



Region of Waterloo

PLANNING, HOUSING AND
COMMUNITY SERVICES

150 Frederick Street, 8th Floor
Kitchener ON Canada N2G 4J3
Telephone: 519-575-4533
Fax: 519-575-4449
www.region.waterloo.on.ca

Laurel Gibson 519.575.4757 ext. 3210
File: C14-60/7/09003

February 2, 2010

Jeremy Vink
Senior Planner
Township of Woolwich
24 Church St. West, P.O. Box 158
Elmira, ON N3B 2Z6

Dear Mr. Vink:

Re: Zone Change Application 3/2009- UPDATED COMMENTS
2167534 Ontario Inc.
125 Peel Street
TOWNSHIP OF WOOLWICH

Hydrogeology

The Mitz & Associates (MA) report indicates that no groundwater or surface water impacts are likely from the proposed site operations. This overall conclusion is based on a review of background information, the installation of groundwater monitoring wells, the geochemical analyses of groundwater samples and an interpretation of all the data.

A review of the MA report has lead to the following comments:

1. Page 2, Section 2.1. The elevations of the monitoring wells were estimated from a topographic survey. Estimating the elevation of the monitoring wells is not accurate enough and a detailed site survey is required. Presenting water level data on a mASL (metres above sea level) basis may not adequately determine the water levels at the site which are required to determine the detailed elevation of the extraction depth.
2. Section 3.2. The thickness of the sand and gravel unit where extraction is proposed has not been determined or estimated. One of the recommendations (page 11) is to replace the existing monitors with deeper monitors around the perimeter of the site. (Note: MW3 is outside the limit of extraction and should not need replacing.) This is a good recommendation to ensure that monitors will not be destroyed during site operations but it is not known why the monitors should be deeper. How deep should the monitors be installed? It must be ensured that they are installed within the same sand and gravel unit.
3. Page 5, Section 3.2. Water levels have only been presented from one monitoring event – December 2007. One of the recommendations (page 11) was to continue to obtain water levels on a quarterly basis. It is not known if this has been done but two years of data would be required to establish water levels and seasonal fluctuations that may occur. The depth of extraction can only be determined once the data has been collected.
4. Page 6, Section 3.2. Hydraulic conductivity values have been estimated. However, the values are not considered valid since the monitoring wells were installed in excavated test pits. Although it is presumed that excavated material was used as backfill around the monitors, this

represents a disturbed environment around the well screen which may not be representative of the native material. The hydraulic testing data was not provided in the report.

5. Page 7, Section 3.2. Well records were only obtained from MOE well records. No door-to-door survey, as required by the Region's Guidelines was conducted. This is especially important to determine if there are any shallow wells in the vicinity of the site. No well records are presented for the existing house or livestock operations on the property. Establishing the integrity of wells in the immediate vicinity of the site prior to beginning site operations may alleviate concerns in the future by establishing a baseline set of data.
6. Page 8, Section 3.3. Petroleum hydrocarbons (PHCs) were not included in the geochemical sampling. PHC monitoring is required by the Region's Guidelines when fuel is to be stored on a proposed aggregate site. The Guidelines also require geochemical sampling twice a year but only annual monitoring is recommended (page 11).
7. Page 10, Section 4.2.4. The text states that ..."lake temperature moderates the air temperature". It is not known what "lake" is being discussed in this sentence or its relevance to local infiltration?
8. Page 11, Conclusion 3. The report concludes that nearby wells are generally completed in deep confined aquifers. There is no discussion in the main text of the report with respect to confined aquifers or how this conclusion was derived. This is related to comment 2.

The IBI Operational Plan presents differing refueling recommendations. Fuel would be stored near the site entrance and mobile equipment would refuel at that location. Semi portable equipment would be refueled by a fuel truck. However, the MA report recommends refueling on an impermeable pad. Presumably this pad is in reference to the fuel tank near the entrance but it is not known if any sort of pad has been designed or taken into consideration for the fuel storage area.

The IBI Operational Plan also states that recycled asphalt and concrete will be stored within 2.0 m of the established groundwater surface. Will the recycling area be predetermined so that excavation does not proceed to within 1.5 m of the groundwater surface or will soil material be added to the pit floor to raise the floor 0.5 m?

General Comments

The applicant should also be advised that any issuance of a building permit for future development on the subject lands will be subject to provisions of Regional Development Charge By-Law 09-024 or any successor thereof.

Please accept this letter as our request for a copy of the decisions and minutes pertaining to the zoning application noted above. Should you require Regional Staff to be in attendance at the meeting or have any questions, please do not hesitate to contact the undersigned.

Sincerely,



Laurel Gibson, M.PL
Planner

cc: Diane Schwier, MNR