



BY MAIL AND EMAIL

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June 14, 2010

Dear Ms McGee and Ms Myles:

Re: Darlington New Nuclear Power Plant Project Suggested Interrogatories for Ontario Power Generation

Please find attached a list of suggested Interrogatories for Ontario Power Generation (OPG) with regard to the proposed Darlington New Nuclear Power Plant Project. Lake Ontario Waterkeeper has identified gaps in the Environmental Impact Statement (EIS) and Technical Support Documents (TSDs) provided by OPG with the assistance of our retained subject matter experts, including Wilf Ruland, Hydrogeologist, Dr. Peter Henderson, Cooling Water Systems Expert, Doug Howell, Fish Habitat Expert, David Dillenbeck, Aquatic Biologist, and Peter Faye, Energy Systems Consultant.

The attached Interrogatories reflect those areas where additional information is required in order for our consultants to assess the full potential impact of the proposed project. Accordingly, our consultants have put their review process on hold pending receipt of

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technical responses from OPG. Upon receipt of those responses and reports, our consultants may need to submit additional Interrogatories. Further, we have arranged with OPG to tour the Darlington Nuclear site on June 29, 2010. Following that visit, our experts may identify further questions that will be submitted as Interrogatories at that time.

Once our consultants have enough information to complete their final assessments, we will submit our final reports and recommendations to the Joint Review Panel (the Panel) for consideration. We intend to complete this work within the allotted six month comment period, which we understand has been on hold since February 2010. We ask that you notify us of any change to this comment period, so that we can ensure that our consultants have adequate time remaining to complete their review of the EIS and TSDs, and to prepare reports that will benefit the Panel and further the public interest in these proceedings.

We ask that you present these Interrogatories to the Panel for submission to OPG. We ask for these questions to be answered individually and in writing as soon as possible, to allow our consultants to continue their review, and to help augment the information available to the Panel. Please contact Joanna Bull, counsel for Lake Ontario Waterkeeper, at 416-861-1237 if you have any questions or concerns about this information request.

Thank you for your assistance with this matter,



Mark Mattson
President and Waterkeeper

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IR#	EIS Guidelines Section	EIS Section or Technical Support Document (TSD)	Information Request	Rationale / Context
QUESTIONS REGARDING INFORMATION MISSING FROM THE EIS				
1	4.1 Scope of the Project 4.2 Factors to be Considered in the EIS 8 Description of the Project 11.4.3 Groundwater 12 Accidents, Malfunctions, and Malevolent Acts 15 Follow-up Program		Please provide: detailed plans for site preparation and construction; detailed plans for erosion control and stormwater management; detailed plans for site operations; detailed designs; a detailed environmental management plan; a detailed environmental protection plan for the handling, storage and disposal of fuel oils, solvents and lubricants; detailed construction waste management plans; detailed monitoring plans; detailed spills response plans; and detailed contingency plans.	The EIS Report has been issued prematurely. There is no decision yet on which reactor type is proposed to be used, and critical plans are missing entirely from the EIS and supporting documentation. In essence, much of the EIS simply represents a “plan to have a plan”, which is not satisfactory for the environmental impact assessment of a project of this magnitude.

IR#	EIS Guidelines Section	EIS Section or Technical Support Document (TSD)	Information Request	Rationale / Context
2	8.1 General Information and Design Characteristics	EIS Figure 1.1-2 DN Site Plan	Please provide detailed site maps showing the onsite features (like the existing DNGS, waste storage areas, shoreline, and ponds). Provide detailed maps showing the surrounding features, include the St. Marys Cement Plant and Limestone Quarry. Please provide updated mapping for the EIS generally, including adding legends to maps that currently have none.	There are serious deficits in the mapping provided in the EIS. Figure 1.1-2 does not have a legend, and does not show important existing site features. In particular, there are no maps showing the DNGS, the NND site, and the St. Marys Cement Plant and Limestone Quarry immediately to the east of the NND site.
3	4.1 Scope of the Project 8.1 General Information and Design Characteristics 8.2 Site Preparation		Please provide detailed information regarding the disposal of low- and intermediate-level wastes (L&ILW) or the disposal of high-level wastes from the proposed plant.	The EIS does not consider the impacts of the disposal wastes from the NND.

IR#	EIS Guidelines Section	EIS Section or Technical Support Document (TSD)	Information Request	Rationale / Context
4	2.5 Precautionary Approach 2.6 Study Strategy and Methodology	EIS 3.2.7 Adherence to the Precautionary Principle	Please clarify which standards were used in the preparation of the EIS, and indicate how they were applied (including, if applicable, specific sections of the document that reflect their application).	Page 3-20 of the EIS Report indicates that the Precautionary Principle has been applied throughout the preparation of the EIS, and that “industry standards and best practices” were applied. Throughout the rest of the EIS, there is only reference to “Good Industry Management Practices” (or GIMPs), rather than best practices. GIMPs should not be the standard used at this site - best practices should be applied through the life of the project.
5	12.3 Conventional Accidents	EIS 7 Malfunctions, Accidents, and Malevolent Acts.	Please provide detailed plans, as referred to in the EIS, regarding spill prevention and contingency in the event of malfunctions, accidents, and malevolent acts.	Section 7 of the EIS Report indicates that a variety of spill prevention and contingency plans will be in place for all sources of potential spills at the facility. None of these plans are presented in the EIS report, and until at least detailed outlines are included, the EIS Report can not be considered complete.
6	15 Follow-up Program	EIS 11 Preliminary Plan for EA Follow-up Program	Please provide detailed plans regarding the “follow-up program” or Monitoring program, including specific monitoring plans for groundwater quality and groundwater levels, surface water flows, and surface water quality.	Section 11 of the EIS report deals with the “follow-up program”, which would normally be called a Monitoring Program for the NND site. Few details are provided, and there is only a “plan to have a plan” for many critical aspects of the proposal that will need monitoring, including groundwater quality and groundwater levels, surface water flows, surface water quality, the Radiological Environmental Monitoring Program (REMP), and many more.

IR#	EIS Guidelines Section	EIS Section or Technical Support Document (TSD)	Information Request	Rationale / Context
QUESTIONS REGARDING HYDROGEOLOGY				
7	10 Existing Environment	EIS 00: Table ES-2 Executive Summary Page ES-10	Please provide a report that summarizes all observed negative impacts of the existing DNGS on the groundwater and surface water environments, and uses this case history to identify the critical contaminants in both groundwater and surface water for each of the following parameter groups: inorganic parameters, heavy metals, VOCs, PAHs, radiological contaminants.	Table ES-2 predicts “no residual adverse effects” on groundwater or surface water from the proposal. This strains credibility and is inconsistent with the observed monitoring history of the existing Darlington Nuclear Generating Station (DNGS) site. The existing DNGS provides an on-the-spot case history for assessing many of the potential impacts of the proposed New Nuclear - Darlington (NND) site - not enough use is made of this case history in predicting potential impacts of a second plant at this location.
8	7.3 Alternative Means of Carrying out the Project	EIS 2.4.1 Alternative Means of Implementing the Project	Please provide detailed justification for the proposed lake-filling aspect of the project. Please describe alternatives to lake-filling, as required by the EAA.	Page 2-12 of the EIS indicates that the NND will, “require some lake infill and a variation that did not involve lake infilling was screened out as not technically feasible”. Adequate justification for this decision is not provided, nor are alternatives properly canvassed for assessment as part of the EA. This question should have been properly assessed in the EA through alternative designs and put to the Panel for consideration.

IR#	EIS Guidelines Section	EIS Section or Technical Support Document (TSD)	Information Request	Rationale / Context
9	8.2 Site Preparation 8.3 Construction	EIS 2.5 Site Preparation and Construction Phase	Please provide storm water management plans that include the construction of surface water management ponds capable of containing and treating all runoff from areas exposed during construction.	Page 2-27 of the EIS Report indicates that “for assessment purposes it is assumed that the entire site will be prepared for construction at the outset of the project”. This means that raw soil could be exposed across a huge area, leading to the potential for massive air quality impacts (from dust) and surface water quality impacts (from soil erosion). To mitigate potential surface water impacts, a precondition for any site clearing, preparation, or construction in any new area for the NND project should be the construction of surface water management ponds capable of containing and treating all runoff from the affected area(s).
10	10 Existing Environment	2.6.13 Management of Conventional Waste	Please provide detailed information regarding the content of the Northwest Landfill, and any information regarding leachate plumes on the DN site.	Page 2-59 of the EIS Report indicates that “no waste disposal facilities will be established on the NND site”. Further, the EIS report does not clearly indicate whether waste materials (beside soil and rock) are buried in the Northwest Landfill. If waste is buried in that landfill, then there will likely be a leachate plume which could be used to map groundwater flow patterns and velocities on the DN site.

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11	5.4 Environmental Assessment and Regulatory Process and Approvals 11.3 Significance of Residual Adverse Effects	EIS 5.3.7.2 Mitigation Measures	Please specify which “regulatory requirements” for water will be used to determine the treatment standard for contaminated water on the site.	Page 5-38 of the EIS makes the critical commitment that “all water impacted by radioactive or conventional contaminants, discharged from any liquid stream... to the environment... will be treated as necessary to meet regulatory requirements”. Missing from this commitment are the regulatory requirements that are proposed to be used. The EIS cannot be considered complete until the regulatory criteria to be used in determining acceptability of all discharges to surface waters are specified. LOW submits that the appropriate standards to be applied would be the Provincial Water Quality Objectives (PWQO), which reflect the current water quality in Lake Ontario.
12	4.1 Scope of the Project 8.3 Construction 11.5.6 Human Health	EIS 5.3.7.2 Mitigation Measures EIS 6.1.3.2.2 Efficient Use of Infrastructure and Access to Services	Please specify the receiving wastewater treatment plant. Please provide specific detail regarding all measures which will be used to ensure that nothing other than domestic sewage will be flowing into the sewer system.	Page 5-38 and page 6-17 of the EIS Report indicate that “all domestic sewage will be directed to the wastewater treatment plant” by sanitary sewer, and that the existing DNGS buildings will also be serviced by the sewer system.

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13	4.1 Scope of the Project 8.3 Construction 11.5.6 Human Health	EIS 5.3.7.2 Mitigation Measures	Please provide detailed descriptions of the proposed water collection/ treatment facilities.	Page 5-38 of the EIS Report indicates that "... all water having come into contact with blasting agents and other contaminants" will be collected and treated appropriately, without specifying how this will be done.
QUESTIONS REGARDING THE POTENTIAL IMPACTS OF THE ADJACENT ST. MARYS QUARRY				
14	10.1.1 Geology and Geomorphology	EIS 4.6.2.2 Geology and Hydrogeology	Please provide a more detailed analysis of the issue of karstification at the NND site, conducted by a qualified expert in that field, with specific reference to the adjacent St. Marys Cement quarry.	The hydrogeological investigation for the NND project has concluded that karstification of the bedrock is not an issue at this site, but it is not clear how carefully this issue was considered. Given the proximity of the St. Marys quarry immediately to the east of the site and the great depth to which quarrying will occur, it appears advisable that the karst issue be carefully evaluated in more detail by a qualified expert in the field.

IR#	EIS Guidelines Section	EIS Section or Technical Support Document (TSD)	Information Request	Rationale / Context
15	<p>11.4.1 Geology and Geomorphology</p> <p>11.4.9 Effects of the Environment on the Project</p>	<p>EIS 8.2.1 Past and Existing Projects and Activities</p> <p>TSD 09 Geological and Hydrogeological Environment: Existing Environmental Conditions</p>	<p>Please address the potential for serious negative impacts on the proposed nuclear plant from the quarry operation, including the potential impacts of blasting. These concerns should be investigated, considered, and discussed in detail in the report by qualified experts.</p>	<p>The St. Marys operation, which has been at that location for decades, includes a quarry which recently received approval for extraction to a final depth of close to 200 meters below ground surface (over 190 meters below lake level). It could more appropriately be considered an open-pit mine than a quarry. The existing quarry is situated in the northeast of the St. Marys property, but the approved quarry operations plans have the quarry extending southwestward all the way to the southeastern Darlington Nuclear property boundary. The quarry will be about 80 meters deep within a distance of less than 100 meters from the DN property boundary. The NND proposal involves construction of a nuclear generating station at the point on the DN property which is closest to the St. Marys quarry.</p> <p>There will be ongoing blasting occurring for decades in the immediate proximity of the proposed NND facility, carried out by a third party over whom the proponent has no control. The potential effects of vibrations from blasting on the proposed nuclear plant are a significant concern.</p>

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16	11.4.1 Geology and Geomorphology 11.4.9 Effects of the Environment on the Project	EIS 8.2.1 Past and Existing Projects and Activities TSD 09 Geological and Hydrogeological Environment: Existing Environmental Conditions	Please address the potential for serious negative impacts on the proposed nuclear plant from the quarry operation, including the potential impacts of subsidence. These concerns should be investigated, considered, and discussed in detail in the report by qualified experts.	There is the potential for significant subsidence on the NND property due to dewatering of the bedrock groundwater flow system by the quarry. The quarry will have to pump out ever greater amounts of groundwater as it goes ever deeper into the bedrock, in order to keep a dry working area for blasting and aggregate extraction. As a groundwater-bearing formation is dewatered it will compact (in a process often referred to as subsidence). If there is any karstification or even any moderate permeability of any of the bedrock layers beneath the site and quarry, then subsidence could prove to be a significant problem on the DN property.
QUESTIONS REGARDING FISH HABITAT				
17	11.4.5 Aquatic Environment	EIS 5.4.5 Likely Environmental Effects on Aquatic Biota	Provide an analysis of the extent of the area of fish habitat that is harmfully altered or disrupted within the mixing zone associated with the cooling water discharge from once through cooling and from the use of cooling towers. Provide a detailed plan of the proposed compensation measures that will be deployed to offset these impacts.	The EIS and SWE Assessment of Environmental Effects TSD indicate that the cooling water temperature at the diffuser outlet will be +/-9°C above ambient temperature. Although this difference decreases as a result of mixing, fish and other mobile aquatic biota are likely to avoid a significant portion of the mixing zone resulting in a loss of productive fish habitat.

IR#	EIS Guidelines Section	EIS Section or Technical Support Document (TSD)	Information Request	Rationale / Context
18	13 Cumulative Effects	EIS 8.4.2 Effects on the Aquatic Environment EIS Table 8.2-1 Other Projects and Activities in the Study Area	Provide a detailed assessment of the impact of cumulative losses of fish and other biota as a result of impingement and entrainment at NND, DNGS, PNGS and “other industrial plants and municipal water treatment and pollution control plants drawing water from the lake in the LSA”.	Table 8.2-1 acknowledges that current and future operations at DNGS and PNGS contribute to fish impingement effects and concurrent entrainment effects are assumed. The text in Section 8.4.2 references the losses at individual sites, but does not evaluate total losses from all known sites within the RSA or LSA.

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19	11.4.2 Surface Water 13 Cumulative Effects	EIS 8.4.2 Effects on the Aquatic Environment EIS 8.2.1 Past and Existing Projects and Activities	Provide a detailed assessment of the cumulative impact of thermal loading resulting from the discharges at NND, DNGS, PNGS, St. Marys Cement, and other industrial plants on the lake.	Table 8.2-1 acknowledges that current and future operations at DNGS and PNGS contribute to the thermal loading to Lake Ontario. Elsewhere in the EIS, it is acknowledged that NND will also contribute to that loading. In Section 8.2.1, mention is made that emissions from the St. Marys Cement plant include untreated once through cooling water to Lake Ontario. Although thermal loading from NND is not listed as a residual effect, considering thermal loading as a rationale for the inclusion of DNGS and PNGS in Table 8.2-1 suggests the cumulative effect of the thermal loading from all sources within the RSA should be assessed.

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QUESTIONS REGARDING ONCE THROUGH COOLING WATER SYSTEMS				
20	11.4.5 Aquatic Environment	TSD 5 "Aquatic Environment: Existing Environmental Conditions" (NK054-REP-07730-00003 Rev 000)	<p>How has OPG interpreted the definition of "entrainment", with what effect on their consideration of it in the EIS?</p> <p>Has OPG considered the wider definition of "entrainment", which is not limited to the "sucking-in" of organisms, in order to assess the full potential effects of entrainment on fish from the NND? (This includes the effects of entrainment of organisms in emitted streams of water - see IR 5).</p>	<p>Within the EIS, entrainment is defined as the movement of organisms through the primary cooling water circuits. In the glossary of TSD 5, for example, it is defined as "<i>Occurs when aquatic invertebrates, fish eggs and fish larvae are drawn into a water intake and cannot escape.</i>" This definition is commonly used in relation to power plant environmental impacts, however, the actual definition of the term is wider and entrainment actually describes the process by which an object is incorporated into a flow. This wider definition may be important when considering the impacts of power plants.</p>
21	11.4.2 Surface Water 11.4.5 Aquatic Environment	TSD 4 "Surface Water Environment: Assessment of Environmental Effects" Table 4.5-5 Lake Temperatures for Alternative Discharge	<p>Has any consideration been given to the effects of entrainment by larval fish in the lake into this water jet and turbulent mixing zone? In particular, has the possibility that larvae will be killed or incapacitated by (a) shear stresses (b) exposure to rapid temperature changes and/or (c) exposure to biocides such as chlorine been considered?</p>	<p>If a once through cooling water system is adopted, it will be fitted with a 90-port diffuser designed to rapidly mix the 250 m³/s discharge with the receiving water of the lake. The cooling water will be released as a jet from these ports to facilitate rapid turbulent mixing. The assumed design is for an exit velocity of 6 m/s (about 13.4 miles per hour).</p>

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22	11.4.5 Aquatic Environment	TSD 6 “Aquatic Environment: Assessment of Environmental Effects” Section 3.3.2.3 Entrainment	<p>How can the loss of 8000 adult equivalent slimy sculpin through entrainment (TSD 6, p.3-30) be insignificant if the species has suffered a lake-wide recent decline in abundance? Would it not be the case that the losses from entrainment have and would continue to contribute to this decline?</p> <p>How can entrainment losses of round whitefish and Alewife be insignificant, if both of these species are reported to have populations that have recently declined? Is it not the case that the entrainment losses are presently contributing to these declines and that increased entrainment losses will accelerate the declines further?</p>	<p>A key environmental issue is the potential loss of young stages of fish caused by passage through the cooling water system. This entrainment loss can be very large in terms of absolute numbers. However, the EIS declares that the effects will be confined to a small area, will be mitigated, entrainment monitoring has failed to detect entrainment losses that would affect populations, and entrainment and impingement numbers would be negligible relative to lake-wide populations (TSD 6, p.3-32).</p>
23	11.4.5 Aquatic Environment	TSD 6 “Aquatic Environment: Assessment of Environmental Effects” Section 3.3.2.3 Entrainment	<p>Given the large recent changes in some fish populations, have calculations to estimate magnitudes of early and juvenile stage fish been undertaken using recently derived survival estimates?</p>	<p>The estimated adult equivalent losses caused by entrainment are highly sensitive to the assumed magnitudes of early and juvenile stages before adulthood.</p>

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24	11.4.5 Aquatic Environment	TSD 6 “Aquatic Environment: Assessment of Environmental Effects” Section 3.3.2.3 Entrainment	<p>Does the assertion on page 3-31 that entrainment is not possible just refer to the egg/larval stages of the American eel, or to all life stages of the American eel?</p> <p>What is the maximum size of eel that could be entrained by passing across the filter screens?</p> <p>Does this size of eel live in, or migrate through, Lake Ontario?</p>	On page 3-31 of Aquatic Environment (Effects) TSD, OPG states: “American eel – egg/larval life stages are marine. Entrainment is not possible”.
25	11.4.5 Aquatic Environment	TSD 6 “Aquatic Environment: Assessment of Environmental Effects” Section 3.3.2.3 Entrainment	Irrespective of the magnitude of the local density of these animals, is it possible that the entrainment losses will reduce the local population in the nearshore in the vicinity of the power plant?	The EIS openly acknowledges that large numbers of invertebrates are presently being, and will in the future be, entrained. TSD 6 states at page 3-30, “Invertebrate entrainment was also addressed in ESG 2001 and in Ager et al., 2006. Although estimates of chironomid, amphipod and <i>Mysis</i> losses involved large numbers, the respective studies cited high nearshore densities and huge lake populations of these organisms and concluded that they are unlikely to be affected.”

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26	11.4.5 Aquatic Environment 13 Cumulative Effects	TSD 5 “Aquatic Environment: Existing Environmental Conditions” Section 3.14.2 TSD 6 “Aquatic Environment: Assessment of Environmental Effects”	Has an in-combination assessment of all the power plants and other intakes affecting the fish populations been undertaken? If so, on what basis, using which other facilities? Has an estimate of the total fish mortality of the existing and proposed facilities combined been determined? If so, on what basis?	The TSD describes the potential impact of the NND plant on fish in relation to the large size of the fish populations within the lake. TSD 5 (Aquatic Environment: Existing) states at page 3-81 that, “Broadly distributed populations could withstand localized effects with little or no impact on the population as a whole, and therefore, would not be as sensitive to project-related impacts”. However, for this calculation to be acceptable, we would need the in-combination impact of all the power plants and other intakes affecting the fish populations in the whole lake. Further, we could not identify estimates for the total fish mortality of the existing and proposed facilities combined.

IR#	EIS Guidelines Section	EIS Section or Technical Support Document (TSD)	Information Request	Rationale / Context
QUESTIONS REGARDING EVAPORATIVE COOLING WATER SYSTEMS				
27	11.4.5 Aquatic Environment	TSD 4 “Surface Water Environment: Assessment of Environmental Effects” Table 4.2-1 Scenario Summary for Assessment	<p>Has any consideration been given to the effects of entrainment by larval fish in the lake into this water jet and turbulent mixing zone?</p> <p>In particular has OPG adequately considered the possibility that larvae will be killed or incapacitated by: (a) shear stresses; (b) exposure to rapid temperature changes; or (c) exposure to biocides, increased mineral concentrations, and other chemical additives present in the discharge?</p>	According to TSD if evaporative cooling is implemented, there would be a single discharge port with an exit velocity of 1.5 m ³ /s.
28	11.4.2 Surface Water 11.4.5 Aquatic Environment	EIS Section 5.3.2.3 Characterisation of Plant Effluents	How can OPG be certain that the impacts on aquatic life from additive chemicals in cooling water will not be appreciable, if the effects of exposing organisms entrained in the discharge plume in the mixing zone are not assessed?	The specific additive chemicals and their concentrations in the cooling tower discharge water are not specified in the EIS or TSDs. It is argued, however, that, “dilution factors within Lake Ontario for the cooling water systems were calculated to support a screening level assessment.”

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29	11.4.2 Surface Water 11.4.5 Aquatic Environment	EIS Section 5.3.2.3 Characterisation of Plant Effluents	Provide specific information regarding the type and volume of chemicals that will be used for each cooling water scenario, to allow for a review of potential impacts based on the specific contents of the effluent prior to dilution.	As stated above, the EIS states that liquid effluent can be assessed without specific information on the type or concentration of effluent because, “dilution factors within Lake Ontario for the cooling water systems were calculated to support a screening level assessment.” However, s.36(3) of Canada’s <i>Fisheries Act</i> (R.S.C. 1985, c. F-14) prohibits the deposition of a deleterious substance into waters frequented by fish. Canadian courts have held that this applies to effluent <i>before</i> it is diluted in receiving waters, making the dilution factor irrelevant to the prohibition.
30	11.4.2 Surface Water 11.4.5 Aquatic Environment	EIS Section 5.3.6	Please show how the magnitude of this impact has been assessed, and how it will be mitigated.	At page 5-31, the EIS states that, “Under extreme conditions, the effluent temperature may exceed the ambient water temperature by 16.9 degrees Celcius resulting in a positively buoyant plume.” Planktonic life in the lake, including fish, which come into contact with water this far above ambient temperature are likely to be killed or harmed.

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QUESTIONS REGARDING NEED FOR AND ALTERNATIVES TO THE PROJECT				
31	7 Project Justification	EIS Section 2.4 Definition of the Project for EA Purposes	Please confirm that section 16(1) of the <i>EAA</i> applies to the Environmental Assessment conducted by OPG for the Darlington new build project. If, in OPG's opinion, this section does not apply, please explain why not.	Section 16(1) of the <i>Environmental Assessment Act</i> (R.S.C. 1992 C.37) provides that: "Every screening or comprehensive study of a project and every mediation or assessment <i>by a review panel shall include a consideration of the following factors: ...</i> (e) any other matter relevant to the screening, comprehensive study, mediation or assessment by a review panel, such as the need for the project and alternatives to the project... " (emphasis added)
32	7 Project Justification	EIS Section 1.1.3 Purpose of and Need for the Project Section 1.1.4 Alternatives to the Project Section 2.4 Definition of the Project for EA Purposes	If s.16(1)(e) does apply to the project, please explain how the evidence in the EIS satisfies the requirement for establishing the need for the project and alternatives to the project, respectively.	Both the <i>EAA</i> and the EIS Guidelines require OPG to consider alternatives <i>to</i> the project, in addition to alternative means of carrying out the project. The Guidelines state, "This section must therefore identify and discuss other technically and economically feasible methods of producing electricity other than the construction and operation of the OPG Darlington NNPP that are within the control and/or interests of OPG." It is not clear from the EIS that any alternatives to the construction of a new nuclear power plant have been considered.

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33	7 Project Justification	EIS Section 1.1.3 Purpose of and Need for the Project Section 1.1.4 Alternatives to the Project Section 2.4 Definition of the Project for EA Purposes	Has the Province of Ontario provided an analysis of the need for the project and alternatives to the project separately from OPG's EIS? If yes, please provide the applicable documentation. If no, has the Province of Ontario been exempted by the Federal Minister of the Environment from compliance with s.16(1)(e) regarding an analysis of need for and alternatives to the project? If yes, please provide the applicable documentation. If no, please explain on what basis the review panel should assess the need for the project and alternatives to the project as required by s.16(1)(e) of the Act.	The following statement appears on page 1-6 in s.1.1.3 of the EIS: "The need for the NND project has been determined by the Province of Ontario and its energy policy, and OPG has been assigned responsibility for obtaining the necessary approvals for it."

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34	7 Project Justification	EIS Section 1.1.3 Purpose of and Need for the Project Section 1.1.4 Alternatives to the Project Section 2.4 Definition of the Project for EA Purposes	Is it OPG's position that a directive from the Province of Ontario exempts it from complying with the requirements of s.16(1)(e) of the Environmental Assessment Act? If yes, please explain what authority OPG relies on for that position including any legal precedents that may apply. If no, please explain why OPG has not filed evidence to fulfill the requirements of s.16(1)(e) regarding need for and alternatives to the project.	See above.