

December 28, 2016

CD#: 00216-CORR-00521-00007

MS. HEATHER SMITH

Vice President, Operations
Canadian Environmental Assessment Agency
Place Bell Canada
160 Elgin Street, 22nd Floor
Ottawa, Ontario K1A 0H3

Dear Ms. Smith,

OPG's Deep Geologic Repository for Low and Intermediate Level Radioactive Waste Project – Response to Information Requested from the Minister of Environment and Climate Change

References: 1. Minister of Environment and Climate Change letter, Honourable C. McKenna to L. Swami, "Deep Geologic Repository for Low and Intermediate Level Radioactive Waste Project," February 18, 2016, CD# 00216-CORR-00521-00003.

The purpose of this letter is to provide the Canadian Environmental Assessment Agency (CEAA) with OPG's response to the information requested in the letter from the Minister of the Environment and Climate Change [Reference 1].

The enclosures to this letter provide OPG's response to the three information requests from the Minister. The enclosures are comprised of three packages and total 7 documents as follows:

- Study of Alternate Locations
 - Study of Alternate Locations Main Submission, 00216-REP-07701-00013
 - Description of Alternate Locations, 00216-REP-07701-00014
 - Environmental Effects of Alternate Locations, 00216-REP-07701-00015
 - Cost and Risk Estimate for Packaging and Transporting Waste to Alternate Locations, 00216-REP-03450-00001
- Updated Analysis of Cumulative Environmental Effects
 - Updated Analysis of Cumulative Environmental Effects, 00216-REP-07701-00018
 - Adaptive Phased Management (APM) Deep Geologic Repository (DGR) Preliminary Description, 00216-REP-07701-00017

- Mitigation Measures
 - Mitigation Measures Report, 00216-REP-07701-00019

A brief summary of OPG's findings is as follows:

1. Study of Alternate Locations

As requested by the Minister OPG has completed an evidence-based study which:

- makes specific reference to alternate locations which meet OPG's criteria and thresholds for technical and economic feasibility,
- determines the environmental effects of the DGR at those alternate locations,
- identifies incremental costs and risks for the off-site transportation of the L&ILW to the alternate locations, and
- identifies additional project related costs and uncertainties associated with alternate locations.

OPG's study demonstrates that relocating the DGR to an alternate location will likely result in greater environmental effects as compared to the DGR Project at the Bruce Nuclear site. There will be increased effects on air quality, including green house gas emissions, effects on traditional and non-traditional land use, and adverse effects on vegetation and wildlife communities in establishing a new nuclear facility. All environmental effects can be mitigated such that there are no significant adverse environmental effects.

In addition, an estimated 22,000 to 24,000 road shipments over a 30 year period will occur at an estimated incremental cost ranging from \$0.4B to \$1.4B. There will be incremental radiological and conventional transportation risks which are estimated to be between 3 and 69 road collisions.

The other incremental project costs (non-transportation related) to be incurred are estimated to be in the range of \$0.8B to \$2.1B. These costs would include such things as site characterization of an alternate location, regulatory approvals, and site preparation and infrastructure development.

2. Updated Analysis of Cumulative Environmental Effects

The updated analysis of the cumulative effects of the DGR Project at the Bruce Nuclear site in light of the APM DGR project shows that there is no potential for likely adverse cumulative effects and the conclusions presented in the EIS for the DGR Project at the Bruce Nuclear site regarding cumulative effects remains valid. This report also shows that cumulative effects are unlikely as a result of malfunctions, accidents, and malevolent acts related to both projects.

3. Mitigation Measures Commitments

OPG has provided an updated list of mitigation and monitoring commitments for each identified adverse effect for the DGR project, including mitigation measures and monitoring activities identified in the Canadian Environmental Assessment Agency's (CEAA's) proposed conditions as accepted by OPG. The report also

identifies out-dated or redundant commitments that were previously brought forward to the Panel.

OPG therefore concludes that the DGR Project at the Bruce Nuclear site remains the preferred location based on a relative consideration of environmental effects, transportation risks, transportation and other project-related costs and uncertainties; and the absence of any guarantee of improved safety or environmental quality at an alternate location.

If you have any questions, or require additional information, please contact me at <contact information removed>, or by e-mail at <email address removed> .

Sincerely,
<Original signed by>

Lise Morton
Vice President
Nuclear Waste Management

cc: Ron Hallman - President, Canadian Environmental Assessment Agency
Dr. Michael Binder - President, Canadian Nuclear Safety Commission
R. Jammal - CNSC (Ottawa)
D. Newland - CNSC (Ottawa)
J. Keto - Vice President Nuclear Decommissioning, OPG
Department of Fisheries and Oceans
Major Projects Management Office
Transport Canada
Health Canada
Natural Resources Canada
Environment and Climate Change Canada

ENCLOSURE 1

Study of Alternate Locations Main Submission 00216-REP-07701-00013

Including:

- Description of Alternate Locations, 00216-REP-07701-00014
- Environmental Effects of Alternate Locations, 00216-REP-07701-00015
- Cost and Risk Estimate for Packaging and Transporting Waste to Alternate Locations, 00216-REP-03450-00001

ENCLOSURE 2

Updated Analysis of Cumulative Environmental Effects
00216-REP-07701-00018

Including:

- Adaptive Phased Management (APM) Deep Geologic Repository (DGR) Preliminary Description, 00216-REP-07701-00017

Enclosure to OPG Letter, L. Morton to H. Smith, "OPG's Deep Geologic Repository for Low and Intermediate Level Radioactive Waste Project – Response to Information Requested from the Minister of Environment and Climate Change", CD#00216-CORR-00531-00272

ENCLOSURE 3

Mitigation Measures Report
00216-REP-07701-00019