

MINISTER OF THE ENVIRONMENT AND CLIMATE CHANGE

IN THE MATTER OF sections 34.1, 100 and 101 of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40 as amended;

-and-

IN THE MATTER OF Part XIII of the *Environmental Protection Act*, R.S.O. 1990, c. E.19 as amended;

-and-

IN THE MATTER OF sections 38 to 48 of the *Environmental Bill of Rights*, S.O. 1993, c. 28;

-and-

IN THE MATTER OF an appeal by the Concerned Citizens of Brant against the decision of Belinda Koblik, Director, Ministry of the Environment and Climate Change, under section 34.1 of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended, to issue Permit to Take Water No. 7115-9VVLJW, dated October 29, 2015, to CRH Canada Group Inc., for the taking of groundwater from the Source Pond at the Paris Pit located at Lot 27, Concession 2, Geographic Township of Dumfries, County of Brant;

-and-

IN THE MATTER OF an appeal by the Concerned Citizens of Brant against the decision of Fariha Pannu, Director, Ministry of the Environment and Climate Change, under section 20.3 of the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended, to issue Environmental Compliance Approval No. 1400-9VNPVY, dated October 29, 2015, to CRH Canada Group Inc., for the establishment, use and operation of sewage works for the collection, transmission, treatment and reuse of wash water effluent from an aggregate washing operation at the Dufferin Aggregates - Paris Pit, at Lot 26, 27, 1, 2 & 3, Concession 3, 2, WGR, South Dumfries, County of Brant;

-and-

IN THE MATTER OF an appeal by the Concerned Citizens of Brant of a decision dated April 11, 2017 of the Environmental Review Tribunal in respect of the above matter.

REPLY

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I. INTRODUCTION

1. This is the Reply of the Concerned Citizens of Brant (“CCOB” or the “Appellants”) to the Responses of the Parties in respect of the Appeal, dated May 9, 2017, brought before the Minister of the Environment and Climate Change (“Minister”) by CCOB under section 20.16(1)(b) of the *Environmental Protection Act*, R.S.O. 1990, c. E.19 (“EPA”), as amended.

2. In particular, this Reply addresses Responses filed by the following Parties:

- (a) CRH Canada Group Inc. (“CRH” or “Dufferin”), dated June 23, 2017;
- (b) Director, Ministry of the Environment and Climate Change (“Director”), dated June 23, 2017; and
- (c) Corporation of the County of Brant (“Brant”), dated June 23, 2017.

II. REPLY TO RESPONSE OF CRH

3. The Appellants submit that when read in its entirety, the CRH Response confirms why the April 11, 2017 decision of the Environmental Review Tribunal (“ERT” or “Tribunal”) is contrary to:

- (a) the public interest and public policy; and
- (b) the facts and evidence heard before the Tribunal.

A. Issues Raised by CCOB are Questions of Policy and Fact, not Law

4. As an overall observation, CCOB submits that CRH, as well as the Director, seek to characterize our appeal grounds as raising a question of law covered by s. 20.16(1)(a) of the *Environmental Protection Act*, R.S.O. 1990, c. E.19 (“EPA”) and, therefore, only addressable by Divisional Court, as opposed to a question other than a question of law, addressable by the Minister under s. 20.16(1)(b) (CRH Response, Tab 1, paras, 6, 17; Director’s Response, para 26). We note though that the Director concedes that CCOB has “raised a wide range of factual issues on appeal” (Director’s Response, para 21).

5. CCOB submits that the problems posed by the decision and reasons of the Tribunal in this matter are a combination of mixed policy and fact. If any are capable of being characterized as questions of law, which CCOB says is not the case, they are not questions of law alone. As such, they are not amenable to appeal to Divisional Court under s. 20.16(1)(a). The courts have been clear that unless there is a question of law alone, a matter on appeal is not subject to Divisional Court jurisdiction. Questions of fact, mixed fact and law, or the exercise of the Tribunal’s discretion, are not good enough. There must be a pure question of law alone for a matter to be capable of appeal to

Divisional Court.¹ There are no questions of law associated with the CCOB appeal in this matter, let alone pure questions of law. There are many questions of policy and fact raised in the appeal. Accordingly, the appeal has been properly brought under s. 20.16(1)(b).

B. The Minister Does Not Owe Deference to the Tribunal

6. The Responses of CRH (as well as the Director) also argue that the Minister “should respect the function of the Tribunal”, not “second-guess” the Tribunal without the benefit of the complete record before it, not undermine the principle of finality of decision-making, or render the Tribunal’s role meaningless, that deference is owed the Tribunal on factual findings because of its specialized expertise, and the Minister should also defer to the MOECC experts (CRH Response, Tab 1, paras 18-25; Director’s Response, paras 11-21).

7. In reply, CCOB submits that: (1) CRH (and the Director) cite no statutory or case law authority for their proposition that the Minister (as opposed to a court) must accord deference to the Tribunal’s decision (let alone to the experts of one of the parties); (2) the courts have made it clear that Ministers are entitled to deference because of, among other things, their expertise² and expertise is determined by the nature of the decision-maker, therefore, there is no particular reason for the Minister to accord the Tribunal deference when they are both experts and the Minister has final decision-making authority; (3) the CCOB cover letter to the Minister, dated May 9, 2017, asked that the Tribunal record be placed before the Minister (See CCOB Reply, Schedule “A”); (4) the CCOB Final Argument provided to the Minister with the CCOB Appeal summarizes in detail the evidence-in-chief, cross-examination, re-examination, and responses to Tribunal

¹ See, for example, s. 96 of the *Ontario Municipal Board Act*, R.S.O. 1990, c. 28 (appeal from a decision of the Ontario Municipal Board lies to Divisional Court on a question of law with leave of the Court); **CCOB Reply Book of Authorities, Tab 1** - *Simon v. Bowie*, 2010 ONSC 5989, 2010 CarswellOnt 10838 (Ont. Div. Ct.) at paras 4, 7 (a question of fact or mixed fact and law is not enough; there must be a question of law alone to be able to appeal to Divisional Court); **CCOB Reply Book of Authorities, Tab 2** – *Ottawa (City) v. 267 O’Connor Ltd.* 2016 CarswellOnt 1689 (Ont. Div. Ct.) at para 10 (under s. 96(1) of the *OMB Act* Divisional Court only has jurisdiction to hear a pure question of law; a question of mixed law and fact is not sufficient); **CCOB Reply Book of Authorities, Tab 3** – *Miller Paving Ltd. v. McNab/Braeside (Township)* 2016 CarswellOnt 16400 (Ont. Div. Ct.) at para 16 (findings of fact or of mixed fact and law are not subject to appeal to Divisional Court); **CCOB Reply Book of Authorities, Tab 4** – *Residents for Sustainable Development in Guelph v. 6 & 7 Developments Ltd.*, [2005] O.J. No. 3623 (Ont. Div. Ct.) at para 9 (on appeal, Divisional Court has no jurisdiction to consider questions of fact, questions of mixed fact and law, or questions of the exercise of the Board’s discretion); **CCOB Reply Book of Authorities, Tab 5** – *Stone v. Prince Edward (County)*, [2008] O.J. No. 2588 (Ont. Div. Ct.) at paras 10-13 (question of mixed fact and law involves applying a legal standard to a set of facts); **CCOB Reply Book of Authorities, Tab 6** – *Association for the Protection of Amherst Island v. Windlectric Inc.*, 2017 ONSC 1012 (Ont. Div. Ct.) (at para 12 (jurisdiction of Divisional Court hearing an appeal from ERT is a narrow one; court may only consider questions of law, but open to a party to appeal ERT decision “on any matter other than a question of law” under s. 145.6(2) of *EPA* to Minister).

² **CCOB Reply Book of Authorities, Tab 7** - *Baker v. Canada (Minister of Citizenship and Immigration)*, [1999] 2 S.C.R. 817 at para 59 (the fact that the formal decision-maker is the Minister is a factor militating in favour of deference; the Minister has some expertise relative to courts...particularly with respect to when exemptions should be given from the requirements that normally apply).

questions of the witnesses for all the parties; and (5) the powers of the Minister on appeal, pursuant to s. 20.16(3) are very broad. They allow the Minister to “confirm, alter or revoke the decision of the Tribunal, substitute for the decision of the Tribunal such decision” as the Minister “considers appropriate” or require a new hearing (though CCOB submits a new hearing is not warranted in the circumstances of this case because the relief CCOB seeks relates to modifications to language in a small number of conditions of the Environmental Compliance Approval – “ECA” – not the larger question of whether the ECA be revoked). In short, the Minister has the means to examine the record and has broad authority to overturn a Tribunal decision (in this case by modifying certain conditions) with, or without, a new hearing. Such broad authority is not consistent with the narrow ambit of discretion the CRH (and the Director) would ascribe to the Minister. Furthermore, the principle that a decision under s. 20.16(1)(b) is a political decision, as argued by CRH and discussed below, is also inconsistent with the notion that the Minister must defer to the Tribunal decision.

C. CCOB’s Proposed Conditions Are Within the Scope of the Appeal

8. The CRH also argues that CCOB’s proposals for conditions 4.8 and 5 of the ECA go beyond the proper scope of the ECA (CRH Response, para 5).

9. In reply, CCOB submits that the Tribunal decision stated the following:

“[96] What is within the scope of the appeal is whether the ECA contains sufficient measures to identify and address cumulative effects of the aggregate washing operations together with the sediment to be used in the rehabilitation plan. CCOB may reasonably adduce evidence on how atrazine may concentrate in the wash fines that are included in the rehabilitation plan, and how they may combine with residual atrazine on the Site, in order to make its case” (CCOB Appeal, Schedule “A” – Tribunal Decision, para 96).

10. In the submission of CCOB, its proposed amendments to conditions 4.8 and 5 are consistent with the above Tribunal observation. That the Tribunal did not adopt these proposed amendments does not stop the Minister from doing so.

D. Tribunal Should Evaluate the Evidence Not Simply Draw Conclusions

11. Both the Responses of CRH and the Director argue that the Tribunal need not address every point raised in the evidence in order to come to the decision it did (CRH Response, Tab 1, paras 13-16; Director’s Response, para 27).

12. CCOB does not dispute that. But drawing conclusions without acknowledging let alone evaluating large swaths of material evidence to the contrary is not necessarily protected by the cases cited by CRH and the Director, and certainly does not bind the Minister on an appeal. The cumulative effect of the Tribunal not addressing a myriad of key factual issues in dispute (as we have summarized in the CCOB Appeal) does not deprive the Minister of the authority to come to a different conclusion where the evidence

warrants under s. 20.16(1)(b). CCOB repeats that the material contained in the CCOB Final Argument and the CCOB Appeal demonstrates that the evidence so warrants in the circumstances of this case.

E. CRH Response Underscores Reasons Why Decision is Contrary to the Public Interest and Public Policy

1. Failing to Assess Toxicological /Adverse Health Effects of Atrazine

13. The CRH Response makes two assertions at the beginning of its submissions. First, that in Ministerial appeals, the Minister applies his or her view of the public interest to the matters in dispute and makes what is essentially a political decision (relying on Blake on *Administrative Law in Canada*). However, CRH says that the CCOB appeal does not require the Minister to respond to political, economic, or social concerns. Second, that CCOB raised no significant issue of public policy or public interest and CRH even suggests that the herbicide atrazine is only a “potential” public policy issue (CRH Response, Tab 1, paras 7, 9).

14. Replying to these two CRH points together, CCOB submits that even if a Ministerial appeal invites a political decision it is a decision based on competing public policies and is certainly on a question other than a question of law (i.e. s. 20.16(1)(b)). This appeal places squarely before the Minister whether, as a matter of policy (or politics), he regards the Tribunal’s treatment of the toxicological safety and health effects of atrazine (by essentially deferring to Health Canada) as precautionary for the drinking water supply of the residents of Paris, Ontario in light of the evidence that was before the Tribunal on, for example, the 50 times more precautionary standard relied on by the European Union on atrazine. CCOB submits that based on the material summarized in our appeal, as a matter of policy, and as an issue of considerable public interest, the Minister’s answer should be “no” (CCOB Appeal, paras 8-14).

2. Allowing Sewage Works for Aggregate Washing Operations to be Established Where Atrazine May be Present is Not Consistent With Protecting Nearby Drinking Water Supplies

15. The CRH Response purports to address the other public policy issue raised by CCOB (noted in the above heading and addressed fully in the CCOB Appeal) by stating that the CCOB submissions do not highlight that: (1) no atrazine was found in the soil on site; (2) the ECA-approved works are outside the 25-year capture zone of the Brant municipal wells; (3) CCOB’s concerns should be addressed to the legislature; and (4) CCOB’s, Dr. Howard, did not think there was anything special or unique about the Paris Pit site (CRH Response, Tab 1, paras 9-10; Tab 2, para 22).

16. In reply, CCOB states that the first two CRH points noted above have been fully refuted in both CCOB’s Final Argument and this Appeal and need not be repeated here. Regarding CRH’s third point, there is nothing that prevents the Minister from addressing what should be the standard for this site in the ECA if it will better protect the drinking

water supply of the Paris, Ontario community given the particular circumstances. As to the fourth point, what Dr. Howard was asked in cross-examination on January 9, 2017 was whether he would expect any former agricultural land in southern Ontario to have some pesticide residue on it. It was to that question that he answered there was nothing unique about the lands owned by CRH. But that statement is a far cry from the issue that precipitated Dr. Howard's concern with what was going to take place on the Paris Pit site itself as part of the ECA. His concern (and his unshaken evidence was) that the CRH washing process would concentrate many times over any atrazine concentrations present in the washed sediment and re-spreading that material one meter above the water table in or near the wellhead protection area ("WHPA") of the Paris drinking water supply constituted a very credible threat to groundwater quality in the region (CCOB Final Argument, paras 240-245). In the respectful submission of CCOB, in the post-Walkerton era these concerns should rank at the very top of any public policy and public interest issues for the Minister notwithstanding the Tribunal decision. Accordingly, CCOB repeats and relies on its Appeal submissions (CCOB Appeal, paras 15-19).

F. CRH Response Underscores Reasons Why the Decision is Contrary to the Facts and Evidence Heard Before the Tribunal

17. The CCOB Final Argument, summarized in the CCOB Appeal, identifies many material admissions obtained from witnesses for CRH and the Director during the course of proceedings before the Tribunal. However, many are not mentioned, are misapprehended, or are miss-stated in the Tribunal decision and are glossed over in the CRH Response. The CCOB Reply briefly addresses particular points raised by CRH in its Response that underscore our conclusions.

1. Toxicological Aspects of Atrazine

18. The CRH Response: (1) states that the PMRA's Special Review Decision on Atrazine (PMRA 2017 Decision) confirmed that there "are no acute or chronic risks of concern from atrazine in groundwater at the maximum detected concentration in Canadian groundwater"; (2) summarizes the evidence regarding the non-monotonic features of atrazine and claims that its expert Mark Chappel testified that atrazine has not been proven to have a non-monotonic dose response; and (3) asserts that the European Union ban on atrazine is a "result of a policy based decision" and, therefore, has no scientific basis (CRH Response, Tab 2, paras 3-4, 12, 16).

19. In reply, CCOB submits with respect to the first point in the preceding paragraph that the PMRA 2017 Decision is new evidence that was not before the Tribunal. Moreover, the PMRA 2017 Decision simply reiterates the position that PMRA had taken on atrazine in its earlier reviews. The PMRA 2017 Decision, like the previous reviews, fails to consider the non-monotonic effects of atrazine and its potential to have more severe effects at lower doses than higher doses. According to Dr. Forkert, this means that threshold levels at which adverse impacts to human health would occur are difficult to identify and establish. According to Dr. Forkert, the failure to consider non-monotonic dose response constitutes a fundamental weakness of the assessment by federal

regulatory bodies of threshold levels at which atrazine could cause adverse impacts on human health and the environment (CCOB Appeal, para 13).

20. Furthermore, it is important to note that immediately following the 2017 PMRA Decision, this agency initiated a new special review of atrazine (see now CCOB Reply, Schedule “B” – Re-evaluation Note REV2017-10: March 31, 2017), which states:

“This notice is to advise that Health Canada’s Pest Management Regulatory Agency (PMRA) has initiated a special review of registered pest control products containing the active ingredient atrazine under subsection 17(1) of the *Pest Control Products Act*.

PMRA became aware of additional information on atrazine and a preliminary analysis of this information indicated that the criteria listed in subsection 17(1) of the *Pest Control Products Act* have been met, and a special review is warranted. The aspects of concern for the special review are related to:

- Potential change(s) to toxicological endpoint(s) used for human health and environmental risk assessment, and impact thereof, including potential human health (drinking water) and environmental risk from atrazine in surface water.

Following evaluations of the aspects of concern, pursuant to section 28 of the *Pest Control Products Act*, the PMRA will publish its proposed special review decision for public consultation.

At any point during the special review, the registration of one or more of the pest control products containing the active ingredient atrazine may be amended, should evidence become available to believe that such action is necessary to deal with a situation that endangers human health or the environment”.

21. CCOB submits that PMRA’s re-evaluation notice supports Dr. Forkert’s concern that threshold levels at which adverse impacts to human health would occur are difficult to identify and establish. The new special review, which was initiated immediately after the 2017 PMRA Decision, also underscores the significant weakness of the assessment by federal regulatory bodies with respect to threshold levels at which atrazine could cause adverse impacts to human health and the environment.

22. With respect to the second point in paragraph 18, above, CCOB submits that it should be noted that Mr. Chappel has a prior working relationship with Syngenta, the Swiss multinational that manufactures atrazine. Furthermore, Mr. Chappel’s evidence regarding the potential impacts of atrazine was not provided in a fair, non-partisan manner for reasons which are more fully set out in CCOB’s Final Argument and CCOB’s Appeal (CCOB Final Argument, para 40, 58). CCOB further submits that the CRH Response provides an incomplete and inaccurate account of Mr. Chappel’s testimony before the Tribunal. Mr. Chappel expressed reservation on whether atrazine has a non-

monotonic dose response because the conclusion had been drawn in a scientific journal publication (the Wirbisky study) which had undertaken a comprehensive review of the existing scientific literature on atrazine. Mr. Chappel stated he would prefer to see further toxicological studies on this issue. However, under cross-examination, Mr. Chappel acknowledged that the research for the scientific journal publication had been funded by two credible organizations: the National Institutes of Health and the National Institutes of Environmental Health Sciences. Mr. Chappel also admitted under cross-examination that he did not think it would be a ‘particular challenge’ to define a threshold level for a chemical that had a non-monotonic dose response. However, he was unaware of any regulatory agency that had undertaken such an assessment (CCOB Final Argument, para 57).

23. With respect to the third point in paragraph 18, above, CCOB submits that it is inaccurate for CRH to suggest that because the European Union decision is a policy-based decision that it lacks a scientific basis. The widespread use of atrazine made it virtually impossible for the drinking water systems in Europe to meet the regulatory limit of 0.1ug/L, thereby resulting in the European Union instituting a ban. Dr. Forkert testified that the European Union ban was prompted by concerns over public health and safety concerns. Accordingly, the European Union undertook a precautionary approach to ensure that its citizens were not placed at risk of drinking pesticide-contaminated water (CCOB Final Argument, para 17).

2. Atrazine in Soil and Groundwater and the Impact of Aggregate Washing

a. Sampling for Atrazine in Soils

i. Test Pit Sampling of the Topsoil

(A) Importance of Sampling Topsoil

24. The CRH Response questions CCOB’s characterization of the importance of testing topsoil in this case suggesting that: (1) it is an improper characterization of the matters covered by the ECA because the topsoil is not meant to be washed; and (2) characterizing sediment as “sewage” is a question of law that cannot be decided by the Minister on appeal (CRH Response, Tab 2, para 32).

25. In reply, CCOB submits that with respect to the first point made by CRH and summarized in the preceding paragraph, the company’s statement is not consistent with paragraph 96 of the Tribunal reasons for decision regarding the scope of the appeal. The problem with the analysis in the decision on this issue is that the Tribunal did not go on to evaluate the evidence on the basis of the paragraph 96 characterization. With respect to the second point made by CRH and summarized in the preceding paragraph, the question of whether sediment is “sewage” is not a question of law alone but of mixed fact and law depending, for example, on whether it is also contaminated with atrazine and, therefore, is a proper ground for appeal to the Minister under s. 20.16(1)(b). The evidence during the hearing from MOECC witnesses was that sediment with pesticide concentrations in

the wash water that disqualified the sediment as inert fill would have to be disposed of off-site as waste (CCOB Final Argument, para 334).

(B) *Number of Samples and Sampling Locations*

26. The CRH Response states that it was not necessary for the Tribunal to address the number of topsoil samples taken (CRH Response, Tab 2, para 31).

27. CCOB disagrees and repeats and relies on the submissions contained in its Appeal (CCOB Appeal, para 36).

(C) *Placement of the Sampling Locations*

28. The CRH Response disagrees with but does not refute the concerns raised by CCOB on the placement of sampling locations (CRH Response, Tab 2, para 33). Accordingly, CCOB repeats and relies on its Appeal submissions (CCOB Appeal, para 37).

(D) *Methods*

29. The CRH Response states that: (1) the topsoil was tested, including the top interval of 0-30 cms, and suggests that CCOB witness Dr. Ken Howard made a “baseless assertion” to the contrary; and (2) that CCOB is confused about the composite sampling conducted by CRH’s consultants (CRH Response, Tab 2, paras 30, 34-35).

30. In reply, CCOB submits that with respect to the first point made by CRH summarized in the preceding paragraph, the evidence showed that the critical interval of topsoil to test in the test pits was in the top 0-5 cm range, a range that both witnesses for the Director and CRH admitted under cross-examination had not been tested (CCOB Appeal, paras 39, 41; CCOB Final Argument, paras 95-99). With respect to the second point made by CRH and summarized in the preceding paragraph, the evidence shows that the only ones confused about what CRH’s consultant did with respect to composite soil sampling in the test pits for atrazine at the site are CRH’s consultant and CRH (CCOB Appeal, paras 40-41; CCOB Final Argument, paras 100-109).

ii. *Soil Detection Limits*

31. The CRH Response states that: (1) the CCOB argument that soil detection limits used by CRH were too high to detect atrazine is based on laboratories in other jurisdictions “allegedly” able to achieve lower limits; and (2) the limits used by CRH “were sufficient” to determine if atrazine might be present at a level of concern to Health Canada, according to the Tribunal (CRH Response, Tab 2, paras 36, 38).

32. In reply, CCOB submits with respect to the first point in the preceding paragraph that lower soil detection limits for atrazine were not “allegedly” achievable in other jurisdictions. The uncontradicted evidence from the hearing is very clear that orders of

magnitude lower soil detection limits for atrazine than the ones used by CRH **were** being achieved in the United States (U.S. Geological Survey) in 2012 and Germany in 2014-2015 (CCOB Appeal, para 45). With respect to the second point in the preceding paragraph, CCOB repeats and relies on its appeal submissions as to why the soil detection limits used were not sufficient in the circumstances (CCOB Appeal, paras 42-43, 45).

iii. Borehole Sampling of the Overburden

(A) *Alleged Lack of Fine Grain Content Within Discrete Horizons: Missed Opportunities to Sample for Atrazine*

33. The CRH Response states that the places CRH did not sample for atrazine in BH4-13 were below the water table or the extraction limit or both and, therefore, not relevant for sampling as they would not be in areas where material would be extracted and washed (CRH Response, Tab 2, para 42).

34. In reply, CCOB submits that these layers in BH4-13 were: (1) above the water table; (2) discrete enough to be sampled; and (3) within the extraction limit as admitted to by CRH's witness at the time of cross-examination and as is apparent on the face of BH4-13 itself. Accordingly, CCOB repeats that since there were only 5 boreholes drilled by CRH where atrazine was sampled for on a 260-hectare site, this particular borehole represented 20 per cent of the CRH opportunity to sample such fine grain content. Because CRH did not do so it missed opportunities to sample for atrazine in material that is of fine grain content that would be extracted and washed (CCOB Appeal, para 49; CCOB Final Argument, paras 145-147).

(B) *Discrete Horizon Mis-Descriptions and Other Stratigraphic Log Errors*

35. The CRH Response states generally that the Tribunal found that the soil testing program and methodologies for the borehole sampling for atrazine in soil were thorough and reliable for the purposes for which they were completed (CRH Response, Tab 2, paras 28, 41).

36. In reply, CCOB repeats and relies on its Appeal submissions to the contrary regarding the discrete horizon mis-descriptions and other stratigraphic log errors contained in Exhibit 16 (the pesticide report prepared for CRH), why these errors are important, and the fact they were not addressed at all by the Tribunal in its decision (CCOB Appeal, paras 51-52).

(C) *Composite Sampling*

37. The CRH Response states that the CRH consultant did not take composite soil samples in the borehole sampling program by combining samples from two different intervals (a practice that would otherwise be contrary to MOECC guidance) (CRH Response, Tab 2, paras 34-35).

38. In reply, CCOB repeats and relies on its Appeal submissions to the contrary, which clearly show that this did occur, and again was not an issue explicitly addressed in the Tribunal decision (CCOB Appeal, paras 53-54; CCOB Final Argument, paras 164-165).

(D) *Number of Samples*

39. The CRH response states the following as the view it attributes to Mr. Bulman (MOECC's witness) as evidence given at the hearing: "...in a gas station, testing would not be for an herbicide deemed to be safe for widespread use on commercial crops over large areas, but rather for dangerous, volatile hydrocarbons which would be expected to be found in large quantities in a very local area around fuel storage and handling areas". As a result, according to CRH, Mr. Bulman's admission that for a 50 x 50 metre gas station he would likely drill 5 to 6 boreholes, CRH says is an irrelevant comparison (CRH Response, Tab 2, para 43).

40. In reply, CCOB submits that what we have placed in quotation marks from CRH paragraph 43, above, was not a view articulated by MOECC witness Bulman (or any other witness) at the hearing. CRH has failed to provide a satisfactory explanation as to why it was appropriate for CRH to only drill 1 borehole for every 79,000 sq m of site in looking for atrazine, when in looking for contaminants at a 2,500 sq m gas station Mr. Bulman would have drilled 5 to 6 boreholes. The disparity underscores why CCOB witness Dr. Howard characterized the CRH soil testing program in search of atrazine at the site as hardly constituting extensive testing (CCOB Appeal, para 55). Again this was a matter not addressed by the Tribunal in its decision (CCOB Appeal, para 56).

iv. *Effect of Degradation and Attenuation*

(A) *Degradation*

41. The CRH Response states that the Tribunal dismissed the CCOB reliance on German studies on atrazine degradation rates in soil because these studies were laboratory studies as opposed to field studies from Ontario which the Tribunal did rely on (CRH Response, Tab 2, paras 50-54).

42. In reply, CCOB submits that, as we pointed out in our Appeal, the Vonberg study from Germany, which showed atrazine persisting in soil for over 20 years, was a field study, which should have put it on an equal footing with a field study from unnamed and unknown sites in Ontario relied on by both CRH and the Tribunal which showed atrazine persisting in soil for a much shorter period of time (CCOB Appeal, paras 57-60; CCOB Final Argument, paras 174-190, 205). The significance of the persistence period is that if atrazine can persist in soil for over 20 years that makes it more likely that it can contaminate and be concentrated in sediment to be washed in the CRH aggregate washing process with the washed and possibly still atrazine-contaminated sediment then re-applied to the site one meter above the local water table.

(B) Attenuation

43. The CRH Response states that the Tribunal: (1) adopted the view that atrazine once applied to the ground surface would be expected to move quickly down to groundwater and, therefore, would not remain in the overburden where it would be available for excavation with, and washing of, sediment as part of the CRH aggregate washing process; and (2) rejected CCOB witness Dr. Howard's "nitrate bomb" example because the levels of atrazine in soil would be at extremely low levels (CRH Response, Tab 2, paras 55-60).

44. In reply, CCOB submits with respect to the first point in the preceding paragraph that the evidence for this site showed: (1) CRH had no empirical data on the rate water (and any contaminants flowing with it such as atrazine) is moving vertically down the unsaturated zone soils (i.e. overburden) to groundwater at this site; and (2) 60 per cent of the boreholes CRH tested all had seams or layers of till and/or clay in the unsaturated zone soils where the aggregate mining will occur that were capable of attenuating (retarding or slowing) the vertical downward velocity of water (and any contaminants flowing with it) thus making any atrazine in those soils potentially available to be washed and concentrated during the aggregate washing process. CCOB submits with respect to the second point in the preceding paragraph that the Tribunal's rejection of the "nitrate bomb" example ignores that the aggregate washing process could greatly concentrate the levels of atrazine in the sediment to be washed at the site prior to its being re-applied to the site one meter above the water table as part of the site's rehabilitation (CCOB Appeal, paras 62-64; CCOB Final Argument, paras 191-204, 206).

b. Sampling for Atrazine in Groundwater

45. The CRH Response states that there is no cause for concern for drinking water supplies that groundwater sampling revealed trace amounts of atrazine or its breakdown product, atrazine desethyl, at each monitoring location on the site, a view shared by the Director, and that the Tribunal now appears to share as well (CRH Response, Tab 2, paras 44-48; Director's Response, paras 43-47; CCOB Appeal – Schedule "A" Tribunal Decision, para 110). Indeed, the Director's Response goes so far as to say that throughout the hearing all witnesses gave evidence that they expected to find trace levels of atrazine in groundwater and that this, in the Director's (and apparently now the Tribunal's) view, would not be a cause for concern with respect to human health (Director's Response, para 46).

46. In reply, CCOB repeats and relies on its Appeal submissions to the contrary (CCOB Appeal, paras 65-74; CCOB Final Argument, paras 207-237) and adds that the view that trace concentrations of atrazine in water are no cause for alarm ignores the fact that atrazine is an endocrine disruptor that exhibits a non-monotonic dose response. Therefore, even trace concentrations of it are a matter of serious concern for human health and the environment. Furthermore, the early positions of both witnesses for CRH (Mr. Murphy) and the Director (Mr. Bulman) were exactly opposite to, and undermine, their positions now. In this early period when no atrazine was being detected at all in

groundwater sampling (mid-2013 for Mr. Murphy), or when only one groundwater monitoring well tested positive for atrazine (mid-2015 for Mr. Bulman), their position was that this indicated that atrazine would not be found or concentrated in the aggregate washing process (CCOB Appeal, paras 67, 70). Now their position appears to be that trace levels of atrazine or its metabolites everywhere it was tested for is no problem. CCOB submits that the Respondents cannot have it both ways. CCOB says that atrazine's presence everywhere it has been tested for at any level in groundwater is a problem for the aggregate washing process because the Respondents earlier made such a big deal about how its complete absence indicated there would be no problem at all. This underscores why the Tribunal decision itself is so problematic on this issue.

c. Aggregate Washing Process

i. Introduction

47. The CRH Response states that: (1) CCOB witness Dr. Howard during his evidence in chief “backed away” from his earlier position that the aggregate washing process would result in atrazine concentrations orders of magnitude greater than in the original pre-washed sediment, and instead alleged it would concentrate atrazine by a factor of 25 or 33; and (2) Mr. Murphy's evidence showed – and persuaded the Tribunal – that the gravel washing process will not cause atrazine to concentrate in the water to a higher level than it would absent the washing operations (CRH Response, Tab 2, paras 61-62).

48. In reply, CCOB submits with respect to the first point in the preceding paragraph that a factor of 25 or 33 is still more than an order of magnitude greater than the concentrations in the pre-washed sediment. Moreover, based on Dr. Howard's calculations this would contribute to a concentration of atrazine in water 20 to 25 times in excess of the Ontario Drinking Water Quality Standard for atrazine depending on the soil detection limit used (CCOB Final Argument, para 281). Furthermore, Dr. Howard was not cross-examined on this by the Respondents. With respect to the second point in the preceding paragraph, Mr. Murphy's theory: (1) did not appear in any of his written material in support of the CRH application; (2) did not appear in any of his written material in response to Dr. Howard's written evidence for the hearing even though CRH would have had Dr. Howard's material going back to August 2014; and (3) was not put to Dr. Howard during his cross-examination by the Respondents. In short, it emerged at the eleventh hour in the hearing during Mr. Murphy's oral testimony. In the respectful submission of CCOB, it is a very slim reed indeed for the Tribunal to hang its decision on and should carry little weight with the Minister in this Appeal.

ii. The Role of Kd: Another Data Gap

49. The CRH response states that: (1) Dr. Howard conceded during cross-examination that it was possible to calculate the Kd for low amounts of atrazine, such as those detected in groundwater, without batch testing; and (2) there is very little organic

matter in the aggregate for atrazine to adsorb to and, therefore, little atrazine to be found in the aggregate to be washed (CRH Response, Tab 2, paras 64-65).

50. In reply, CCOB submits with respect to the first point in the preceding paragraph that Dr. Howard admitted that it was possible to calculate, but not preferable to batch testing, to obtain a Kd value. His testimony was that calculations produce approximations not hard values as could be obtained from performing batch tests. In point of fact, neither calculations nor batch tests to obtain a Kd value were conducted or reported upon in the CRH pesticide report for its application (Exhibit 16). Moreover, according to Dr. Howard's evidence CRH performed relatively few analyses of the organic content of the soils on the site, and it was his un-contradicted evidence that it would have been useful to have many more analyses of total organic carbon values than were performed for CRH if the company was going to rely on trying to calculate a Kd rather than batch testing to obtain a Kd value (CCOB Final Argument, paras 253, 256-257, 260, 262-263; CCOB Appeal, paras 82-83). With respect to the second point in the preceding paragraph, CCOB submits that it was the un-contradicted evidence of Dr. Howard that he had seen much lower organic carbon values in Ontario, an order of magnitude lower, and that at even the levels CRH suggested were present, the level of pesticide present could still be of concern (CCOB Final Argument, para 257).

iii. Calculations Performed

51. The CRH Response states that Dr. Howard's "calculation was inaccurate and overly conservative, and was rejected by the Tribunal" (CRH Response, Tab 2, para 67).

52. In reply, CCOB submits that the Tribunal gave no reasons as to why it did not accept Dr. Howard's evidence. The Tribunal certainly did not say that it found Dr. Howard's calculation to be "inaccurate and overly conservative". The Tribunal reasons simply state in a single sentence that: "The Tribunal finds there is no evidence that washing the aggregate at this Site will result in concentrated atrazine in the wash fines" (CCOB Appeal, Schedule "A" – Tribunal Decision, para 114). Given the considerable evidence from Dr. Howard and the other available evidence on this issue, CCOB submits that the Tribunal reason is hardly persuasive in the circumstances (CCOB Appeal, paras 84-87; CCOB Final Argument, paras 271-289).

iv. WellHead Protection Areas: Capture Zone Expansion

53. The CRH Response states that: (1) the WHPAs are not subject to expansion; and (2) CRH consultant modeling confirmed that the site operation would stay outside the WHPA boundaries and MOECC witness Bulman stated in re-examination that the capture zone lines would not move under the settling pond system even during a drought scenario (CRH Response, Tab 2, paras 71-73 and the heading at page 20; to the same points see also Director's Response, paras 51-52).

54. In reply, CCOB submits that with respect to the first point in the preceding paragraph this CRH statement is contradicted by: (1) the testimony of MOECC witness Mr. Bulman who stated that when well pumping rates change the WHPA lines change, if there is lower recharge because of less precipitation, then the WHPA capture zone gets larger, and acknowledged that we know the lines move; and (2) the testimony of CCOB witness Dr. Howard who stated that the WHPA time of travel lines are dynamic, they grow and shrink (CCOB Final Argument, paras 291, 294, 296-297). With respect to the second point in the preceding paragraph CCOB submits that: (1) CRH's consultant did not model a drought scenario for its applications to MOECC or for the hearing before the Tribunal; and (2) MOECC witness Bulman said the opposite in cross-examination of what he said in re-examination and was not, in any event, qualified to give expert opinion evidence as a groundwater modeler (CCOB Appeal, para 89).

3. Conditions under Appeal - ECA

a. Condition 4.8: Use of Sediment On-Site is Unclear

i. Scope of the Problem

55. The CRH Response states that: (1) the fact that there will be large quantities of sediment following the wash process is not an issue in and of itself because the volume of sediment is a fraction of the material that will be extracted (3-4 percent) and is already present in the aggregate at the site; and (2) the issue of the use that will be made of the wash fines in site rehabilitation was found by the Tribunal to be beyond the jurisdiction of the MOECC under the ECA, and is a question of law beyond the scope of the Minister's review on appeal (CRH Response, Tab 2, paras 78-80).

56. In reply, with respect to the first point in the preceding paragraph, CCOB submits that CRH misapprehends or misstates the issue that is of concern. The issue is how much of these large quantities of sediment will be potentially atrazine-contaminated? Why is that important? Following the washing process, the sediment will be re-applied to the site for progressive and final rehabilitation one meter above the water table within the WHPAs of the drinking water supply of the community of Paris, Ontario. CCOB witness David Malcolm estimated the sediment quantities as being up to 24,000 tonnes per year (derived from CRH's ECA Application, Exhibit 41, Tab 13, page 15), up to 240,000 tonnes over ten years, and up to 768,000 tonnes over the 32 year life of the site. Accordingly, the quantities, and the quality of the quantities, matter. With respect to the second point in the preceding paragraph, CCOB submits that: (1) the issue of the use to be made of the wash fines is not a question of law, but rather a question of mixed fact and law depending on, among other things, whether they are contaminated with atrazine or other contaminants and, therefore, entirely amenable to the jurisdiction of the Minister on appeal under s. 20.16(1)(b) of the *EPA*; and (2) the CRH argument does not follow because there is a fundamental internal and irreconcilable conflict in the reasoning of the Tribunal decision (paragraphs 96 and 143) as Table 1, below, illustrates, which is within the authority of the Minister to resolve on appeal because it is a question of interpreting issues of mixed fact and law:

Table 1: Comparison of Paragraphs 96 and 143 of April 11, 2017 Tribunal Decision

Paragraph Number	Text of Paragraph	Interpretation
96	What is within the scope of the appeal is whether the ECA contains sufficient measures to identify and address cumulative effects of the aggregate washing operations together with the sediment to be used in the rehabilitation plan. CCOB may reasonably adduce evidence on how atrazine may concentrate in the wash fines that are included in the rehabilitation plan, and how they may combine with residual atrazine on the Site, in order to make its case.	ECA is appropriate instrument to address use of wash fines in the rehabilitation plan
143	...the Tribunal finds that the ECA is not the appropriate instrument to determine what use will be made of wash fines in Site rehabilitation, as it is regulated by the MNRF under the ARA.	ECA is not appropriate instrument to address use of wash fines in the rehabilitation plan

ii. Need for New Science Risk Assessment

(A) *Alberta-Nova Scotia Guidelines Do Not Apply*

57. The CRH Response states that: (1) the atrazine limits set out in the guidelines from Alberta and Nova Scotia, respectively, were included in ECA Condition 4.8 by Mr. Bulman to serve as a “flag” to give the MOECC input on the use of the fines if atrazine were to be detected; (2) MOECC witness Bulman agreed that the size of the entire Paris Pit site exceeded 10 x 10 x 3 metres, not that the potential source of groundwater contamination at the site was bigger than those dimensions such that the Alberta guideline dimensions would not apply; and (3) the Paris Pit site aggregate washing facilities are outside the WHPA, not in the WHPA (CRH Response, Tab 2, paras 88-92).

58. In reply, with respect to the first point in the preceding paragraph, CCOB submits that Mr. Bulman proposed the use of a detection limit that is higher than the Alberta standard he proposes using. The effect of this is that no one will know when the standard is exceeded. Furthermore, the Nova Scotia guidelines do not have values for atrazine desethyl and total atrazine metabolites so they will not be very helpful at the Paris Pit site either (CCOB Final Argument, paras 344-362, 377). With respect to the second point in the preceding paragraph, the CRH assertion is simply wrong (see CCOB Final Argument, para 354). With respect to the third point in the preceding paragraph, the Paris Pit aggregate washing and wastewater operations are not located in the WHPAs. The lands where they are located are adjacent to, and largely surrounded on three sides (north, east, and west) by, WHPAs (CCOB Appeal, para 17; CCOB Final Argument, para 290). However, the site operations that involve re-spreading of sediment as part of progressive and final rehabilitation are located within the WHPAs.

(B) *Why a New Science Risk Assessment Should Be Conducted*

59. The CRH response states that: (1) O. Reg. 153/04 does not apply to the Paris Pit site, therefore, a new science risk assessment (“NSRA”) does not apply, and the Tribunal’s finding to that effect is a legal one beyond the Minister’s jurisdiction on

appeal; and (2) requiring an NSRA for this site would unfairly prejudice CRH (CRH Response, Tab 2, paras 81-87).

60. In reply, with respect to the first point in the preceding paragraph, CCOB repeats and relies on its earlier submissions (CCOB Appeal, paras 100-101; CCOB Final Argument, paras 363-369, 371-372), but adds that the question is not a question of law, but one of mixed fact and law turning on, among other things, whether the site will contain atrazine-contaminated sediment. With respect to the second point in the preceding paragraph, CCOB submits that: (1) the potential for there to be atrazine-contaminated sediment post the washing process and for that sediment to be re-applied to the site one meter above the water table has the potential to prejudice the community of Paris, Ontario; and (2) there is no dispute that the aquifer is “highly vulnerable” as admitted by CRH itself (CRH Response, para 58).

b. Condition 5: Contingency and Pollution Prevention Plan and the Lack of a Trigger Mechanism

i. The Leak from the “Sealed” Settling Pond Bottom: Spill, Pollution in Need of Prevention, or Both?

61. The CRH Response is no answer to the leakage issues raised in the CCOB Appeal associated with the settling pond “seal” (CRH Response, Tab 2, paras 93-98). Accordingly, in reply, CCOB repeats and relies on its Appeal submissions (CCOB Appeal, paras 102-105).

ii. Lack of Trigger Mechanism

62. The CRH Response is no answer to the issues raised in the CCOB Appeal regarding the lack of a trigger mechanism in the Contingency and Pollution Prevention Plan (“CPPP”) (CRH Response, Tab 2, para 99). Accordingly, in reply, CCOB repeats and relies on its Appeal submissions (CCOB Appeal, paras 106-108).

III. REPLY TO RESPONSE OF THE DIRECTOR, MOECC

63. CCOB has reviewed the Response of the Director to the CCOB Appeal. In light of our Reply to the Response of CRH, which includes reply to the Director where appropriate, CCOB repeats and relies on its reply to CRH as a complete answer to the Director’s Response as well.

IV. REPLY TO RESPONSE OF BRANT

64. Brant has filed “Reply Submissions” requesting the dismissal of CCOB’s Appeal.

65. In reply, CCOB submits that it is important to note that Brant had serious concerns that CRH’s aggregate washing operation would result in significant harm to the environment and human health. However, prior to the hearing, Brant worked out with

CRH revised conditions to the ECA (and the Permit to Take Water “PTTW”). The revised conditions do not address the concerns that CCOB and Brant had previously raised about the potential for CRH’s aggregate washing operation to result in adverse impacts on the environment and human health. Moreover, no such explanation is provided by Brant’s “Reply” submission. Brant did not participate at the Tribunal hearing, other than a very brief appearance by Brant counsel on the first day of the hearing to file with the Tribunal the revised conditions to the ECA and PTTW. The revised conditions are set out in Appendix B of the Tribunal’s decision.

66. Brant, like CCOB, was a party to these proceedings at a very early stage. On November 12, 2015, Brant Council passed a resolution that “Brant County Council write a letter to support the Concerned Citizens of Brant’s Leave to Appeal the Permit to Take Water and the Environmental Compliance Approval related to the Watt’s Pond Road Pit”.³

67. Brant, like CCOB, filed applications for leave to appeal the Directors’ decisions to issue the ECA and the PTTW. In support of its applications for leave to appeal, Brant filed a letter by Mr. Alex Davidson, a professional engineer and the Director of Water for Brant.⁴ In his letter Mr. Davidson states:

- Brant has serious concerns about the adverse and significant environmental impacts this proposal will have on the groundwater aquifer as well as to the cold water stream Gilbert Creek, Gilbert Creek wetlands and to the Grand River;
- Brant is concerned that the PTTW along with the aggregate washing operation will result in significant environmental impacts to the quantity and quality of the aquifer source of the Telfer and Gilbert wells. Any impact to the aquifer will result in devastating consequences for Brant and for the users of the Paris water supply system. There will be similar problems for those Brant ratepayers who take their water from the same aquifer via private wells. While Dufferin’s settling ponds are not situated in the WHPAs identified for the Gilbert and Telfer well fields, the ponds are situated immediately adjacent to these WHPAs. Brant is also concerned that drainage from washed material stockpiles may be situated in WHPAs resulting in significant impacts to the groundwater;
- Brant has similar concerns about the risk of harm to Gilbert Creek and to the Grand River. The City of Brantford and the Six Nations take water from the Grand River downstream of the Paris Pit. Grand River is designated a heritage river and situated in close proximity to the proposal. The cold water stream Gilbert Creek and Gilbert Creek wetlands may also be impacted;

³ Letter from R.E.F. (Ron) Eddy, Mayor to Secretary, Environmental Review tribunal, Fariha Pannu, P. Eng., CRH Canada Group Inc., The Environmental Commissioner, and Belinda Koblik, P. Eng., dated November 12, 2015 (CCOB Reply, Schedule “C”).

⁴ Letter from Alex Davidson, P. Eng. AMCT, Director of Water, County of Brant to Secretary, Environmental Review Tribunal, Fariha Pannu, P.Eng, CRH Canada Group Inc., The Environmental Commissioner of Ontario and Belinda Koblik, P.Eng. dated November 12, 2015 (CCOB Reply, Schedule “D”).

- Aggregate washing results in an intensification of the natural leaching process. Pesticide residues and other agro-chemicals existing in the extraction layer of the gravel may be brought up from the aggregate washing process. Brant is concerned about the introduction of such contaminants into the aquifer that has not been adequately addressed with respect to the potential for leaching from the settling pond into the aquifer both during operations and during the proposed “rehabilitation” period. Dufferin has failed to consider any potential for leaching and as a result there is no contingency plan in place in the event such leaching occurs and the contaminants enter the aquifer;
- In summary, Brant is concerned that the gravel washing operation has the potential to wash pesticides and fertilizers off of the aggregate and cause them to concentrate in the re-circulated wash water; in the sediment settled out in the sediment pond; in the aquifer under the settling pond and aggregate stockpile; and in a plume flowing from the wash water pond, settlement pond and the aggregate stockpile;
- As to water quantity in the aquifer, there has been no satisfactory reconciliation of the net taking from the aquifer so Brant has not been provided with any information relating to how much drawdown there will be at the Telfer and Gilbert well fields or in private wells in the vicinity of these operations. Dufferin has failed to consider the impacts of drawdown and there is no contingency plan in place in the event this would occur resulting in significant harm to the environment; and
- Brant has serious concerns that the pit has the potential to affect the GUDI (groundwater under direct influence) status of the Telfer well field and Dufferin’s operations may affect the wells from a pathogen and chemical perspective.

68. CCOB submits that it is important to note that the one of the reasons that Mr. Davidson cites in support of his concern with CRH’s proposed aggregate washing operation was the lack of information. According to Mr. Davidson the information provided by CRH “is neither comprehensive nor conclusive.” Mr. Davidson concludes his letter by stating “[i]n the absence of knowledge and in the absence of contingency plans, it is the County’s position that the issuance of the PTTW and of the ECA is unreasonable and that *the consequences of allowing the aggregated washing operation carry the serious potential to significantly harm the environment*” (emphasis added).

69. On March 31, 2016, the Tribunal granted Brant and CCOB leave to appeal certain conditions in the ECA and PTTW. Brant and CCOB both filed appeals of the decisions of the Directors under Part XII of the *EPA* and section 100 of the *Ontario Water Resources Act*. The grounds for appeal set out in Brant’s Notice of Appeal are similar to the grounds

raised in CCOB's Notice of Appeal.⁵ These include the inadequacy of the conditions in the ECA and the PTTW to protect the environment and the public health, the failure to consider cumulative effects, the failure to utilize adaptive management and the failure to apply the precautionary principle and other principles mandated by the MOECC's Statement of Environmental Values.

70. On October 28, 2016, Brant filed with the Tribunal a copy of Mr. Alex Davidson's witness statement dated October 18, 2016. Mr. Davidson's witness statement reiterates the concerns that he had expressed earlier in his letter dated November 12, 2015.⁶

71. However, prior to the commencement of the hearing before the Tribunal, Brant suddenly and unexpectedly reversed its position. It remains unknown what factors prompted Brant to reach an agreement with CRH on revisions to certain conditions in the ECA and PPTW. Brant did not call any evidence at the hearing to explain how the revised conditions would address the serious concerns raised by Mr. Davidson regarding the safety of the water supply for the community of Paris, the City of Brantford and for the Six Nations. Moreover, Brant did not provide any evidence at the hearing as to what, if any, new information had been received by it to alleviate its earlier concerns about the risks to human health and the environment from the aggregate washing operation that it had previously identified. Under these circumstances, CCOB submits that the Minister should not afford any weight to the Brant "reply" submissions.

V. CONCLUSIONS

72. In light of the above submissions, and those contained in the CCOB Appeal, and CCOB Final Argument, the Appellants respectfully repeat in this Reply their conclusions from the CCOB Appeal urging the Minister to find that the Tribunal decision is:

- (a) contrary to the public interest and public policy because it:
 - Failed to assess the toxicological and adverse health effects of the herbicide atrazine; and
 - Allowed sewage works for aggregate washing operations to be established where atrazine may be present and is not consistent with protecting nearby drinking water supplies; and
- (b) contrary to the facts and evidence heard before the Tribunal with respect to:
 - Toxicological aspects of atrazine;

⁵ Notice of Appeal by the Corporation of the County of Brant in relation to Permit to Take Water No. 7115-9VVLJW and Environmental Compliance Approval No. 1400-9VNPVY issued to CRH Group Inc. (attachments omitted) (CCOB Reply – Schedule "E").

⁶ Witness Statement of Alex Davidson dated October 28, 2016 (CCOB Reply – Schedule "F").

- Atrazine in soil and groundwater;
- Impact of aggregate washing;
- ECA Conditions 4.8 and 5.

VI. ORDER REQUESTED

73. The Appellants respectfully repeat in this Reply the Order requested in their Appeal to the Minister:

- (a) Revoking the Decision of the Tribunal, dated April 11, 2017, in respect of certain conditions of the ECA, which Decision is set out at paragraph 165 of Schedule “A” appended to the Appeal;
- (b) Substituting for the Decision at paragraph 165, the CCOB proposed revised conditions to the ECA found at Appendix “D” of the Decision;
- (c) Such further or other Order as the Minister deems appropriate.

ALL OF WHICH IS RESPECTFULLY SUBMITTED,

Dated: July 7, 2017



Joseph F. Castrilli
Counsel for the Appellants,
Concerned Citizens of Brant



Ramani Nadarajah
Counsel for the Appellants,
Concerned Citizens of Brant

VII. SCHEDULE "A" – CCOB CORRESPONDENCE, DATED MAY 9, 2017

May 9, 2017

The Hon. Glen R. Murray
Minister of the Environment and Climate Change
11th Floor, Ferguson Block
77 Wellesley Street West
Toronto, Ontario M7A 2T5

Dear Minister Murray:

Re: Concerned Citizens of Brant v. Director (Ministry of the Environment and Climate Change) Case Nos. 16-048 and 16-052

Enclosed please find the following:

1. An appeal, dated May 9, 2017, filed by the Concerned Citizens of Brant (“CCOB”) pursuant to section 20.16(1)(b) of the *Environmental Protection Act*, R.S.O. 1990, c. E.19 (“EPA”) in respect of the Decision of the Environmental Review Tribunal (“Tribunal”) in the above matter; and
2. The Final Argument of CCOB filed with the Tribunal in February 2017.

By way of this letter we request that the full record from the Tribunal be placed before you in conjunction with this appeal.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION



Joseph F. Castrilli
Counsel

Ramani Nadarajah
Counsel

Encls.

- c. Secretary, Environmental Review Tribunal
Nicholas Adamson, Counsel for the Directors, MOECC
Jonathan W. Kahn & Brittiny Rabinovitch, Counsel for the Instrument Holder, CRH
Canada Group Inc.
Paula Lombardi, Counsel for the Corporation of the County of Brant

**VIII. SCHEDULE "B" – PMRA RE-EVALUATION NOTE REV2017-10, DATED
MARCH 31, 2017**



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Re-evaluation Note

REV2017-10

Special Review Initiation: Atrazine

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This notice is to advise that Health Canada's Pest Management Regulatory Agency (PMRA) has initiated a special review of registered pest control products containing the active ingredient atrazine under subsection 17(1) of the *Pest Control Products Act*.

PMRA became aware of additional information on atrazine and a preliminary analysis of this information indicated that the criteria listed in subsection 17(1) of the *Pest Control Products Act* have been met, and a special review is warranted. The aspects of concern for the special review are related to:

- Potential change(s) to toxicology endpoint(s) used for human health and environmental risk assessment, and impact thereof, including potential human health (drinking water) and environmental risk from atrazine in surface water.

Following evaluations of the aspects of concern, pursuant to section 28 of the *Pest Control Products Act*, the PMRA will publish its proposed special review decision for public consultation.

At any point during the special review, the registration of one or more of the pest control products containing the active ingredient atrazine may be amended, should evidence become available to believe that such action is necessary to deal with a situation that endangers human health or the environment.

**IX. SCHEDULE "C" – LETTER/RESOLUTION FROM BRANT COUNCIL,
DATED NOVEMBER 12, 2015**

County of Brant
R.E.F. (Ron) Eddy, Mayor
Paul Emerson, Chief Administrative Officer
(519) 449-2451
(519) 449-2454 (FAX)
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County Administrative Building
26 Park Avenue
Burford
Mailing Address:
P.O. Box 160
Burford, Ontario N0E 1A0

November 12, 2015

Reference: E16 Dufferin Aggregates – Paris Pit

Secretary, Environmental Review Tribunal
655 Bay Street- Floor 15
Toronto, Ontario
M5G 1E5

The Environmental Commissioner
1075 Bay Street, Suite 605
Toronto, Ontario
M5S 2B1

Fariha Pannu, P. Eng.
Supervisor Environmental Approvals Branch
Ontario Ministry of the Environment and Climate
Change
135 St. Clair Avenue West – 1st Floor
Toronto, Ontario M4V 1P5

Belinda Koblik, P. Eng.
Supervisor Water Resources Unit
West Central Regional Office
Ontario Ministry of the Environment and
Climate Change
12TH Floor, 119 King Street West
Hamilton, Ontario L8P 4Y7

CRH Canada Group Inc.
2300 Steeles Avenue West, 4th Floor
Concord, Ontario
L4X 5X6

To Whom It May Concern:

Re: Dufferin Paris Pit – Review of PTTW and ECA

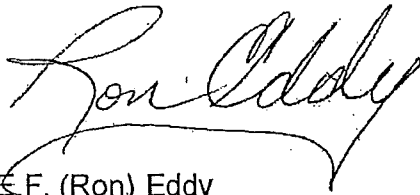
The Council of the County of Brant (County) passed the following resolution on November 12, 2015:

"That Brant County Council write a letter to support the Concerned Citizens of Brant's Leave to Appeal the Permit To Take Water and the Environmental Compliance Approval related to the Watt's Pond Road Pit".

This letter is in support of the application filed by the Concerned Citizens of Brant ("CCOB") to the Environmental Review Tribunal seeking leave to appeal the decision of Belinda Koblik, Director, Ministry of the Environment and Climate Change under section 34.1, of the *Ontario Water Resources Act*, ("OWRA") in issuing Permit No. 7115-9VVLJW, dated October 29, 2015, ("PTTW") to CRH Canada Group Inc., formerly known as Dufferin Aggregates, A Division of Holcim (Canada), Inc. ("Dufferin"). This letter also is in support of the CCOB's applications to the Environmental Review Tribunal seeking leave to appeal the decision of Fariha Pannu, Director, Ministry of the Environment and Climate Change under Part II.1, *Environmental Protection Act* ("EPA"), in issuing Environmental Compliance Approval No. 1400-9VNPVY, dated October 29, 2015, ("ECA") to Dufferin.

The County submits that it is unreasonable to put at risk the water supply for the community of Paris, the City of Brantford and for the Six Nations of the Grand River without insisting on comprehensive and conclusive studies and with all possible precautions put in place to avoid any serious harm to the environment. The County is concerned that the information provided by Dufferin is neither comprehensive nor conclusive. In the absence of knowledge and in the absence of contingency plans, it is the County's position that the issuance of the PTTW and of the ECA is unreasonable and that the consequences of allowing the aggregate washing operation carry the serious risk and the potential to significantly harm the environment. Given these concerns, the County fully supports the CCOB's application on this matter.

Yours truly,



R.E.F. (Ron) Eddy
Mayor

AD/MB/kv

cc: file
MCF File/CCGM
Concerned Citizens of Brant
Andrew C. Wright, Siskinds LLP

**X. SCHEDULE "D" – CORRESPONDENCE FROM BRANT COUNTY
WATER DIRECTOR, DATED NOVEMBER 12, 2015**

Public Works Department
519-449-2451 or 1-888-250-2295
519-449-3382 (FAX)
publicworks@brant.ca
www.brant.ca



County Administrative Building
26 Park Avenue
P.O. Box 160
Burford, ON N0E 1A0

November 12, 2015

Reference: E16 Dufferin Aggregates – Paris Pit

Secretary, Environmental Review Tribunal
655 Bay Street- Floor 15
Toronto, Ontario
M5G 1E5

The Environmental Commissioner
1075 Bay Street, Suite 605
Toronto, Ontario
M5S 2B1

Fariha Pannu, P. Eng.
Supervisor Environmental Approvals Branch
Ontario Ministry of the Environment and Climate
Change
135 St. Clair Avenue West – 1st Floor
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Belinda Koblik, P. Eng.
Supervisor Water Resources Unit
West Central Regional Office
Ontario Ministry of the Environment and
Climate Change
12TH Floor, 119 King Street West
Hamilton, Ontario L8P 4Y7

CRH Canada Group Inc.
2300 Steeles Avenue West, 4th Floor
Concord, Ontario
L4X 5X6

To Whom It May Concern:

Re: Dufferin Paris Pit – Review of PTTW and ECA

This letter is in support of the application filed by The Corporation of the County of Brant ("County") to the Environmental Review Tribunal for an order granting leave to appeal the decision of Belinda Koblik, Director, Ministry of the Environment and Climate Change under section 34.1, of the *Ontario Water Resources Act*, ("OWRA") in issuing Permit No. 7115-9VVLJW, dated October 29, 2015, ("PTTW") to CRH Canada Group Inc., formerly known as Dufferin Aggregates, A Division of Holcim (Canada), Inc. ("Dufferin")

This letter also is in support of the County's application to the Environmental Review Tribunal for an order granting leave to appeal the decision of Fariha Pannu, Director, Ministry of the Environment and Climate Change under Part II.1, *Environmental Protection Act* ("EPA"), in issuing Environmental Compliance Approval No. 1400-9VNPVY, dated October 29, 2015, ("ECA") to Dufferin.

The PTTW and the ECA are interrelated authorizations relating to an aggregate washing operation proposed by Dufferin at its Paris Pit location. Dufferin's Paris Pit is 249 hectares in area and was licensed for extraction of sand and gravel in 1974. The Paris Pit has the required licensing under the *Aggregate Resources Act* and the applicable municipal land use planning and zoning approvals.

Since 1974 until the Fall of 2014 the Paris Pit land has been used predominantly for agriculture purposes, primarily cash crops. In the Fall of 2014 Dufferin began extraction operations at the Paris Pit. In connection with those extraction operations, Dufferin requested the necessary approvals to authorize the implementation of aggregate washing as part of processing operations at the Paris Pit.

The aggregate washing operations will be a closed-loop system whereby water for aggregate washing will be obtained from a source water pond, used in the wash plant, discharged to the settling pond prior to its discharge back into the settling pond. The purpose of the ECA is to permit the use of the settling ponds while the PTTW allows the taking of ground water for use in these ponds.

The County has serious concerns about the adverse and significant environmental impacts this proposal will have on the groundwater aquifer as well as to the cold water stream Gilbert Creek, Gilbert Creek wetlands and to the Grand River.

The County is a single tier municipality created as a result of a municipal restructuring on January 1, 1999. At that time all Brant County local municipalities (except Brantford) were amalgamated into one municipality with the status of a city. The traditional, upper tier County of Brant was also incorporated into the restructured County of Brant.

The Town of Paris was one of the municipalities included in the County amalgamation. The community of Paris relies on a municipal water supply system that is operated by the County. The Paris municipal water system supplies water to approximately 10,000 persons as well and to commercial establishments and industry in the community.

The Paris water supply system relies upon groundwater as its source of water. The ground water is taken from three well fields known municipally as the Telfer, the Gilbert and the Bethel wellfields. The Bethel wells are remote from the Paris Pit but the Telfer and the Gilbert well fields lie on either side and are in close proximity to the Paris Pit. The Telfer well field is just to the east of the Paris Pit and the Gilbert well field just to the west. The location of the Gilbert and Telfer well fields in relation to the Paris Pit are shown on the attached map.

The County is concerned that the PTTW along with the aggregate washing operation will result in significant environmental impacts to the quantity and quality of the aquifer source for the Telfer and the Gilbert wells. Any impact to the aquifer will result in devastating consequences for the County and for the users of the Paris water supply system. There will be similar problems for those County ratepayers who take their water from the same aquifer via private wells. While the Dufferin's settling ponds are not situated in the well head protection area identified for the Gilbert and Telfer well fields, the ponds are situated immediately adjacent to these wellhead protection areas. The County is also concerned that the drainage from washed material stockpiles may be situated in the wellhead protection areas resulting in significant impacts to the groundwater.

The County has similar concerns about the risk of harm to Gilbert Creek and to the Grand River. The City of Brantford and the Six Nations take water from the Grand River downstream of the Paris Pit. Grand River is designated as a heritage river and situated in close proximity to the proposal. The cold water stream Gilbert Creek and Gilbert Creek wetlands may also be impacted.

Aggregate washing results in an intensification of the natural leaching process. Pesticide residues and other agro-chemicals existing in the extraction layer of the gravel may be brought up from the aggregate washing process. The County is concerned about the introduction of such contaminants into the aquifer that have not been adequately addressed with respect to the potential for leaching from the settling pond into the aquifer both during operations and during the proposed "rehabilitation" period. Dufferin has failed to consider any potential for leaching and as a result there is no contingency plan in place in the event such leaching occurs and contaminants enter the aquifer.

In summary, the County is concerned that the gravel washing operation has the potential to wash pesticides and fertilizers off of the aggregate and cause them to concentrate: in the re-circulated wash water; in the sediment settled out in the sediment pond; in the aquifer under the settling pond and aggregate stockpile; and in a plume flowing from the wash water pond, settlement pond, and the aggregate stockpile.

As to water quantity in the aquifer, there has been no satisfactory reconciliation of the net taking from the aquifer so the County has not been provided with any information relating to how much drawdown there will be at the Telfer and the Gilbert well fields or in private wells in the vicinity of these operations. Dufferin has failed to consider the impacts of the drawdown and there is no contingency plan in place in the event this would occur resulting in significant harm to the environment.

The County has serious concerns that the pit has the potential to affect the GUDI status of the Telfer well field and Dufferin's operations may affect the wells from a pathogen or chemical perspective.

The County retained Stantec Consulting in 2014 to conduct a review of Dufferin's proposal with respect to the PTTW and the aggregate washing operations. Stantec noted that:

- there exists a potential for impact on the water levels in three existing ponds to the east of the settling pond area as a result of aggregate washing operations;
- limited assessment of the ecological features associated with the existing ponds and it is unknown whether there are any features that could be impacted by the anticipated changes to the ponds; and
- potential to increase the vulnerability to aquifer contamination near the Telfer well field, currently the aquifer vulnerability well score is already at the maximum, according to source protection criteria.

The County notes that the Lake Erie Region Source Protection Committee passed the following motion on November 6, 2014:

"That the Lake Erie Region Source Protection Committee continues to express their concerns with regard to land uses and activities that penetrate the municipal aquifer and or increase the vulnerability of wellhead protection areas or intake protection zones".

Brant County Council passed the following resolution on March 24, 2015:

"That Brant County Council acknowledges Dr. Howard's opinion on the inadequacy of the data provided by the proponents and reaffirms its resolution of May 27, 2014 that no approvals be given or progress be made to open Watts Pond Road, Paris Pit site until the applicants are able to demonstrate through scientific methods that the proposed pit and its activities will not adversely affect the local water supply and the aquifer;

That this resolution refer to both the Permit to Take Water and the Environmental Compliance Approval currently under application;"

The opinion of Dr. Howard was provided to the County by the citizens' organization called Concerned Citizens of Brant ("CCOB"). Details of Dr. Howard's opinion are provided with the application for leave being made by CCOB in connection with the ECA and the PTTW.

It is understood that in order for the Tribunal to be satisfied, the County needs to demonstrate that (a) there is good reason to believe that no reasonable person, having regard to the relevant law and to any government policies developed to guide decisions of that kind, could have made the decision; and (b) the decision in respect of which an appeal is sought could result in significant harm to the environment."

The County submits that it is unreasonable to put at risk the water supply for the community of Paris, the City of Brantford and for the Six Nations without insisting on comprehensive and conclusive studies and with all possible precautions put in place to avoid any serious harm to the environment.

The County is concerned that the information provided by Dufferin is neither comprehensive nor conclusive. In the absence of knowledge and in the absence of contingency plans, it is the County's position that the issuance of the PTTW and of the ECA is unreasonable and that the consequences of allowing the aggregate washing operation carry the serious potential to significantly harm the environment.

November 12, 2015

Regards,



Alex Davidson, P. Eng., AMCT
Director of Water
County of Brant

AD/AD/kv

Attachments:

1. Figure 1.2 Paris Pit and Surrounding Lands (Excerpt from ECA Application)

cc: file
MCF File/CCGM
Andrew C. Wright, Siskinds LLP

XI. SCHEDULE "E" – BRANT NOTICE OF APPEAL

ENVIRONMENTAL REVIEW TRIBUNAL

IN THE MATTER OF sections 34.1, 100 and 101 of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40 as amended;

-and-

IN THE MATTER OF Part XIII of the *Environmental Protection Act*, R.S.O. 1990, c. E.19 as amended;

-and-

IN THE MATTER OF sections 38 to 48 of the *Environmental Bill of Rights*, S.O. 1993, c. 28;

-and-

AND IN THE MATTER OF an application by the County of Brant, pursuant to section 38 of the *Environmental Bill of Rights, 1993*, for leave to appeal the decision of the Director, Ministry of the Environment and Climate Change under section 34.1 of the *Ontario Water Resources Act*, as amended, in issuing Permit to Take Water No. 7115-9VVLJW dated October 29, 2015, to CRH Canada Group Inc. for the taking of water at the Paris Pit, at Part Lot 27, Concession 2, Geographic Township of Dumfries, County of Brant, Ontario.

-and-

AND IN THE MATTER OF an appeal by the Corporation of The County of Brant, pursuant to section 38 of the *Environmental Bill of Rights, 1993*, for leave to appeal the decision of the Director, Ministry of the Environment and Climate Change under section 20.3 of the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended, in issuing Environmental Compliance Approval No. 1400-9VNPVY, dated October 29, 2015, to CRH Canada Group Inc. for the establishment, use and operation of sewage works for the collection, transmission, treatment and reuse of wash water effluent from an aggregate washing operation at the Dufferin Aggregates – Paris Pit, located on Lot 26, 27, 1, 2 & 3, Concession 3, 2 WGR, South Dumfries in the County of Brant.

**NOTICE OF APPEAL
THE CORPORATION OF THE COUNTY OF BRANT**

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Lawyers for the Appellant,
The Corporation of the County of Brant

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Environmental Review Tribunal
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Toronto, Ontario M5G 1E5

AND TO: Isabelle O'Connor / Nicholas Adamson
Legal Services Branch
Ontario Ministry of the Environment and Climate Change
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Toronto, Ontario M4V 1P5

Counsel for the Director, Ministry of the Environment
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AND TO: Jonathan W. Kahn / Sarah Emery
Blake, Cassels & Graydon LLP
Barristers & Solicitors
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Counsel for the Instrument Holder
CRH Canada Group Inc.

AND TO Joseph F. Castrilli / Ramani Nadarajah
Canadian Environmental Law Association
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Toronto, Ontario M5J 2H7
Tel: (416) 960-2284, ext. 218
Fax: (416) 960-9392

Counsel for the Appellant
Concerned Citizens of Brant

AND TO: Environmental Commissioner of Ontario
1075 Bay Street, Suite 605
Toronto, Ontario M5S 2B1

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TAB 1

ENVIRONMENTAL REVIEW TRIBUNAL

IN THE MATTER OF sections 34.1, 100 and 101 of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40 as amended;

-and-

IN THE MATTER OF sections 38 to 48 of the *Environmental Bill of Rights*, S.O. 1993, c. 28;

-and-

AND IN THE MATTER OF an application by the County of Brant, pursuant to section 38 of the *Environmental Bill of Rights, 1993*, for leave to appeal the decision of the Director, Ministry of the Environment and Climate Change under section 34.1 of the *Ontario Water Resources Act*, as amended, in issuing Permit to Take Water No. 7115-9VVLJW dated October 29, 2015, to CRH Canada Group Inc. for the taking of water at the Paris Pit, at Part Lot 27, Concession 2, Geographic Township of Dumfries, County of Brant, Ontario.

**NOTICE OF APPEAL
THE CORPORATION OF THE COUNTY OF BRANT**

TAKE NOTICE that pursuant to sections 100 and 101 of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40 (“*OWRA*”), and pursuant to the decision of the Environmental Review Tribunal (“Tribunal”) in Case No. 15-141 dated March 31, 2016 granting leave to appeal to the County of Brant (the “Appellant” or “County”), the Appellant requires a hearing before the Tribunal in respect of the decision of Belinda Koblik, Director, Ministry of the Environment and Climate Change (“MOECC”), to issue the following Conditions in Permit to Take Water No. 7115-9VVLJW (“PTTW”) (appended to this Notice) dated October 29, 2015 to CRH Canada Group Inc. (“CRH”) under section 34.1 of the *OWRA*:

- Condition 3.3 (whether dust suppression is in addition to maximum water taking amounts in Condition 3.4a);
- Condition 3.4b (frequency that maximum water taking rate in Condition 3.2 may be reverted to for one month);
- Condition 3.6 (permitted water taking for final eight years of PTTW);
- Condition 4 generally (specific objectives for monitoring requirements);
- Condition 4.7 (trigger mechanism and contingency plan).

AND FURTHER TAKE NOTICE that the Appellant hereby appeals the above-noted Conditions, and respectfully request that the Tribunal grant:

- (a) An Order revoking Conditions 3.3, 3.4b, 3.6, 4, and 4.7 in the PTTW;
- (b) An Order directing the Director to substitute further and better Conditions in the PTTW in relation to the above-referred to subject-matter of Conditions 3.3, 3.4b, 3.6, 4 and 4.7, as may be specified by the Tribunal; and
- (c) Such further or other Orders as Appellant's counsel may advise and this Tribunal may permit.

AND FURTHER TAKE NOTICE that the grounds for the Orders requested by the Appellant are as follows:

1. The Conditions in the PTTW noted above ("PTTW Conditions" or "Conditions") are inadequate and insufficient to protect the environment, public health and safety, and do not require appropriate and effective measures to ensure timely identification, assessment, and mitigation of the direct, indirect, and cumulative effects that may be caused by the water taking authorized by the PTTW. In particular, the above-noted Conditions were issued by the Director without:
 - a. considering an ecosystem approach, the precautionary principle, cumulative effects analysis, adaptive management, or any other principles mandated by the MOECC's Statement of Environmental Values ("SEV") issued under the *Environmental Bill of Rights* ("EBR");
 - b. taking into account whether the PTTW Conditions were factually or scientifically unreasonable, or in accordance with the provisions of *OWRA*, Ontario Regulation 387/04, or the MOECC's 2005 PTTW Manual;

- c. contemplating the existing baseline conditions in the area and taking into account the close proximity of the Paris Pit to the wellhead protection area for the Paris water supply or area drought conditions.
2. Allowing the environmental risks or impacts of the water takings at the Paris Pit to be investigated, monitored, and reported upon under the deficient Conditions in the PTTW is contrary to the public interest and not consistent with the purposes and provisions of the *OWRA*, *EBR*, Ontario Regulation 387/04, the MOECC's 2005 PTTW Manual, and the MOECC's *Water Management Policies, Guidelines and Provincial Water Quality Objectives*.
3. Sections 0.1, 1, 2, 34.1, 53, 100, 101, and 107 of the *OWRA* and sections 1, 2, 11, and 38 to 48 of the *EBR*.
4. Such further or other grounds as Appellant's counsel may advise and this Tribunal permit.

AND FURTHER TAKE NOTICE that the material facts and particulars that the Appellant relies upon in relation to the above-noted grounds of appeal include, but are not necessarily limited to, the following:

Background

1. On October 29, 2015, Belinda Koblik, Director decided to issue Permit to Take Water No. 7115-9VVLJW (the "PTTW") to CRH Group Inc. ("CRH"). CRH, previously known as Dufferin Aggregates, is a Division of Holcim (Canada), Inc. ("Dufferin"). The references to Dufferin in this notice of appeal should be interpreted as a reference to, or the actions of, CRH.
2. Dufferin is the owner and operator of the Dufferin Aggregates – Paris Pit located on Lots 26, 27, 1, 2 & 3, Concession 3, 2, WGR, South Dumfries in the County of Brant. Dufferin is seeking to commence aggregate washing operations at the Paris Pit. The aquifer underlying the Paris Pit is the water supply for the Town of Paris.
3. The Appellant is a single tier municipality created as a result of a municipal restructuring on January 1, 1999. At that time, all Brant County local municipalities (except Brantford) were amalgamated into one municipality with the status of a city. The traditional, upper tier County of Brant was also incorporated into the restructured County of Brant.
4. The Town of Paris was one of the municipalities included in the County amalgamation. The community of Paris has a municipal water supply system that is operated by the County. The Paris municipal water system supplies water to approximately 10,000 people as well as to commercial establishments and industry in the community.

5. The Paris municipal water system relies upon groundwater as its source of water. The groundwater is taken from three well fields known municipally as the Telfer, the Gilbert and the Bethel well fields. The Bethel wells are remote from the Paris Pit but the Telfer and the Gilbert well fields lie on either side; the Telfer well field is just to the east of the Paris Pit and the Gilbert well field located just to the west of the Paris Pit.
6. In March 2013, CRH applied for a Category 3 PTTW for an excavated source water pond sustained by a closed-loop design system for the purposes of aggregate washing operations. In June 2013, in conjunction with the PTTW application, CRH applied for an environmental compliance approval (“ECA”) of companion industrial sewage works under section 53 of the *OWRA*.
7. The Paris Pit is 249 hectares in area and is operated pursuant to a licence granted by the Province in 1974 for the extraction of aggregates. It is licenced under the *Aggregate Resources Act* and has applicable land use planning and zoning approvals. Despite being licenced for extraction, the site has been used primarily for agricultural uses such as the growing of corn, including the use of pesticides and fertilizers on the site.
8. In or around the fall of 2014, Dufferin began extraction operations at the Paris Pit. In connection with these operations Dufferin is now seeking to undertake aggregate washing operations at the Paris Pit.
9. On October 29, 2015, the Director issued the PTTW for a period of ten (10) years to CRH despite objections regarding potential impacts of the proposed water taking upon municipal and private wells and surface water features. On the same date, the ECA also was approved by a MOECC Director. On November 13, 2015, the County sought leave to appeal the decisions to issue the PTTW and the ECA.
10. On March 31, 2016, the Tribunal found that it appeared there was good reason to believe that the Director’s decision to issue the PTTW, with the Conditions, was unreasonable and could result in significant environmental harm. The Tribunal granted the County leave to appeal the PTTW with respect to the above-noted PTTW Conditions pursuant to sections 38 to 48 of the EBR. A similar decision by the Tribunal was also issued on March 31, 2016 regarding the ECA, and is the subject of a separate notice of appeal by the County.

Grounds 1(a) and 1(b): Failure to Consider or Apply Binding MOECC Principles

MOECC SEV Considerations

11. The MOECC SEV requires the application of a “precautionary, science-based approach” when making environmentally significant decisions. A precautionary approach presumes the existence of environmental risk in the absence of proof to the contrary. It places the onus of establishing the absence of environmental harm upon the source of risk. In situations where scientific uncertainty exists as to whether an

activity could have an adverse effect, the precautionary principle requires that it should be considered to be as hazardous as it could possibly be.

12. There is considerable scientific uncertainty as it relates to the PTTW for the Paris Pit, and the potential for adverse effects exist. The application of the precautionary approach required the Director to view the water taking at the Paris Pit to be as hazardous as possible including but not limited to the potential impacts on municipal and private wells and surface water features.
13. The Director proceeded to issue the PTTW despite the considerable uncertainty about environmental risks from the water taking. The Director merely required CRH to conduct monitoring, without known objectives, and to develop trigger mechanisms and a contingency plan only after the issuance of the PTTW. With the application of the precautionary approach, the trigger mechanisms should have been developed before, not after, the issuance of the PTTW. As a result, the Director's approach is not consistent with the precautionary principle.
14. The MOECC SEV principle of adaptive management provides a structured, iterative process of decision making in the face of uncertainty, with an aim to reducing uncertainty over time in light of necessary and appropriate monitoring. The Director failed to take into consideration and apply the principle of adaptive management when it allowed the development of trigger mechanisms and a contingency plan after the issuance of the PTTW and not before.
15. The MOECC SEV also establishes an ecosystem approach as another fundamental principle to guide MOECC decision making, the Director issued the PTTW Conditions and neglected to take into consideration any impacts on the surrounding ecosystem and failed to recognize the evidentiary gaps in CRH's supporting documentation.
16. In issuing the PTTW Conditions the Director failed to consider the lack of evidence from CRH relating to any impacts on the ecological features associated with the existing ponds and whether any features could be impacted by the anticipated changes to the ponds. The Director, when issuing the PTTW Conditions, failed to consider the source protection criteria and the potential to increase the vulnerability to aquifer contamination near the well field.
17. The Director failed to consider the MOECC SEV when it neglected to apply any cumulative effects analysis in issuing the 10-year PTTW. The failure to engage in a cumulative effects analysis is evidenced in the Director's decision as the permitted water taking limits will not be known for a period of two years, and the limits may be increased after that date.

18. The MOECC SEV requires that the principle of sustainable development be applied. The Director must consider the effects of its decisions on current and future generations, consistent with sustainable development principles. The Director's issuance of a 10-year PTTW, including the potential for the permitted water taking levels to be increased after a two year period, fails to ensure the conservation and sustainable use of water to maximize its availability for existing or future users and to sustain ecosystem integrity.

Considerations under OWRA, O. Reg. 387/04 and the MOECC 2005 PTTW Manual

19. Where the *OWRA*, O. Reg. 387/04, and the MOECC's 2005 PTTW Manual require consideration of the above principles, the County repeats and adopts the above-noted statements in paragraphs 11-18.
20. The above-noted PTTW Conditions for the Paris Pit were issued by the Director to CRH without due regard for, or proper consideration of, the principles entrenched in the *OWRA*, O. Reg. 387/04, and the MOECC 2005 PTTW Manual, including an ecosystem approach, consideration of cumulative effects, application of the precautionary principle, sustainable development and adaptive management.
21. Paragraphs 11-18 show that the PTTW Conditions issued by the Director are factually and scientifically unreasonable in the circumstances.

Ground 1(c): Failure to Consider Existing Baseline Environmental Conditions

22. There were no baseline environmental conditions taken into consideration by the Director prior to issuing the PTTW Conditions. The Director ignored the existing baseline environmental conditions, including but not limited to the fact that the removal of the overburden in close proximity to the Telfer well field may affect the GUDI¹ status of the groundwater; the potential increased vulnerability to aquifer contamination near the Telfer well field; drought conditions resulting in impacts on the Paris Pit operations; and, that according to source protection criteria the current aquifer vulnerability well score is already at the maximum.

Ground 2: Inadequate Terms and Conditions

23. The Paris Pit is located in a setting where a water taking has the potential to cause significant adverse effects on groundwater and surface water resources and interference with nearby municipal and private wells.

¹ GUDI means Groundwater Under the Direct Influence of surface water.

24. The Paris municipal water system relies on groundwater as its source of water. The groundwater is taken from three well fields known municipally as the Telfer, the Gilbert and the Bethel well fields. The Bethel wells are remote from the Paris Pit but the Telfer and Gilbert well fields lie on either side of the Paris Pit – the Telfer well field is situated to the east of the Paris Pit and the Gilbert well field is located to the west of the Paris Pit.
25. The PTTW Conditions fail to provide sufficient controls to prevent, avoid, minimize, and mitigate any possible adverse effects. Also, the PTTW Conditions neglect to ensure the appropriate monitoring for adverse effects, nor do they require the implementation of appropriate contingency measures. The PTTW Conditions neglect to specify and require:
 - a. The amount of water that is permitted to be taken by CRH in its operations;
 - b. Clear and specific monitoring objectives and requirements and targeted detection limits; and
 - c. An appropriate Trigger Mechanism and Contingency Plan.

Water Taking

26. PTTW Condition 3.3 is unclear and fails to specify whether or not in allowing the water taking to be used for dust suppression purposes it is subject, or in addition, to the maximum rate set out in Condition 3.4a.
27. More importantly, PTTW Condition 3.4b appears to allow the amount of water taking from the Source Pond to revert to maximum rate of water taking permitted in Condition 3.2. subject to Table A for a period of one month for the purpose of refilling of the settling and recirculation ponds after the removal of accumulated sediment. In issuing this condition, the Director neglected to take into consideration several substantive and procedural matters, including but not limited to setting a limit on how often CRH can revert to the maximum rate of water taking set out in Condition 3.2.
28. Condition 3.4b requires the removal of accumulated sediment from the ponds. The Director failed to describe the sediment removal process and how often it is required. There is no way of understanding how the removal will impact the water taking.
29. PTTW Condition 3.6 requires that after two years of operation, CRH, shall submit a report evaluating their water taking needs. The report is required to make recommendations regarding future water needs and potential changes to the permitted rates and volumes. It appears that the Director has abrogated her responsibilities, resulting in substantive deficiencies and procedural flaws in the PTTW. The Director failed to take into consideration that:

- a. notwithstanding an alleged reduction in the water taking volume from 14,000 litres per minute (“lpm”) to 1,400 lpm after three months of operation as required in Condition 3.4a and 3.4b, Condition 3.6 provides CRH with an opportunity to return to greater volumes of water taking a mere two years after commencing operations under the PTTW;
- b. the amount of the permitted water taking for approximately eight years of the PTTW is unknown and undetermined; and
- c. in the circumstances, a 2-year PTTW is appropriate as opposed to the 10-year PTTW that was issued.

Monitoring Objectives

30. PTTW Condition 4 sets out the required monitoring provisions. The Director neglected and failed to take into consideration the apparent deficiencies and procedural flaws in the PTTW as it relates to the monitoring requirements including, but not limited to:
- a. failing to impose or clarify monitoring requirements or enact specific objectives on how the various components of the monitoring program are to be conducted;
 - b. the glaring lack of objectives for the monitoring program and the consequences associated with the lack of objectives. The lack of objectives results in no mechanism being provided to CRH to adaptively manage problems that may arise. This lack of objectives also restricts the ability of the MOECC to review the impact of the PTTW and potentially jeopardizes the rights and interests of the County;
 - c. the lack of required monitoring of groundwater levels before, during and after construction of the ponds;
 - d. the absence of any specificity regarding the timing for the collection of information relating to groundwater levels, including any time where a modification of, or sediment removal from, any of the three ponds occurs;
 - e. neglecting to take into account any monitoring of nearby ponds or wetlands, municipal wells, or the private supply wells; and
 - f. failing to require any monitoring for leakage or, alternatively, failing to specify a permitted level of leakage, if any, for the wastewater settling pond.

Trigger Mechanism and Contingency Plan

31. PTTW Condition 4.7 requires CRH, prior to the construction of the Source Pond, to submit a Trigger Mechanism and Contingency Plan (“Trigger and Plan”). However, in issuing PTTW Condition 4.7, the Director failed to recognize that the timing of the submission and the Director’s requirement for the Trigger and Plan precludes the County and members of the public from reviewing and commenting on the Trigger and Plan. This approach contradicts the approach generally taken by MOECC directors to subject such plans to public scrutiny prior to the issuance of the PTTW;
32. When issuing Condition 4.7, the Director failed, neglected or refused to address numerous substantive deficiencies and procedural flaws with the PTTW including, but not limited to requiring that:
 - a. a qualified person prepare and submit the Trigger and Plan;
 - b. an annual review be conducted of the Trigger and Plan, or any updates be completed when there is a change of circumstances of the Trigger and Plan;
 - c. additional reviews of the Trigger and Plan be undertaken when a monitoring program and/or trigger(s) indicates unusual or elevated levels of any monitoring data that either confirms, or could result in, an impact to the environment;
 - d. any information arising from the implementation of the Trigger and Plan be incorporated into the annual report required under Condition 4.4. The annual report should include an evaluation of compliance with the PTTW and any applicable environmental legislation, regulations, guidelines, manuals, policies and/or objectives and the impacts of the drawdown, if any;
 - e. any and all complaints received arising from the Trigger and Plan be included in the annual report. The summary of each complaint should indicate how the complaint relates to the PTTW along with an overview of the steps taken to resolve the complaint; and
 - f. any trigger mechanism identified and established for the PTTW be linked to, and incorporated with, the ECA and that it be updated regularly to reflect site operations, monitoring data, and recommendations of the qualified person responsible for preparing the annual reports.

Ground 3: Inconsistency with MOECC Environmental Statutes, Regulations, Manuals, Policies, Guidelines, or Objectives

33. In respect of Ground 3, the Appellant pleads and relies on the facts and particulars set out in the foregoing paragraphs.

DATED at London this 14th day of April, 2016.



Paula Lombardi



Kirsten Mikadze

Siskinds LLP
Barristers & Solicitors
680 Waterloo Street
P.O. Box 2520
London, ON N6A 3V8

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kirsten.mikadze@siskinds.com

Lawyers for the Appellant,
The Corporation of the County of Brant

TO: The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario M5G 1E5

AND TO: Isabelle O'Connor / Nicholas Adamson
Legal Services Branch
Ontario Ministry of the Environment and Climate Change
135 St. Clair Avenue West – 10th Floor
Toronto, Ontario M4V 1P5

Counsel for the Director, Ministry of the Environment
and Climate Change

AND TO: Jonathan W. Kahn / Sarah Emery
Blake, Cassels & Graydon LLP
Barristers & Solicitors
199 Bay Street
Suite 4000, Commerce Court West
Toronto, Ontario M5L 1A9

Counsel for the Instrument Holder
CRH Canada Group Inc.

AND TO Joseph F. Castrilli / Ramani Nadarajah
Canadian Environmental Law Association
1500 – 55 University Avenue
Toronto, Ontario M5J 2H7
Tel: (416) 960-2284, ext. 218
Fax: (416) 960-9392

Counsel for the Appellant
Concerned Citizens of Brant

AND TO: Environmental Commissioner of Ontario
1075 Bay Street, Suite 605
Toronto, Ontario M5S 2B1

TAB 2



Ministry of the Environment
Ministère de l'Environnement

PERMIT TO TAKE WATER
Ground Water
NUMBER 4245-959MRB

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

The Corporation of the County of Brant.
Post Office Box 160
Burford, Ontario
N0B 1A0

For the water
taking from: P210, P211, P212, P213, P214 and P215

Located at: Lot 29 Concession 2 Former Township of South Dumfries County of Brant
Brant

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

- (a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.
- (b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.
- (c) "Ministry" means Ontario Ministry of the Environment.
- (d) "District Office" means the Guelph District Office.
- (e) "Permit" means this Permit to Take Water No. 4245-959MRB including its Schedules, if any, issued in accordance with Section 34 of the OWRA.
- (f) "Permit Holder" means The Corporation of the County of Brant.
- (g) "OWRA " means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

- 1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated December 19, 2012 and signed by Alex Davidson, and all Schedules included in this Permit.
- 1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.
- 1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.
- 1.4 This Permit is not transferable to another person.
- 1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.
- 1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.
- 1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act*, R.S.O. 1990, the *Pesticides Act*, R.S.O. 1990, or the *Safe Drinking Water Act*, S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

- (a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act*, and

the *Environmental Protection Act*, and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 Expiry

This Permit expires on May 31, 2023. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	P210	Well Drilled	Municipal	Water Supply	300	24	432,000	365	17 549927 4784982
2	P211	Well Drilled	Municipal	Water Supply	300	24	432,000	365	17 549928 4784948
3	P212	Well Drilled	Municipal	Water Supply	150	24	216,000	365	17 549938 4784907
4	P213	Well Drilled	Municipal	Water Supply	270	24	389,000	365	17 549954 4784834
5	P214	Well Drilled	Municipal	Water Supply	948	24	1,365,000	365	17 549967 4784775
6	P215	Well Drilled	Municipal	Water Supply	1,032	24	1,486,000	365	17 549972 4784760
							Total Taking:	4,320,000	

3.3 Notwithstanding Table A, the maximum combined total daily rate of pumping from P210, P211, P212, P213, P214 and P215 shall not exceed 3,000 LPM and shall not exceed a 7-day rolling average of 2,100 LPM.

4. Monitoring

4.1 Under section 9 of O. Reg. 387/04, and as authorized by subsection 34(6) of the *Ontario Water Resources Act*, the Permit Holder shall, on each day water is taken under the authorization of this Permit, record the date, the volume of water taken on that date and the rate at which it was taken. The daily volume of water taken shall be measured by a flow meter or calculated in accordance with the method described in the application for this Permit, or as otherwise accepted by the Director. A separate record shall be maintained for each source. The Permit Holder shall keep all records required by this condition current and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request. The Permit Holder, unless otherwise required by the Director, shall submit, on or before March 31st in every year, the records required by this condition to the ministry's Water Taking Reporting System.

4.2 The Permit Holder shall replace the existing multi-level piezometers MP1, MP3, MP4, MP6, MP8 and MP10 with multi-level drivepoint piezometers identified as DP1, DP3, DP4, DP6, DP8 and DP10 by April 28, 2014.

4.3 The Permit Holder shall undertake the following surface water monitoring program:

- ⊙ Continuous measurement (i.e. every 1 hour) of surface water levels at SF1, SF2, SF5, SF6 and SF7;
- ⊙ Manual monthly surface water level measurement at SF1, SF2, SF5, SF6 and SF7;
- ⊙ Development of a stage-discharge curve at SF1, SF2, SF5, SF6 and SF7;
- ⊙ Calculation of continuous flow from the continuous surface water level data;
- ⊙ Manual monthly flow monitoring at SF1, SF2, SF3, SF4, SF5, SF6 and SF7;
- ⊙ Manual monthly measurement of shallow and deep groundwater levels at drivepoint piezometer locations DP1, DP3, DP4, DP6, DP8 and DP10;
- ⊙ Continuous measurement (i.e. every 1 hour) of shallow and deep groundwater levels at drivepoint piezometer locations DP1, DP4, DP6 and DP8; and
- ⊙ Calculation of vertical hydraulic gradient from the continuous shallow and deep groundwater level data.

4.4 Dataloggers for continuous measurement of surface water and groundwater levels shall be installed from April 1 to November 30 of each year. Should freezing conditions occur within this window the dataloggers can be installed later in April and/or removed earlier in November to avoid damage of the equipment.

4.5 The Permit Holder shall undertake a fisheries assessment consisting of electrofishing and redd spawning surveys in the year following the year in which the annual average pumping rate exceeds 1,500 LPM. The fisheries assessment shall be completed on a bi-annually basis (once every two years) and discontinued when the annual average pumping rate is less than 1,500 LPM for two consecutive years.

4.6 The Permit Holder shall submit to the Director, an annual report which presents and interprets the monitoring data collected under Conditions 4.1, 4.3 and 4.5 and shall be assessed by a qualified person(s). The report shall be submitted to the Director by March 31st of each year and include the monitoring data for the 12-month period ending December 31st of the previous year.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate

such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act*, Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.
2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.
3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, as amended, provides that the Notice requiring the hearing shall state:

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

*The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5
Fax: (416) 314-4506
Email: ERTTribunalsecretary@ontario.ca*

AND

*The Director, Section 34
Ministry of the Environment
12th Floor
119 King St W
Hamilton ON L8P 4Y7
Fax: (905) 521-7820*

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600

by fax at (416) 314-4506

by e-mail at www.ert.gov.on.ca

This Permit cancels and replaces Permit Number 03-P-2316, issued on 2003/10/26.

Dated at Toronto this 24th day of December, 2013.

Carl Slater

Carl Slater
Director, Section 34
Ontario Water Resources Act, R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 4245-959MRB, dated December 24, 2013.



AMENDED PERMIT TO TAKE WATER
Ground Water
NUMBER 0736-8L3P4L

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

The Corporation of the County of Brant
26 Park Avenue
Burford, Ontario NOE 1A0

For the water taking from: Two Wells (P28, P29)
Located at: Lot 28 and 29, Concession 2, South Dumfries
Brant

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

- (a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.
- (b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.
- (c) "Ministry" means Ontario Ministry of the Environment.
- (d) "District Office" means the Guelph District Office.
- (e) "Permit" means this Permit to Take Water No. 0736-8L3P4L including its Schedules, if any, issued in accordance with Section 34 of the OWRA.
- (f) "Permit Holder" means The Corporation of the County of Brant.
- (g) "OWRA " means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40, as amended.

applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 Expiry

This Permit expires on **May 31, 2018**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

- ⊙ PUC2/98
- ⊙ PUC3/98
- ⊙ PUC4/98
- ⊙ PUC5/98
- ⊙ PUC6/98
- ⊙ TW2/92
- ⊙ TW3/92

4.3 The Permit Holder shall submit to the Director, an annual monitoring report which presents and interprets the monitoring data in Condition 4.2. This report shall be prepared, signed and stamped by a licensed professional geoscientist or a licensed professional engineer specializing in hydrogeology who shall take responsibility for its accuracy. The report shall be submitted to the Director by March 31 of each calendar year and include monitoring data for the 12 months period ending December 31 of the previous year.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, as amended, provides that the Notice requiring the hearing shall state:

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5
Fax: (416) 314-4506

AND

The Director, Section 34
Ministry of the Environment
12th Floor
119 King St W
Hamilton ON L8P 4Y7
Fax: (905) 521-7820

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

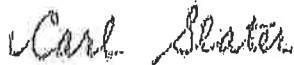
by telephone at (416) 314-4600

by fax at (416) 314-4506

by e-mail at www.ert.gov.on.ca

This Permit cancels and replaces Permit Number 3561-7NHJZIK, issued on 2009/01/21.

Dated at Hamilton this 1st day of November, 2011.



Carl Slater
Director, Section 34
Ontario Water Resources Act, R.S.O. 1990

TAB 3

ENVIRONMENTAL REVIEW TRIBUNAL

IN THE MATTER OF Part XIII of the *Environmental Protection Act*, R.S.O. 1990, c. E.19 as amended;

-and-

IN THE MATTER OF sections 38 to 48 of the *Environmental Bill of Rights*, S.O. 1993, c. 28;

-and-

AND IN THE MATTER OF an appeal by the Corporation of The County of Brant, pursuant to section 38 of the *Environmental Bill of Rights, 1993*, for leave to appeal the decision of the Director, Ministry of the Environment and Climate Change under section 20.3 of the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended, in issuing Environmental Compliance Approval No. 1400-9VNPVY, dated October 29, 2015, to CRH Canada Group Inc. for the establishment, use and operation of sewage works for the collection, transmission, treatment and reuse of wash water effluent from an aggregate washing operation at the Dufferin Aggregates – Paris Pit, located on Lot 26, 27, 1, 2 & 3, Concession 3, 2 WGR, South Dumfries in the County of Brant.

**NOTICE OF APPEAL
THE CORPORATION OF THE COUNTY OF BRANT**

TAKE NOTICE that pursuant to sections 139, 142 and 145.2 of the *Environmental Protection Act*, R.S.O. 1990, c. E.19 (“*EPA*”), and pursuant to the decision of the Environmental Review Tribunal (“Tribunal”) in Case No. 15-143 dated March 31, 2016 granting leave to appeal to the Corporation of the County of Brant (the “County” or “Appellant”), the Appellant require a hearing before the Tribunal in respect of the decision of Fariha Pannu, Director, Ministry of the Environment and Climate Change (“MOECC”), to issue the following Conditions in Environmental Compliance Approval (“ECA”) No. 1400-9VNPVY (appended to this Notice) dated October 29, 2015 to CRH Canada Group Inc. (“CRH”) under section 20.3 of the *EPA*:

- Condition 4.8 (future uses of sediment for on-site rehabilitation);

- Condition 5 (contingency and pollution prevention plan);
- Condition 5 (lack of a trigger mechanism in the contingency and pollution prevention plan)

AND FURTHER TAKE NOTICE that the Appellant hereby appeals the above-noted Conditions, and respectfully request that the Tribunal grant:

- (a) An Order revoking Conditions 4.8 and 5 in the ECA;
- (b) An Order directing the Director to substitute further and better Conditions in the ECA in relation to the subject matter of Conditions 4.8 and 5 referred to above, as may be specified by the Tribunal; and
- (c) Such further or other Orders as Appellant's counsel may advise and this Tribunal may permit.

AND FURTHER TAKE NOTICE that the grounds for the Orders requested by the Appellant are as follows:

1. The conditions of the ECA identified above ("Conditions") are inadequate and fail to protect the environment, public health and/or safety and do not establish appropriate and effective measures to ensure the timely identification, assessment, and mitigation of the direct, indirect, and cumulative effects that may result from the operation of the sewage works at the Paris Pit over its operating and post-closure lifespan. These Conditions were issued by the Director without:
 - a. considering, applying, or incorporating the precautionary principle, cumulative effects analysis, adaptive management, public participation, or other principles mandated by the MOECC's Statement of Environmental Values ("SEV") issued under the *Environmental Bill of Rights* ("EBR");
 - b. taking into account whether the Conditions were factually or scientifically unreasonable, or in accordance with the *EPA*, Ontario Regulation 224/07, or MOECC guidelines, policies, or objectives; and
 - c. acknowledging existing baseline conditions in the area including but not limited to the close proximity of the Paris Pit to the wellhead protection area for the Paris water supply, area drought conditions, or past area use of pesticides, including but not limited to atrazine.
2. Allowing the environmental risks or impacts of the sewage works at the Paris Pit to be investigated, monitored, and reported upon under the deficient Conditions in the ECA is contrary to the public interest and not consistent with the purposes and provisions of the *EPA*, *EBR*, Ontario Regulation 224/07, Ontario Regulation

153/04 the MOECC's *Guide to Applying for an Environmental Compliance Approval*, and the MOECC's *Water Management Policies, Guidelines and Provincial Water Quality Objectives*.

3. Sections 1, 2.1, 3, 14, 20.2, 20.3, 20.6, 20.7, 20.8, 20.9, 20.13, and Part XIII of the *EPA*, sections 1, 2, 11, and 38 to 48 of the *EBR*, and section 53 of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40 ("*OWRA*").
4. Such further or other grounds as the Appellant's counsel may advise and this Tribunal may permit.

AND FURTHER TAKE NOTICE that the material facts and particulars that the Appellant rely upon in relation to the above-noted grounds of appeal include, but are not necessarily limited to, the following:

Background

1. On October 29, 2015 Fariha Pannu, Director appointed for the purposes of Part II.1 of the *Environmental Protection Act* ("*EPA*"), Ministry of the Environment and Climate Change, issued Environmental Compliance Approval No. 1400-9VNPVY ("*ECA*") to CRH Canada Group Inc. ("*CRH*"). CRH, previously known as Dufferin Aggregates, is a Division of Holcim (Canada), Inc. ("*Dufferin*"). Any references to Dufferin in this application should be interpreted as a reference to, or the actions of, CRH.
2. Dufferin is the owner and operator of the Dufferin Aggregates – Paris Pit located on Lots 26, 27, 1, 2 & 3, Concession 3, 2, WGR, South Dumfries in the County of Brant ("*Property*"). Dufferin is seeking to commence aggregate washing operations at the Paris Pit. The aquifer underlying the Paris Pit is the water supply for the Town of Paris.
3. The Appellant is a single tier municipality created as a result of a municipal restructuring on January 1, 1999. At that time all Brant County local municipalities (except Brantford) were amalgamated into one municipality with the status of a city. The traditional, upper tier County of Brant was also incorporated into the restructured County of Brant.
4. The Town of Paris was one of the municipalities included in the County amalgamation. The community of Paris has a municipal water supply system that is operated by the County. The Paris municipal water system supplies water to approximately 10,000 people as well as to commercial establishments and industry in the community.
5. The Paris municipal water system relies upon groundwater as its source of water. The groundwater is taken from three well fields known municipally as the Telfer, the Gilbert and the Bethel well fields. The Bethel wells are remote from the Paris Pit but the Telfer and the Gilbert well fields lie on either side; the Telfer well field

is just to the east of the Paris Pit and the Gilbert well field located just to the west of the Paris Pit.

6. The Paris Pit is 249 hectares in area and is operated pursuant to a licence granted in 1974 for the extraction of aggregates. The Paris Pit is licensed under the *Aggregate Resources Act* and has all the applicable land use planning and zoning approvals. Despite being licenced for extraction, the Paris Pit has been used primarily for agricultural uses such as the growing of corn and other various cash crops. The historical agricultural operations have resulted in the use of pesticides and fertilizers on the site.
7. In or around the fall of 2014, Dufferin began extraction operations at the Paris Pit. In connection with these operations Dufferin is now seeking to undertake aggregate washing operations at the Paris Pit.
8. In or around June 2013, Dufferin submitted an application to the Ontario Ministry of the Environment (now the Ministry of Environment and Climate Change) (both of which are referred to as the “MOECC” in this application) for an ECA pursuant to section 20.2 of the EPA with respect to industrial sewage works under section 53 of the *Ontario Water Resources Act* (“OWRA”). This ECA application is associated with the aggregate washing operations for water aggregate extraction at the Paris Pit. The industrial sewage works are to be operated in conjunction with the water taking activities for Dufferin for the production of concrete and asphalt products at the Paris Pit. Dufferin has also made a separate application for a permit to take water (“PTTW”) under section 34 of the OWRA. The Appellant has also filed an appeal on the Conditions in the PTTW.
9. The Paris Pit was in continuous use for agricultural purposes prior to the issuance of the pit licence in 1974. The principal crop grown on the Property was corn. The most common herbicide used for corn is identified as atrazine, often used in combination with other herbicides. Atrazine is: (1) inherently toxic to humans and non-humans, according to Environment Canada; (2) one of the top 100 most persistent organic pollutants, according to Environment Canada; and (3) ranked the highest of 83 pesticides in Agriculture Canada’s priority scheme for potential groundwater pollution.
10. Human exposure to atrazine is linked to a number of serious health effects. Atrazine is identified as a potent endocrine disruptor, interferes with hormonal activity, and is linked to elevated risks of certain cancers.
11. The Paris Pit is in close proximity to the wellhead protection area for the Paris water supply, private water supply wells, and ecological surface water resources, such as the Gilbert Creek. The water intake is situated in a protection zone for the City of Brantford and represents a threat to the water supplies in the area. The location abuts the Paris and Gilbert Well Field Wellhead Protections Areas and is in a designated area of high vulnerability and is immediately upstream of the

intake Protection Zone for Brantford and the Grand River serving the Six Nations First Nations reserve.

12. In June 2013, CRH applied under section 20.2 of Part II.1 of the *EPA* for an ECA to establish, use, and operate sewage works for the collection, transmission, treatment, and reuse of wash water effluent from an aggregate washing operation under section 53 of the *OWRA*. Further, in April 2015, CRH proposed modifications to the sewage works for the ECA application. Also, in March 2013, CRH had applied for a companion Category 3 Permit to Take Water (“PTTW”) under section 34.1 of the *OWRA* for an excavated source water pond sustained by a closed-loop design system for the purposes of aggregate washing operations.
13. On October 29, 2015, notwithstanding the multitude of comments received from the public, the Director issued the ECA to CRH despite the concerns raised by the County regarding potential impacts of the proposed sewage works on municipal and private wells and surface water features. Also on October 29, 2015, the PTTW was approved by the Director. On November 13, 2015, the County sought leave to appeal the Director’s decisions to issue the ECA and the PTTW.
14. On March 31, 2016, the Tribunal found that it appeared there was good reason to believe that no reasonable person could have issued the ECA in regard to the Contingency and Pollution Prevention Plan, which does not contain a trigger mechanism, and Condition 4.8, which does not specify future uses of sediment for on-site rehabilitation. The Tribunal granted the County leave to appeal the ECA with respect to the above-noted Conditions pursuant to sections 38 to 48 of the *EBR*. A similar decision by the Tribunal was also issued on March 31, 2016 regarding the PTTW Conditions, and is the subject of a separate notice of appeal by the Appellant.

Ground 1(a) and 1(b): Failure to Consider or Apply Binding MOECC Principles

MOECC SEV Considerations

15. The MOECC SEV requires the application of a “precautionary, science-based approach” when making environmentally significant decisions. A precautionary approach presumes the existence of environmental risk in the absence of proof to the contrary. It places the onus of establishing the absence of environmental harm upon the source of risk. In situations where environmental uncertainty exists as to whether an activity could have an adverse effect, the precautionary principle requires that it should be considered to be as hazardous as it could possibly be.
16. The application of the precautionary approach under the ECA Conditions for the Paris Pit required that the Director consider the sewage works to be as hazardous as possible, particularly in circumstances where there was information indicating that an inadequate investigation had been conducted.

17. The Director proceeded to issue the ECA Conditions despite the considerable uncertainty about environmental risks from the sewage works. The Director had information and documentation regarding the environmental risks including but not limited to the inadequate pesticide soil sampling methods and the potential for pesticide leaching and related problems. Despite this information, the Director merely required CRH to carry out monitoring absent any known objectives. The Director also required CRH to develop contingency and pollution prevention plans after, not before, the issuance of the ECA.
18. The Director issued the ECA Conditions to CRH contrary to the precautionary principle. The Director, being advised and knowing of evidentiary gaps in CRH's supporting documentation, proceeded to issue the ECA Conditions. CRH neglected to address the potential for leaching from the settlement pond into the aquifer. Aggregate washing results in an intensification of the natural leaching process. CRH failed to address the pesticide residues (including atrazine), other agro-chemicals and contaminants existing in the extraction lawyer of the gravel that may be brought up from the aggregate washing process. CRH failed to address or consider the fate of approximately 24,000 tonnes per year of potentially pesticide-contaminated fines that will be washed from the aggregate, settled in the settling pond, and the potential for leaching from the settling pond into the aquifer during both operations and the proposed "rehabilitation" period.
19. The Director's approach is not in keeping with, nor is it consistent with, nor reflective of, the precautionary principle.
20. The Director's decision to issue the ECA Conditions also fails to reflect the SEV principle of adaptive management. Adaptive management requires that in order to allow a project to proceed with any uncertainty, but potentially adverse environmental impacts, an adequate baseline of information regarding the existing environment, potential impacts, and mitigation measures must first be in place.
21. The Director, before issuing the ECA Conditions, did not require that CRH conduct a cumulative effects analysis of the ECA in conjunction with the removal of aggregate in the area, extractive operations generally, and the rehabilitation plans for the Paris Pit, despite the fact that consideration of cumulative effects is a principle of the MOECC SEV.
22. Pollution prevention is established as a "priority" in the MOECC SEV for "minimizing the creation of pollutants that can adversely affect the environment". Notwithstanding this principle, the ECA Conditions authorize the establishment and operation of sewage works that will result in, not prevent, pollution by concentrating on-site pesticides in the aggregate wash water.
23. The MOECC SEV states that public consultation is "vital to sound environmental decision-making" and that the MOECC "will provide opportunities" for consultation in respect of "decisions that might significantly affect the

environment". The issuance of this ECA is a decision that may significantly affect the environment. Despite this, the Director neglected to require that CRH undertake public consultation in respect of the Contingency or Pollution Prevention Plan ("Contingency Plan") that the ECA Conditions require be produced prior to commencement of the sewage work operations at the Paris Pit.

24. There was also no opportunity provided by the Director pre-approval, or post-approval, in the above-noted ECA Conditions to review and comment upon the Contingency Plan. The Contingency Plan is only required by the ECA Conditions to be produced by CRH after the issuance of the ECA.

Considerations under EPA, O. Reg. 224/07, and MOECC Guidelines, Policies, and Objectives

25. To the extent that the *EPA*, O. Reg. 224/07, O. Reg. 153/04, and the MOECC's guidelines, policies, and objectives similarly require consideration of the above principles, the Appellant repeats and adopts the above-noted statements in paragraphs 15-24.
26. In short, the ECA Conditions for the Paris Pit were issued by the Director to CRH without regard for, or proper consideration of, the aforementioned principles entrenched in the *EPA*, O. Reg. 224/07, O. Reg. 153/04, and the MOECC guidelines, policies, and objectives.
27. Furthermore, in light of paragraphs 15-24, the ECA Conditions issued by the Director are both factually and scientifically unreasonable in the circumstances.

Ground 1(c): Failure to Consider Existing Baseline Environmental Conditions

28. There were no baseline environmental conditions taken into consideration by the Director prior to issuing the ECA Conditions. The Director ignored the significant uncertainties regarding existing baseline environmental conditions, including but not limited to the close proximity of the water taking to the wellhead protection area for the Paris drinking water supply area, groundwater, surface water, and the past agricultural use of pesticides, such as atrazine, on the lands subject to excavation and on the aggregate that will be washed at the site.

Ground 2: Inadequate Terms and Conditions

29. The Paris Pit is located in a setting where sewage works have the potential to cause significant adverse effects on groundwater and surface water resources, and interfere with municipal and private wells located in the area.
30. The Paris municipal water system relies on groundwater as its source of water. The groundwater is taken from three well fields known municipally as the Telfer, the Gilbert and the Bethel well fields. The Bethel wells are remote from the Paris

Pit, but the Telfer and Gilbert well fields lie on either side of the Paris Pit – the Telfer well field is situated to the east of the Paris Pit and the Gilbert well field located to the west of the Paris Pit.

31. The ECA Conditions do not contain sufficient controls to prevent, avoid, minimize, and mitigate any possible adverse effects upon these water resources. Also, the ECA Conditions neglect to ensure appropriate monitoring of adverse effects, nor do they require the implementation of appropriate contingency measures. The ECA Conditions neglect to specify and require:
- a. The proposed use of sediment from the settling pond in the rehabilitation of the pit area;
 - b. The Contingency Plan should have been required prior to the issuance of the ECA and available for public scrutiny before the ECA was granted; and
 - c. The production of the Contingency Plan and the inclusion of any trigger mechanisms.

Sediment Use

32. The Director failed or refused to address numerous substantive deficiencies and procedural flaws in ECA Condition 4.8 including, but not limited to:
- a. neglecting to appropriately characterizing the sediment to assess its suitability for various on-site uses;
 - b. failing to identify the flaws in the standards chosen to evaluate sediment samples from the site;
 - c. neglecting to utilize the appropriate risk assessment principles to establish standards that could be used to develop risk management measures with respect to sediments at the site, including but not limited to the use of laboratory detection limits; and
 - d. not incorporating into ECA Condition 4.8 a requirement that sediment found to contain unacceptable levels of atrazine, or other pesticides, cannot be used for on-site rehabilitation.

Contingency and Pollution Prevention Plan (“Contingency Plan”)

33. The Director failed or neglected to address the following numerous deficiencies and procedural flaws, or introduce the following corresponding remedies thereto, when issuing Condition 5 of the ECA that requires the preparation of a

Contingency Plan prior to the commencement of operation of the sewage works, including but not limited to:

- a. the delineation, or more detailed delineation, of the sediment sampling methodology to be employed to understand how on-site sediment will be assessed for contamination from atrazine, or other pesticides;
- b. the delineation, or more detailed delineation, of a testing methodology to determine on an on-going basis, when the recirculation cell bottom for the wash plant is sealed;
- c. implementing a requirement that the Contingency Plan include water sampling in the closed-loop system to address pre-washing and worst case scenario conditions in order to appropriately assess the impact of washing conditions on the recirculated water and if necessary incorporated into the trigger mechanism assessment;
- d. establishing a requirement that the Contingency Plan be prepared by a qualified person;
- e. integrating the Operations Manual (authorized under Condition 3) with the Contingency Plan, including definitions for normal operations, abnormal operations, and contingency measures for mitigating upset conditions or other problems in respect of both equipment operations and any environmental impacts from wastewater handling;
- f. including a requirement that the Contingency Plan be reviewed at a minimum annually by a qualified person;
- g. requiring reviews of the Contingency Plan when a process changes, or when the monitoring program or trigger(s) forming part of the Contingency Plan indicate unusual elevated readings of any of the monitoring data that could indicate an impact to the environment;
- h. mandating that any information relating to the Contingency Plan, during the course of a year be included as part of the annual report required in Condition 6.3 and include an evaluation of compliance with the ECA, relevant or applicable environmental legislation, regulations, manuals, guidelines, policies, or objectives;
- i. directing that the annual report relating to the Contingency Plan include a summary of any complaints received, an indication of how or whether the complaints relate to the ECA, and any steps taken to address and resolve the complaints; and

- j. requiring that the Contingency Plan evaluate performance of the ECA in relation to relevant or applicable environmental legislation, regulations, manuals, guidelines, or objectives.

Trigger Mechanism

34. The Director failed or neglected to address the following numerous deficiencies and procedural flaws when issuing Condition 5 of the ECA that requires the preparation of a Contingency Plan prior to the commencement of operation of the sewage works, including, but not limited to:
- a. failing to require a trigger mechanism for the Contingency Plan. The failure to include a trigger mechanism results in severe consequences for the ability of CRH to adaptively manage problems that may arise in the future, limits the MOECC in its review of the impact of the operation of the ECA, and potentially jeopardizes the rights and interests of the County;
 - b. allowing CRH to rely on sampling methods and detection limits contained in the report appended to Schedule "A" of the ECA, for which numerous concerns have been expressed about the adequacy of the sampling methods and, if not corrected, would defeat any trigger mechanism developed for the Contingency Plan;
 - c. not requiring the production, or public review, of a trigger mechanism prior to the issuance of the ECA, or neglecting to make the trigger mechanism subject to public review and oversight prior to approval by the Director;
 - d. linking the trigger mechanism for the Contingency Plan to the companion Permit to Take Water and requiring similar mechanisms in the management of sediment and in the Contingency Plan identifying a threshold exceedance when monitoring or sampling; and
 - e. failing to identify a trigger mechanism in the Contingency Plan and requiring that it be updated on an on-going basis based upon site operations, monitoring data, and recommendations of the qualified person preparing annual reports.

Ground 3: Inconsistency with MOECC Environmental Statutes, Regulations, Policies, Guidelines, or Objectives

2. In respect of Ground 3, the Appellant pleads and relies on the facts and particulars set out in the foregoing paragraphs.

DATED at London, this 14th day of April, 2016.



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Toronto, Ontario M5S 2B1

TAB 4



ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 1400-9VNPVY

Issue Date: October 29, 2015

CRH Canada Group Inc.
2300 Steeles Avenue West, 4th Floor
Concord, Ontario
L4K 5X6

Site Location: Dufferin Aggregates - Paris Pit
Lot 26, 27, 1, 2 & 3, Concession 3,2,WGR,
South Dumfries
County of Brant

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the establishment, use and operation of sewage works for the collection, transmission, treatment and reuse of wash water effluent from an aggregate washing operation, consisting of the following:

- one (1) *settling pond* (comprised of the settling cell(s) and the recirculation cell) constructed above the ground-water table receiving wash water from the Processing Wash Plant and make-up water from the source water pond, and returning settled water back to the Processing Wash Plant.

all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned sewage Works.

all in accordance with the supporting documents listed in Schedule 'A' to this environmental compliance approval.

For the purpose of this environmental compliance approval, the following definitions apply:

"Application" means the application for an environmental compliance approval submitted to the Ministry for approval by or on behalf of the Owner and dated June 03, 2013.

"Approval" means this environmental compliance approval, any schedules attached to it, and the Application;

"Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

"District Manager" means the District Manager of the Guelph District Office of the Ministry;

"EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;

"Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

"Owner" means CRH Canada Group Inc., and includes its successors and assignees;

"OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended; and

"Works" means the sewage works described in the Approval.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITION

- 1.1 The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- 1.2 Except as otherwise provided by these terms and conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with this Approval.
- 1.3 Where there is a conflict between a provision of this environmental compliance approval and any document submitted by the Owner, the conditions in this environmental compliance approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Owner, the Application shall take precedence unless it is clear that the purpose of the document was to amend the Application
- 1.4 Where there is a conflict between the documents listed in the Schedule A, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

1.5 The terms and conditions of this Approval are severable. If any term and condition of this environmental compliance approval, or the application of any requirement of this environmental compliance approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

2. CHANGE OF OWNER

2.1 The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within **thirty (30) days** of the change occurring:

- (a) change of address of Owner or operating authority;
- (b) change of Owner or operating authority or both, including address of new Owner or operating authority, or both;
- (c) change of partners where the Owner or operating authority is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act, R.S.O. 1990, c. B.17* ; and
- (d) change of name of the corporation where the Owner or operator is or at any time becomes a corporation, and a copy of the "Initial Return" or "Notice of Change" filed under the *Corporations Information Act, R.S.O. 1990, c. C.39* , shall be included in the notification to the District Manager.

2.2 In the event of any change in ownership of the Works, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager.

2.3 The Owner shall ensure that all communications made pursuant to this condition refer to the number at the top of this environmental compliance approval.

3. OPERATIONS MANUAL

3.1 The Owner shall prepare an operations manual prior to the construction, use and operation of the Works that includes, but is not limited to, the following information:

- (a) operating procedures for routine operation of the Works;
- (b) inspection programs, including frequency of inspection, for the Works and the methods or tests to be employed to detect when maintenance is necessary;

- (c) repair and maintenance programs, including the frequency of repair and maintenance for the Works;
 - (d) contingency plans and procedures for dealing with a potential spill, bypasses or any other abnormal situations, including notifying the District Manager of the situation; and
 - (e) procedures for receiving and responding to public complaints.
- 3.2 The Owner shall review and update the operations manual from time to time and shall retain a copy of the updated manual onsite at the Works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.
- 3.3 The Owner shall make all reasonable efforts to promptly develop a seal at the bottom of the settling pond (comprised of the settling cell(s) and the recirculation cell) and to maintain the integrity of the seal when removing excess sediment from the bottom of the settling pond.

4. MONITORING AND RECORDING

- 4.1 The Owner shall monitor the groundwater through seven (7) groundwater monitoring wells. Existing wells may be used or new wells installed. The groundwater monitoring wells shall meet the following requirements:
- (a) the wells shall be screened within the upper sand and gravel aquifer;
 - (b) three (3) groundwater monitoring wells shall be located along the northern boundary of the Paris South Pit, one (1) of these wells may be located at the south boundary of the Paris North Pit;
 - (c) three (3) groundwater monitoring wells shall be located along the southern boundary of the Paris South Pit, with one of these monitoring wells located up gradient of the County of Brant's Telfer wells P31 and P32 and another located immediately down gradient of the source water pond; and
 - (d) existing groundwater monitoring well MW1-12 or a suitable replacement shall be included in the monitoring.
- 4.2 Within **three (3) months** of the issuance of this Approval, the owner shall submit to the Director and the District Manager a document for approval indicating the location and screened depth intervals for the seven (7) groundwater wells proposed to be used.
- 4.3 Groundwater samples shall be collected from the seven (7) wells required by Condition 4.1 above in **May, August and December** of each year and sent for analysis in accordance with the table below:

General Chemistry	Metals (1)
Conductivity, pH, Hardness (as CaCO ₃), Total Suspended Solids (TSS), Total Dissolved Solids, Alkalinity - Bicarbonate (as CaCO ₃), Alkalinity - Carbonate (as CaCO ₃), Alkalinity - Hydroxide (as CaCO ₃), Total - Alkalinity (as CaCO ₃), Unionized Ammonia, Total Ammonia (as N), Nitrate-N, Nitrite-N, Nitrate & Nitrite (as N), Phosphate-P (ortho), Sulphate, Anion Sum, Cation Sum, Cation - Anion Balance, Dissolved Organic Carbon, Total Organic Carbon, Turbidity.	Aluminium, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Chloride, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon (total and dissolved silicon), Silver, Sodium, Strontium, Thallium, Tin, Titanium, Tungsten, Uranium, Vanadium, Zinc, Zirconium.

(1) - Groundwater samples are analyzed for dissolved metals. Surface water samples are analyzed for total metals.

4.4 Groundwater samples shall also be analysed for pesticides, including organochlorine pesticides and herbicides, as listed in Assessment of Herbicide and Pesticide Concerns, Dufferin Paris Pit, County of Brant, Ontario, CRA (2014) (see Schedule A), at detection limits equal to or lower than those listed. In the event of any analytical issue (e.g. matrix interference), reasonably achievable laboratory detection limits will apply.

4.5 Surface water samples shall be collected from SW1B (previously referred to as SW1; see OWRA S53 Environmental Compliance Approval (ECA) Application and Supporting Information, Dufferin Paris Pit, County of Brant, CRA, 2013, See Schedule A) and analysed as follows:

- (a) Samples shall be collected three (3) times per year in **May, August and December**; and,
- (b) Samples shall be analysed for: Field Parameters General Chemistry, Metals and Oil and Grease in accordance with the table below:

Field Parameters	General Chemistry, Metals (1) and Oil & Grease
pH, temperature, conductivity, dissolved oxygen, turbidity	Total Suspended Solids, hardness, alkalinity, nutrients (total phosphorous, total ammonia, total nitrate, total nitrite and calculated unionized ammonia), major ions, metals (unfiltered samples except for aluminium which should be from a clay free sample), Oil and Grease.

- (c) Surface water samples shall also be analysed for the suite of pesticides, including organochlorine pesticides and herbicides, listed in Assessment of Herbicide and Pesticide Concerns, Dufferin Paris Pit, County of Brant, Ontario, CRA (2014) (see Schedule A).

For pesticides, the analytical detection limits shall be equal to or lower than those listed in Assessment of Herbicide and Pesticide Concerns, Dufferin Paris Pit, County of Brant, Ontario, CRA (2014). In the event of any analytical issue (e.g. matrix interference), reasonably achievable laboratory detection limits will apply.

- 4.6 Within **three (3) months** of the issuance of this Approval, the Owner shall prepare and submit to the Director for approval a sediment sampling plan for sediment accumulated within the settling cell(s). The purpose of the sediment sampling plan is to determine the distribution and concentration of pesticides within the settling cell(s).
- 4.7 The sediment shall be sampled for: atrazine, atrazine plus atrazine desethyl, glyphosate and aminomethylphosphonic acid (AMPA) and the pesticides listed in Assessment of Herbicide and Pesticide Concerns, Dufferin Paris Pit, County of Brant, Ontario, CRA (2014) (see Schedule A). For pesticides, the analytical detection limits shall be equal to or lower than those listed in Assessment of Herbicide and Pesticide Concerns, Dufferin Paris Pit, County of Brant, Ontario, CRA (2014). In the event of any analytical issue (e.g. matrix interference), reasonably achievable laboratory detection limits will apply.
- 4.8 The results of the sediment samples shall be compared to the lower of the standards for each of the parameters in Condition 4.7 above to those set out in Alberta Tier 1 Soil Remediation Guideline and Nova Scotia Environmental Quality Standards (as updated or replaced), and shall be provided to the Director and the District Manager, future Ontario or Federal guidelines developed for the parameters set out in Condition 4.7 above shall also be used for comparison. Based on the results of the sediment samples, the Director and Owner shall discuss suitable uses for the sediment for on-site rehabilitation.
- 4.9 Water samples shall be collected from the recirculation cell as follows:
- (a) In the first year after operational commencement of the processing wash plant, one (1) sample shall be collected within **one (1) week** of the recirculation cell bottom being sealed and two (2) times thereafter until cessation of aggregate washing for the calendar year. Samples shall be collected at least **thirty (30) days** apart.
 - (b) In the second year after operational commencement of the processing wash plant, water samples shall be collected three (3) times during the calendar year between **February 15th** and **December 15th** at approximately equally spaced intervals.
 - (c) For each subsequent year, water samples shall be collected two (2) times during the calendar year, between **February 15th** and **December 15th**, with the first sample taken prior to the start of aggregate washing season and the second taken at the end, with the following exception:
 - i. if sediment is to be removed from the recirculation cell, the sediment shall be removed prior to the start of the aggregate washing season. A water sample shall be collected **one (1) week** after the bottom of the cell has been sealed and two (2)

times thereafter at approximately equally spaced intervals between the first sample date and December 15th.

- 4.10 The water samples collected from the recirculation cell shall be sent for analysis of general chemistry, including nutrients, metals and pesticides, including Glyphosate, Atrazine, Atrazine Desethyl and Aminomethylphosphonic Acid (AMPA). The sampling methods shall have detection limits at levels identical to or lower than those described in Assessment of Herbicide and Pesticide Concerns, Dufferin Paris Pit, County of Brant, Ontario, CRA (2014) (see Schedule 1). In the event of any analytical issues (e.g. matrix interference), reasonably achievable laboratory detection limits will apply.
- 4.11 After three (3) years of continuous data collection, application may be made to the Director to have the monitoring conditions amended.

5. **CONTINGENCY AND POLLUTION PREVENTION PLAN**

- 5.1 The Owner shall prepare a Contingency and Pollution Prevention Plan prior to the commencement of operation of the Works that includes, but is not necessarily limited to, the following information:
- (a) the name, job title and address of the Owner, person in charge, management or control of the facility.
 - (b) the name, job title and 24-hour telephone number of the person(s) responsible for activating the Contingency Plan.
 - (c) a site plan drawn to scale showing the facility, nearby buildings, streets, maintenance access and the Works (including direction(s) of flow in storm events) and any features which need to be taken into account in terms of potential impacts on access and response (including physical obstructions and location of response and clean-up equipment).
 - (d) a listing of telephone numbers for: local clean-up company(ies) who may be called upon to assist in responding to spills; local emergency responders including health institution(s); and MOECC Spills Action Centre 1-800-268-6060.
 - (e) Materials Safety Data Sheets (MSDS) for each hazardous material which may be transported or stored within the area serviced by the Works.
 - (f) the written procedures by which the Contingency and Pollution Prevention Plan is activated.
 - (g) a description of the spill response and pollution prevention training provided to employees assigned to work in the area serviced by the Works, the date(s) on which the training was provided and to whom.

(h) the date on which the Contingency and Pollution Prevention Plan was prepared and subsequently, amended.

(i) any other information the District Manager requires from time to time.

5.2 The Contingency and Pollution Prevention Plan shall be kept in a conspicuous place inside the office building. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

5.3 The Contingency and Pollution Prevention Plan shall be reviewed and amended from time to time, as needed by changes in the operation of the facility.

6. REPORTING

6.1 **One (1) week** prior to the start-up of the operation of the Works, the Owner shall notify the District Manager (in writing) of the pending start-up date.

6.2 In addition to the obligations under Part X of the *Environmental Protection Act*, the Owner shall, within **ten (10) working days** of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

6.3 The Owner shall prepare and submit a report to the District Manager on an annual basis within **ninety (90) days** following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data with a comparison to applicable objectives, guidelines, standards, and modelled predictions;

(b) an overview of the success and adequacy of the Works;

(c) a description of any operating problems encountered and corrective actions taken;

(d) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works; and

(e) any other information the District Manager requires from time to time.

7. SPECIAL CONDITION – PUBLIC ACCESSIBILITY TO REPORT

The Owner shall, make the report required by Condition 6.3 available to the community advisory panel and publicly by posting it on the Company's website at the time specified in Condition 6.3.

SCHEDULE 'A'

This Schedule contains a list of supporting documentation / information received, reviewed and relied upon in the issuance of this Approval.

1. Environmental Compliance Approval Application for Industrial Sewage Works submitted by J. Richard Murphy, P.Eng., of Conestoga-Rovers & Associates Ltd., and signed by Kevin Mitchell, Manager Environment and Properties, of Holcim (Canada) Inc., dated June 03, 2013; and all supporting documentation and information.
2. CRA. 2013. OWRA S53 Environmental Compliance Approval (ECA) Application and Supporting Information, Dufferin Paris Pit, County of Brant, Ontario, signed and stamped by Michael R. Tomka, P. Eng., signed and stamped by Gary Lagos, P. Geo. and signed by J. Richard Murphy, P. Eng. of Conestoga-Rovers & Associates, June 2013, #078410, Report Number: 3.
3. CRA (2014). Assessment of Herbicide and Pesticide Concerns, Dufferin Paris Pit, County of Brant, Ontario; signed and stamped by Gary Lagos, P. Geo. and signed by J. Richard Murphy, P. Eng. of Conestoga-Rovers & Associates, July 2014, #078410, Report Number: 5.
4. CRA. 2015. Re: Modifications to Works for Existing ECA Application Dufferin Paris Pit, Paris, Ontario; letter addressed to Mr. Adedoyin Adenowo, Senior Wastewater Engineer, Ministry of Environment and Climate Change from Michael Tomka, P. Eng. of Conestoga-Rovers & Associates, April 16, 2015, Reference No. 078410.
5. AE. 2010. Alberta Tier 1 Soil and Groundwater Remediation Guidelines, Alberta Environment, December 2010, ISBN: 978-0-7785-9015-6 (Printed Edition) ISBN: 978-0-7785-9947-0 (On-line Edition), Retrieved May 6, 2015 from:
<http://environment.gov.ab.ca/info/library/7751.pdf>
6. NSE. 2014. Environmental Quality Standards for Contaminated Sites Rationale and Guidance, Nova Scotia Environment, Environmental Quality Standards for Contaminated Sites, April 2014, retrieved May 6, 2015 from:
<https://novascotia.ca/nse/contaminatedsites/docs/EQS-Contaminated%20Sites-Rationale-and-Guidance-NSE-2014.pdf>

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.
2. Condition 2 is included to ensure that the Ministry records are kept accurate and current with respect to approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the works in compliance with it.
3. Condition 3 is included to ensure that a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner and made available to the Ministry. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the owner in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Works.
4. Condition 4 is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained and so that the Works do not cause any impairment to the environment. The Condition is also included for the following purposes:
 - a) To determine the chemistry of groundwater flowing onto and from that part of the Paris Pit property located south of Watts Pond Road. This area is known as the Paris South Pit.
 - b) To determine whether the sedimentation, recirculation and source ponds have an effect on groundwater chemistry.
5. Condition 5 is included to ensure that the Owner will implement the spill contingency plan, such that the environment is protected and deterioration, loss, injury or damage to any person(s) or property is prevented.
6. Condition 6 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.
7. Condition 7 is included to provide the general public with the report required in Condition 6.3.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5


AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment and
Climate Change
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-3717 or www.ert.gov.on.ca

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 29th day of October, 2015



Fariha Pannu, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

AA/

c: District Manager, MOECC Guelph District Office
J. Richard Murphy, P.Eng., Conestoga-Rovers & Associates Ltd.

**XII. SCHEDULE "F" – WITNESS STATEMENT FROM BRANT COUNTY
WATER DIRECTOR, DATED OCTOBER 18, 2016**

ENVIRONMENTAL REVIEW TRIBUNAL

IN THE MATTER OF sections 38 to 48 of the *Environmental Bill of Rights*, S.O. 1993 c.28, Section 34.1 of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40 as amended, and section 20.3 of the *Environmental Protection Act*, R.S.O. 1990, c. E.19 as amended;

IN THE MATTER OF applications by the Corporation of the County of Brant and Concerned Citizens of Brant, pursuant to section 38 of the *Environmental Bill of Rights, 1993*, S.O. 1993, c. 28, for leave to appeal the decision of the Director, Ministry of the Environment and Climate Change, under section 20.3 of the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended, in issuing Environmental Compliance Approval No. 1400-9VNPVY, dated October 29, 2015, to CRH Canada Group Inc., for the establishment, use and operation of sewage works for the collection, transmission, treatment and reuse of wash water effluent from an aggregate washing operation at the Dufferin Aggregates - Paris Pit, located on Lot 26, 27, 1, 2 & 3, Concession 3, 2, WGR, South Dumfries, County of Brant;

AND IN THE MATTER OF applications by the Corporation of the County of Brant and the Concerned Citizens of Brant, pursuant to section 38 of the *Environmental Bill of Rights, 1993*, S.O. 1993, c. 28, for leave to appeal the decision of the Director, Ministry of the Environment and Climate Change under section 34.1 of the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended, in issuing Permit to Take Water No. 7115-9VVLJW, dated October 29, 2015, to CRH Canada Group Inc. for the taking of water at the Paris Pit, at Part Lot 27, Concession 2 Geographic Township of Dumfries, County of Brant.

**WITNESS STATEMENT OF ALEX DAVIDSON
(October 28, 2016)**

Background

1. I am a professional engineer (P.Eng.). I obtained a Bachelor of Engineering from McMaster University in 1982. I also hold a Diploma of General Business (Honours) from Mohawk College as well as three Drinking-water Operator Certificates: Water Treatment 1, Water Distribution and Supply 4, and Water Quality Analyst.

2. I am an active member of the Ontario Water Works Association and am the representative to the Ontario Groundwater Association for The Corporation of the County of Brant (the "County").
3. I am currently the Director of Water for the County. I have held this position since 2001. When I initially started, the title of this position was Water Division Head. It has also been referred to as Water Manager.
4. As Director of Water, I am responsible for the overall operation of the Water Division, which safeguards the public safety in the supply and distribution of potable water and water for fire protection. This includes all of the County's municipal residential drinking water systems and small municipal non-residential systems.
5. Prior to this, I was employed as a professional engineer and project manager with a specialization in the areas of municipal water production, treatment, storage, pumping and transmission facilities, and wastewater treatment facilities with various companies, the most recent being with Acres & Associated Engineering.
6. On March 31, 2016, the County was granted leave to appeal certain conditions of Environmental Compliance Approval No. 1400-9VNPVY ("ECA") and Permit to Take Water No. 7115-9VVLJW ("PTTW") issued by the Ministry of the Environment and Climate Change ("MOECC") to Dufferin Aggregates, which is now CRH Canada Group Inc. ("Dufferin"). Both the ECA and PTTW were issued on October 29, 2015.
7. The ECA and PTTW would permit Dufferin to operate an aggregate washing operation in connection with an aggregate extraction operation known as the Paris Pit.
8. I will provide factual evidence for the purpose of this appeal.

The County and its Aquifers

9. The County is a single-tier municipality that was created as a result of a municipal restructuring on January 1, 1999. At that time, all Brant County local municipalities, with the exception of Brantford, were amalgamated into one municipality with the status of a city. The traditional, upper-tier County of Brant was also incorporated into the restructured County of Brant. The Town of Paris was one of the municipalities that was included in the amalgamation.
10. The community of Paris relies on a municipal water supply system that is operated by the County. The Paris municipal water system supplies water to approximately 10,000 people as well as to an array of commercial establishments and industry located in the community.

11. Paris's water supply system relies upon groundwater as its source. The groundwater is taken from three well fields known municipally as the Telfer, the Gilbert and the Bethel wellfields.
12. The Telfer and Gilbert well fields lie on either side of the Paris Pit: the Telfer wellfield is just to the east of the Paris Pit, and the Gilbert wellfield is situated just to the west of the Paris Pit. The Bethel wells are remote from the Paris Pit.
13. In short, the aquifer that supplies water for the Telfer and Gilbert wells is crucial for all water-users in the County. Any impact to one or both of the wellfields would result in devastating consequences for the County, particularly for users of the Paris water supply system.
14. There are also private wells in the area that take water from the same aquifers to supply drinking water and water for other uses to residents and businesses not connected to the County's municipal water system that could be impacted by Dufferin's proposed operations.

Municipal Source Protection

15. Source protection is a major municipal concern in Ontario. In particular, municipalities are increasingly mindful of the potentially adverse impacts posed by certain land uses and activities upon drinking water sources.
16. For example, in 2014, the Lake Erie Region Source Protection Committee passed a motion noting that:

the Lake Erie Region Source Protection Committee continue[s] to express their concerns with regard to land uses and activities that penetrate the municipal aquifer and/or increase the vulnerability of wellhead protection areas or intake protection zones.

17. Similar concerns have compelled the County to take action regarding the ECA and PTTW. Brant County Council passed the following resolution on March 24, 2015:

That Brant County Council acknowledges Dr. Howard's opinion on the inadequacy of the data provided by the proponents and reaffirms its resolution of May 27, 2014 that no approvals be given or progress be made to open Watts Pond Road, Paris Pit site until the applicants are able to demonstrate through scientific methods that the proposed pit and its activities will not adversely affect the local water supply and the aquifer;

That this resolution refer to both the Permit to Take Water and the Environmental Compliance Approval currently under application.

The Paris Pit

18. Dufferin owns and operates the Paris Pit.

19. The Paris Pit is 249 hectares in area. It is located on Lots 26, 27, 1, 2 & 3, Concession 3, 2, WGR, South Dumfries in the County of Brant. It is located south of Watts Pond Road, to the west of the Grand River in Brant.
20. For as long as I can recall, the Paris Pit land has been and continues to be used primarily for agricultural purposes, most recently for the production of cash crops such as corn.
21. Dufferin has held a licence to extract aggregate from the Paris Pit lands since 1974, but only recently began extraction operations at the site. In connection with these extraction operations, Dufferin is seeking to implement an aggregate washing operation at the Paris Pit, for which it applied, and received, the ECA and PTTW.
22. The aggregate washing operation would be a "closed-loop" system whereby water for aggregate washing would be obtained from a source water pond, created from extracting a pond below the water table. The water would then be used in the wash plant and subsequently recirculated through a settling pond to remove particulate, with most of the water being then returned to a recirculation cell.
23. The ECA would permit the use of a sewage works (settling pond and recirculation cell), while the PTTW would allow the taking of groundwater for use in the source pond.
24. The source and settling ponds are situated immediately adjacent to the wellhead protection areas identified for the Gilbert and Telfer wellfields.

Impact of the Proposed Aggregate Washing Operation at the Paris Pit

25. Dufferin's proposed aggregate washing operations, per the terms of the ECA and PTTW, pose potentially significant and adverse environmental impacts for the County. Broadly speaking, the aggregate washing operation, as proposed and approved under the terms of the ECA and the PTTW, puts at risk the water supply for the community of Paris, the City of Brantford, and the Six Nations First Nation. The County is also concerned that the drainage from washed material stockpiles may be situated in the wellhead protection areas resulting in significant impacts to the groundwater.
26. The County is also concerned about the risk of harm to the nearby Gilbert Creek and Grand River and associated wetlands.
27. More specifically, the proposed aggregate washing operation poses potential impacts to the *quality* of the aquifer water, including through the leaching of agro-chemical residues. Aggregate washing results in an intensification of the natural leaching process, whereby residues may be introduced into the aquifer.

28. Given that the Paris Pit lands were used for agricultural purposes for at least four decades, the County is concerned that agro-chemicals will be washed off during the aggregate washing process, becoming concentrated in the re-circulated wash water; in the sediment that has settled in the settling pond; in the aquifer underneath the settlement pond and aggregate stockpile; and in a plume flowing from the wash water pond, settlement pond, and the aggregate stockpile.
29. The restoration plan proposed by Dufferin contemplates the sediment from the sediment pond being spread across the Paris Pit. The County is concerned that agro-chemicals may exist in the sediment resulting in leaching of agro-chemicals into the groundwater impacting the County's drinking water source.
30. The County is concerned, in particular, that the proposed aggregate washing operation has the potential to affect the GUDI (groundwater under direct influence) status of the Telfer wellfield, affecting the wells from a pathogen and/or chemical perspective.
31. The proposed aggregate washing operation also poses potential impacts to the *quantity* of the aquifer's water. There has been no satisfactory reconciliation of the net taking from the aquifer. Dufferin has not provided adequate information relating to how much drawdown there will be at the Telfer and Gilbert wellfields, in private wells, or impacts to Gilbert Creek, as a result of these operations. It has failed to consider these impacts and design an appropriate contingency plan.
32. The County is also concerned that the potential for run-off from lands not subject to the extraction, situated both on and surrounding the Paris Pit, onto the extracted area needs to be eliminated as the extraction creates a more direct path to the aquifer.
33. The County is concerned that Dufferin has failed to implement an effective and comprehensive monitoring program of the County's aquifers to eliminate any risk to the County's water users. In addition Dufferin has failed to provide any contingency plan in the event that there is an issue with the quality and quantity of the County's water supply.

The Stantec Report

34. In March 2014, the County retained Stantec Consulting to conduct a review of Dufferin's proposal with respect to the PTTW and the aggregate washing operations more generally.
35. In its report to the County, Stantec underscored several concerns with the proposed aggregate washing operations.

36. Among others concerns, it identifies the potential for impact on water levels in three existing ponds to the east of the area of the Settling Pond as a result of aggregate washing operations. It noted that (page 24):

Groundwater flow modelling simulations show that the operation of the Source Water Pond might result in a lowering of water levels in the existing ponds on the order of 15 cm to 24 cm. This decline is mostly from the leveling effect of the pond surface on the local water table (i.e. the water level is lowered upgradient of the pond and increased downgradient of the pond as a result of the presence of the flat pond surface).

37. Stantec also found that there was limited assessment of ecological features associated with the existing ponds, finding that it was unknown whether there are any features that could be impacted by the anticipated changes to the ponds (at 34):

It is noted that there has been limited assessment of the ecological features associated with the existing ponds and additional assessments should be conducted to determine if there are any features that could be impacted by the anticipated changes to the ponds.

38. Stantec further identified the potential for increased vulnerability to aquifer contamination in the capture area of the Telfer wellfield due to the removal of aggregate and below water extraction (page 33):

There is the potential to increase the vulnerability to aquifer contamination near the Telfer Well Field, with the removal of aggregate and soil. The aquifer Vulnerability Score is already the maximum score, under Source Protection criteria; however, the potential loss of filtration and decrease in microbial activity above the water table could increase the opportunity for pathogen migration to the Telfer Well Field.

Below water extraction could create a more rapid pathway for surface contamination to enter the shallow aquifer system. The opportunity for runoff directly into the below water extraction ponds in the Telfer Well Head Protection area needs to be minimized.

39. The report also identified the potential for the Telfer wellfield to become GUDI with the removal of overburden and potential changes to runoff patterns.

Expert Findings of Dr. Ken Howard

40. Some of the County's concerns were further confirmed by Dr. Ken Howard, a professor and expert groundwater consultant. The citizens group, Concerned Citizens of Brant ("CCOB"), retained Dr. Howard in 2014 to provide a preliminary expert opinion on herbicide and pesticide concerns at the Paris Pit and to conduct a peer review of a report completed for Dufferin by Conestoga-Rovers and Associates ("CRA").

41. Dr. Howard disagreed with CRA's findings, which downplayed any risk of contamination of the aquifer by agro-chemicals. He found:

the study to be so poorly designed and executed that the range and quality of data obtained is entirely inadequate for drafting appropriate DRAFT conclusions.

42. Dr. Howard noted further that:

The study was poorly designed and executed, and has failed to obtain the good quality data so crucially required for reliable interpretation and scientifically justifiable conclusions. Until such time an appropriate, comprehensive investigation is carried out (with adequate detection limits), I believe that, contrary to the assertions made by CRA, there remains a credible threat to public or private water supply quality from past use of pesticides at the Paris Pit Site.

43. In summary, it is my opinion that the proposed aggregate washing operation poses significant and unreasonable risk to the water supply for the community of Paris, the City of Brantford, and for the Six Nations. The information provided by Dufferin is neither comprehensive nor conclusive. In the absence of more information and appropriate contingency planning, the PTTW and ECA do not adequately and sufficient address these risks.

44. At the hearing of this appeal, I will give factual and opinion evidence. I have no personal or pecuniary interest in any matters that are pertinent to this appeal.

Dated this 28th day of October, 2016

Submitted by



Alex Davidson, P. Eng., AMCT
Director of Water, County of Brant

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