

Balclava School Council



*Working Together
School - Parents - Community*

November 29, 2006

PTTW Coordinator
Ministry of the Environment
West Central Region
119 King St. W., 12th Floor
Hamilton, ON
L8P 4Y7

By e-mail: cora.sheppard@ontario.ca

Dear PTTW Coordinator,

Re: EBR # IA06E1293 - St Marys Cement Group application for a Permit to
Take Water (PTTW)

On behalf of the school and parent community, Balclava School Council and Balclava Home & School Association, we would like to voice and officially register concerns with the Ministry of the Environment (MOE) regarding the recent application by Gartner Lee Limited, on behalf of St Marys Cement Group (CBM). St Marys is requesting a PTTW to test the proposed Groundwater Recirculation System it is advancing to mitigate the significant negative impacts from a proposed quarry development in our community. This matter was raised at our respective meetings of November 7th and 16th, 2006. It is of concern to us given the location of our school which is but one concession south of the proposed development and given that our supply of potable water comes from a drilled well which shares the same aquifer that the proposed test and development are planning to access. By way of copy, given the short deadlines for public comment and the lengthy technical material submitted by the applicant, we request that the Hamilton-Wentworth District School Board review this matter as well and provide corroborating comments and that the Ministry accept the Board's comments even if received following the December 1st, 2006 suggested

timeline for public feedback. We note that the new Board does not meet until December 4, 2006 for its inaugural meeting.

We see a number of issues regarding this PTTW application which are relevant to our facility and its population:

1. Water Quality : For our school to remain open, it is a legal requirement that it have an on-site potable water supply. It is imperative that the health of our children, our teaching and administrative staff, and community members active in the school, is not placed at risk. The test does not indicate how the quality of water in the aquifer will be protected from potential surface contaminants and/or changes in temperature which could lead to bacteriological impacts during the test and during the proposed quarry life. In reviewing government, agency and peer review reports regarding hydrogeology matters, we note that concerns about “thermal plumes” and how they would be addressed have been raised by both MOE and the Ministry of Natural Resources (MNR). Balaclava currently has a well which meets both quantity and quality requirements. We do not want the capital and operating expense for our school nor our Board to replace same. Nor do we want our children bussed to schools elsewhere in the City of Hamilton because external factors affected the well water supply. Water quality is a sensitive issue for our school community as for the first time in anyone’s recent memory, the drinking water supply for Balaclava has been temporarily replaced by bottled water. This action was taken on November 28, 2006 by Public Health when a routine “test” sample indicated high levels of nitrates. The school will not return to using well water for drinking until directed to do so by Public Health following three tests within appropriate limits. As such, we are concerned about the volume and concentration of water proposed for discharge into Mountsberg Creek and run-off implications, the temperature/contaminant issue above, the long term impacts on the aquifer of recirculation. Bottled water is not a long term solution. It is important that individual wells for private residences and public facilities, such as schools, be given equal accord with the Carlisle municipal system. Water quality must be guaranteed.
2. Water Quantity : Balaclava School has never had ANY problems with water quantity. Analysis suggests that the permit is requesting 2.8 million gallons per day, which is almost 4 times the currently approved daily use for the whole community of Carlisle, a community which has had water quantity issues for years. One of the tests is to try to illustrate the unmitigated impacts of the quarry. Another would involve procedures, such as aquifer fracturing, which would be irreversible and could impact existing groundwater flows. We must understand upfront with whom we will have recourse – a complaint procedure that

promises a supply of bottled water, as an example, is not appropriate for our needs. As noted above, there is a viable well servicing the school. We do not have a cistern anywhere on the Balaclava School property nor do we necessarily want to put one in – notably at our expense because of an outside incursion. This would have capital and operating expense implications – from trucked in water to fill the cistern - for the publicly funded education system. Further, it is our understanding that changes in recent legislation, such as the Greenbelt Plan, preclude the taking of water from lake-based systems, such as Lake Ontario, and piping it to outlying areas, either through new pipes or extensions of existing systems. Water quantity must not be impacted and the onus for doing so must be clear.

3. *Cumulative Water Quantity and Quality Impacts with other PTTWs* :
We are concerned about the cumulative impacts on groundwater aquifers of this application in conjunction with other existing PTTWs, including the recent Flamborough Springs application. We refer you to our letter of March 13, 2006 regarding Flamborough Springs. The St Marys' application will dewater millions of gallons of water daily, at the eastern end of the 11th Concession East far greater than that requested by Flamborough Springs and the MOE has adopted the pre-cautionary principle with that application. The draft Level 2 hydrogeological report suggests that the capture zone for the Carlisle wells, the "tadpole" from which our own school well draws, could change as a result of the proposed quarry's dewatering impacts to the vicinity of the aquifer that Flamborough Springs is proposing to access to a greater extent. Both commercial businesses are proposing to remove significant quantities of a very valuable natural resource, to the potential detriment of longstanding residents and facilities in the area. Cumulative impacts of the two proposals over time, as well as other existing PTTWs – in terms of quantity and quality - must be clearly understood before new PTTW are granted.

We request that you seriously consider the preceding concerns about the PTTW application for St Marys Cement Group in light of the following circumstances.

The GRS system proposed is still unproven and there is no example of a precedent anywhere in the world. This is particularly notable for the system's application to reducing the impacts of quarry dewatering in a deep fractured bedrock setting. The case studies that St Marys has included do not relate at all to the geology found in this area; they were very shallow in depth and involved soil overburden not dolomite bedrock. The studies point to the need for more research and problems with the systems over the longer term from factors such as wells and trenches plugging up and bedrock dissolution. The test, as proposed, will do nothing to help assess the known long term failure scenarios of these systems. Nor can a test using groundwater injection replicate what would

happen with water from the proposed quarry floor – that water would be high in suspended particulates, oxidization, etc. which would make problems more likely. This seems to be a very large scale and risky experiment, given the stage of the overall application in the land use planning review process.

There is still considerable outstanding work required to understand our watershed and to evaluate all the risks and other factors. The City of Hamilton has undertaken groundwater characterization analyses for Carlisle and Freelon but these studies have not been signed off by your Ministry nor have action plans been developed and implemented. The hydrogeological implications of the proposed aggregate development are not yet fully understood. Already, the hydrogeological work prepared for the quarry application is coming under intense scrutiny from municipal, peer review, conservation authority and provincial reviewers for both process and substance. Perhaps the most critical has been your own Ministry. This includes implications for both our drinking water and key hydrological features like the Provincially Significant Wetland complexes in the area. Source water protection plans – to protect wellhead protection and recharge areas - are just being mandated under your ministry's new *Clean Water Act* and Conservation Halton, along with the Hamilton Conservation Authority, are at the very early stages of their work on same in this watershed.

Finally, we are not aware of how the test will be monitored throughout by external agencies. Monitoring and careful documentation to allow for independent assessment would be critical.

In true school fashion, let's do our homework first and get things right before we allow significant volumes of groundwater to be removed from our aquifers. Then, if and when testing is appropriate, let's put appropriate limits on the PTTW.

Yours sincerely,

Originals signed by:

Janet Cameron
Co-chair
Balaclava School Council

Jan Whitelaw
Co-chair

Leah Connor
President
Balaclava Home & School Association

CC: Laurel Broten, Minister of the Environment
Paavo Kivisto, Deputy Minister
Theresa McClenaghan, Special Assistant – Policy (water)
Reg Woodworth, outgoing Ward 14/15 HWDSB Trustee
Karen Turkstra, incoming Ward 14/15 HWDSB Trustee
Val Stephens-Brockbank, Principal, Balaclava
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Our Lady of Mount Carmel School Council and Administration