

Environmental Review Tribunal
Tribunal de l'environnement



ISSUE DATE: April 11, 2017

CASE NO(S): 16-048 and
16-052

PROCEEDING COMMENCED UNDER section 41 of the *Environmental Bill of Rights, 1993*, S.O. 1993, c. 28, as amended

Appellant: Concerned Citizens of Brant (File No. 16-048)
Appellant: Corporation of the County of Brant
(File No. 16-049)
Instrument Holder: CRH Canada Group Inc.
Respondent: Director, Ministry of the Environment and Climate
Change
Subject of appeal: Permit to Take Water from Paris Pit issued under
section 34.1 of the *Ontario Water Resources Act*,
R.S.O. 1990, c. O.40, as amended
Reference No.: 7115-9VVLJW
Property Address/Description: Lot 27, Concession 2
Municipality: Township of South Dumfries
Upper Tier: County of Brant
ERT Case No.: 16-048
ERT Case Name: Concerned Citizens of Brant v. Ontario (Environment
and Climate Change)

PROCEEDING COMMENCED UNDER section 41 of the *Environmental Bill of Rights, 1993*, S.O. 1993, c. 28, as amended

Appellant: Concerned Citizens of Brant (File No. 16-052)
Appellant: Corporation of the County of Brant
(File No. 16-053)
Instrument Holder: CRH Canada Group Inc.
Respondent: Director, Ministry of the Environment and Climate
Change
Subject of appeal: Environmental Compliance Approval issued under
section 20.3 of Part II.1 of the *Environmental
Protection Act*, R.S.O. 1990, c. E. 19 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

Reference No.: 1400-9VNPVY
 Property Address/Description: Lot 26, 27, 1, 2 & 3, Concession 3, 2, WGR
 Municipality: Township of South Dumfries
 Upper Tier: County of Brant
 ERT Case No.: 16-052
 ERT Case Name: Concerned Citizens of Brant v. Ontario (Environment and Climate Change)

Heard: December 12-13, 2016, January 9-12, 16-19, 23-24, 27, 30, February 1 and 23, 2017 in Paris, Ontario

APPEARANCES:

Parties

Concerned Citizens of Brant

Corporation of the County of Brant

Directors, Ministry of the Environment and Climate Change

CRH Canada Group Inc.

Counsel

Joseph Castrilli, Ramani Nadarajah and Monica Poremba (student-at-law)

Paula Lombardi (December 12, 2016 only)

Nicholas Adamson

Jonathan W. Kahn, Ravi Amarnath and Brittiny Rabinovitch

Presenters

See Appendix A

TABLE OF CONTENTS

Background	4
Description of the Works	4
Witnesses	8
Relevant Legislation	10
Discussion, Analysis and Findings	10
The Legal Test	10
Issue No. 1: Whether PTTW Conditions should be revised.....	11
i.) Risk to the aquifer	11
ii.) Consent revisions to Conditions 3.3 and 3.4b	13
iii.) PTTW Condition 3.6 – Volume in Years 3 to10.....	14
iv.) PTTW Condition 4 – Monitoring Program.....	16
v.) PTTW Condition 4.7 - Trigger Mechanism and Contingency Plan (“TMCP”) 22	
Conclusion on Issue No. 1 – PTTW	28
Issue No. 2: Whether ECA Conditions should be revised	29
<i>The Environmental Compliance Approval.....</i>	<i>30</i>
<i>Grounds on which Leave to Appeal Granted.....</i>	<i>30</i>
<i>Scope of Appeal</i>	<i>31</i>
<i>Evidence on Atrazine.....</i>	<i>33</i>
<i>Atrazine in Soil at the Site</i>	<i>34</i>
<i>Atrazine in Groundwater.....</i>	<i>37</i>
<i>Atrazine and the Washing Process.....</i>	<i>38</i>
<i>ECA Condition 4.8 Monitoring and Recording - Use of Sediment.....</i>	<i>39</i>
<i>ECA Condition 5 - Contingency and Pollution Prevention Plan</i>	<i>48</i>
<i>County Proposal on Condition 5.1</i>	<i>49</i>
<i>Condition 5.3 – Amendments to the CPPP.....</i>	<i>50</i>
Conclusion on Issue No. 2 - ECA.....	51
DECISION.....	52

DECISION DELIVERED BY HEATHER I. GIBBS

REASONS

Background

[1] On October 29, 2015, Belinda Koblik, Director, Ministry of the Environment and Climate Change (“MOECC”), issued Permit to Take Water No. 7115-9VVLJW (“PTTW”) to CRH Canada Group Inc. (“CRH”, or its division Dufferin Aggregates (“Dufferin”)). Also on October 29, 2015, Fariha Pannu, Director, MOECC issued Environmental Compliance Approval No. 1400-9VNPVY (“ECA”) to CRH. Both the PTTW and the ECA relate to a proposed aggregate washing operation and sewage works (the “Works”) at the Dufferin Aggregates Paris Pit (“Site”) in the Township of South Dumfries, County of Brant.

[2] On March 31, 2016 the Environmental Review Tribunal (“Tribunal”) granted leave to the Concerned Citizens of Brant (“CCOB”) and the Corporation of the County of Brant (“County”) (jointly “Appellants”) to appeal the Directors’ decisions, in part, under the *Environmental Bill of Rights, 1993* (“EBR”) (see *Concerned Citizens of Brant v. Ontario (Ministry of the Environment and Climate Change)*, [2016] O.E.R.T.D. No. 12; “Leave Decision”, decided by the “Leave Panel”).

Description of the Works

[3] In the Leave Decision, the Leave Panel gave a succinct overview of the Works and a background to the appeal, which are reproduced here for convenience.

[8] In 1974 the Province granted a licence to Dufferin under the *Pits and Quarries Act, 1971* to extract aggregate at the Paris Pit. Until August 2014, no extraction took place, and the site was mainly used for agriculture such as the growing of corn, including use of pesticides. The site covers 249 hectares, has relatively flat to rolling topography and is surrounded by agricultural fields to the north, the Gilbert municipal wellfield to the west, the Telfer municipal wellfield to the east, residential areas to the west, a golf course to the south and residences and agricultural land to the east.

[9] Dufferin began extraction operations in the fall of 2014, pursuant to an updated 1990 Licence No. 5601 under the *Aggregate Resources Act* (“the ARA Licence”), and an Operational Site Plan from 1991, both approved by the Ministry of Natural Resources (now the Ministry of Natural Resources and Forests, “MNRF”), and appropriate municipal land use planning and zoning approvals. The original site plans, and all site plans since, have permitted aggregate washing and settling ponds. In September 2014 the MNRF granted permission to Dufferin to remove aggregate from the Paris Pit to be washed at the Butler Pit located in North Dumfries until a PTTW is obtained for the Paris Pit. Dufferin began shipping aggregate to the Butler Pit in May 2015.

...

[11] On March 12, 2013, Dufferin submitted an application to the MOECC for a Category 3 Permit to Take Water for proposed aggregate washing operations involving an excavated source water pond sustained by a closed loop design system. Once the source pond has been created through excavation, water will be made up from groundwater flow and direct precipitation.

[12] On June 18, 2013, as a companion to the PTTW, Dufferin submitted an application for an Environmental Compliance Approval proposing the closed-loop aggregate washing system under s. 53 of the *Ontario Water Resources Act* (“OWRA”).

[13] The following are details of the sewage works and water taking:

- (1) Preliminary monitoring began in 1988 both on site and in the surrounding area as required by the ARA Licence, providing some baseline understanding of existing conditions at the site.
- (2) The aquifer underlying the Pit supplies water for the Town of Paris. Paris was included in the amalgamation of Brant County local municipalities (except Brantford) on January 1, 1999, and Brant supplies Paris’ municipal water system which services approximately 10,000 people and commercial establishments and industry. The municipal water system relies on groundwater from three wells – the Telfer, Gilbert and Bethel wellfields. The Bethel field is remote from the Pit, the Telfer is just to the east of the Pit, and the Gilbert just to the west.
- (3) The Pit is mainly above the water table. Limited extraction below the table would create the source pond; and two areas would be designated for extraction below the water table during final aggregate extraction but only if it can be demonstrated in advance that this can be done without adverse impacts to groundwater receptors.
- (4) The source pond will be constructed below the water table, by removing aggregate material from above and below the water table and will contain approximately 40,000 to 80,000 cubic metres (m³) of water.
- (5) The PTTW is effective for a term of 10 years, and allows Dufferin to initially take up to a maximum of 14,000 litres per minute (“LPM”) or

10,080,000 litres per day ("LPD") for a period of up to three months for the initial drilling of the source pond. The rate of the water taking will then be reduced to 1,400 LPM, and can only revert to 14,000 LPM for a period of one month (however the Tribunal notes that it is not clear whether this means one month per year, one month in total over the operation of the 10 year PTTW, once at the Pit reclamation stage, or other).

- (6) Within sixty days following two full years of operation Dufferin must submit a report evaluating water taking needs and making recommendations regarding future water needs and any potential changes to the permitted rates and volumes.
- (7) Water taking can only occur to a maximum of 180 days between February 15 and December 15 of each year.
- (8) The water taking permitted by the PTTW may also be used for dust suppression.
- (9) The ECA is for the establishment, use and operation of a sewage works, i.e. a settling pond (consisting of a settling cell(s) and a recirculation cell) for the collection, transmission, treatment and reuse of wash water from aggregate washing operations.
- (10) The source pond will be located between the Grand River (about 1.3 km to the east and 600 m to the south) and Gilbert Creek (about 400 m to the west). The source, settling and recirculation ponds will be located outside the Gilbert Municipal Wellfield WHPA.
- (11) The closed loop washing system will re-circulate water through a settling pond to remove particulates and return the water to a recirculation cell. As some water will remain on the sand and gravel and some will evaporate, a small amount of "make-up" water will be taken from the source pond. Once the fine particles have settled, the wash water will be re-circulated through the system. The use of water for aggregate washing and re-circulation is estimated to be approximately 160 L/min (or less than 2% of the maximum permitted withdrawal rate of 18,185 L/min).
- (12) The settling pond will be created by constructing one or more cells above the pit floor using excavated and aggregate material, with berms, and will be above the water table. The settling pond will have a maximum overall capacity of 5 to 10 days (12 hours/day) of the maximum volume of water used for washing (approximately 66,000 to 131,000 m³). It will be sealed by the accumulation of fine materials. Settled fines would periodically be excavated from the settling pond.
- (13) A schedule for water conservation measures is included in the PTTW Application as Appendix F. The PTTW Application is included in Schedule A of the PTTW, and the PTTW expressly states that Schedule A forms part of the PTTW.
- (14) The wash plant will be used to wash approximately 60% of the Pit's output. No aggregate washing is expected to occur between December and February annually.

- (15) The source and settling ponds are outside the municipal well capture zones and projected WHPAs.
- (16) There will be no surface discharge connection from the source or settling ponds to other water bodies in the area, because of the closed-loop system.

[4] The aspects of the Directors' decisions for which the Appellants were granted leave to appeal are outlined in para. 119 of the Leave Decision:

The Tribunal finds that it appears that there is good reason to believe that no reasonable person could have issued the PTTW and ECA in regard to the following specific aspects of the decisions:

- Condition 3.3 of the PTTW, which does not specify whether the water taking permitted for dust suppression is *in addition to* the maximum amounts set out in condition 3.4a.
- Condition 3.4b of the PTTW, which does not clarify *how often* Dufferin may revert to the maximum rate of water taking in Condition 3.2 "for one month following removal of sediment from the settling pond".
- Condition 3.6 of the PTTW, which states that "[w]ithin 60 days following two full years of operation, the Permit Holder shall submit to the Director a report evaluating water taking needs and making recommendations regarding future water needs and potential changes to the permitted rates and volumes." This means that the permitted water taking for almost eight years of the PTTW is unknown and will not be known for over two years.
- The lack of clear and specific objectives for the monitoring requirements in the PTTW.
- Condition 4.7 of the PTTW (Trigger Mechanism and Contingency Plan) and Condition 5 of the ECA (Contingency and Pollution Prevention Plan). These Plans are not available and will only be subjected to scrutiny by the MOECC and the Proponent, after the instruments have been granted.
- The ECA Contingency and Pollution Prevention Plan, which does not contain a trigger mechanism.
- Condition 4.8 of the ECA, which does not specify future uses of sediment for on-site rehabilitation.

[5] On April 14, 2016, CCOB and the County filed appeals of the decisions of Directors Koblik ("PTTW Director") and Pannu ("ECA Director") with the Tribunal under s. 100 of the *Ontario Water Resources Act* ("OWRA") and Part XIII of the *Environmental Protection Act*, R.S.O. 1990, c. E.10 ("EPA"), respectively.

[6] A hearing took place over 16 days in December 2016, January and February 2017 in Paris, Ontario.

[7] At the opening of the hearing, the County advised it had agreed to a number of revised conditions with Dufferin, which resolved the County's concerns. The County and Dufferin jointly request that the Tribunal approve the instruments as amended by revised conditions set out in Appendix B to this decision ("County's revisions"). The County did not otherwise participate in the hearing.

[8] CCOB requests revisions to PTTW Conditions 3.3, 3.4b, 3.6, 4, and 4.7, and ECA Conditions 4.8 and 5, as outlined in Appendices C and D to this decision, respectively. The proposed revisions were first described by CCOB in a letter that became Exhibit 21 in the hearing, with modifications in CCOB's final submissions.

[9] The Directors and Dufferin are opposed to all of CCOB's proposed revisions, other than those specifically noted to be on consent, below.

[10] The Directors and Dufferin take the position that certain of the issues raised by CCOB, and the evidence CCOB adduced on those contested points, are outside the scope of the appeal as delineated by the Leave Decision, and thus outside the Tribunal's jurisdiction in this appeal. Prior to the hearing, the parties agreed to reserve the arguments on scope for final submissions, thereby allowing the evidence portion of the hearing to proceed in an uninterrupted and efficient manner.

Witnesses

[11] The following witnesses testified in this appeal:

Called by CCOB:

- Dr. Poh-Gek Forkert was qualified to give opinion evidence as a toxicologist.
- Dr. Ken Howard was qualified to give opinion evidence in the area of hydrogeology.

- David Malcolm, an engineer and Principal and President of Melroz Engineering Inc., was qualified to give opinion evidence in the areas of engineering and hydrogeology.

Called by MOECC:

- Vincent Bulman was qualified to give opinion evidence as a hydrogeologist. He is an employee of MOECC and did the technical review of, and proposed the conditions in, both the PTTW and the ECA.
- Adedoyin Adenowo, an MOECC employee, was qualified to give opinion evidence on the engineering aspects of the ECA. Mr. Adenowo was involved in reviewing the ECA and suggesting to Dufferin that water taking could be reduced through using a closed-loop system, which then became part of the ECA.
- Craig Fowler, MOECC surface water specialist, was qualified to give opinion evidence in surface water quality and quantity.

Called by Dufferin:

- Mark Chappel was qualified to give opinion evidence on toxicology and atrazine.
- Kevin Mitchell gave fact evidence in his capacity as Dufferin's Director of Property Planning and Approvals.
- Thomas Guoth was qualified to give opinion evidence in the areas of geology, hydrogeology and environmental engineering.
- Richard Murphy was qualified to give opinion evidence in the areas of engineering and hydrogeology.

[12] The Tribunal heard from the following presenters, all of whom supported CCOB: Jeff Broomfield, Dave Dietrich, Anne Ehrlich, Alex Faux, Nora Fueten, Dana Glory, Nick Greenacre, Cassie McDaniel and Ron Norris.

Relevant Legislation

[13] Relevant legislation is attached as Appendix E to this decision.

Discussion, Analysis and Findings

The Legal Test

[14] Section 100(10) of the *OWRA* provides that a hearing by the Tribunal “shall be a new hearing and the Tribunal may confirm, alter or revoke the action of the Director that is the subject-matter of the hearing and may by order direct the Director to take such action as the Tribunal considers the Director should take in accordance with this Act and the regulations, and, for such purposes, the Tribunal may substitute its opinion for that of the Director.” Section 145.2 of the *EPA* provides for identical Tribunal powers in an appeal under that Act.

[15] The phrase “in accordance with this Act and the regulations” includes the purposes of the *OWRA* and the *EPA*, which are, for the *OWRA*, to “provide for the conservation, protection and management of Ontario’s waters and for their efficient and sustainable use, in order to promote Ontario’s long-term environmental, social and economic well-being;” and for the *EPA*, to “provide for the protection and conservation of the natural environment.”

[16] In a *de novo* hearing such as this one, where the Tribunal stands in the shoes of the Director, the Tribunal determines on the basis of the evidence before it what is appropriate in the circumstances. The Tribunal’s remedial powers were discussed in *RPL Recycling & Transfer Ltd. v. Ontario (Ministry of Environment)*, [2006] O.E.R.T.D. No. 13 at paras.19 and 20:

As per the terms of section 145.2 of the *EPA*, the Tribunal is not overly constrained in its approach to dealing with an issue. While it can simply confirm, alter or revoke the Director’s action (which is how the role of the Tribunal’s predecessor Environmental Appeal Board was described in the *EPA* until 1981), it can also, because of the

“new hearing” provision, go beyond those options that were considered by the Director and fashion a new solution by substituting its opinion for that of the Director (see: *Uniroyal Chemical Ltd., Re* (1992), 9 C.E.L.R. (N.S.) 151 (Env. Appeal Board) at 168-170). This is in keeping with the Tribunal’s role under statutes that have broad public interest mandates.

However, as indicated in section 145.2, the Tribunal does not have limitless jurisdiction to deal with any environmental matter affecting the parties to a proceeding. Its jurisdiction is constrained by the subject matter of the proceeding, the underlying powers that the Director may exercise in accordance with the Act and regulations, and the purposes of the legislation.

[17] The Paris Pit has been licensed for gravel extraction under the *Aggregate Resources Act* (“ARA”). Whether or not the Site will be used for gravel extraction is not before the Tribunal. The question is whether the Tribunal should exercise its discretion to amend the PTTW and ECA conditions in accordance with the relevant legislation.

[18] The Tribunal’s jurisdiction in an appeal where leave has been granted under the *EBR* is determined by the parameters of the Leave Decision, and the subject matter of the appeal (*Smith v. Ontario (Environmental Review Tribunal)*, [2003] O.J. No. 1032 (Div. Ct.) (“*Smith*”), and *Trent Talbot River Property Owners Assn. v. Ontario (Ministry of the Environment)*, [2010] O.E.R.T.D. No. 54 (“*Trent Talbot*”). Where an issue has been argued at the leave stage and leave was explicitly not granted on that issue, the Tribunal will not revisit the issue in the appeal itself.

Issue No. 1: Whether PTTW Conditions should be revised

i.) Risk to the aquifer

[19] The PTTW regulates the quantity of water that may be taken during pit operations. The parties differ in their views on the quantity of water available in the aquifer, which informs their positions on the sufficiency of, and level of precaution required in, the PTTW conditions.

[20] There is no disagreement that the aquifer in the Paris Pit area is an unconfined outwash sand and gravel deposit with high permeability. The ability of water to move quickly down to and through the aquifer means the aquifer has a high recharge rate.

[21] Mr. Malcolm testified that this is a very sensitive aquifer. He referred to the Source Water Protection Program, which characterized the aquifer as “highly vulnerable.” Mr. Malcolm cited information from the March 2013 Conestoga-Rogers & Associates (“CRA”) Report attached to the PTTW application, which states at p. 15 that the upper unconfined aquifer ranges in thickness from 0 m to 7.5 m. He also noted from the CRA Report that the available water can fluctuate between 1-4 m annually. He concluded that the aquifer is shallow, there is not a large amount water, and it is being shared by multiple users. Mr. Malcolm’s opinion was that the water taking may have a negative impact on the municipal wellfields and down gradient private wells. Mr. Malcolm did not perform his own assessment as to the vulnerability of the aquifer, but relied on the information in the PTTW application.

[22] Mr. Murphy and Mr. Bulman, however, provided data to confirm that the aquifer is prolific. Mr. Murphy pointed out that, in Mr. Malcolm’s reference to p. 15 of the CRA Report, he failed to read the next sentence stating that “the saturated thickness of the Outwash Sand and Gravel Deposits is approximately 10 to 20 m at the Gilbert Wellfield and up to 34 m at the Telfer Wellfield.” Mr. Murphy confirmed that the Grand River Source Water Protection Area Approved Assessment Report determined that “there is low potential for water quantity stress in all foreseeable scenarios, including current use, future consumption (i.e., with increased water demand associated with growth), and in a drought situation.”

[23] Mr. Murphy testified that water levels in the area where the washing is to take place vary by approximately 1 m over the course of year due to seasonal variations. He stated that, given the thickness of the aquifer, the seasonal variations do not significantly affect the quantity of water in the aquifer.

[24] The County of Brant hired Stantec to conduct an impact assessment for water quantity risks in the sub-watershed portion of the Grand River. It concluded that “(t)he present and future water quantity demands are considered low stress with consumptive demand less than 20%.” (*Review of Hydrogeology and Water Resources Dufferin Aggregates Paris Pit County of Brant*, March 14, 2014, p. 13 (“Stantec Report”)). Mr. Malcolm acknowledged that CRA’s annual monitoring report from March 31, 2015 shows that there is no long-term decline in groundwater levels from 1988 to 2015.

[25] The Tribunal finds that the Paris aquifer is not stressed. All of the data establishes there is plenty of water, contrary to Mr. Malcolm’s stated concerns. The aquifer is characterized as “vulnerable” by the Grand River Conservation Authority because it is vulnerable to contamination, due to rapid infiltration through the sand and gravel overburden. The porosity that makes the aquifer vulnerable to contamination is the very same characteristic that ensures a high recharge rate. As noted by Dufferin, the only support for the notion that the aquifer at the Paris Pit is stressed is Mr. Malcolm’s reading of one paragraph, out of context, of the CRA Report.

[26] This finding will inform the Tribunal’s assessment of the parties’ proposed revisions.

ii.) Consent revisions to Conditions 3.3 and 3.4b

[27] All of the County’s proposed revisions to the PTTW were supported by the PTTW Director as appropriate and in the public interest.

[28] CCOB agrees to the County’s proposed revisions to Conditions 3.3 and 3.4b of the PTTW. Therefore, all parties consent to revised Conditions 3.3 and 3.4b, as outlined in Appendix B.

[29] By stating explicitly that the “Taking Specific Purpose” identified in Table A includes water for dust suppression, revised Condition 3.3 clarifies the intent of the original condition, without changing the intent or requirements of the PTTW. The

Tribunal finds that the clarification resolves the issue raised in the Leave Decision (para. 119, first bullet point) and that it is appropriate to revise Condition 3.3 as outlined in Appendix B to this decision.

[30] The proposed revision to Condition 3.4b restricts periods in which Table A rates and amounts of water taking from the Source Pond may be used, to one thirty (30) day period annually. This restriction addresses the issue raised in the Leave Decision of *how often* Dufferin may revert to the maximum water taking amount (para. 119, second bullet point) and, being more protective of water resources than the original PTTW, is consistent with the purpose and provisions of the *OWRA*. The Tribunal therefore finds that it is appropriate to revise Condition 3.4b as outlined in Appendix B.

iii.) PTTW Condition 3.6 – Volume in Years 3 to10

[31] The Leave Decision states at para. 52: “(w)hile s. 3.6 may have been intended to allow that permitted rates and volumes may only be *reduced* but not increased as a result of the analysis of two years of water taking data, this is not stated expressly in the PTTW.” The Tribunal commented in the Leave Decision that the effect of Condition 3.6 was that the permitted water taking is unknown for almost eight years of the PTTW, and will not be known for over two years. The Leave Panel found that this unknown future water taking had implications under the ecosystem approach, cumulative effects, and sustainable development principles.

[32] Mr. Bulman testified that the intent of Condition 3.6 was to keep water taking to a minimum, and was not intended to allow for higher takings in the future. In any event, he testified, this condition could not permit an increase in rates or volumes of water taking, as that would require another permit (or an amendment to this one) under the *OWRA*.

[33] The County and Dufferin consent to adding a new sentence to the end of Condition 3.6, such that the revised Condition would read as follows (added sentence underlined):

Within 60 days following two full years of operation, the Permit Holder shall submit to the Director a report evaluating water taking needs and making recommendations regarding future water taking needs and potential changes to permitted rates and volumes. Any potential increases to the permitted rates and volumes set out in this Permit shall be done in accordance with a permit issued under the Ontario Water Resources Act.

[34] Mr. Malcolm testified that, in his opinion, the condition would be improved by making it explicit that the goal is to reduce water takings. CCOB therefore proposes revising Condition 3.6 as follows:

Within 60 days following two full years of operation, the Permit Holder shall submit to the Director a report examining and reporting on whether water taking can be further reduced.

[35] The difference between the two proposals is that CCOB's revisions reflect a goal of reducing the water taking, below that permitted in the first two years.

[36] The PTTW Director submits that both proposed amendments capture the substantive purpose of the condition as originally drafted, which is to require Dufferin to prepare a report that examines the possibility for reductions in water taking needs in light of Dufferin's experience during the first two years of operation.

[37] It must be recalled that leave to appeal was not granted on the rates and volumes of water taking permitted in the first two years of operation. Rather, the Leave Decision was focused on the uncertainty around water-taking requirements in years 3 to 10 of the PTTW. Specifically, the Leave Panel found at para. 56 that the test under s. 38 of the *EBR* was met in that the ecosystem approach did not appear to have been applied, when the Director issued "a 10 year PTTW with the possibility that the permitted water taking levels could be increased after two years based on two years of water taking reporting...". Similarly, the Leave Panel found at para. 76 that a cumulative effects analysis could not have effectively been applied "in issuing a 10 year PTTW with the possibility that the permitted water taking levels could be increased after two years."

[38] Mr. Bulman testified that, in accordance with the *OWRA*, in order to increase its water takings, Dufferin would have to apply for a new or amended PTTW. The Tribunal is satisfied, on the evidence before it in this appeal, that the water taking levels could not be increased after two years on the basis of this PTTW, or based on two years of water taking reporting. The Tribunal therefore finds that the added sentence, proposed on consent by the County and Dufferin, does no more than state what is required in any event under the law; i.e., that any increase in takings will only be permitted in accordance with the *OWRA*.

[39] Mr. Bulman's evidence is that CCOB's revision to Condition 3.6 clarifies the MOECC's original intent for the provision; i.e., the notion that Dufferin must attempt to reduce its water takings over time. The Tribunal therefore finds that revising Condition 3.6 as proposed by CCOB would clarify the intent of the provision and is consistent with the purpose of the *OWRA* and in the public interest.

iv.) PTTW Condition 4 – Monitoring Program

[40] Condition 4 contains the monitoring program for the PTTW. The Leave Panel granted leave on the basis that the precautionary principle had not been respected due to "(t)he lack of clear and specific objectives for the monitoring requirements in the PTTW" (at para. 119. See also paras. 110 and 112 of the Leave Decision).

[41] CCOB submits that the objectives of the PTTW should be clarified with additional protections to prevent negative impacts. It proposes that the following new monitoring and reporting requirements for groundwater and surface water should be added to the monitoring program,:

- 4.2(a) installation of three additional monitoring wells;
- 4.2(c) groundwater levels to be monitored hourly during construction of the Settling Ponds and Recirculation Cells, in addition to the Source Pond;
- 4.2(e) groundwater levels to be collected for an additional 8 weeks in winter;

- 4.3(b) continuous hourly monitoring of water levels in a large pond for the life of the PTTW;
- 4.4 requirement to report on surface water levels in comparison with simulated groundwater levels
- (Proposed new Conditions 4.8 and 4.9 dealt with below)

[42] CCOB relies on evidence from Mr. Malcolm with respect to the PTTW. During the hearing, however, Mr. Malcolm agreed that the *ARA* monitoring and reporting requirements capture many of his concerns relating to Condition 4. His remaining concerns are that the *ARA* monitoring program is not administered or enforced by the MOECC, there is no requirement to recalibrate the model with the actual monitoring data, and there is nothing in the PTTW monitoring plan to ensure the inclusion of monitoring well 3-16 (“MW 3-16”), as it is only required under the *ARA*.

[43] The PTTW Director submits that the objectives of the monitoring program are clear. Relying on the testimony of Mr. Bulman and Mr. Murphy, the PTTW Director submits that “Overall, the purpose is to monitor the actual impact of the water taking to ensure that it is in line with expectations and that it is not causing any unacceptable impacts.”

[44] Dufferin also submits that the objectives of the monitoring requirements under PTTW Conditions 4.2, 4.3 and 4.4 are clear and specific. Dufferin points to Mr. Bulman’s witness statement at para. 50, noting the objective of Condition 4.2 is to “determine the cone of influence from the drawdown of the Source Pond when the wash plant is operating.” The purpose of Condition 4.3 is to have continuous surface level monitoring at the on-site ponds in non-freezing conditions, and the purpose of Condition 4.4 is to submit a Combined Annual Monitoring Report which is to be submitted annually. Dufferin concludes that the overall objectives of the monitoring requirements are “explained in the PTTW itself: they are 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’.” (See PTTW at p. 7)

[45] The PTTW Director and Dufferin submit that additional monitoring and reporting requirements are outside the scope of the appeal because leave was not granted to appeal “the various components of the monitoring program”. The PTTW Director submits that leave was granted only with respect to the perceived lack of clear and specific objectives for the monitoring requirements in the PTTW, and that none of CCOB’s proposed amendments involves specifying or clarifying the objectives of the monitoring requirements. Rather, they all involve adding new and further requirements.

[46] The PTTW Director and Dufferin submit additionally that the new monitoring requirements proposed by CCOB are unnecessary, in part because Dufferin is already doing additional monitoring under the *ARA* licence requirements.

Whether CCOB’s additional monitoring requirements are within the scope of the appeal

[47] Dufferin and the Director take the position that the additional monitoring conditions are not within the scope of the appeal and should be disregarded. CCOB proposes the additional monitoring requirements as part of a remedy to the lack of clarity in the PTTW, which is a ground on which leave was given.

[48] The Tribunal finds that the proposed additional monitoring conditions are sufficiently related to the issues described in the Leave Decision that they fall within the scope of the appeal. The Tribunal finds that it is consistent with the nature of administrative tribunals and their more informal procedures and flexible rules of evidence, to consider a wider range of proposed remedies if they are sufficiently related to an issue on which leave was granted.

[49] In this case, CCOB is proposing additional conditions related to monitoring. They are sufficiently relevant to the scope of the Leave Decision that the Tribunal will consider them.

Conditions 4.1 to 4.3 and 4.5 to 4.6

[50] The Tribunal finds that Conditions 4.1 to 4.3 and 4.5 to 4.6 of the PTTW are protective of Ontario's water resources, and that no credible basis has been established for the Tribunal to exercise its jurisdiction to revise them. The Tribunal makes this finding for the following reasons.

[51] First, as discussed above, the aquifer is not under stress generally.

[52] Second, the evidence before the Tribunal is that there are no predicted negative impacts from the PTTW on any other users of this aquifer. The potential receptors identified in the area are the Gilbert and Telfer Municipal wellfields, private wells, and natural (surface water) features.

[53] There is no water taking planned within the Wellhead Protection Area. Mr. Bulman testified that he assessed the potential zone of influence of the proposed water taking through pump test data that had been conducted on behalf of the County at the Gilbert and Telfer wellfields, and concluded that "the expected zone of influence (of the PTTW) will be less than 200m, which is at a significant distance from the nearest Gilbert well located 750m away." (CRA Report, p. 22). The nearest Telfer well is located 1,700 m away (CRA Report, p. 24).

[54] Mr. Murphy's evidence was that there was little chance of a measurable drawdown in the residential wells down-gradient of the water taking. There was no evidence to counter his conclusion.

[55] Mr. Fowler gave unchallenged expert opinion evidence that the PTTW will have no significant impact on surface water, including water levels to the on-site pond/wetland, Gilbert Creek and the Grand River. His conclusions are consistent with the findings of the simulations performed by Dufferin using various scenarios.

[56] CCOB's proposed additional conditions should therefore be considered in light of the fact that there is no evidence of predicted negative impacts from the PTTW to any of these other water users.

[57] Third, Condition 4 is already precautionary with respect to other water users and the natural environment, and no basis has been established that a higher level of precaution is required.

[58] According to Mr. Bulman, the PTTW currently contains safeguards that are not standard in PTTWs, one being an extensive monitoring program that includes monitoring of groundwater levels (Condition 4.2), surface water levels (Condition 4.3), annual reporting (Condition 4.4) of data from all monitoring wells on the Site, including several additional groundwater monitoring wells that are monitored pursuant to a monitoring plan required by the *ARA* licence, and provision of the annual report to the community advisory panel and public posting of the report (Condition 4.5). The requirement that the permit holder submit a Trigger Mechanism and Contingency Plan to the PTTW Director for approval prior to construction of the source pond (Condition 4.7, discussed below) is also not a standard condition.

[59] Mr. Malcolm accepted that many of his concerns were addressed through the *ARA* monitoring program, although three concerns remain: (i) the *ARA* monitoring requirements are enforceable by the MNRF rather than the MOECC; (ii) one monitoring well, MW 3-16, is not explicitly included in the PTTW monitoring program; (iii) and there is no requirement to recalibrate the model with the actual monitoring data. As a result of Mr. Malcolm's testimony, there is no evidence before the Tribunal that conditions 4.1 to 4.3 and 4.5 to 4.6 require amendment. The Tribunal will turn to Mr. Malcolm's three remaining concerns.

(i) Enforceability by MOECC

[60] The *ARA* monitoring requirements are enforceable by the MNRF, a provincial ministry. No basis has been presented to conclude that there is a need to duplicate all

of the monitoring requirements in the PTTW. In any event, the *ARA* monitoring program is required to be approved by the MOECC, and monitoring information collected under the *ARA* monitoring program must be included in the Combined Annual Monitoring Report, which is required to be submitted to the MOECC under Condition 4.4 of the PTTW. As such, the Tribunal finds this concern of Mr. Malcolm's to be unfounded.

(ii) Location of monitoring well MW 3-16

[61] Mr. Malcolm is concerned that the location of new well MW3-16 is not specified in the PTTW. The Tribunal agrees with the submissions of Dufferin in this regard, that PTTW Conditions 4.2(a)(ii) and 4.2(b) together specify the location of the new well. There are additional specifications in ECA Condition 4.1(a) (monitoring wells shall be screened in the upper unconfined aquifer) and 4.2 (a plan must be submitted to MOECC for approval of well installations, one of which is MW3-16). As such, the Tribunal finds this concern of Mr. Malcolm's to be unfounded.

(iii) Recalibration of the model

[62] No basis has been established to require that the groundwater model be recalibrated with actual data, which is Mr. Malcolm's remaining proposal. Mr. Malcolm did not explain what use might be made of a recalibrated model. Mr. Murphy testified that there is no point in recalibrating a model once the water taking has begun, as it has already served its purpose. The Tribunal agrees, and finds there is nothing to be achieved by recalibrating the model once the water taking begins.

[63] To conclude this section, the Tribunal finds that the monitoring requirements currently in Conditions 4.1 to 4.3 and 4.5 to 4.6 in the PTTW are prudent and protective of the environment and should not be changed.

Condition 4.4 – Combined Annual Monitoring Report

[64] With respect to Condition 4.4, the Director agrees in final submissions that the Combined Annual Monitoring Report should include a comparison not only of measured groundwater levels with simulated levels, but also a comparison of measured surface water levels with simulated levels. The PTTW Condition 4.4 does not explicitly include surface water.

[65] Mr. Bulman testified that “it would be expected that the water level in the on-site natural pond be compared to the modelled water levels in the annual report. If this was omitted, the Director would ask that it be done” (para 113 of his witness statement).

[66] Dufferin opposes the change as outside the scope of the appeal because it constitutes an additional monitoring requirement (dealt with above), and takes the position that it is redundant because CRH is required to report annually “all monitoring data” pursuant to Condition 6.3(a) of the ECA, which includes surface water data.

[67] The Tribunal finds that Condition 4.4 should explicitly include surface water monitoring data as well as groundwater data, given that this is an expectation of the PTTW Director. Condition 4.4 should therefore be clarified by revising the second paragraph as proposed by CCOB:

The Combined Annual Monitoring Report shall include a comparison of the groundwater and surface water levels collected through the year with the simulated water level changes outlined in the OWRA s34 Permit-To-Take-Water Application and Supporting Hydrologic and Hydrogeologic Study, Dufferin Paris Pit, County of Brant, Ontario, prepared by Conestoga-Rovers & Associates, dated March 2013.

v.) PTTW Condition 4.7 - Trigger Mechanism and Contingency Plan (“TMCP”)

[68] Condition 4.7 requires that Dufferin submit a TMCP to the MOECC for review and approval prior to construction of the source pond. It does not provide for public consultation on the plan, or specify any of its required elements. The Leave Panel

stated at para. 112 that the *EBR* test had been met because the precautionary principle was not respected when the PTTW was issued “without seeing, assessing, making available for public comment as part of the consultation, and approving the PTTW Trigger Mechanisms and Contingency Plan...” At para. 111, the Leave Panel notes that it appears to be contrary to the purposes of the *EBR* (especially those that permit public comments to be made regarding proposed instruments) and the *OWRA* if the Director could insulate his decision from scrutiny, in this case “by leaving crucial elements of the approval for later debate and discussion between only the MOECC and the Proponent”.

[69] The County, Dufferin and the MOECC agree that adding the following new condition after 4.7 will address the concerns raised in the Leave Decision:

4.8 A minimum of thirty (30) days prior to submission, a copy of the Plan required by Condition 4.7 shall be provided to the County of Brant and posted on the Company’s website for a period of thirty (30) days to permit the County of Brant and the public the opportunity to provide comments to the section 34.1 Director of the Ministry of the Environment and Climate Change.

[70] CCOB’s proposal goes further, and proposes that Condition 4.7 of the PTTW should include a list of required elements for the TMCP. CCOB’s evidence and submissions are based on Dufferin’s draft TMCP, circulated on October 17, 2016 as part of the document disclosure for this hearing. CCOB proposes:

- Early-Warning Threshold Level (“EWTL”) consistent with the groundwater model
- Trigger Level consistent with the groundwater model predictions;
- Six monitoring wells (including 3 from new Condition 4.2(a))
- SW1 and the piezometer identified in Condition 4.3(b);
- Reporting of exceedances of EWTL and Trigger levels to CCOB, the County, and the Director
- Exceedance of EWTL to require reduced pumping;
- Exceedance of Trigger Level to require a halt to pumping (except for dust suppression)

- Schedule for review and revision of the TMCP
- Contents of Combined Annual Monitoring Report

[71] CCOB does not agree that the County's proposed Condition 4.8 addresses the concerns over which leave was granted. CCOB also proposes a new Condition 4.8, but with a longer consultation period, a requirement to post the TMCP on the Environmental Registry, and appeal rights over TMCP amendments. CCOB's proposed Condition 4.8 reads:

4.8 A minimum of sixty (60) days prior to submission, a copy of the TMCP required by Condition 4.7 shall be provided to the County of Brant, the Concerned Citizens of Brant, and posted on the Permit Holder's website and the EBR Registry for a period of at least sixty (60) days to permit the County of Brant, the Concerned Citizens of Brant, and the public the opportunity to provide comments to the Director. The TMCP shall be regarded as an amendment to the Permit and shall not go into effect until approved by the Director and all appeal, or leave to appeal, rights have been exhausted under applicable law.

[72] CCOB also proposes a new Condition 4.9, requiring that Dufferin report "significant deviations" from modeled groundwater levels to CCOB, the Director and the County.

[73] The Director and Dufferin submit that the specific elements of the TMCP are outside the jurisdiction of the Tribunal because the Leave Decision did not relate to the contents of the TMCP, but only an opportunity for the Director, the County and the public to review it. In the alternative, the Director and Dufferin argue that CCOB's additions are all unnecessary and completely impractical, including the notion in Condition 4.8 of appeal rights for TMCP amendments, and the proposed reporting requirement in Condition 4.9.

The Plan

[74] Dufferin circulated the TMCP to all parties on October 17, 2016. Dufferin acknowledges that the TMCP is a relevant document "for purposes of disclosure", but points out that the TMCP itself is not before the Tribunal.

[75] Mr. Malcolm agreed at the hearing that he did not oppose the structure of the TMCP where there are tiers to the trigger level: i.e., initially an increase in monitoring followed by a 25% reduction in pumping where a trigger level is reached, increased to 50% if monitoring continues to show low levels, and eventually ceasing pumping altogether (with the exception of dust suppression). The main area of disagreement between the parties regards the water levels considered to be triggers.

[76] The TMCP provides an early warning trigger (also referred to as “threshold”) level as the “historical minimum monthly water level based on analysis of monitoring data (1988 to August 2016)”. Mr. Malcolm suggested that the early warning trigger should be the average water level recorded over the past 28 years, because this average was used to calibrate the groundwater model. Mr. Malcolm’s concern is that the lowest groundwater level measured is not protective because no warning will arise until too late, when the water levels are already low. Mr. Malcolm testified that in his understanding there was no modelling scenario in which the water taking continues at “the lowest groundwater level seen in 28 years”, and we therefore do not know the response of the aquifer to this stress, or the impact on other water users.

[77] Mr. Murphy testified that the early warning trigger level proposed in the draft TMCP is appropriate. He explained that, since the aquifer is not stressed, the “lowest level” recorded does not necessarily present a problem for current and future water takings. It is therefore appropriate to use this level as a trigger for closer study. He also noted that under Mr. Malcolm’s suggestion of using an average water level, the trigger would be met 50% of the time (by definition), despite there being no risk to water quantity in the aquifer. This would create a “crying wolf” result, in addition to unwarranted interruptions with the wash plant operations.

[78] Mr. Bulman testified that the PTTW is precautionary and protective without the TMCP details. He explained that the PTTW under appeal already contains more stringent monitoring than what is normally required, and that Dufferin was directed to do more extensive studies than in a typical PTTW application due to concerns expressed by the public and CCOB. In addition, Mr. Bulman and Mr. Murphy described a low

water response plan administered by the GRCA that includes three tiers of response to low water conditions caused by weather conditions in the watershed. The possible responses to low water conditions range from a call for a 10% voluntary reduction in water taking (Level 1), to mandatory restrictions on holders of permits to take water (Level 3).

Tribunal Findings on Condition 4.7

[79] In considering the different trigger level proposals, the Tribunal acknowledges that Mr. Murphy and Mr. Bulman have significantly more experience relating to trigger plans than does Mr. Malcolm, who has no professional experience with trigger plans in PTTWs, and only worked with two trigger plans for sewage works. Further, Mr. Malcolm worked from the assumption that the aquifer is stressed, which is not the case, and drew conclusions from perceived “inadequacies” in the reports. Mr. Murphy and Mr. Bulman, on the other hand, relied on recorded data to support their conclusions. For these reasons the Tribunal prefers the opinion evidence of Mr. Murphy and Mr. Bulman in this regard. The Tribunal agrees that an early warning level that is exceeded 50% of the time during normal conditions is not a useful indicator of anything. Further, it would be impractical and onerous to administer.

[80] The Tribunal finds that, given the following facts, it is not appropriate to insert a specific early warning indicator into the PTTW itself, or to enumerate the wells and monitoring locations to be included. Rather, such specifics should be left for the TMCP because:

- there is no evidence of stress on this watershed,
- the PTTW includes stringent monitoring conditions, and
- the GRCA has a low water conditions response plan.

[81] CCOB proposes additional items regarding the content of the TMCP. As a general comment, the Tribunal finds that CCOB has not established grounds for their inclusion in the PTTW and they appear to be redundant. In particular, proposed

Conditions 4.7(e) and 4.7 (h) request that exceedances be included in the Combined Annual Monitoring Report, which is required under Condition 4.4. Mr. Murphy confirmed that this information would already be included in the Combined Annual Monitoring Report, which is made public (and is therefore accessible by CCOB) pursuant to Condition 4.5. The Tribunal therefore finds that these proposals provide no additional environmental protection function and are not necessary. Proposed Condition 4.7(g), which purports to establish a schedule for the review and revision of the TMCP, is not necessary given the extensive monitoring and reporting that is already occurring, and the fact that the MOECC can request alterations at any time.

Tribunal Findings on Conditions 4.8 and 4.9

[82] The Tribunal finds that Condition 4.8 as proposed on consent of the County and Dufferin is appropriate, and it addresses the concerns expressed in the Leave Decision; that is, that the TMCP be “available”, and be subject to public scrutiny prior to the Source Pond being built. Condition 4.8 as proposed by CCOB, on the other hand, is not appropriate. CCOB has provided no cogent reason why the standard 30-day consultation period is insufficient. Further, the purpose of posting items on the Company’s website is to allow public access; CCOB has not explained why it should be specifically provided with a copy for comment, over and above the notice to the public. In any event, practically speaking, CCOB had an opportunity to review and comment on Dufferin’s draft TMCP through this appeal process.

[83] The Tribunal agrees with the Director and Dufferin that it would be unwieldy, unnecessary and unduly onerous to consider every change to the TMCP as a PTTW amendment giving rise to appeal rights, as suggested in CCOB’s proposed Condition 4.8. The TMCP is a “living plan” which may change over time to include information the MOECC may want to incorporate such as climatic conditions. Mr. Bulman testified that the MOECC expects a TMCP to be updated every two years. The Tribunal accepts that establishing appeal rights for every TMCP amendment would have significant implications for pit operations, and for the MOECC in its regulation of the Works. CCOB

has not established a sufficient basis for the Tribunal to revise the PTTW Conditions in such a significant way.

[84] With respect to CCOB's proposed Condition 4.9, Mr. Malcolm amended the wording during the hearing such that only "significant" or "substantial" departures from the model would require notification. Both Dufferin and the PTTW Director submit that this additional notification is unnecessary. Mr. Bulman testified that, once water-taking has begun, there is nothing to be gained by looking to the model. The TMCP requires that MOECC be notified within two days where a water level is below a trigger level for both surface water and groundwater, as well as weekly notification of the status of water levels. Condition 4.4 of the PTTW provides that all monitoring results must be included in the Combined Annual Monitoring Report, which is publicly available. The Tribunal therefore finds the additional notice requested by CCOB in Condition 4.9 is unnecessary and does not contribute to protection of the environment.

Conclusion on Issue No. 1 – PTTW

[85] The Tribunal finds that the following revisions to the PTTW are appropriate:

1. Condition 3.3 is removed and replaced with the following:

3.3 The "Taking Specific Purpose" identified in Table A, includes the water to be used for dust suppression.

2. Condition 3.4b is removed and replaced with the following:

3.4b The rate and amount of water taking from the Source Pond may revert to that in Table A for a period not to exceed thirty (30) consecutive days for the purpose of refilling of the settling and recirculation ponds after the removal of accumulated sediment from these ponds. This shall not be permitted to occur more than one thirty (30) day period annually.

3. The following is added as a new sentence to the end of Condition 3.6:

Any potential increases to the permitted rates and volumes set out in this Permit shall be done in accordance with a permit issued under the Ontario Water Resources Act.

4. Condition 4.4 is removed and replaced with the following:

4.4 The Combined Annual Monitoring Report shall include a comparison of the groundwater and surface water levels collected through the year with the simulated water level changes outlined in the OWRA s. 34 Permit-To-Take-Water Application and Supporting Hydrologic and Hydrogeologic Study, Dufferin Paris Pit, County of Brant, Ontario, prepared by Conestoga-Rovers & Associates, dated March 2013.

5. A new condition is added after Condition 4.7 which states as follows:

4.8 A minimum of thirty (30) days prior to submission, a copy of the Plan required by Condition 4.7 shall be provided to the County of Brant and posted on the Company's website for a period of thirty (30) days to permit the County of Brant and the public the opportunity to provide comments to the s, 34.1 Director of the Ministry of the Environment and Climate Change.

Issue No. 2: Whether ECA Conditions should be revised

[86] The Tribunal has considered all of the evidence and submissions presented. Given the amount of evidence and length of submissions, only a synopsis will be mentioned, and only key pieces of evidence. All of the Presenters are local residents with concerns about groundwater and possible health effects relating to atrazine. All

support CCOB. All of their presentations and concerns have been considered, although not specifically mentioned in these reasons because the expert evidence relevant to their concerns has been discussed in relation to CCOB, the party that brought the evidence.

The Environmental Compliance Approval

[87] As noted in the “Background” section in this decision, the ECA is for the establishment, use and operation of a sewage works, i.e. a settling pond (consisting of a settling cell(s) and a recirculation cell, above the water table) for the collection, transmission, treatment and reuse of wash water from aggregate washing operations at the Dufferin Paris Pit. The ECA is required because the settling pond will be “leaky” in that some of the water that has been used to wash the aggregate will percolate through the bottom of the settling pond into the natural environment. Dufferin estimates that initially, 10 million L/day will be directly discharged into the settling pond and will flow through, the amount infiltrating into groundwater gradually reducing as a natural seal is formed at the bottom, to a flow of approximately 98 L/minute after sealing.

Grounds on which Leave to Appeal Granted

[88] The Leave Panel granted leave to appeal on three aspects of the ECA:

- the fact that Condition 4.8 of the ECA “does not specify future uses of sediment for on-site rehabilitation” and therefore cumulative effects could not be assessed;
- the fact that the Contingency and Pollution Prevention Plan (“CPPP”) required by Condition 5 “will only be subjected to scrutiny by the MOECC and the Proponent, after the instruments have been granted”; and
- the finding of a lack of a trigger mechanism in the CPPP required by Condition 5.

[89] The Tribunal granted leave to appeal the ECA in part on the grounds that, absent the details of the rehabilitation plan, a full assessment of the cumulative effects of the ECA could not be determined. In this regard the Leave Panel was considering the “cumulative effects” of the ECA “in conjunction with the removal of aggregate in the area and extraction operations generally, and the rehabilitation plans for the Pit” (Leave Decision, para. 78).

[90] The Leave Panel rejected CCOB’s submissions that the ECA Director failed to apply the “ecosystem approach” in relation to the ECA. In so doing, the Leave Panel at para. 66 of the Leave Decision cited examples of the ECA Director’s application of the ecosystem approach:

While the Greenacre report does challenge the methodology of Dufferin’s pesticide report, *the Tribunal finds that the Ministry’s technical evaluations applied conservative assumptions about the potential concentrations of pesticides in the wash fines and their ability to leach into the water, and despite very limited evidence of pesticides in the information gathered, the ECA contains a pesticides monitoring program that will sample water in the recirculation cell and several groundwater wells for herbicides....* (Emphasis added)

[91] Condition 4.8 of the ECA falls within the “Monitoring and Recording” section. It provides that after sediment in the settling pond is analyzed, “the Director and Owner shall discuss suitable uses for the sediment for on-site rehabilitation.” Given the discretion that is left open to the Director and CRH at that point, the Leave Panel faulted the ECA for not providing “more assurance that cumulative effects of the ECA will not include the possibility of allowing concentrated levels of pesticides, if any are found, to pose a risk to the surface and ground water in the area.” (Leave Decision, para. 79)

Scope of Appeal

[92] The Director and Dufferin both take the position that CCOB’s proposed amendments to Conditions 4.8 and 5, relating to pesticide monitoring, are beyond the scope of the appeal that was granted leave.

[93] The Director submits that the Leave Panel specifically denied leave to appeal on a ground that was raised by CCOB again in this appeal; i.e., whether “the aggregate washing operation could concentrate residual atrazine in the wash sediment and that this atrazine could then also desorb into the wash water in concentrations of concern.” In addition the Director submits that, with the exception of one aspect of Condition 4.8, the Leave Panel declined to grant leave to appeal any of the several conditions in the ECA that impose monitoring and reporting requirements for atrazine and other pesticides. The Director relies on *Smith* and *Trent Talbot* to argue that CCOB cannot “use the narrow leave that was granted as a backdoor” to re-litigate an issue, and that is it not appropriate to propose new and detailed monitoring conditions relating to atrazine (or other pesticides) where leave to appeal that issue was explicitly rejected by the Leave Panel.

[94] This analysis is somewhat complicated by the fact that the Leave Decision is organized around an *approach* to the Director’s decision-making; i.e. an ecosystem approach, a cumulative effects approach, and a precautionary approach. With respect to the ECA, the Leave Panel concluded that an ecosystem approach was applied by the Director, and that a cumulative effects analysis was not. On the appeal, however, the Tribunal is concerned with whether the instrument *accomplishes* the requisite level of environmental protection; that is, the Tribunal evaluates the *result* of the Director’s approach; i.e., whether the conditions are sufficiently precautionary in the circumstances to protect the natural environment.

[95] In the Tribunal’s view, whether the ECA contains sufficient measures to monitor and report on the presence of pesticides in the soil, groundwater and surface water is not under appeal. That was rejected by the Leave Panel at paras. 65 and 66 of the Leave Decision.

[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.

Evidence on Atrazine

[97] Atrazine is one of the most widely-used pesticides for corn crops in Ontario. Atrazine was applied to corn crops on the Site until 2014.

[98] CCOB is concerned that atrazine or its metabolites (hereinafter, a reference to “atrazine” includes its metabolites) may contaminate the groundwater in this vulnerable aquifer as a result of the operations in two ways. First, it submits that atrazine may be released into the wash water during the wash operations, and that wash water would then leak through the bottom of the settling pond into the aquifer. Second, it submits that atrazine-contaminated organic matter may be concentrated in the wash fines, which are then spread over the pit floor as part of the rehabilitation plan. The concern under this scenario is that precipitation moving through the concentrated fines could bring additional atrazine with it into the aquifer. CCOB is concerned that these two pathways of contamination may pose risks to drinking water.

[99] Dr. Forkert was qualified to give opinion evidence as a toxicologist. She has no direct research experience with atrazine, but testified that she is very familiar and has worked extensively with this type of chemical. Dr. Forkert testified that in 2003 the European Union (“EU”) banned the use of atrazine, an approach that she considers to be precautionary. Dr. Forkert recommended that the Tribunal should also take a precautionary approach. Dr. Forkert also discussed the *Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Atrazine*, modified in 2011 (“Health Canada Guidelines”), which concludes that “the weight of evidence indicates that atrazine is not genotoxic, although the evidence is mixed for the few *in vivo* studies that are available. Atrazine has therefore been included in Group III (possibly carcinogenic to humans.)” The Health Canada Guidelines set the maximum acceptable concentration (“MAC”) for atrazine in drinking water at 5 micrograms per litre (“ug/L”, also written as 0.005 milligrams per litre (“mg/L”)), which was determined using a

scientifically-derived “no adverse effect” level of exposure, together with an “uncertainty factor” for added precaution.

[100] Mr. Chappel is a Board certified Diplomate of the American Board of Toxicology and has extensive experience with risk assessment investigations for contaminated sites across Ontario, and specifically with respect to evaluating health risks for atrazine. Mr. Chappel explained that the EU approach is a policy-driven blanket ban on pesticides, and is not a science-based, pesticide-specific approach. By contrast, Mr. Chappel explained that Canada has taken a science-based approach and regulates an amount of atrazine and metabolites in drinking water that it considers to be safe. Mr. Chappel’s opinion is that the Health Canada Guidelines are prudent, conservative and protective of human health.

[101] In July 2014, at the request of the Director, Dufferin retained CRA to complete an Assessment of Herbicide and Pesticide Concerns (“Pesticide Assessment”), as well as an updated well survey. CRA found no atrazine or metabolites in the soil samples or in the groundwater well samples from the Site. Upon a request by Mr. Greenacre to re-run the samples using lower laboratory detection limits, atrazine was detected in groundwater.

Atrazine in Soil at the Site

[102] No atrazine has been detected in the soil on Site. While it is reasonable to assume that, since it was sprayed on corn crops for many years and until 2014 on this Site, some residual atrazine may indeed be present but undetected, nonetheless no atrazine or metabolites were detected in the soil. Dufferin and the Director posit that the non-detect may be because it is not there; they rely on the evidence of Mr. Chappel that atrazine breaks down quickly in the environment, and on the evidence of Mr. Murphy that the sand and gravel deposits in the area have high rates of infiltration/recharge. CCOB posits that the non-detect may be simply because it was missed in the sampling program; it relies on the evidence of Dr. Howard relating to

gaps in the sampling program, persistence of atrazine in the soil for decades according to some studies, and the atrazine detection limits used for the Pesticide Assessment.

[103] The sufficiency of the sampling program is relevant to the reliability of its findings with respect to the Site. Dr. Howard testified that the sampling program was insufficient to determine whether atrazine is present because it failed to focus on the topsoil in the centre of the fields, where the pesticide is most likely to be present because atrazine tends to adsorb to organic material. Mr. Bulman testified that Dufferin was asked to prepare a report on herbicides and pesticides on the Site, despite the fact that such an assessment is not normally required for a gravel pit in an agricultural field, due to concerns raised in this case in public meetings. This resulted in the CRA Pesticide Assessment. Mr. Murphy testified to the sampling program. He stated that topsoil samples were tested, but that the sampling program was focused on detecting atrazine in the material that will be affected by the Works; specifically the sand and gravel deposits that will be washed. He also testified that test pits were located within the fields, but close to the monitoring wells and ponds to get soil data in proximity to these features. Mr. Murphy's conclusions were that the soil testing results do not indicate a potential for aggregate washing to result in higher concentration of atrazine in the sediment that could pose a risk to water quality.

[104] CCOB also argues that the detection limits used were too high, and that had more stringent detection limits been used, CRA may well have detected atrazine in soil on the Site. Moreover, Dr. Howard suggested a mathematical method by which a conservative level of atrazine in the soil could be estimated, assuming it was present in the soil but below the detection limit. Mr. Murphy, on the other hand, suggested that, since no atrazine at all was detected in soil, Dr. Howard's calculation gave an artificially inflated assumption of chemical presence which was so conservative as to be of no use.

[105] Mr. Murphy testified that detection limits are a function of the equipment available to the laboratory, and that in some cases lower limits can be used depending on the quality of the samples, but with less reliable results. In this case, Mr. Greenacre

asked that detection limits be used that were lower than the laboratory's standard practice, and the laboratory was able to comply. He testified that the detection limits used were lower than those used by the County of Brant when it tests its municipal wells, and sufficient to identify a pesticide concentration of concern under the Health Canada Standards. The Tribunal finds that the detection limits were sufficient for the report's purposes; that is, to determine whether atrazine is present at a level that has been identified by Health Canada as a level of concern. This is also sufficient for the Tribunal's purposes on this appeal. The detection limits were applied by an accredited and professional laboratory in the normal course of business and the Tribunal has no reason to place less than full weight on the laboratory results.

[106] Assuming, however, that CCOB's theory is correct and that atrazine is present but undetected in the soil, then the amount of residual atrazine in the soil on Site would be at extremely low levels. Further, given that atrazine is no longer being applied at the Site, atrazine concentrations will only decrease in the future. In this regard, the Tribunal places no weight on Dr. Howard's illustrative analogy to a "nitrate bomb" of fertilizer moving slowly through the soil, resulting in a delayed but significant impact on an aquifer several years after application. Evidence was filed specifically dealing with the properties of atrazine and its persistence in the environment. The experts agree that atrazine persistence varies according to local conditions. For this reason, the Tribunal places considerable weight on field studies from Ontario on atrazine degradation (such as those reported in Health Canada's Pest Management Regulatory Agency ("PMRA") publication, *Re-evaluation of Atrazine (Environmental Assessment)* dated 22 May 2007), which are applicable to agricultural conditions at the Site. The Tribunal places less weight on laboratory studies from Germany (i.e., Vonberg, David Stefan *Atrazine in the environment 20 years after its ban: long-term monitoring of a shallow aquifer (in western Germany) and soil residue analysis*). Mr. Chappel testified that field studies, including the PMRA 2007 report, conclude that the half-life for atrazine is 56 to 125 days. Mr. Murphy concluded that degradation would likely occur on this Site in 1 to 2.25 years. After that time, most of the residual atrazine and metabolites would be adsorbed to organic material and would not be released into water as a result of precipitation.

[107] The Tribunal finds that Dr. Howard's criticisms of the CRA Pesticide Assessment would demand a far more rigorous and complete testing program than what is appropriate in the circumstances, and ignore the fact that no atrazine was found in the soil samples from the Site. The Tribunal is satisfied that the CRA Pesticide Assessment is thorough and reliable for the purposes for which it was completed; i.e. determining whether atrazine is present on the Site at a level of concern.

Atrazine in Groundwater

[108] Atrazine has been detected in trace amounts in groundwater at all four monitoring wells on the Site, the highest concentration at 0.35 ug/L. Dr. Howard proposed that its presence may be due to atrazine applied on the Site that is infiltrating down into the aquifer. He posited that atrazine may be at a low concentration at this point due to a retardation factor that applies to chemicals moving through media, but that over time higher concentrations of atrazine may make their way to groundwater. Dr. Howard concluded that "there remains a credible threat to public or private water supply from past use of pesticides at the Paris Pit Site."

[109] Dufferin posits that, since this is an agricultural area, atrazine may be present in the groundwater due to migration from neighbouring fields where it continues to be applied. Mr. Murphy testified that it was inconceivable that any atrazine applied on the Site would not already have moved down through the overburden, given that it was last applied in 2014, and given the high porosity of the sand and gravel deposits on Site (i.e., the very reason the area is characterized as "high vulnerability"). He pointed out that the atrazine concentrations detected at the monitoring wells in August 2013 were 0.35 ug/L and 0.27 ug/L, (5 and 6.7 times lower, respectively, than the Canadian Water Quality Guidelines for the Protection of Aquatic Life in Fresh Water, which is 1.8 ug/L) using a detection limit 0.1 ug/L. Had they used a detection limit of 1 ug/L, as is currently used by the County to test municipal wells, the result would have been non-detect. Mr. Murphy also testified that, should any atrazine reach groundwater from the Works, it would be diluted to such an extent that it would not cause a threat to the drinking water supply. Mr. Murphy concluded that no negative water quality impacts

are indicated or anticipated, and there is no credible threat to public or private water supply quality from the past use of pesticides at the Paris Pit Site.

[110] The Tribunal has no hesitation in finding that there is no credible threat to public or private water supply from past use of pesticides at the Paris Pit Site, primarily because: atrazine has not been applied on the Site since 2014; atrazine in southern Ontario farm fields tends to break down over a 1 to 2.2.5 year period; contaminants move quickly into the groundwater in this area due to the high rate of infiltration of the sand and gravel deposits that characterize the area; no atrazine has been found in the soil on Site; and very low levels (trace concentrations) of atrazine were detected in the groundwater.

Atrazine and the Washing Process

[111] Dr. Howard relied on what he identified as “data omissions” to support the notion that atrazine may be concentrated in the wash fines. In particular, he testified that the partition coefficient (“Kd”) for atrazine is not constant because it varies according to moisture and the organic content of the soil. In his opinion, it is therefore necessary to calculate the Kd for atrazine at this Site using batch tests, which was not done. Instead, Dr. Howard testified that CRA used a “mass balance approach” to account for any release of atrazine into the wash water. In Dr. Howard’s view, CRA’s approach is not reliable.

[112] Mr. Bulman testified that he was not concerned about the Kd value in this case, and he was confident that there would be no adverse impacts resulting from the washing of aggregates at the Paris Pit. He based his opinion on the following facts: no atrazine was detected in soil on Site; there are no published studies supporting the notion that pesticides are concentrated in wash sediments; most residual atrazine would be adsorbed to topsoil, which will not be washed; and only trace levels of atrazine have been detected in groundwater.

[113] Mr. Murphy testified that there is no expectation or evidence to support the notion that atrazine will exist in the wash water in a concentration of concern. He added that atrazine degrades more rapidly when moisture is present. Mr. Murphy noted that atrazine is a hydrophobic organic compound that partitions between soil and water, and tends to be associated with soil. Mr. Murphy disagreed with Dr. Howard's suggestion that K_d should be calculated through batch tests. Mr. Murphy explained that if the organic content in the wash fines is being concentrated, so too is the adsorption coefficient being concentrated, such that the groundwater concentration does not vary. Mr. Murphy concluded that washing of aggregate will not cause an appreciable change in the concentration of atrazine present in the water. Mr. Murphy explained that CRA's calculations were conservative and used safety factors, and even so resulted in a concentration of at least 11 times lower than the Ontario Drinking Water Quality Standards.

[114] The Tribunal finds that there is no evidence that washing the aggregate at this Site will result in concentrated atrazine in the wash fines. Further, the Works are outside the wellhead protection areas for the Telfer and Gilbert wellfields, and there is no contamination pathway to those wells from the settling pond.

[115] These findings, along with the evidence about the risks that atrazine poses to human health, will now be applied to the Tribunal's analysis of whether the ECA sufficiently manages any environmental risks posed by the Works.

ECA Condition 4.8 Monitoring and Recording - Use of Sediment

[116] Mr. Malcolm explained that there will be a large volume of sediment used in the rehabilitation of the Site (approximately 30,000 tons per year), which will be placed approximately 1 m above the water table.

[117] Currently, ECA Condition 4.8 reads:

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.

[118] Mr. Bulman stated that his goal in including Condition 4.8 was to make sure the proponent would discuss with the Ministry if certain atrazine levels were reached while the sediment remained in the pond and before it was used for on-site rehabilitation pursuant to the *ARA* site plans. Mr. Bulman explained that he wanted to ensure that if atrazine were found in the sediment, the Ministry would know about it, and take action if necessary.

[119] Mr. Bulman testified that, since there is no Ontario guideline for acceptable levels of atrazine in soil, he referenced Alberta and Nova Scotia in Condition 4.8 of the ECA as credible agencies with guidelines that could be used as comparators

[120] The ECA Director and Dufferin point out that note 3 to the Operational Plan in the *ARA* license requires that the sediment from the settling ponds be used as fill as part of the rehabilitation plan for the pit. Further, the ECA Director points out that she has jurisdiction to impose conditions relating to the sewage works itself, but cannot regulate, within the sewage works ECA, the ultimate disposition of the accumulated sediment once that sediment is removed from the sewage works.

County's Proposed Condition 4.8

[121] The County, with the consent of Dufferin and the ECA Director, proposes adding the following new sentence to Condition 4.8:

No sediment shall be used on Site for rehabilitation without complying with all applicable laws in place at the time of reuse.

[122] The ECA Director submits that this sentence appropriately addresses the concerns raised by the Leave Panel with respect to the on-site use of the wash

sediment, and is a sensible way of addressing CCOB's concerns regarding the potential for pesticides to accumulate in the sediment without overstepping what it is permissible to require within a sewage works ECA. Since the condition requires consultation with the Director, the ECA Director will be aware if the sediment sampling results reveal concentrations of pesticides, and the MOECC will be able to take appropriate abatement steps to address the issue, including regarding appropriate disposal of the sediment. Should the sediment analysis indicate that the sediment should be treated as waste, Dufferin would have to comply with applicable laws governing waste.

CCOB's proposed Condition 4.8

[123] CCOB proposes a highly prescriptive Condition 4.8. CCOB rejects the ECA's reliance on soil standards for atrazine in Alberta and Nova Scotia, and proposes instead that a "new science risk assessment" be undertaken to determine appropriate Site-specific standards for atrazine in soil:

4.8(a) The Owner shall submit to the Director no later than November 30, 2018, with copies to the County of Brant and the Concerned Citizens of Brant, a new science risk assessment as set out below. The new science risk assessment shall be regarded as an amendment to the Approval and posted on the EBR Registry for a minimum of 60 days for comment, and the values identified in the new science risk assessment shall not come into effect until the exhaustion of all appeal, or leave to appeal, rights under applicable law.

The new science risk assessment shall be undertaken pursuant to the requirements of, and be evaluated through the normal review process of the Ministry outlined in, O. Reg. 153/04, to establish site specific standards for the soils and groundwater at the site for the parameters set out in Condition 4.7 above.

[124] CCOB's proposed Condition 4.8 goes on to prescribe elements of the new science risk assessment (sub-paragraphs i to viii), requirements relating to detection limits and comparators, reporting requirements where atrazine is detected, a prohibition on stockpiling sediment or using it for rehabilitation where the determined standard has been met, a requirement to comply with any other risk management procedures

determined in the new science risk assessment, and an interim provision until the new science risk assessment is complete.

[125] Underpinning CCOB's proposals for a new Condition 4.8 is the argument that the Alberta and Nova Scotia soil guidelines, referenced by the ECA Director, are not applicable. CCOB submits that a "new science risk assessment" should be undertaken, in compliance with O. Reg. 153/04, "to establish site specific standards for the soils and groundwater at the site for the parameters set out in Condition 4.7 above."

[126] Mr. Malcolm gave his opinion that the Alberta Tier 1 Guidelines are not appropriate. Mr. Malcolm believes the existing guidelines are not appropriate here because:

- a. the Site location is in a "wellhead protection area";
- b. this area has a "vulnerability" score of 10/10 according to the Conservation Authority, even before mining out the sand and gravel located above the water table;
- c. this Site would qualify an exception in the Alberta Tier 1 Guidelines because:
 - i. an existing large pond on Site has been termed a "stagnant water body";
and
 - ii. the length of the "source" (contaminant zone) is over 10 m.

[127] The ECA Director submits that CCOB's proposed amendments are both outside the scope of the leave to appeal, and unwarranted from an environmental perspective. The ECA Director submits that the ECA includes an extensive and unprecedented monitoring program for pesticides and herbicides that has never been included in an ECA for a comparable operation anywhere in Ontario. The ECA Director submits that despite the fact that there is no indication that the operation will cause atrazine or its metabolites to enter the groundwater in concentrations of concern, the ECA contains such an extensive monitoring program in order to address the concerns raised by CCOB.

[128] Mr. Bulman testified that he included the Alberta Tier 1 Guidelines because Ontario lacks a published soil standard for atrazine, and this is a credible agency with available soil standards as a comparator. Mr. Chappel opined that Alberta's soil standard for atrazine is protective to human receptors and was derived using the same acceptable daily intake for atrazine as Health Canada.

[129] Dufferin submits that CCOB's proposals respecting Condition 4.8 are outside the scope of the appeal. Further, it submits that the matter over which leave was granted is beyond the scope of the ECA, which regulates only the wash plant and settling pond. It submits that the use to which the fines are put, if no atrazine levels of concern are detected, is governed by the *ARA* and the Paris Pit site plans, and is therefore outside the scope of the ECA.

[130] Dufferin echoes the Director's comment that Condition 4.8 is the first of its kind in Ontario, and submits that it was included by the MOECC to provide increased protection in this location. Dufferin points out that, in order to address concerns raised by the CCOB, Dufferin collaborated with the MOECC to make changes to pit operations and the proposed wash plant to increase water quality protection, and repeatedly asked its consultant to do further work to ensure water quality was not compromised. This extra effort was taken despite the fact that there is:

- no evidence of atrazine in the soil on-site;
- uncontroverted evidence that no atrazine has been applied at the Site since at least 2013;
- clear evidence that any atrazine applied in 2013 or before would have since dissipated; and
- the wash plant is outside the wellhead protection area for the Telfer and Gilbert wellfields, although many aggregate pits in Ontario, including in Brant County, are located within wellhead protection areas and "high vulnerability zones".

[131] Dufferin submits that “simply put, apart from bald assertions by CCOB, this Tribunal heard no evidence to suggest that the Paris pit was “special” from a locational or operational perspective such that it would warrant any “special” conditions for a routine wash plant.”

[132] Dufferin submits that all the elements of CCOB’s proposed additions to Condition 4.8 are unnecessary and inappropriate, specifically:

- Alberta and Nova Scotia soil concentration figures for atrazine are appropriately referenced in the ECA because the provinces are credible agencies and Ontario lacks a published soil standard for atrazine; and
- the Record of Site Condition Regulation (O. Reg. 153/04, “RSC Regulation”) which CCOB submits directs that a new science risk assessment must be completed for the Site, does not apply, for reasons including:
 - a. Paris Pit is not a contaminated site and the ongoing operation of a gravel pit is not a circumstance that triggers the RSC Regulation. Atrazine is non-detect in the soil on-site.
 - b. Paris Pit is an operating gravel pit (i.e., industrial use) and will continue to operate as such throughout the period of progressive rehabilitation. The RSC Regulation does not apply to progressive rehabilitation.

Analysis and Findings on Condition 4.8

A new science risk assessment is not required

[133] For the following reasons, the Tribunal finds that the Director’s reference to Alberta and Nova Scotia soil guidelines in Condition 4.8 is appropriate, and that a new science risk assessment is not required.

[134] In support of his view that the Alberta Tier 1 Guidelines do not apply to this Site, Mr. Malcolm cited the two exceptions within the Tier 1 Guidelines: firstly, there is a “stagnant water body” on the Site, and secondly, there is a “source of groundwater contamination” that is more than “3 m deep and 10 m wide with a length of 10 m parallel to the direction of groundwater flow”. In this regard, Mr. Malcolm opined that the progressive rehabilitation on the Site could be more than 10 m in length in the direction of groundwater flow.

[135] However, Mr. Murphy relied on the CRA “Supporting Hydrologic and Hydrogeologic Study” dated March 2013 and attached to the PTTW application (“CRA Report”) at pages 12-13, to conclude that the pond referred to by Mr. Malcolm is not a stagnant water body because there is groundwater flow into it, and surface water flow out of it. In addition, he testified that, since no atrazine has been detected in the soil, it cannot be assumed that the sediment would be a contaminant.

[136] The Tribunal finds that the pond referred to by Mr. Malcolm is not a stagnant water body. The reference to a “stagnant water body” referred to by Mr. Malcolm was not in the context of a report characterizing the surface feature, while the CRA Report did just that. According to the CRA Report attached to the PTTW application, it has both groundwater inflows and surface outflows. That Report notes at p. 13 that “(t)he only outflow from the existing ponds appears to be a limited seasonal discharge under extreme high water conditions which could flow through a buried culvert to the south side of the former rail line.”

[137] CCOB’s Condition 4.8 proposes that the new science risk assessment be undertaken “pursuant to the requirements of, and be evaluated through the normal review process of the Ministry outlined in, O. Reg. 153/04, to establish site specific standards for the soils and groundwater at the site...” However, the Tribunal accepts Dufferin’s submissions on this point that O. Reg. 153/04 does not apply in this case. The Paris Pit is not a contaminated site for purposes of the RSC Regulation because atrazine has not been detected. Mr. Guoth testified that in his considerable experience doing this type of work, he has never been asked to perform a risk assessment on a

contaminant that is a non-detect on a site. Further, a record of site condition is only required where there is a change in use from a less sensitive to a more sensitive land use. Mr. Guoth and Mr. Murphy testified that no record of site condition would be required for progressive rehabilitation, and Mr. Malcolm could not provide support for the idea give examples of where it was required.

[138] For these reasons, the Tribunal finds that a new science risk assessment is not warranted to determine a standard for atrazine presence in soil and groundwater on the Site, and therefore CCOB's proposed Condition 4.8, as it refers to a new science risk assessment, is not appropriate.

Condition 4.8 – Use of the Sediment

[139] The current wording of Condition 4.8 provides that “(b)ased on the results of the sediment samples, the Director and Owner shall discuss suitable uses for the sediment for on-site rehabilitation.”

[140] The ECA Director submits that CCOB's proposed amendments are not warranted from an environmental perspective. In light of the Tribunal's findings in the “Evidence on Atrazine” section earlier in this decision, the Tribunal agrees entirely with paras. 82 and 83 of the ECA Director's submissions, as follows:

The evidence of Mr. Bulman, Mr. Guoth and Mr. Murphy explained how there has been a careful assessment of the extent to which there is any atrazine in the portions of the overburden that will be mined and washed, and this assessment has found that there is no presence of atrazine in the overburden (or the groundwater) that would pose any risk. There has also be a careful examination of the potential for any residual atrazine to concentrate in the wash sediment and a careful examination of the potential for any atrazine that might, contrary to expectations, concentrate in the sediment, to then desorb into the wash water.

Despite the lack of evidence of any significant amount of atrazine in the overburden (or in the groundwater), and despite the scientific literature that has found that residual atrazine in soil will be tightly bound to clay and organic carbon and therefore unlikely to desorb into water in amounts of concern, the ECA includes an extensive and unprecedented monitoring program for pesticides and herbicides that has never been included in an ECA for a comparable operation anywhere in Ontario. ...

[141] The Tribunal finds that CCOB's proposed Condition 4.8(f) is redundant as the ECA already requires that findings of the sediment sampling program be forwarded to MOECC.

[142] CCOB's proposed Conditions 4.8(g) and (i) purport to direct what may be done with the sediment, if atrazine is detected at the chosen standard. Dufferin submits these provisions are entirely outside the scope of the Tribunal on appeal, and also outside the jurisdiction of the MOECC because they fall within the purview of the Ministry of Natural Resources and Forestry ("MNR") under the *ARA* licence.

[143] The Tribunal finds that it is not reasonable to assume that any detection of atrazine in the sediment bound for on-site rehabilitation would be cause for concern. It is appropriate that detection should be cause for discussion with MOECC. Further, 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 MNR under the *ARA*.

Conclusion on Condition 4.8

[144] For the reasons noted above, the Tribunal finds that:

- a. the County's consent wording is appropriate, responsive to the concerns raised in the Leave Decision, and consistent with the environmental protection provisions of the *EPA*;
- b. a new science risk assessment is not warranted; it is entirely appropriate for the ECA conditions to rely on the Health Canada standard for safe levels of atrazine in drinking water, and the Alberta Tier 1 or Nova Scotia Standard for pesticides in soil; and
- c. CCOB's remaining proposed provisions are either redundant or not warranted from an environmental perspective.

[145] The Tribunal finds that it is appropriate that Condition 4.8 of the ECA be revised in accordance with the County's proposal in Appendix B.

ECA Condition 5 - Contingency and Pollution Prevention Plan

Condition 5.1

[146] ECA Condition 5.1 provides that

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:

[subparagraphs (a) to (i) not reproduced]

[147] The Leave Decision granted leave on the grounds that the Director granted “the ECA without seeing, assessing, making available for public comment as part of the consultation, and approving the Contingency and Pollution Prevention Plan, and requiring a trigger mechanism for that Plan.”

[148] Dufferin prepared a CPPP and provided it to the Director and CCOB as part of disclosure in this hearing process.

[149] Mr. Adenowo explained the purpose of the CPPP. He stated it is not intended to deal with the pollution that required the ECA itself, such as, in this case, water leaking from the settling pond. Rather, a CPPP is to prevent pollution from outside the sewage works, such as a diesel spill from equipment on Site, which is why there is no provision for the Director to review or approve the plan. Similarly, Mr. Guoth testified that CPPPs are plans on how to deal with an unexpected spill. A CPPP would include such items as hazard identification as well as contact information for the Ontario Spills Centre and contractors who could clean up a spill. Mr. Guoth testified that a CPPP is a living plan that is updated regularly and is specific to the chemicals (or other hazards) being used and stored on a property.

County Proposal on Condition 5.1

[150] The County and Dufferin proposed consent wording to address the Leave Panel's concern that no trigger mechanism was required in the CPPP, by adding the phrase "and a description of the Trigger Mechanism(s)" to Condition 5.1(f) prior to the commencement of operation of the Works.

[151] The ECA Director supports the amendment, although takes the view that this additional wording is redundant because any CPPP will, by its very nature, contain "triggers" in the sense that the plan must include a requirement that if there is a spill within the meaning of Part X of the EPA, then the spill is a trigger.

[152] CCOB proposes that appropriate trigger levels and early warning levels be outlined in the ECA itself, and suggests appropriate trigger levels and measures to be taken if the levels are met. In Mr. Malcolm's view, a discharge of atrazine through waste water should be considered a "spill" under the *EPA*. Mr. Malcolm testified that his suggested amendments to Condition 5.1 of the ECA are intended to develop an early warning trigger level in enough time to take action, and to identify some contingency and mitigation remedial plans in case there is a contaminant of concern.

[153] The County and Dufferin also proposed consent wording to address the Leave Panel's concern about public notice and the failure of the Director to see, assess, make available for public comment as part of the consultation, and approve the CPPP, through addition of a new Condition 5.4 as follows:

5.4 A minimum of thirty (30) days prior to submission, a copy of the Plan required by Condition 5.1 shall be provided to the County of Brant and posted on the Company's website for a period of thirty (30) days to permit the County of Brant and the public the opportunity to provide comments to the section 20.2 Director of the Ministry of the Environment and Climate Change.

[154] While the ECA Director consents to a new requirement to post the Plan and provide it to the County, the ECA Director opposes having public comments directed to the *EPA* s. 20.2 Director, and would have them directed to Dufferin instead.

[155] Mr. Adenowo testified that, as a matter of prudence, MOECC generally includes a condition like the current Condition 5, to ensure that the recipient of the ECA has put in place a CPPP. However, the Director would not normally have a role in reviewing or approving CPPPs, and does not review them even where a CPPP is required by regulation. He testified that the most likely potential contaminant on site in this case is diesel fuel for equipment, and fuel storage is regulated by the Technical Standards and Safety Authority, not MOECC.

Findings on Condition 5.1

[156] The Tribunal finds that the County's proposed revisions to Condition 5.1(f) are appropriate and responsive to the Leave Decision, and that the phrase "and a description of the Trigger Mechanism(s)" prior to the commencement of operation of the Works, should be added.

[157] The Tribunal finds that CCOB's proposal to include trigger levels relating to atrazine in the CPPP is not appropriate, as potential atrazine contamination is addressed in the ECA itself. The proposal is not consistent with the purpose of the CPPP.

[158] With respect to public input to the CPPP, the Tribunal partially accepts the additional wording to Condition 5.1 as agreed between the County and Dufferin, with the revision as requested by the ECA Director that comments resulting from the public posting go to Dufferin, rather than to the *EPA* s. 20.2 Director. The last line of the new Condition 5.4 should therefore read: "... to permit the County of Brant and the public the opportunity to provide comments to the Company."

Condition 5.3 – Amendments to the CPPP

[159] CCOB proposes that Condition 5.3 should be amended to include a new requirement that, once the CPPP is in effect and the pit in production, any amendments to the CPPP:

...shall be regarded as amendments to the Approval and shall be provided to the Director, the County of Brant, the Concerned Citizens of Brant, and be posted on the EBR Registry for a minimum of 60 days for comment and shall not come into effect until the exhaustion of all appeal, or leave to appeal, rights under applicable law.

[160] The ECA Director and Dufferin submit that CCOB's proposal, in addition to being outside the scope of the appeal, is "impractical, unworkable and pointless." Dufferin submits that the CCCP is a "living plan" that will be updated regularly, and the updates are not of a type that should require an amendment to the ECA, posting on the Environmental Registry, and appeal rights.

Findings on Condition 5.3

[161] The Tribunal agrees that the CPPP is a "living plan" that contains information that may be subject to frequent amendment, such as:

- Phone numbers for key staff, emergency contacts and spill response contractors;
- Maps specifying the location of equipment; and
- Material Safety Data Sheets.

[162] It is clear that changes to this type of information do not warrant MOECC review, or posting on the Environmental Registry. The addition of these requirements would hamper operations for no apparent environmental benefit. For this reason, the Tribunal finds the proposed revised Condition 5.3 to be inappropriate.

Conclusion on Issue No. 2 - ECA

[163] The Tribunal finds that the following revisions to the ECA are appropriate:

1. The following is added as a new sentence to the end of Condition 4.8:

No sediment shall be used on Site for rehabilitation without complying with all applicable laws in place at the time of reuse.

2. The following is added to the end of Condition 5.1(f) in the same sentence:

and a description of the Trigger Mechanism(s).

3. A new condition is added after Condition 5.3 which states as follows:

5.4 A minimum of thirty (30) days prior to submission, a copy of the Plan required by Condition 5.1 shall be provided to the County of Brant and posted on the Company's website for a period of thirty (30) days to permit the County of Brant and the public the opportunity to provide comments to the Company.

DECISION

[164] The Tribunal orders that the PTTW is revised as follows:

1. Condition 3.3 is removed and replaced with the following:

3.3 The "Taking Specific Purpose" identified in Table A, includes the water to be used for dust suppression.

2. Condition 3.4b is removed and replaced with the following:

3.4b The rate and amount of water taking from the Source Pond may revert to that in Table A for a period not to exceed thirty (30) consecutive days for the purpose of refilling of the settling and recirculation ponds after the removal of accumulated sediment from these ponds. This shall not be permitted to occur more than one thirty (30) day period annually.

3. The following is added as a new sentence to the end of Condition 3.6:

Any potential increases to the permitted rates and volumes set out in this Permit shall be done in accordance with a permit issued under the Ontario Water Resources Act.

4. Condition 4.4 is removed and replaced with the following:

4.4 The Combined Annual Monitoring Report shall include a comparison of the groundwater and surface water levels collected through the year with the simulated water level changes outlined in the OWRA s. 34 Permit-To-Take-Water Application and Supporting Hydrologic and Hydrogeologic Study, Dufferin Paris Pit, County of Brant, Ontario, prepared by Conestoga-Rovers & Associates, dated March 2013.

5. A new condition is added after Condition 4.7 which states as follows:

4.8 A minimum of thirty (30) days prior to submission, a copy of the Plan required by Condition 4.7 shall be provided to the County of Brant and posted on the Company's website for a period of thirty (30) days to permit the County of Brant and the public the opportunity to provide comments to the s, 34.1 Director of the Ministry of the Environment and Climate Change.

[165] The Tribunal orders that the ECA is revised as follows:

1. The following is added as a new sentence to the end of Condition 4.8:

No sediment shall be used on Site for rehabilitation without complying with all applicable laws in place at the time of reuse.

4. The following is added to the end of Condition 5.1(f) in the same sentence:

and a description of the Trigger Mechanism(s).

5. A new condition is added after Condition 5.3 which states as follows:

5.4 A minimum of thirty (30) days prior to submission, a copy of the Plan required by Condition 5.1 shall be provided to the County of Brant and posted on the Company's website for a period of thirty (30) days to permit the County of Brant and the public the opportunity to provide comments to the Company.

*Permit to Take Water Amended
Environmental Compliance Approval Amended
Appeals Allowed in Part*

"Heather I. Gibbs"

HEATHER I. GIBBS
VICE-CHAIR

Appendix A – List of Presenters

Appendix B – Proposed Revised Conditions by County of Brant and Dufferin

Appendix C – Proposed Revised Conditions to PTTW by CCOB

Appendix D – Proposed Revised Conditions to ECA by CCOB

Appendix E – Relevant Legislation

If there is an attachment referred to in this document,
please visit www.elto.gov.on.ca to view the attachment in PDF format.

Environmental Review Tribunal

A constituent tribunal of Environment and Land Tribunals Ontario

Website: www.elto.gov.on.ca Telephone: 416-212-6349 Toll Free: 1-866-448-2248

Appendix A

List of Presenters

1. Jeff Broomfield
2. Dave Dietrich
3. Anne Ehrlich
4. Alex Faux
5. Nora Fueten
6. Dana Glory
7. Nick Greenacre
8. Cassie McDaniel
9. Ron Norris

Appendix B**Proposed Revised Conditions by County of Brant and Dufferin**Permit to Take Water

Condition 3.3 is removed and replaced with the following:

The “Taking Specific Purpose” identified in Table A, includes the water to be used for dust suppression.

Condition 3.4b is removed and replaced with the following:

The rate and amount of water taking from the Source Pond may revert to that in Table A for a period not to exceed thirty (30) consecutive days for the purpose of refilling of the settling and recirculation ponds after the removal of accumulated sediment from these ponds. This shall not be permitted to occur more than one thirty (30) day period annually.

The following is added as a new sentence to the end of Condition 3.6:

Any potential increases to the permitted rates and volumes set out in this Permit shall be done in accordance with a permit issued under the Ontario Water Resources Act.

A new condition is added after Condition 4.7 which states as follows:

4.8 A minimum of thirty (30) days prior to submission, a copy of the Plan required by Condition 4.7 shall be provided to the County of Brant and posted on the Company’s website for a period of thirty (30) days to permit the County of Brant and the public the opportunity to provide comments to the section 34.1 Director of the Ministry of the Environment and Climate Change.

Environmental Compliance Approval

The following is added as a new sentence to the end of Condition 4.8:

No sediment shall be used on Site for rehabilitation without complying with all applicable laws in place at the time of reuse.

The following is added to the end of Condition 5.1(f) in the same sentence:

and a description of the Trigger Mechanism(s).

A new condition is added after Condition 5.3 which states as follows:

5.4 A minimum of thirty (30) days prior to submission, a copy of the Plan required by Condition 5.1 shall be provided to the County of Brant and posted on the Company's website for a period of thirty (30) days to permit the County of Brant and the public the opportunity to provide comments to the section 20.2 Director of the Ministry of the Environment and Climate Change.

Appendix C

Proposed Revised Conditions to PTTW by CCOB

(Underlined portions as amended in final submissions)

Condition	Recommendation
<p>3. Water Takings Authorized by this Permit 3.3 Notwithstanding the "Taking Specific Purpose" identified in Table A, the water taking may also be used for dust suppression.</p>	<p>Condition 3.3 of the PTTW should be deleted.</p> <p>Table A shall be amended to read: Taking Specific Purpose: Aggregate Washing and Dust Suppression.</p>
<p>3.4b The rate and amount of water taking from the Source Pond may revert to that in Table A for a period of one month for the purpose of refilling of the settling and recirculation ponds after removal of accumulated sediment from these ponds.</p>	<p>Condition 3.4b of the PTTW should be deleted and replaced with the following:</p> <p>3.4b The rate and amount of water taking from the Source Pond may revert to that in Table A for a period not to exceed thirty (30) consecutive days for the purpose of refilling of the settling and recirculation ponds after the removal of accumulated sediment from these ponds. This shall not be permitted to occur more than one thirty (30) day period annually.</p>
<p>3.6 Within 60 days following two full years of operation, the Permit Holder shall submit to the Director a report evaluating water taking needs and making recommendations regarding future water taking needs and potential changes to permitted rates and volumes.</p>	<p>Condition 3.6 of the PTTW should be deleted and replaced with the following:</p> <p>3.6 Within 60 days following two full years of operation, the Permit Holder shall submit to the Director a report <u>examining and reporting on whether water taking can be further reduced.</u></p>
<p>4. Monitoring 4.2 (a) The Permit Holder shall monitor groundwater levels at the following monitoring wells: (i) MW1-12 or replacement well in the same general area, (ii) A well located between the Source Pond and the south property boundary, (iii) A well, to be installed prior to the construction of the Source Pond, located west of the Source Pond along the west property boundary. Well H-88-5, may be used as this third well.</p>	<p>Condition 4.2(a) should be amended by adding the following immediately after (iii): (iv) Three (3) wells identified and installed across the site and within the groundwater modelled area at different locations to assess, and calibrate to, modelled conditions.</p> <p>Condition 4.2(c) should be amended as follows:</p> <p>(c) The Permit Holder shall ensure that groundwater levels at the three groundwater monitoring wells identified in Condition 4.2(a)(i)-(iii) are collected during the week prior to and during the construction of the Source Pond, Settling Ponds, and Recirculation Cells, at a minimum of hourly intervals using a datalogger.</p>

<p>The wells listed above shall be installed prior to the construction of the Source Pond.</p> <p>(c) The Permit Holder shall ensure that groundwater levels at the three groundwater monitoring wells are collected during the week prior to and during the construction of the Source Pond, at a minimum of hourly intervals using a datalogger.</p> <p>(e) The Permit Holder shall ensure that groundwater levels are collected at the three groundwater monitoring wells described in Condition 4.2(a) between February 15 and December 15 of every year for which the Permit is valid. Water levels shall be collected at a minimum of hourly intervals using a datalogger.</p> <p>...4.3 The Permit Holder shall establish the following surface water monitoring program seasonally during non-freeze conditions: ...</p> <p>(b) continuous water level monitoring in a multi-level piezometer located in the southern portion of the large pond prior to and one year after the construction of the Source Pond;</p> <p>... 4.4</p> <p>The Combined Annual Monitoring Report shall include a comparison of the annual groundwater elevation contours with the simulated water level changes outlined in the OWRA s34 Permit-To-Take- Water Application and Supporting Hydrologic and Hydrogeologic Study, Dufferin Paris Pit, County of Brant, Ontario, prepared by Conestoga-Rovers & Associates, dated March 2013.</p>	<p>Condition 4.2(e) should be amended as follows:</p> <p>(e) The Permit Holder shall ensure that groundwater levels are collected at the six groundwater monitoring wells described in Condition 4.2(a) between January 1 and December 31 of every year for which the Permit is valid. Water levels shall be collected at a minimum of hourly intervals using a datalogger.</p> <p>Condition 4.3(b) should be amended as follows:</p> <p>(b) continuous water level monitoring at an hourly interval in a multi-level piezometer located in the southern portion of the large pond prior to and one year after the construction of the Source Pond, and thereafter, continuous hourly interval water level monitoring in the multi-level piezometer every year for which the Permit is valid;</p> <p>Condition 4.4, second paragraph, should be amended as follows:</p> <p>The Combined Annual Monitoring Report shall include a comparison of the groundwater and surface water levels collected through the year with the simulated water level changes outlined in the OWRA s34 Permit-To-Take-Water Application and Supporting Hydrologic and Hydrogeologic Study, Dufferin Paris Pit, County of Brant, Ontario, prepared by Conestoga-Rovers & Associates, dated March 2013.</p>
<p>4.7 Prior to the construction of the Source Pond, the Permit Holder shall submit a Trigger Mechanism and Contingency Plan for both groundwater and surface water to the Ministry of the Environment and Climate Change Section 34.1 Director for review and approval.</p>	<p>4.7 Prior to the construction of the Source Pond, the Permit Holder shall submit a Trigger Mechanism and Contingency Plan (TMCP) for both groundwater and surface water to the Director for review and approval. The TMCP shall include, but not be limited to:</p> <p>(a) An Early-Warning Threshold Level that shall be consistent with the levels used in the groundwater model;</p> <p>(b) A Trigger Level that shall be consistent with the predicted levels identified in the groundwater model;</p> <p>(c) All six (6) wells identified in Condition</p>

	<p>4.2(a)(i)-(iv);</p> <p>(d) SW1 and the piezometer identified in Condition 4.3(b);</p> <p>(e) The requirement for the production of a report respecting any <u>exceedance</u> of the Early-Warning Threshold Level, and Trigger Level and its provision to the Director, the County of Brant, and the Concerned Citizens of Brant;</p> <p>(f) A requirement to reduce pumping if the Early- Warning Threshold Level is <u>exceeded</u>, and a requirement that pumping be halted, <u>except for dust suppression</u>, if the Trigger Level is violated;</p> <p>(g) A schedule for review and revision of the TMCP;</p> <p>(h) A requirement for the inclusion in the Combined Annual Monitoring Report, contained in Condition 4.4, of:</p> <p>(i) a discussion of the TMCP and any <u>exceedances</u> with respect thereto;</p> <p>(ii) a discussion of the adequacy of the TMCP in light of applicable legislation, regulations, manuals, guidelines, and objectives; and</p> <p>(iii) a summary of all complaints received, whether the complaints relate to the PTTW, and steps taken to address and resolve the complaints.</p>
	<p>New Conditions 4.8 and 4.9 should be added as follows:</p> <p>4.8 A minimum of sixty (60) days prior to submission, a copy of the TCMP required by Condition 4.7 shall be provided to the County of Brant, the Concerned Citizens of Brant, and posted on the Permit Holder's website and the EBR Registry for a period of at least sixty (60) days to permit the County of Brant, the Concerned Citizens of Brant, and the public the opportunity to provide comments to the Director. The TMCP shall be regarded as an amendment to the Permit and shall not go into effect until approved by the Director and all appeal, or leave to appeal, rights have been exhausted under applicable law.</p> <p>4.9 The Permit Holder shall report immediately to the following persons any <u>significant</u></p>

	<p>deviations from the predicted groundwater modeled levels:</p> <ul style="list-style-type: none">(a) the Director;(b) the County of Brant;(c) the Concerned Citizens of Brant.
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Appendix D

Proposed Revised Conditions to ECA by CCOB

Condition	Recommendation
<p>4.0 Monitoring and Recording</p> <p>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.</p>	<p>Condition 4.8 of the ECA should be deleted and replaced with the following:</p> <p>4.8(a) The Owner shall submit to the Director no later than November 30, 2018, with copies to the County of Brant and the Concerned Citizens of Brant, a new science risk assessment as set out below. The new science risk assessment shall be regarded as an amendment to the Approval and posted on the EBR Registry for a minimum of 60 days for comment, and the values identified in the new science risk assessment shall not come into effect until the exhaustion of all appeal, or leave to appeal, rights under applicable law.</p> <p>(b) The new science risk assessment shall be undertaken pursuant to the requirements of, and be evaluated through the normal review process of the Ministry outlined in, O. Reg. 153/04, to establish site specific standards for the soils and groundwater at the site for the parameters set out in Condition 4.7 above.</p> <p>(c) The Owner shall ensure that the new science risk assessment includes, but is not limited to:</p> <ul style="list-style-type: none"> (i) adequate characterization of the soil to assess its suitability for various uses on-site, or direction that the soil be subject to off-site disposal, if it is contaminated or otherwise defined as a waste; (ii) characterization of the soil that includes a focus on topsoil, silt, and clay horizons and samples for pesticides identified in Condition 4.7; (iii) identification of discrete atrazine, glyphosate, or other pesticide horizons in the samples collected and does not use composite (i.e. mixed) horizons in the sampling undertaken; (i) horizontal and vertical characterization of contaminants to adequately assess distribution of contaminants at the site;

	<p>(j) calculations undertaken and reported upon with respect to the potential release of contaminants, including the pesticides outlined in Condition 4.7, to water during the aggregate washing process;</p> <p>(k) analysis of the potential impact and the undertaking of a mass balance and examination of the role of sorption;</p> <p>(l) a mass balance analysis of groundwater flow through the wash pond area over a 30-year period to determine whether concentrations of atrazine and glyphosate will remain significantly below Standard, and that does not use groundwater quality determined under “natural” or “pre-quarry” conditions in the analysis;</p> <p>(m) a further mass balance analysis that estimates the concentrations of atrazine and glyphosate in the wash water if all the sediment from the aggregate in the course of one year were to have the highest concentration found as a result of the sampling undertaken pursuant to Condition 4.8(c)(i)-(iv), above.</p> <p>5 The results of sample analyses shall be compared to the O. Reg. 153/04, section 43(1) new science risk assessment value.</p> <p>6 The plan for sampling and analysis of the various media shall identify how laboratory detection limits will be achieved that will allow meaningful interpretation to support the new science risk assessment.</p> <p>7 Any exceedances of parameters established by the new science risk assessment shall be reported to the Director, the County of Brant, and the Concerned Citizens of Brant within 48 hours of a determination that there has been an exceedance.</p> <p>8 Where detections indicate an exceedance of standards established as a result of the new science risk assessment, the sediment tested shall not be stockpiled on the site, nor shall it be used in rehabilitation of the site, but shall be disposed of off-site at a facility or facilities authorized in accordance with the laws of Ontario and Canada to receive such</p>
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	<p>contaminated or waste material and use best practices in its management.</p> <p>(d) Should risk management measures be identified in the new science risk assessment, the Owner shall comply with the risk management measures identified.</p> <p>(e) On an interim basis, until the new science risk assessment has been completed and approved by the Director and any appeal, or leave to appeal, rights exhausted with respect thereto, the results of sediment sample analysis 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</p> <p>1 Soil Remediation Guideline and Nova Scotia Environmental Quality Standards (as updated or replaced). Where detections indicate an exceedance of these standards, the sediment tested shall not be stockpiled on the site, nor shall it be used in rehabilitation of the site, but shall be disposed of off-site at a facility or facilities authorized in accordance with the laws of Ontario and Canada to receive such contaminated or waste material and use best practices in its management.</p>
<p>5. Contingency and Pollution Prevention Plan</p> <p>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:</p> <p>[subparagraphs (a) to (i) not reproduced]</p>	<p>Condition 5.1 should be amended to add the following:</p> <p>(j) The Contingency and Pollution Prevention Plan (CPPP) shall:</p> <ul style="list-style-type: none"> (i) include an Early-Warning Threshold Level (EWTL) for waste water, sediment, groundwater and surface water well below the Standard, and define in detail the process to rapidly evaluate the cause and identify the contingencies to address the issue; (ii) include a Trigger Level (TL) below the Standard, having regard to Ministry of the Environment and Climate Change Guideline B-7, and define in detail the contingencies and remedial action plan to correct the situation; (iii) be updated based on the outcomes of the new science risk assessment, including the updating of the EWTL and

	<p>the TL, as necessary;</p> <p>(iv) identify an appropriate number of wells downgradient of the potential sources, and well inside the property boundaries, that would allow ample warning and full response prior to the discharge leaving the site, with consideration given to sample collection of the settling and sediment ponds as leakage of these waters into the aquifer is identified;</p> <p>(v) include laboratory detection limits and sampling frequency that are sufficient to ensure the EWTL and TL will be effective, and laboratory detection limits for all media tested and for parameters listed in Condition</p> <p>4.7 that are at, or below, half the standard used to evaluate the parameter;</p> <p>(vi) contain direction that any monitoring result that exceeds the EWTL or TL outlined in (i) and (ii) at more than half of the standard at any groundwater well, domestic well, or surface water monitoring location shall be reported to the Director, the County of Brant, and the Concerned Citizens of Brant within 48 hours of a determination that there has been an exceedance;</p> <p>(vii) ensure that the EWTL and TL examine all potential contaminants of concern including, but not limited to, parameters listed in Condition 4.7, petroleum hydrocarbons (F1 to F4), and salts;</p> <p>(viii) be prepared by a qualified person who has visited the site and is familiar with the Works;</p> <p>(ix) be reviewed annually by a qualified third party who has visited the site and is familiar with the Works; and</p> <p>(x) require that discussion of any EWTL, TL, and complaints are included in the annual report required to be prepared by Condition 6.3.</p> <p>(k) The Owner shall submit the CPPP to the Director, with copies to the County of Brant and the Concerned Citizens of Brant, and it shall be</p>
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	<p>regarded as an amendment to the Approval and be</p> <p>posted on the EBR Registry for a minimum of 60 days for comment and shall not come into effect until the exhaustion of all appeal, or leave to appeal, rights under applicable law.</p> <p>Condition 5.3 should be deleted and replaced with the following:</p>
<p>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.</p>	<p>5.3 The CPPP shall be reviewed and amended from time to time, as needed by changes in the operation of the facility. All amendments to the CPPP shall be regarded as amendments to the Approval and shall be provided to the Director, the County of Brant, the Concerned Citizens of Brant, and be posted on the EBR Registry for a minimum of 60 days for comment and shall not come into effect until the exhaustion of all appeal, or leave to appeal, rights under applicable law.</p>

Appendix E**Relevant Legislation*****Ontario Water Resources Act***

0.1 The purpose of this Act is to provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social and economic well-being.

100 (10) Subject to sections 86, 101 and 102.1, a hearing by the Tribunal under this section shall be a new hearing and the Tribunal may confirm, alter or revoke the action of the Director that is the subject-matter of the hearing and may by order direct the Director to take such action as the Tribunal considers the Director should take in accordance with this Act and the regulations, and, for such purposes, the Tribunal may substitute its opinion for that of the Director.

Environmental Protection Act

3 (1) The purpose of this Act is to provide for the protection and conservation of the natural environment.

145.2 (1) Subject to sections 145.3 and 145.4, a hearing by the Tribunal under this Part shall be a new hearing and the Tribunal may confirm, alter or revoke the action of the Director that is the subject-matter of the hearing and may by order direct the Director to take such action as the Tribunal considers the Director should take in accordance with this Act and the regulations, and, for such purposes, the Tribunal may substitute its opinion for that of the Director.