

December 22, 2014

NK38-00531 P
NK38-CORR-00531-17173 P

Mr. M. Leblanc
Commission Secretary
Canadian Nuclear Safety Commission
280 Slater Street
P.O. Box 1046, Station B
OTTAWA, Ontario
K1P 5S9

Dear Mr. Leblanc:

Darlington NGS - 2014 Update on Ongoing Environmental Activities Arising from DNGS Refurbishment EA Decision 2013

The purpose of this letter is to provide the CNSC (the Commission) with an update on several ongoing environmental activities, discussed by the Commission in the Record of Proceedings and Reasons for Decision in the Environmental Assessment Screening regarding the Proposal to Refurbish and Continue to Operate the Darlington Nuclear Generating Station (EA PR&D), (Reference 1).

In each case the Commission requested OPG for an update on progress up to the end of 2014, in anticipation of the Darlington NGS licence renewal hearing. Each of the updates below provides an overview of detailed technical studies submitted to the appropriate federal and provincial authorities in 2014 where required.

Fisheries Act Authorization: As discussed in paragraph 38 of the EA PR&D, the potential aquatic effects of the Project on aquatic habitat, the Department of Fisheries and Oceans Canada (DFO) had informed the Commission that while the residual adverse effect was minor in nature and not significant, there was a residual impact. The Commission acknowledged OPG's efforts in monitoring the situation and taking measures to minimize the impact of Darlington's operation on fish impingement and entrainment. OPG has now addressed the DFO's concern with the successful implementation of a fisheries habitat restoration project to offset any minor annual impingement and entrainment effects. Based on the successful offsetting measures, OPG has applied for Authorization under Section 35(2)(b) of the Fisheries Act in 2014 and anticipates a DFO response early in 2015.

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Effects on Round Whitefish: As described in paragraph 53 of the EA PR&D, OPG confirmed its intention to continue to undertake studies to update our understanding of the potential thermal effects of the cooling water discharge diffuser. This work was completed in 2014, and the final report submitted to the Commission, Environment Canada and DFO staff. The results of the study confirm low risk on round whitefish eggs and larvae from normal operation of cooling water discharge systems at the Darlington and Pickering nuclear generating stations.

Round Whitefish Action Plan: OPG has also continued to participate in the Round Whitefish Action Plan, under the leadership of the Ontario Ministry of Natural Resources and Forestry (OMNRF). OPG has agreed to work collaboratively with OMNRF to collect samples of Round Whitefish in the vicinity of the Darlington and Pickering nuclear generating stations, as part of a meta-population study, to better understand the population dynamics of this species in Lake Ontario.

Groundwater Contamination: As described in paragraph 65 of the EA PR&D, at the conclusion of the discussion of the Darlington NGS event of Injection Water Storage Tank (IWST) spill that occurred in 2009, the Commission requested that OPG to provide an update on the work completed to characterize the spill in support of the anticipated licence renewal proceedings in 2014.

OPG completed a detailed study in 2014 and concluded that environmental effect of the IWST spill was very low and continues to decrease. Tritium levels measured at drinking water supply plants following the event were found to be approximately 8 to 9 Bq/L compared to a typical background level of 12 Bq/L. The total activity released from the spill was less than one percent of OPG's licensing limit.

The groundwater in the vicinity of the spill is migrating slowly around and underneath the west half of the powerhouse towards the forebay. At the current rate of flow, the contamination will be fully dissipated in six years. As a result of the low levels of original water contamination, the reduction in concentration over time, and the dilution contribution of the other lake and ground water, no measurable change in drinking water can be observed in the lake or at the nearest Drinking Water Supply plant, confirming the Commission's conclusion on this matter.

If you have any questions on this update to the end of 2014, please contact Raphael McCalla, Director - Environment Operations Support, at (905) 839-6746, extension 5118.

Sincerely,



Brian Duncan *S. Gregors for*
Senior Vice President
Darlington Nuclear
Ontario Power Generation Inc.

cc: Mr. F. Rinfret, CNSC (Ottawa)
Mr. A. Ling - CNSC (Darlington)

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- Reference:
1. CNSC letter, L. Levert to Dietmar Reiner, "Record of Proceedings – Environmental Assessment on the Refurbishment and Continued Operation of the Darlington Nuclear Generating Station", March 14, 2013, CD# NK38-CORR-00531-16265.