediate wastes scheduled to be deposited at the DGR. The EIS states that if at some time future decommissioning waste is placed in the DGR the waste volume would increase.

OPG, Project Description

142. The Hosting Agreement that was executed with Kincardine in October 2004 does include a provision for the emplacement of decommissioning waste. The cumulative effects of the impact of the decommissioning waste being sent to the DGR Project and the possibility of additional nuclear facilities being established in Ontario have not been assessed as part of this EIS. This represents a fundamental flaw in the EIS.

143. The Hosting Agreement states *"Whereas nuclear generating stations and associated facilities will need to be Decommissioned, resulting in Decommissioning Waste";* and further states that *"... it is foreseeable that additional nuclear generating facilities may be established in Ontario, with associated production of L&ILW."* The Hosting Agreement recognizes that decommissioning waste may be accepted at the DGR and that an increase in or continued productivity at OPG's other nuclear generating facilities will result in an increase in the amount of LLW and ILW.

144. Kincardine adopted By-law 2004-189 indicating that its decision to host the DGR Project was based on a clear understanding that: *"... No high level waste* ***or*** *used nuclear fuel would be allowed in the facility"* [emphasis added]. The use of the term "or" is a conjunctive term used to link alternatives such as "a cup of tea or coffee".

145. In the case of the Kincardine by-law it indicates that there are two distinct types of nuclear waste that would not be permitted at the DGR Project: high level waste and used nuclear fuel. As described in more detail in these submissions the refurbishment waste is considered, due to its radioactivity, high level nuclear waste but it is not used nuclear fuel waste. The question then arises what actually is going to be deposited at the DGR Project – will it be low, intermediate and high level wastes as currently proposed? Based on this lack of information and detail alone the DGR Project should not be approved.

146. Absent a fulsome explanation and description of the type of waste that will be accepted at the DGR and a list of the nuclear waste that will **not** be accepted for disposal at the DGR the EIS lacks an appropriate level of detail to engage in an assessment of the environmental effects of the DGR Project as required by CEAA.

147. Until such time as this information is provided to the JRP, it has no alternative but to advise the federal Minister of the Environment that the EIS fails to meet the cumulative effects requirement of CEAA.

148. Further, Kincardine and OPG have the ability to amend the Hosting Agreement and by-law to allow the DGR to accept a broader range of nuclear waste without having to go through the environmental assessment process.

PART VIII. THE ENVIRONMENTAL EFFECTS OF THE PROJECT OUTSIDE OF CANADA

(A) Importance of the Great Lakes

149. The Great Lakes holds 21% of the world's fresh water supply and 95% of North America's surface fresh water. There are 40 million people depending on the Great Lakes for drinking water. The Great Lakes are important to fishing, boating, recreation, tourism and agriculture in Michigan and throughout the Region.

Senate Resolution No. 58

150. The five lakes that constitute the Great Lakes water system of channels and canals although in separate water basins form one single interconnected body of fresh water. While historically there have been significant improvements in the health of the Great Lakes, including

a reduction in the impacts associated with persistent toxic substances and excessive nutrients, today's lakes are showing signs of degradation. Lake Huron, Lake Erie and Lake Ontario are in decline due to invasive species, changing climate and the impacts of a growing population resulting in the loss of natural habitats such as wetlands.

151. It takes water twenty-two years to move through Lake Huron and additional nine years to flow through to the St. Lawrence River by way of Lake Erie and Lake Ontario. The Great Lakes are dominated by what is referred to as "shore parallel flow" meaning that any persistent contamination that reaches the lakes by nearshore surface or groundwater flow could potentially threaten water intakes in the Great Lakes.

Written Submission from the Ontario Ministry of the Environment, July 30, 2013 at page 1

(B) International Joint Commission

152. The International Joint Commission ("IJC") recognized that a number of radiological contaminants from the nuclear industry should be considered *"persistent toxic substances"* and that the United States and Canada should aim for the elimination of these man-made substances through a policy of zero discharge, acting on the basis of the "precautionary approach". The Ninth Biennial Report of the IJC stated that *"The management of radionuclides, including the temporary and long-term storage of nuclear wastes, is a matter of public concern."*

International Joint Commission on Great Lakes Water Quality, *Ninth Biennial Report on Great Lakes Water Quality,* 1998, see chapter on Specific Persistent Toxic Substances.

153. The IJC, in 1998 encouraged Canada and the United States to aim for the limitation of human-made radiological contaminants from the nuclear industry, through a policy of zero discharge acting on the basis of a precautionary approach.

International Joint Commission on Great Lakes Water Quality, *Ninth Biennial Report on Great Lakes Water Quality,* 1998, see chapter on Specific Persistent Toxic Substances.

154. The IJC developed a Nuclear Task Force that released numerous reports on the radioactivity in the Great Lakes. In light of the known problems associated with radiological contamination from the nuclear industry of the Great Lakes downstream communities throughout Canada and the United States need to be consulted about OPG's proposed DGR.

International Joint Commission Nuclear Task Force, *Report on Bioaccumulation of Elements to Accompany the Inventory of Radionuclides in the Great Lakes Basin*; International Joint Commission Nuclear Task Force, *Inventory of Radionuclides for the Great Lakes*; and *Nuclear Task Force Chapter of the 1995-97 Priorities and Progress under the Great Lakes Water Quality Agreement*

155. The CNSC staff has stated that it is *"... not of the opinion that effects [of the Project] would occur in the US. There are several projects along the Lake Huron shoreline (including the operation of the existing WWMF) that have demonstrated that adverse effects occur only locally."* The research completed by the IJC contradicts the position taken by the CNSC and provides evidence showing that the operation of Canadian nuclear facilities on the Great Lakes has had measurable transboundary effects.

CNSC, Disposition of Comments from First Nations, the Public and Stakeholders on Scoping Document [sic] for OPG's Proposed DGR, August 2006 (CNSC CMD 06-H22), page 8

156. Despite knowing that there is a likelihood of transboundary effects from the proposed Project and the EIS identifying Michigan elected representatives and their staff, the staff of Michigan environment and geology agencies, and representatives of Michigan environment groups as part of OPG's target audience to provide information and access to information on the DGR OPG has stated that it will not comply with, or at a minimum take into consideration, the applicable laws of the State of Michigan.

EIS page 2-3

(C) Michigan's Opposition to the DGR

157. In May 2008, The Macomb County Water Quality Board ("Macomb Water Quality Board") passed a resolution to protect the waters of the Great Lakes Basin and to oppose OPG's DGR Project. This resolution identifies siting criteria for low-level radioactive waste repositories in Michigan and specifically excludes sites that are situated within ten (10) miles of Lake Huron. The resolution proposes that similar criteria be applied in Canada and all locations along the Great Lakes Basin.

158. On May 22, 2013, the Michigan Senate passed Senate Resolution 58 opposing the DGR Project and recommending that actions be taken by Canadians to resolve the concerns indentified and requests that Congress help ensure Michigan's concerns are fully resolved. It is important to note that the Senate Resolution 58 passed unanimously with 26 Senators signing on as co-sponsors.

159. The Michigan Senate recognized that *"Lake Huron and the other Great Lakes are critically-important resources to both the United States and Canada. The Great Lakes contain 95 percent of North America's surface fresh water and provide drinking water to tens of millions of people. Pristine water is important to fishing, boating, recreation, tourism, and agriculture in Michigan and throughout the region. Agriculture, commercial and sport fisheries, shipping, recreation, and tourism are important components of the Great Lakes economy. This proposal to place a permanent nuclear waste burial facility so close to the Great Lakes raises serious concerns."*

Senate Resolution No. 58

(D) Significant Effects Outside Canada

160. An EIS under CEAA is required to consider the environmental effects of the DGR Project outside of Canada. The CEAA prior to the changes in 2012, defines "environmental effects" to mean any change that the Project may cause in the environment whether any such change or effect *"occurs within or outside Canada."* This statutory requirement is underscored by section 4(1)(c) that identifies one of the purposes of CEAA is to ensure that projects carried out in Canada do not cause significant adverse environmental effects outside the jurisdiction in which they are carried out.

161. CEAA post December 2012 states that the environmental effects that are to be considered include a change that may be caused to the environment that would occur outside of Canada.

(E) 2012 Great Lakes Water Quality Agreement: Amended Protocol

162. The 2012 Great Lakes Water Quality Agreement: Amended Protocol ("Protocol") represents the legislative protocol of the Great Lakes Water Quality Agreement ("GLWQA") as amended in 2012. The GLWQA is a long-standing binational agreement between Canada and the United States, first signed in 1972. Its purpose is to identify shared priorities and coordinate actions of Canada and the United States to restore and protect the chemical, physical and biological integrity of the waters of the Great Lakes. The Protocol amends and updates the 40 year old GLWQA that was last revised in 1987.

http://www.ec.gc.ca/Publications/default.asp?lang=En&xml=9DD80B8C-7E7A-4131-8055-D47B0B3E004F

http://www.pollutionprobe.org/pdfs/Pollution_Probe_Media_Advisory_-__Great_Lakes_Water_Quality_Protocol_FINAL_(Sept-7-12).pdf

163. Article 4, Section 1 of the Protocol states:

> Both governments, in cooperation and consultation with State and Provincial Governments, Tribal Governments, First Nations, Metis, Municipal Governments, watershed management agencies, other local public agencies, the Public, shall develop and implement programs and other measures to fulfil the purpose of the GLWQA, in accordance with the Principles and Approaches set forth in Article 2, and under section 2(a)(vi) these programs and other measures shall include pollution abatement, control, and prevention programs for sources of radioactive materials.

164. Article 4 - Implementation: 2. of the Protocol states: these programs and other measures shall include, but are not limited to (a) **pollution abatement**, control, and **prevention programs for: (vi) sources of radioactive materials**; 3. The Parties commit themselves, in the implementation of this Agreement, to seek: (c) the enactment of any legislation that may be necessary to implement programs and other measures developed pursuant to Article 4.

165. Article 4 of the Protocol requires that programs be put in place for pollution prevention and specific prevention programs for radioactive materials. Allowing the DGR to proceed is contradictory to what Canada and the United States agreed to in the Protocol.

166. More importantly, Article 6 requires that the United States be notified *"in accordance with the requirements set out in the Canada-United States Joint Inland Pollution Contingency Plan and the Canada-United States Joint Marine Pollution Contingency Plan"* in a variety of situations one of which involves the storage or transfer of radioactive materials which, as is the case here, may impact the Great Lakes. Simply providing information is inadequate OPG has an obligation to consult, notify communities situated along the Great Lakes basin in the United States and provide an opportunity for meaningful public consultation of its proposal to construct a DGR for LLW and ILW along the Lake Huron shoreline.

167. The JRP has no alternative but to deny the proposal by OPG for the DGR Project outright on the basis that it is deficient and fails to comply with the Protocol and neglects to take into account environmental effects outside of Canada.

(F) No Harm Principle

168. The no-harm rule is a widely recognized principle of customary international law that recognizes that a State is duty-bound to prevent, reduce and control the risk of environmental harm to its neighbouring states. It could be viewed as an international principle of being a good environmentally responsible neighbour. The principle of no-harm is that: *"no state has the right to use or permit use of its territory in such a manner as to cause extraterritorial harm."*

Principle 21 in Stockholm and Principle 2 in Rio Declaration on Environment and Development, 1992

169. In the Trail Smelter case sulphur dioxide emissions resulted in air pollution migrating across the border into the United States. The arbitral tribunal concluded that the government of Canada had to pay for damage that the smelter had caused to land along the Columbia River valley in the United States. The tribunal concluded that *"under the principles of international law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and injury is established by clear and convincing evidence."*

Trail Smelter Arbitration, United States v Canada, UN Reports of International Arbitral Awards (UNRIAA), 16 April 1938 and 11 March 1941, Vol. III, pp. 1905-1982, available at http://untreaty.un.org/cod/riaa/cases/vol_III/1905-1982.pdf or American Journal of International Law, Vol.33 (1939), p.182 & Vol.35 (1941), at page 684

Trail Smelter Arbitration, UNRIAA, Vol. III, p.1965.

170. The no-harm principle has been confirmed by the International Court of Justice in its advisory opinion relating to the threat, or use, of nuclear weapons. The International Court of Justice stated: *"[t]he existence of the general obligation of states to ensure that activities within their jurisdiction and control respect the environment of other states or of areas beyond national control is now part of the corpus of international law relating to the environment.* These findings have been reiterated in the case relating to the Gabcikovo-Nagymaros dam (*Hungary* v. *Slovakia)* and more recently in the case concerning Pulp Mills on the River Uruguay *(Argentina* v. *Uruguay).*

ICJ, Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, ICJ Reports 1996, page 226 paragraph 29, http://www.icj-cij.org

ICJ Judgment, Case concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia), ICJ Reports 1997, page 41 at paragraph 53

ICJ Judgment, Case concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay), 2010 ICJ Reports 1, page 38 at paragraph 101

171. OPG has an international obligation to take into account and address any possible impacts that may occur from the DGR Project in the United States, specifically in Michigan which is situated immediately across from the DGR Project.

172. The risk of radiation seeping into the groundwater, and contaminating Lake Huron can result in a significant consequence and result in extraterritorial harm violating the no-harm principle.

173. International law has established that there is a duty to notify, warn, consult and engage in negotiation and take preventative due diligence aspect – a standard of care for government authorities. Due diligence consists of the following elements: the opportunity to act or prevent; foreseeability or knowledge that a certain activity could lead to transboundary damage; and proportionality in the choice of measure required to prevent harm or minimize risk.

Birnie, Boyle and Redgwell, International Law and the Environment, pages 143 – 152

ILC Draft Articles

174. The no-harm rule recognizes that environmental protection must be balanced against the sovereign right to exploit national resources. States do not have the freedom to carry out all activities on their territory regardless of the consequences, nor do they enjoy the absolute right to be free of impacts from other states. The general agreement is that transboundary interference must be "of serious consequence" and cause at least "significant", "substantial" or "appreciable" harm.

International Law Commission, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, 2001, Art. 2, commentary at paragraph 4

175. The JRP has no alternative but to deny the proposal by OPG for the DGR Project on the basis that it is deficient and fails to meet the international principle of no-harm.

176. OPG has and continues to ignore the transboundary effects of the DGR Project notwithstanding its statutory, both domestic and international, obligations. This represents a

fundamental flaw in the EIS and at a minimum the JRP cannot approve the EIS until OPG can demonstrate how it will meet these international obligations.

(G) CEAA Consideration of Transboundary Effects

177. Section 5 of the CEAA, 2012 includes effects outside of Canada as 'environmental effects' and these 'environmental effects' are required, under section 19, to be considered. OPG has a statutory obligation to consider the impacts of the proposed DGR Project in Michigan.

178. The JRP has no alternative but to deny the proposal by OPG for the DGR Project outright on the basis that it is deficient and fails to meet the minimum requirements of CEAA.

PART IX. CONCLUSION

179. We respectfully request that the JRP notify the Minister of the Environment that the EIS is deficient based on the fatal flaws identified and the failure of OPG to meet the minimum statutory requirements of CEAA. The JRP has no alternative but to conclude that the DGR Project is not in the public interest, is not justified in the circumstances, is not cost effective, is not the preferred alternative, is not the preferred means of disposal, fails to comply with international law, and therefore must be rejected.

ALL OF WHICH IS RESPECTFULLY SUBMITTED THIS 13TH DAY OF AUGUST

Date: August 13, 2013

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