

Deep Geologic Repository Joint Review Panel

Speaking Notes in Support of an Oral Intervention by

Stop The Great Lakes Nuclear Dump Inc.

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

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INTRODUCTION

1. Good afternoon members of the Joint Review Panel. My name is Beverly Fernandez. I am the spokesperson for Stop The Great Lakes Nuclear Dump.
2. Thank you for granting our group the opportunity to address the Panel on this matter of national and international importance. My comments today are directed not just to members of this Panel, but importantly, to members of the public and the media.
3. Today I stand before you, not as the voice of one person, but with the voices and support of almost 70,000 concerned citizens who have signed the Stop The Great Lakes Nuclear Dump petition; **more than every man, woman and child living in Bruce County.**
4. When our organization appeared before this Panel in September 2013 we indicated then, and we maintain today, that Ontario Power Generations' selection of the proposed DGR site 1 km from the shore of Lake Huron is ill-conceived, non-compliant and controversial.
5. During the course of the 2013 public hearings, it became obvious that OPG did not consider any other sites even though it was required to do so under the EIS Guidelines.
6. During the course of the 2013 public hearings and thereafter, many people and organizations questioned why OPG had not, as part of its due diligence, investigated a site in the Canadian Shield. OPG told the Panel they did not consider an alternate site in the Canadian Shield, or anywhere, because OPG already had a willing host with the Municipality of Kincardine.
7. We said it during the 2013 public hearings and we will say it again today; this is not good enough. One does not select a site to bury lethal radioactive

nuclear waste because a town, who is being paid large sums of money by the proponent, says OK.

8. At the conclusion of the 2013 public hearings this Panel asked OPG to provide information about a “hypothetical” site in the Canadian Shield. The key word here is “hypothetical”.
9. What was obvious then and remains obvious today is that OPG did not and cannot present an analysis or any site characterization work for an ACTUAL alternate site, whether in the Canadian Shield or anywhere. The best they can do is to provide modelled information about a hypothetical site. This is not good enough.
10. Let's be clear. The information provided by OPG about a “hypothetical” site in the Canadian Shield does not allow OPG to achieve compliance with the EIS Guidelines. OPG's site selection is clearly and fatally deficient and this deficiency can never be remedied by assembling and submitting information about a hypothetical site.
11. I will now outline some of the significant concerns with the Relative Risk Analysis Report.
12. In Information Request EIS-12-513 the Panel states QUOTE *“Analysis of risks to socio-economic factors is not required because the conceptual DGR in granite is not located in a specific geographic location”*. END QUOTE
13. This statement is very problematic. If OPG had identified an ACTUAL Granite DGR site, OPG would have been able to conduct an analysis of risks to socio-economic factors for such ACTUAL site.

14. Why did this Panel excuse OPG from having to produce this critical piece of analysis? OPG's failure to provide an analysis of socio-economic factors for an ACTUAL Granite DGR site is evidence of another fatal deficiency in OPG's work and in the case before you.
15. The most glaring deficiency in the relative risk analysis report has to do with the assumed location of the hypothetical Granite DGR site. Let me explain.
16. This Panel has heard from many citizens, environmental organizations and elected officials who are VERY concerned that the proximity of the proposed DGR to Lake Huron, one of our Great Lakes, creates a risk of contamination to these precious waters should the DGR fail in any respect to perform as expected.
17. Think about this for a moment. If one had a choice between two options, a DGR situated right beside a Great Lake, or a DGR situated far from people and far from large bodies of water, it is common sense that a DGR situated far from people and far from large bodies of water would be considered less risky and hence more optimal.
18. Notwithstanding how many reports from paid consultants are filed, no one can escape the very basic common sense conclusion of not burying and abandoning radioactive nuclear waste beside North America's largest supply of fresh water.
19. We know that some of the waste OPG plans to bury in the DGR remains radioactive for over 100,000 years. Locating a DGR in the Great Lakes Basin exposes the Great Lakes to risk of radioactive contamination for 100,000 years.

20. A significant concern with the IEG report is that it assumes the Granite DGR would be located right beside a Great Lake. This assumption is the foundation upon which the relative risk analysis report has been built.
21. We all know what happens if you build a home on a faulty foundation. The home, or in this case the relative risk analysis report, collapses.
22. The Canadian Shield covers a vast area in Eastern and Central Canada and stretches north from the Great Lakes to the Arctic Ocean, covering over half of Canada, and also extends south into the northern reaches of the United States. OPG and the IEG know this.
23. By assuming the Granite DGR site and the Bruce DGR site would be located a similar distance to a Great Lake, both would therefore be equally risky in terms of their potential to contaminate the Great Lakes. This is a convenient outcome if one's goal is to provide evidence that would support a decision to locate the DGR right beside Lake Huron.
24. The written submission from the Saugeen Ojibway Nation describes it perfectly: QUOTE *"by mischaracterizing or misconstruing the information request, the IEG creates a paper tiger – a granite repository with the same key failings as the DGR Project."* END QUOTE
25. Nothing prevented the IEG from assuming that the hypothetical Granite DGR site in the Canadian Shield would be located outside of the Great Lakes Basin.
26. If a Granite DGR was located somewhere in a remote area of the Canadian Shield OUTSIDE of the Great Lakes Basin, this would eliminate the risk of contamination of the Great Lakes in the event of a DGR leakage. OPG, the IEG, and the CNSC, knew or should have known this.

27. So why then did the IEG choose this more risky and less optimal location? Did the Panel instruct the IEG to do so, or did OPG and the IEG simply decide this on their own?
28. If OPG's goal was to provide evidence that would support its decision to locate the DGR right beside Lake Huron, then it is understandable why they would want to assume the Granite DGR would likewise be sited right beside a Great Lake. By assuming so, the Bruce DGR option wouldn't look so bad.
29. The fact of the matter is that the Panel's direction did not say that the Granite DGR site should have QUOTE "similar hydrological disposition to the real Bruce site" END QUOTE; these are the IEG's words not the JRP's words. We assert that the IEG incorrectly interpreted the JRP's direction and we are not alone in our thinking.
30. Our thinking agrees with statements contained in the written submission of the Saugeen Ojibway Nation where they state QUOTE "*The IEG either misunderstood the meaning of the request and clarification, or chose to interpret the direction as requiring the consideration of a granite-based DGR that had the same water surface conditions as the DGR at the Bruce site, including proximity to a large body of water or Great Lake.*" END QUOTE
31. We also fully agree with the SON statement QUOTE "*Siting the Granite DGR near a Great Lake is not a reasonable or defensible assumption.*" END QUOTE
32. Although it was the responsibility of OPG and the IEG to seek clarification on the intent of the JRP direction, OPG and the IEG chose not to do so. The IEG based their entire report on an assumption which is neither reasonable nor defensible and by misconstruing the JRP's direction conveniently avoids the questions asked. As a result, the IEG report is not objective nor is it responsive to the JRP direction and should be dismissed.
33. Again, we are in full agreement with SON's submission where they state QUOTE "*The Precambrian Canadian Shield is a very large formation, certainly*"

with many locations suitable for the placement of a repository that are geographically remote from large bodies of water, agricultural lands or large population centers. Given the broad public concern with locating the DGR Project adjacent to a Great Lake, which the IEG itself notes, it is unjustifiable to assume a Granite DGR would be similarly located.” END QUOTE

34. Given the large outcry of concern and opposition to the location of a DGR right beside the Great Lakes, it is unclear why the JRP did not direct OPG to provide information about a “hypothetical” Granite site located far from people and far from large bodies of water OUTSIDE of the Great Lakes Basin.
35. It is also very disturbing that the CNSC failed to provide any comments on the lack of appropriateness of this fundamental assumption underpinning the IEG report.
36. I will now discuss the comparative analysis of community acceptance of each of the DGR options.
37. As you know, the Panel had requested that the relative risk analysis include a review of community acceptance in the Local and Regional Study Area as well as OUTSIDE THE REGIONAL STUDY AREA.
38. I want to emphasize the words OUTSIDE THE REGIONAL STUDY AREA because this area includes communities not situated in Bruce County, including for example, communities in Ontario and elsewhere in Canada and the US in the Great Lakes region.
39. When faced with this requirement, OPG informed the Panel that insufficient information was available for the IEG to properly perform a distinguishing risk assessment of community acceptance of the four options. As a result, OPG asked the JRP to clarify what would be an acceptable response to this requirement.

40. The Panel clarified by asking for a comparison of risk perception for the four options. The Panel noted it did not expect the Expert Group to include social and ethical trade-offs in its analysis.
41. The Panel also clarified that the requirement that the analysis be "*defensible and repeatable*" should not be interpreted as a requirement for "evidence based" analysis. The Panel's intent was that the analysis be "*transparent*".
42. This Panel confirmed the importance of comparing the relative degree of community acceptance of the Bruce DGR option versus the Granite DGR option when it originally included this as a requirement in Information Request EIS-12-513. Surely if unimportant, the community acceptance element would not have been requested in the first place.
43. Let's be clear. The fact that OPG and the IEG purportedly don't have sufficient information to perform the community acceptance analysis does not diminish or eliminate the critical importance of this information. The Panel required this information to be provided so that it could determine OPG's compliance with section 7.3 of the EIS guidelines, but OPG and the IEG have failed to provide it.
44. We are very concerned with the JRP's direction that the relative risk analysis of community acceptance need not be "evidence based". We assert that evidence based analysis is fundamentally required to produce defensible, transparent and repeatable study results, and any tribunal howsoever constituted makes decisions based on evidence.
45. So let's look at the ACTUAL evidence that OPG and the IEG have either ignored or failed to identify and consider.
46. OPG's evidence presented during these proceedings very clearly demonstrates that OPG did not gather evidence from citizens living outside of

Bruce County concerning their acceptance of a DGR in the proposed Kincardine site location or any other location, including potential locations in the granite of the Canadian Shield. This represents an extremely large gaping hole in OPG's information base concerning the issue of community acceptance.

47. Claims by OPG or the IEG that there is insufficient information directly relevant to the issue of community acceptance for the various options at best lack substance.
48. It is very clear that information is readily available that does provide an indication of community acceptance (or non-acceptance) "Outside of the Regional Study Area" for both DGR options.
49. We would ask the Panel to view the image displayed on the overhead screen. As they say, a picture is worth a thousand words.
50. The image depicts current formal resolutions that have been duly resolved, voted on and passed by communities in Canada and the US all around the Great Lakes in opposition to the proposed DGR. The total population of these communities is almost 11 million people. This resolution map together with the list of all resolutions passed has been regularly updated and publicly posted on the Stop The Great Lakes Nuclear Dump website for all to see, **including by OPG and the IEG, for over 1 year**. This information was available during the preparation of the IEG report.
51. The almost 70,000 signatures and over 23,000 comments found on our public petition are readily accessible for all to see, **including by OPG and the IEG**. Again, this petition information was available during the preparation of the IEG report.

52. Anyone can see that all claims by OPG and the IEG that information concerning community acceptance of the Bruce DGR option and the Granite DGR option was not available, are false and must be rejected out of hand.
53. The IEG's failure to comment on the petition signed by 70,000 people and the 125 resolutions passed by concerned cities and communities is a blatant material omission in the IEG report. In addition, it was also missed a second time and was not addressed in the CNSC's review of the IEG report.
54. There are many other concerns with the IEG report that were covered in our written submission, however our limited time today does not allow us to cover all of them now.
55. I would like to now turn to the issue of WIPP.
56. WIPP is the only OPERATING DGR in the world, although it is currently closed and under investigation. WIPP was constructed as a PILOT PLANT, meaning it was a test facility. The goal of the test was to demonstrate that nuclear waste could be safely buried and contained in a DGR for not less than 10,000 years.
57. Well, we all know how that went. WIPP leaked, it is contaminated, 22 workers suffered radiation contamination, and radioactivity was released into the environment; all of which were NEVER supposed to happen.
58. As this Panel is aware, WIPP featured prominently in the OPG safety case as a shining example of a successful DGR with a solid track record.
59. Today OPG is downplaying the significance of the failure of WIPP because the optics of this failed DGR are problematic for OPG. OPG has assured this Panel that its measures and processes will prevent or mitigate a similar event from

happening at the DGR. OPG's message is basically, we are smarter than the folks at WIPP and "don't worry, be happy", we have it all figured out.

60. When this Panel visited WIPP in 2012, you heard presentations from expert Dr. Abraham Van Luik.
61. Dr. Van Luik's presentation included steadfast assurances that human intrusion is the only credible disturbance scenario that can lead to nuclear waste being brought into the accessible environment. So much for Dr. Van Luik's assurances. On February 14, 2014, radiological contaminants were brought into the accessible environment – not as a result of human intrusion and not due to a seismic or volcanic event, but due to reasons yet to be explained. Fifteen years into its operation, Dr. Van Luik's expert opinions have been turned upside down.
62. Members of the Panel, your lives would have changed forever if you had been in the tunnels when the explosion and radiation release at WIPP occurred. In an instant you would have been exposed to high levels of radiation and all the expert assurances in the world that this could never happen would be meaningless.
63. OPG is purporting they have a fully proven concept that will safely contain its toxic nuclear waste for 100,000 years.
64. Let's be clear. The Kincardine DGR is a trial run. It is an experiment. OPG and the CNSC remain confident that this experimental DGR will succeed despite the international experience of failed DGR's at ASSE II, Morsleben and now WIPP.

65. We cannot afford the Kincardine DGR to be added to the list of failed DGRs when the Great Lakes, and the lives of 40 million people who drink their fresh waters are involved.

SUMMARY

66. We know today with certainty that no geologist or scientist or multi-billion dollar corporation can provide a guarantee that the DGR will not leak and contaminate the Great Lakes.

67. Meanwhile, opposition to OPG's plan continues to mount.

68. Given the enormity of what is at stake - the fresh water of the Great Lakes - the acceptability of OPG's plan must reach the highest degree of social acceptability and broad community acceptance.

69. OPG claims a high degree of community acceptance because the small town of Kincardine provided its consent on behalf of its 11,000 residents. But what about the 40 million people residing in the provinces of Ontario and Quebec, and in the States of Michigan, New York, Indiana, Ohio, Pennsylvania, Illinois, Wisconsin, & Minnesota whose drinking water will be affected if this ill-conceived plan fails? This Panel is being asked to make a 100,000 year decision, without guarantees from the proponent and with deficiencies in its case and in its responses to requests from this Panel.

70. OPG and this panel have a moral, ethical and legal duty to ensure that the 40 million people living in the Great Lakes region are consulted, and have provided informed consent, as part of demonstrating the social acceptability of OPG's plan. The 40 million ARE the community and their voices MUST be heard. This decision must not be allowed to proceed on the basis of the municipality of Kincardine, a community receiving \$21 million in exchange for their support, saying ok.

71. This Panel has a profound responsibility to protect the interests of present and future generations. You have a responsibility to protect the environment, and the Great Lakes, Canada's most important natural resource, 21% of the world's and 84% of North America's fresh water supply vital to human and environmental health. You have a responsibility to recognize that the people and their elected leaders are speaking out loudly, and are saying that ANY RISK of contamination of the Great Lakes is too great a risk to take, and MUST NOT BE TAKEN.
72. Let there be no mistake. This plan has not passed the test of social acceptability. This plan has failed; completely and utterly; to gain social acceptance.
73. This failure is evidenced by statements of opposition from numerous individuals, politicians, and environmental organizations who have appeared before this panel; it is evidenced by the voice of Dr. David Suzuki – Canada's most influential and famous environmentalist – calling for a halt to this nuclear waste dump. It is evidenced by almost 70,000 people from every Canadian Province and Territory, and from all 50 US States who have signed the Stop The Great Lakes Nuclear Dump petition. It is evidenced by the 125 resolutions of opposition passed thus far by communities in Canada and in the US representing almost 11 million people. This is a staggering number. Eleven million people. And the vast majority of resolutions urge that neither the Kincardine nuclear waste repository nor any underground nuclear waste repository, be constructed in the Great Lakes Basin.
74. It is evidenced by the Michigan Senate passing a legislative package, on behalf of Michigan's 9.9 million citizens, calling for public hearings in Michigan and urging intervention by President Barack Obama and Secretary of State John Kerry.
75. It is evidenced by US Congressman Dan Kildee interceding this past July with Canada's Minister of Foreign Affairs to express concern about the proposed site because of its proximity to the Great Lakes and questioning if the

Canadian Government will seek the expressed consent of the US Government before granting final approval to any permanent nuclear waste sites within shared water basins.

76. And finally, it is evidenced by Congressman Kildee introducing, this past Monday, resolution 716 in the US House of Representatives resolving that:

(1) the Canadian Government should not allow a permanent nuclear waste repository to be built within the Great Lakes Basin;

(2) the President and the Secretary of State should take appropriate action to work with the Canadian Government to prevent a permanent nuclear waste repository from being built within the Great Lakes Basin; and

(3) the President and the Secretary of State should work together with their Canadian Government counterparts on a safe and responsible solution for the long term storage of nuclear waste.

77. Members of the Joint Review Panel; the evidence before you clearly shows that OPG's plan is fatally flawed and that its significant deficiencies can never be remedied. The overwhelming lack of social and community acceptance of OPG's plan is undeniable. The voices of opposition are speaking loudly and clearly saying NO to OPG's plan or any DGR in the Great Lakes Basin. We call upon you to recommend that OPG's plan for the Kincardine nuclear waste repository or any nuclear waste repository in the Great Lakes Basin be rejected.

78. Thank you.

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