OPG Responses to Joint Review Panel EIS Information Request Packages 12, 12a, 12b, and 13		
IR#	**EIS Guidelines Section**	**Information Request and Response**
EIS 12-510	• Section 11.3 Significance of Residual Effects • Section 2.6 Study Strategy and Methodology	***Information Request:*** ***Significance Determination for Residual Adverse Effects*** *Provide a detailed narrative to explain how the significance of each residual adverse effect on the biophysical environment (Geology, Hydrogeology and Surface Water, Terrestrial Environment, Aquatic Environment, Radiological Conditions, Air Quality, Noise and Vibrations) and on Aboriginal Interests was determined. Provide a separate narrative for each residual adverse effect.* *The narrative must explain the logic behind the significance determinations and is to use context-based reasoning. Arbitrary category limits for criteria such as magnitude are not required. Rather, the context for the predicted measurable change should be explained in sufficient detail that the reader may understand the relative significance of that change in terms of the magnitude, geographic extent, timing and duration, frequency and degree of irreversibility criteria. If the social/ecological context of the adverse effect was also assessed, the rationale for this criterion must be explained. Defensibility is to be provided by references to the literature (peer-reviewed and "grey" literature). Sufficient information must be provided to allow a third party reviewer to understand how the conclusion was reached.* *The narratives provided in the Socio-Economic Assessment are sufficiently clear and do not require further elaboration.* ***Context:*** *In Dr. Duinker's hearing submission (PMD 13-P1.175), he expresses concerns about the lack of transparency of the decision trees and the apparent arbitrariness in professional judgement used to determine significance (pages 5-7 of the PMD). The determination of significance of adverse impacts is fundamental to the environmental assessment. Therefore, the rationale for the determination of significance must be credible, defensible, clear, reliable, and appropriate.* *Narrative Requirements:* • *Clear explanation of the "measurable change" leading to identification of adverse effect in terms of comparison pre and post-impact, and the assumed measurement error. Would the change be detectable using standard monitoring methods? Have similar changes occurred in the study area and would these changes be described as "measurable"?* • *Avoidance of arbitrary low/medium/high categorization in favour of narrative reasoning that is well supported by literature citations and examples from comparable projects. For example, the context for magnitude may include references to the toxicological literature, risk quotients, or population and community monitoring and modelling from comparable projects which have similar effects on the biophysical environment or upon Aboriginal interests.* • *Avoidance of the "may not be significant" determination. Instead, explain the level of confidence in each of the*

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		significance conclusions. The level of confidence must be explained in terms of the precautionary principle; i.e. the application of risk avoidance, adaptive management and preparation for surprise requirements associated with each significance determination. For example, if the assessment team judges that the consequences of being wrong about the significance of a particular effect are such that explicit monitoring, contingency planning, or further risk reduction measures are required, then these measures must be described in association with the significance result.
		OPG Response: Attachment A presents a detailed narrative explaining how the significance of each residual adverse effect on the biophysical environment was determined in the Environmental Impact Statement (EIS) (OPG 2011). The narrative provides an explanation of the logic used in the significance assessments and further clarifies the significance assessments presented in Sections 7.2.3, 7.3.3, 7.4.3, 7.5.3, 7.6.3, 7.7.3, 7.8.3, and 7.9.3 of the Environmental Impact Statement (OPG 2011). For components of the environment for which no residual adverse effects were identified (i.e., radiation and radioactivity, geology, and surface water quality), information on what would have been required for identification of a significant adverse effect and a discussion of the potential effects of the DGR Project are provided for completeness. The response includes an explanation of “measurable change” leading to the identification of adverse effects for each residual adverse effect. **References:** OPG. 2011. OPG’s Deep Geologic Repository for Low and Intermediate Level Waste - Environmental Impact Statement. Ontario Power Generation report 00216-REP-07701-00001-R000. Toronto, Canada. (CEAA Registry Doc# 298)
EIS 12-511	• Section 16, Follow-Up Program	***Information Request:*** ***Geoscientific Verification Plan*** *Provide an updated Geoscientific Verification Plan (GVP) that includes more details concerning specific methods, timing, and the sequencing of sampling as well as how Ontario Power Generation will develop triggers for changes to engineering design and benchmarks for verification of the safety case.* *Verification activities that are outlined in NWMO DGR-TR-2011-08 are generally defined and lack substantive detail as to the procedures that would be used, spatial locations of testing and timing of testing. An example deficiency is provided in the following paragraph, with more details being provided in the Context section of this IR request.*