

February 2, 2010

Reference No. 046254

DRAFT FOR REVIEW

Director
Ontario Ministry of the Environment
Environmental Assessment and Approvals Branch
2 St. Clair Avenue West
Floor 12A
Toronto, ON M4V 1L5

Dear Sir or Madam:

Re: Draft Project Description Report
Woolwich Bio-En Inc., Elmira, Ontario

Conestoga-Rovers & Associates (CRA) provides this letter, on behalf of Woolwich Bio-En Inc. (Bio-En), to meet the requirements of the Project Description Report as outlined in the Ontario Ministry of the Environment's (MOE's) Renewable Energy Approval (REA) Regulation (O.Reg. 359/09). A Site Location Map showing the project location and the land within 300 metres (m) is attached as Figure 1. A Site Location Plan showing the project on a larger scale is attached as Figure 1a.

Bio-En plans to develop and operate a biogas co-generation facility at 40 Martin's Lane (Plan 58R-14363, Lot 18, Part 9) in Elmira, Ontario (Facility). Elmira is located in the Township of Woolwich, in the Region of Waterloo in Southern Ontario. The property at 40 Martin's Lane will be leased from Marbro Capital Limited. This property is zoned for industrial uses, however, it is currently being used for agricultural purposes. The proposed Facility will be classified as a Class 3 Anaerobic Digestion Facility as defined in Section 3 of O.Reg. 359/09. The proposed Facility will generate 2.85 MW of electricity and 3.02 MW of heat from the biogas produced from a variety of organic materials that may include, but are not limited to:

- Organics from food processing facilities, grocery stores, food distribution companies, and milling facilities
- Livestock manure
- Glycerol
- Kitchen waste
- Fats, oil, and grease (FOG)
- Renewable energy crops (i.e., corn silage)
- Organic solids skimmed from dissolved air flotation (DAF) tanks

The construction of this Facility will involve extending Martin's Lane and constructing an on-site road for truck traffic at the Facility. Fill will be obtained from the North side of the

property, as the elevation of the North side is higher than at the South side of the property. Additional fill will be obtained through the construction company as required. The construction company will dispose of any soil piles remaining after the construction period. Detailed fill and spoils requirements have not been completed at this time, as the detailed design has not been completed for the Facility. During construction, the spoil and fill piles will be placed to help reduce erosion.

The proposed Facility will include two buildings, operations and processing. The operations building will house the reciprocating engines and other equipment to perform facility operations and control. The process building will receive organic materials and will contain equipment to prepare and blend the organic material prior to being fed into the anaerobic digestion equipment. The Facility will be equipped with a control system including alarms and pressure relief valves to ensure the safe operation of the Facility and to minimize the risk of process disruption. The Facility will be fenced and locked to ensure that trespassers do not enter the site and tamper with equipment.

In addition, the Facility will utilize three pre-treatment tanks, two main digester tanks and one secondary digester and repository tank to generate and store biogas. The biogas will be combusted in reciprocating engines to produce renewable heat and power. The Facility will be equipped with a back-up flare to process biogas when required (e.g., engine maintenance).

This Facility has been designed to mitigate and minimize potential impacts to the environment. The following areas of potential environmental impact have been identified:

Air, Noise and Odour

The Facility is expected to emit air contaminants including products of combustion, volatile organic compounds and potentially odour. The Facility is being designed with state of the art emissions control equipment (biofilter) to mitigate the potential emissions of air contaminants and odour from activities including: organic unloading, processing and digestate loading.

In the event of engine malfunction, maintenance, or excess biogas being produced, the Facility will be equipped with a back-up flare capable of combusting 100 percent of the biogas generated.

The Facility will be unloading incoming organic material indoors to minimize the generation of litter at the Facility. In order to further reduce potential litter, all hauling trucks will remain tarped until the material is unloaded inside the building.

The Facility is undertaking an air study in accordance with requirement 6 of Table 1 in O.Reg.359/09 and will meet the requirements of O.Reg. 419/05 including compliance with applicable MOE Point of Impingement criteria under O.Reg. 419.

Potential emissions of odour generated from the incoming organics or from the operations of the digestion equipment will be mitigated with a biofilter. The Facility will install a membrane over the digesters with a permeation of less than 200 cm³/m²/day/bar which exceeds the permeation criteria of 500 cm³/m²/day/bar recommended in O.Reg. 359/09. In addition, all incoming organics will be unloaded indoors and the air from the buildings will be treated with a biofilter that will reduce potential odour impacts. The Facility is designed to meet the MOE's Guideline of less than 1 odour unit (OU) at a sensitive receptor.

The Facility will have potential emissions of noise to the environment. The main sources of noise will be the cogeneration units and the truck traffic. The cogeneration units and other significant sources of noise will be equipped with noise mitigation equipment to mitigate the emissions of noise as required. The Facility has been designed to mitigate potential impacts resulting from noise emissions and will comply with the applicable MOE noise criteria in Section 9 of the Environmental Protection Act. The Facility is undertaking a noise study to ensure that the Facility will comply with the MOE noise criteria. The noise study will be prepared in accordance with Appendix A of the Ministry of the Environment publication entitled "Basic Comprehensive Certificates of Approval (Air) - Users Guide", dated April 2004 as outlined in requirement 8 of Table 1 in O. Reg. 359/09.

Water and Soil

The Facility will be undertaking a hydrogeological assessment for the purposes of the REA Application. This study will investigate the suitability of the site with respect to the hydro-geological features of the site including the groundwater (hydrology) and soil (geotechnical characteristics). This study will be prepared in accordance with requirement 7 of Table 1 in O.Reg. 359/09.

The Facility will be preparing a surface water assessment for the purposes of the REA Application. This study will investigate the potential for effects to the surface water. The surface water assessment will be prepared according to requirement 11 in Table 1 of O.Reg. 359/09. The site will be sloped to ensure proper drainage to a storm water management pond.

The Facility will be conducting a water body study to investigate the potential impacts to water bodies. This assessment will address the requirements of sections 29 to 31 of O.Reg. 359/09 and will be summarized in the surface water assessment report.

The Facility is currently not intending to discharge process water. Bio-En is intending to remove water used by the process as liquid digestate that will be used as a soil amendment or as a fertilizer. The Facility is planning to recycle a great deal of the water required for the process and is also planning on using water collected in the storm water management pond for process water. The Facility will have a toilet and shower that will be discharged to the sanitary sewer

with the approval of the Municipality. The Facility's effluent management plan will be prepared in accordance with requirement 5 of Table 1 in O.Reg. 359/09.

The Facility may obtain the additional water required from the Municipality depending on the agreement with the Municipality. The proposed Facility's anticipated water takings will be presented in the Facility's Design and Operations Report as required in Section 4 of Table 1 in O.Reg. 359/09.

The pretreatment, main digester, and secondary and repository tanks at the Facility are being designed with a live load factor of 1.5 in order minimize the risk of leaks, spills, and contamination to the ground water and soil.

Siltation and Erosion During Construction

During the construction of this Facility, fencing will be placed around the construction site as there may be a potential for siltation or erosion of the site. In addition, spoil and fill piles will be placed to help reduce erosion.

Natural Heritage

The Facility will be undertaking a natural heritage assessment in support of the REA Application to ensure the construction and operation of the Facility do not have an impact on any provincially significant natural features or any species at risk. The natural heritage assessment for this facility will be prepared to fulfill the requirements of sections 24 to 28 of O.Reg. 359/09.

Archaeological and Heritage

The Facility will be undertaking an archaeological assessment and a heritage screening as part of the REA Application in order to ensure that the construction and operation of the Facility do not have the potential to impact any archaeological or heritage resources. The archaeological assessment and heritage screening for this facility will be prepared to fulfill the requirements of sections 19 to 22 of O.Reg. 359/09.

The Facility is located on a parcel of land that is currently zoned for industrial land use, therefore, it is not expected that there will be impacts to any environmentally or culturally sensitive areas.

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The Facility has been designed to mitigate potential environmental impacts and will comply with applicable MOE criteria.

Should you have any questions on the above, please do not hesitate to contact us.

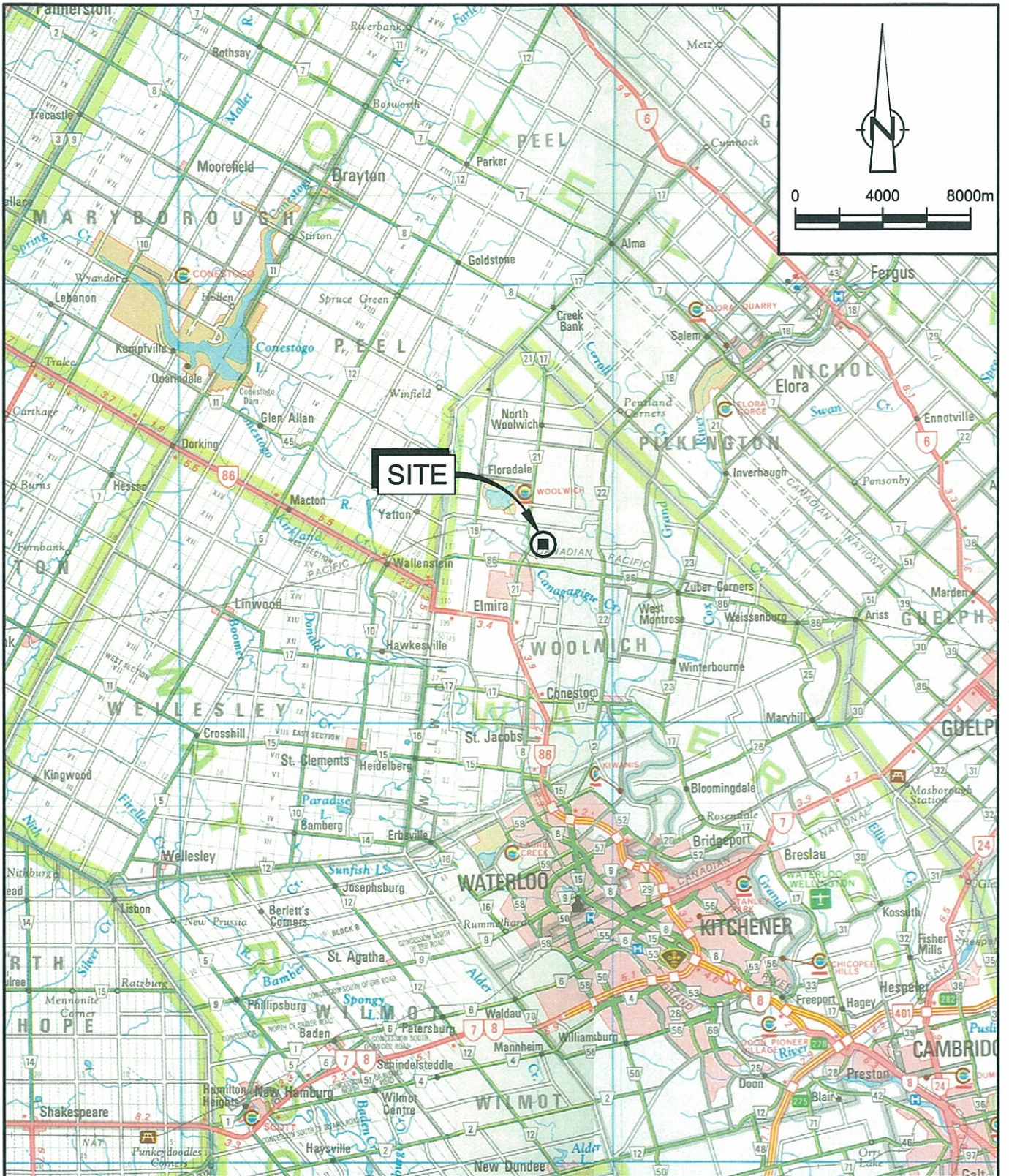
Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

John Ferguson, P. Eng.

SW/ja/4
Encl.





SOURCE: RAND MCNALLY ROAD ATLAS

figure 1A
 SITE LOCATION PLAN
 PROJECT DESCRIPTION REPORT
 WOOLWICH BIO-EN FACILITY
 Elmira, Ontario

