June 30, 2021

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Ministry of Environment Conservation and Parks (MECP)
Technical Support Section,
Surface Water Group
119 King Street West Floor 12 Hamilton ON L8P 4Y7

Attention: Belinda Koblik, Supervisor, Water Resources Belinda.koblik@ontario.ca CC: Lisa Benvenuti Lisa.benvenuti@ontario.ca

Re: ERO number 019-3778
Ministry reference number 5377-C3KL6J
Permit to Take Water No. 7645-AAYS3Y servicing 1712028 Ontario Limited - Port Colborne Quarries.

Dear Ms. Kobik

1712028 Ontario Limited - PCQ, Port Colborne Quarries Inc's (PCQ) PTTW 7645-AAYS3Y permit (PTTW) expires on August 31, 2021. PCQ has submitted a proposal for the renewal of their PTTW that was **posted on the Environmental Registry of Ontario (ERO) on** June 3, 2021. Before PCQ's PTTW is renewed I would ask you to take into consideration the following:

The PTTW Proposal details as written in the ERO states "***Water will be taken from four sumps for dewatering purposes. Details of water taking are as follows: Source name: Sump 1***

- ***purpose category: pits and quarries – dewatering***"

Although the claimed purpose for the PTTW is dewatering of the quarries to enable quarrying operations to be carried out on the floor of the quarry that is only part of the purpose and is miss leading.

1. PCQ also removes ground water from Sump 1 for the purpose of dust control. PCQ uses the ground water from Sump 1 in Pit 1 to water down public roads between their quarries and their canal side stone staging yard as well as internal trucking roads between the Pits and around areas where they perform quarrying operations as illustrated in Figure 1 and 2 below. The ground water taken from the aquifer for this purpose goes above what is required to dewater the quarries so they can be mined. This activity takes place during dry conditions when the water in the aquifer is at its lowest an in its highest demand. This activity increases the potential for contamination of the highly vulnerable aquifer due to the flushing of contaminants from surface areas that could be contaminated with substances used by the processing equipment and trucks such as lubricants and

fuels into the aquifer. The truck routes and processing areas are on the floor of the pits making the contamination pathway very open and short to the highly vulnerable aquifer.

Figure 1: Areas of dust suppression and truck routes

Figure 2: June 9, 2021 Dust Suppression Truck filling with ground water from Sump 1 in Pit 1

2. PCQ has established a product washing area in Pit 1 as shown in Figure 3 below:

Figure 3: Pit 1 Product Washing

Ground water is pumped from the Pit 1 Retention Pond over to the Product Processing Area via the Product Washing Pump Station to wash the product that is stock piled in the Product Processing Area. The series of images below from Figure 4 through to Figure 8 show various views of the Product Washing System.

Figure 4: Satellite Image of Pit 1 Product Washing Pump Groundwater Source

Figure 5: Product Washing Pump Station (June 9/21)

Note: Derelict equipment as seen in the above photo and other material stored in the open on the bottom of the Pits is a source of contaminants as well as spills and leaks associate to the mobile and stationary equipment used in the quarrying process. It should be noted that in PCQ's document 115774-PIT3EXT_4-OP for the expansion of Pit 3 it states in General Operational Notes, note 11 *"No scrap will be stored on-site but will be*

stored either in the Port Colborne Quarries Inc. Pit 1 or within Licence 4444 (Pit 3). ***”***

Figure 6: Satellite Imagery of Pit 1 Product Washing Lagoon

Note: **Significant loading of washing residues of about 30% of Product Washing Lagoon**

Figure 7: June 9, 2021 Spent wash water being discharged into Product Washing Lagoon

Figure 8: June 9, 2021 Spent Wash water being discharged into Pit 1 Product Washing Lagoon

NOTE: Visual observation of spent wash water discharge quality identifies significant loading of suspended solids which is supported by the satellite

imagery showing significant loading of washing residue in the Product Washing Lagoon as seen in Figure .

Spent wash water is then collected in the Product Washing Lagoon and allowed to gravity settle. Spent untreated wash water from the Product Washing Lagoon is allowed seep back into the ground water through the quarry floor. Solids and suspended solids in the spent wash water may get filtered out of the spent wash water by the quarry floor before the spent wash water collects and merges with the highly vulnerable aquifer waters but dissolved solids such as sodium and calcium chlorides along with other water soluble and liquid contaminants such as polyethylene glycols and hydrocarbons will not. These contaminants pose a significant and real threat to the quality of the aquifer.

The ground water that is used for this Product Washing process that is sourced from the PTTW becomes a tailing waste liquid that is allowed to return to the source of the ground water, in this case being the highly vulnerable aquifer virtually untreated. This untreated wash water eventually gets diluted with fresh ground water in the highly vulnerable aquifer and discharged to the municipal storm sewer system.

Note: ***THE REGIONAL MUNICIPALITY OF NIAGARA, Sewer Use By-law By-law No. 27-2014 February 27, 2014. A By-Law To Regulate Discharges To The Sanitary And Storm Sewer Systems Of The Regional Municipality Of Niagara And To Repeal By-Law No. 47-2008.***

Defines Storm sewer and Storm water as follows:

"Storm sewer" means a sewer for the collection and transmission of uncontaminated water, storm water, drainage from land or from a watercourse or any combination thereof;

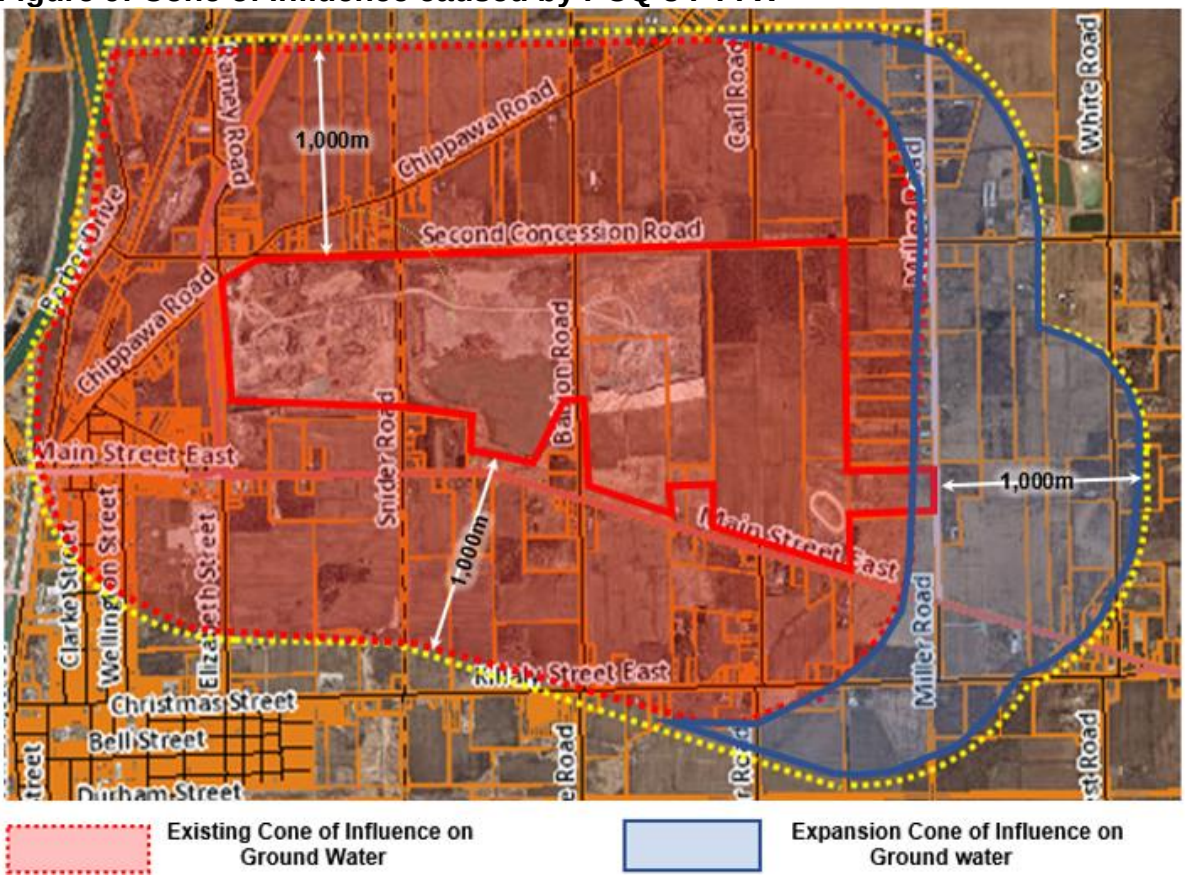
"Storm water" means water from rainfall, other natural precipitation, or from the melting of snow or ice;

Allowing of untreated spent wash water to be reunited with ground water in the highly vulnerable aquifer and there-by being diluted and allowed to be discharged via PCQ's PTTW is environmentally wrong. This is nothing more than enabling dilution to be a solution to pollution and a significant threat to the quality of the ground water of the highly vulnerable aquifer which the Environmental Protection Act, Clean Water Act, Provincial Policy Statement, Regional Official Plan, Muncipal Official Plans and other acts and plans set out to protect and improve.

3. PCQ's mining activities has created a catchment area of Pits 1, 2 and 3 including the Pit 3 expansion equal to approximately 266 hectares or 2.7 square kilometers. The proposed depth of mining is 16 meters below the ground water level of 178 masl and without rehabilitation to passive lakes as proposed for Pit 1

and 2, space equivalent to 43,200,000 cubic meters of ground water would need to be maintained. In order to do this as stated in the Expansion of Pit 3 proposal documents a Cone of Influence will be created which extends 1,000 meters beyond the perimeter of the Pits. This Cone of Influence would have a surface area of approximately 13 square kilometers and impact approximately 101,000,000 cubic meters of ground water. Figure 9 represents the proposed Cone of Influence with the expansion of Pit 3 and no remediation of Pits 1 and 2. This is a significant volume of ground water being impacted. If PCQ is allowed to renew their PTTW to allow them to discharge 25,486 cubic meters of ground water a day they will have the potential of pumping down the aquifer 250% more fresh waters than the City of Port Colborne (City) uses a day.

Figure 9: Cone of Influence caused by PCQ's PTTW



The quarrying operations of PCQ is predicated on the progressive rehabilitation of the Pits as prescribed in the 1982 Site Plan Agreement between the City and PCQ and the conditions of the Ministry of the Natural Resources and Forestry (MNRF) license #4444. Under the Aggregate Resources Act, R.S.O. 1990, c. A.8, Section 48 (1) Every licensee and every permittee shall perform progressive rehabilitation and final rehabilitation on the site in accordance with this Act, the regulations, the site plan and the conditions of the licence or permit. ***Progressive***

rehabilitation means rehabilitation done continually and sequentially during the entire period that a project or mining hazard exists.

Ontario Ministry of Natural Resources / Ministère des Richesses naturelles	*Subject:* **Progressive Rehabilitation Order**	*Policy No.:* **A.R. 6.00.04**	*New:* **Yes**
Compiled by – Branch: **Lands & Waters**	*Section:* **Aggregate & Petroleum Resources**	*Date Issued:* **March 15, 2006**	

Guiding Principle

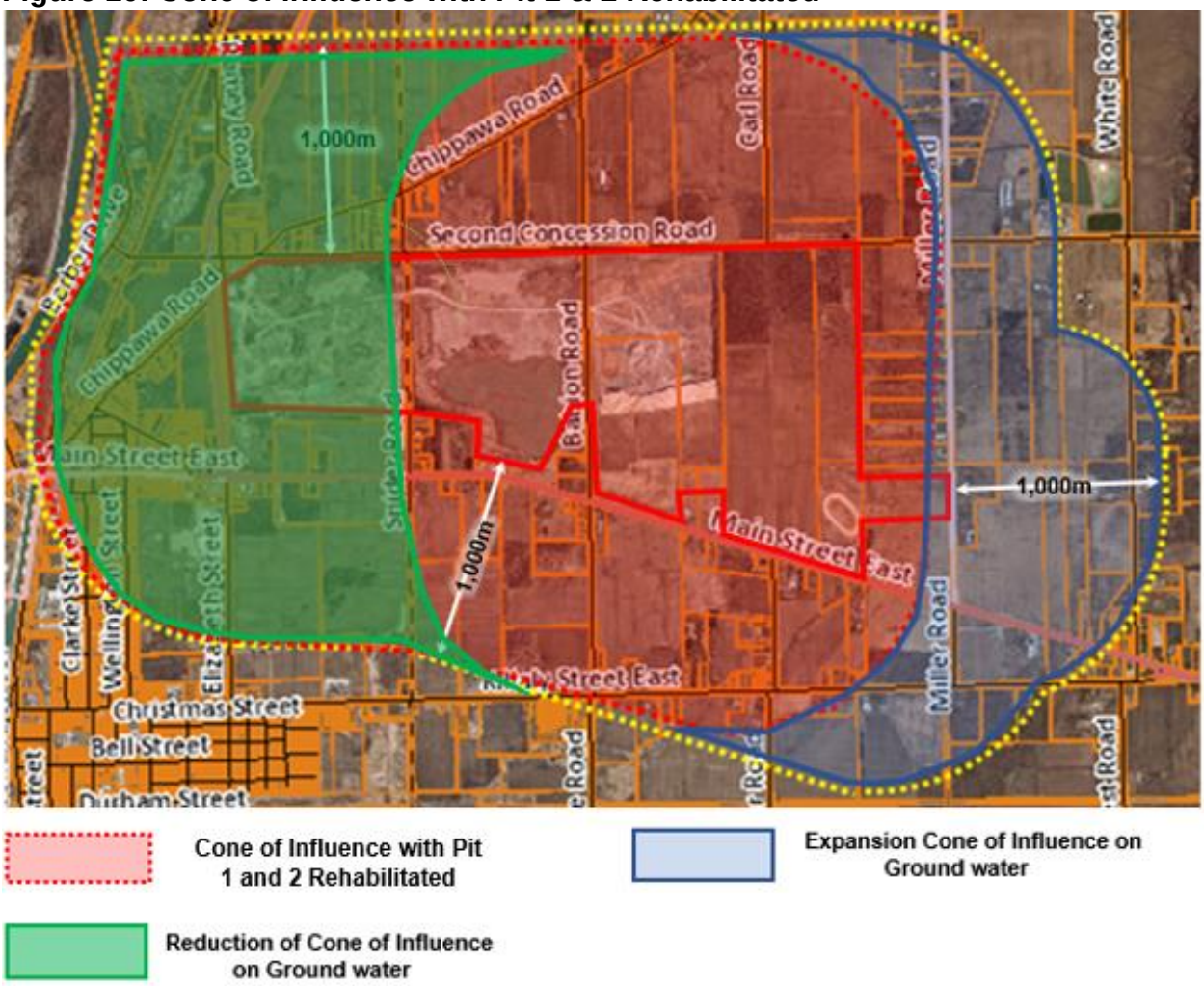
Progressive rehabilitation of lands from which aggregate has been excavated, is a requirement of the legislation and must be performed in accordance with the site plan to minimize potential adverse impacts on the environment and to ensure that the disturbed hectarage of the site is maintained at a minimum amount.

As set out in the MNRF's Aggregate Resource Provincial Standards of Ontario Version 1, 2014 the intent is the minimum rehabilitation standard is to meet the objective of restoration of the mining site to the former use or condition. When that is not reasonably possible the rehabilitation standard is for the site to be rehabilitate to a condition and use that is compatible with the surrounding land uses including aesthetics. In this case since restoring the site back to a prime agricultural condition is unreasonable, PCQ, the City and the MNRF have agreed to progressive rehabilitation of the site to a passive lake.

In my opinion progressive rehabilitation as defined of Pit 1 and 2 and agreed to by all parties could have reasonably been completed by now and should have. If that would have been done it would have reduced the Cone of Influence by approximately 30% as illustrated in Figure 10 below.

Progressive rehabilitation by shutting off the pumps in the depleted Pits 1 and 2 and allowing them o naturally fill with ground water could be achieved quicker and in a more environmentally enhanced way by diverting the ground water discharge from Pit 3 to the Wignell Drain to Pits 1 and 2. By doing this the Wignell Drain would not require modifications to accommodate increased flows and Pits 1 and 2 would become passive recreational lakes in a shorter period of time. As well the Highly Vulnerable Aquifer would not impacted by large volumes of draw down flows.

Figure 10: Cone of Influence with Pit 1 & 2 Rehabilitated



In conclusion it is my opinion that renewal of PCQ's PTTW is not consistent with protecting and improving the quality and quantity of ground water as required under various regulations, acts and official plans or in the best interest of the environment or communities that use the ground water for a necessity of life. The renewal of PCQ's PTTW as proposed does not reflect the requirement or intent to progressively rehabilitate the depleted Pits 1 and 2. The proposed PTTW should be denied as it is miss leading and does not reflect the commitment by PCQ to rehabilitate the depleted Pits 1 and 2 nor does it reflect sound environmental practices to protect the quality and quantity of fresh water of the Highly Vulnerable Aquifer.

Respectfully Submitted

Harry Wells