

AMENDED CERTIFICATE OF APPROVAL

AIR

NUMBER 2072-7PNSUU

Issue Date: April 2, 2009

Niagara Waste Systems Limited
2800 Thorold Townline Road
Thorold, Ontario
L2E 6S4

Site Location: 3879 Thorold Townline Road
Thorold City, Regional Municipality of Niagara, Ontario

You have applied in accordance with Section 9 of the Environmental Protection Act for approval of:

- one (1) grinder with a capacity of 75 tonnes of waste per hour, used to shred a mixture of source separated organic waste and to commingle with leaf and yard waste;
- one (1) screening plant with a capacity of 250 yards per hour;
- one (1) Receiving Building, inside which the compostable materials such as source separated organics and commercial food waste delivered to the site in trucks are unloaded. The air inside the building is drawn by two (2) exhaust fans to two (2) biofilters, one (1) on the north side and one (1) on the south side of the building, for treatment. Each biofilter is an open top, in-ground, upflow biofilter, having dimensions of 19.2 metres in length and 6.35 metres in width, filled with a media comprising a mixture of compost and wood chip to a depth of 1.2 metres, equipped with surface water irrigation system, exhausting into the atmosphere at a maximum volumetric flow rate of 4.75 cubic metres per second, at 2 metres above grade;
- one (1) Cover-All Structure, attached to the Receiving Building described above, within which composted materials are screened during inclement weather conditions;
- one (1) GORE™ Cover Composting System on a concrete base, with a processing capacity of 40,000 tonnes per year of compostable organic material and leaf and yard waste, consisting of a total of sixteen (16) windrows, each windrow equipped with in-floor aeration channels and aerated with a blower, and directly monitored with temperature and oxygen probes to control the on/off of the blower, and covered with a GORE™ cover;

all for the composting operation approved under Certificate of Approval (Waste) number A121001 dated July 15, 1981, as amended.

All in accordance with the Application for Approval (Air & Noise), dated January 15, 2009 and signed by Alison Braithwaite, Niagara Waste Systems Limited, and all information associated with the application including additional information provided by RWDI Air Inc. on behalf of Niagara Waste Systems Limited, dated March 11, 2009 and March 13, 2009 and signed by Brad Bergeron; and the Application for a Certificate of Approval (Air), dated August 13, 2003 and signed by Ed English, Terratec Environmental Ltd., and all supporting information associated with the application including additional information provided by Niagara Waste Systems Limited, dated January 20, 2004 and signed by Mike Deprez.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

- (1) "Act" means the *Environmental Protection Act*.
- (2) "AERMOD" means the dispersion model developed by the American Meteorological Society/U.S. Environmental Protection Agency Regulatory Model Improvement Committee (AERMIC) including the PRIME (Plume Rise Model Enhancement) algorithm, used to calculate one-hour average concentrations of a contaminant at the Point of Impingement and at the most impacted Sensitive Receptor.
- (3) "Biofilters" means the two (2) biofilters described in this Certificate and in the supporting documentation referred to herein, to the extent approved by this Certificate.
- (4) "Certificate" means this Certificate of Approval, including Schedule "A", issued in accordance with Section 9 of the Act.
- (5) "Company" means Niagara Waste Systems Limited.
- (6) "District Manager" means the District Manager, Niagara District Office, West Central Region of the Ministry.
- (7) "ESDM Report" means the Emission Summary and Dispersion Modelling Report prepared by RWDI Air Inc. and dated January 14, 2009, submitted to this Application for Approval (Air & Noise), dated January 15, 2009 and signed by Alison Braithwaite of the Company.
- (8) "Facility" means the composting facility described in this Certificate and in the supporting documentation referred to herein, to the extent approved by this Certificate.
- (9) "Fugitive Odour Management Plan" means a document or a set of documents that provide written instructions to staff of the Company, for the purpose of meeting the requirements of terms and conditions 2(1)(e) in this Certificate.
- (10) "Manager" means the Manager, Technology Standards Section, Standards Development Branch of the Ministry, or any other person who represents and carries out the duties of the Manager, as those duties relate to the conditions of this Certificate.

- (11) "Manual" means a document or a set of documents that provide written instructions to staff of the Company.
- (12) "Ministry" means the Ontario Ministry of the Environment.
- (13) "O. Reg. 419/05" means Ontario Regulation 419/05, Air Pollution - Local Air Quality.
- (14) "Point of Impingement" means any point in the natural environment and as defined by s. 2 of O. Reg. 419/05.
- (15) "Pre-Test Information" means the information outlined in Section 1 of the Source Testing Code.
- (16) "Sensitive Receptor" means any location where routine or normal activities occurring at reasonably expected times would experience adverse effect(s) from odour discharges from the Facility, including one or a combination of:
 - (a) private residences or public facilities where people sleep (e.g.: single and multi-unit dwellings, nursing homes, hospitals, trailer parks, camping grounds, etc.),
 - (b) institutional facilities (e.g.: schools, churches, community centres, day care centres, recreational centres, etc.),
 - (c) outdoor public recreational areas (e.g.: trailer parks, play grounds, picnic areas, etc.), and
 - (d) other outdoor public areas where there are continuous human activities (e.g.: commercial plazas and office buildings).
- (17) "Source Testing Code" means the Source Testing Code, Version 2, Report No. ARB-66-80, dated November 1980, prepared by the Ministry, as amended.
- (18) "Source Testing" means sampling and testing to measure the rate of odour emissions as required under this Certificate from the Biofilters exhausts under process conditions which represent a maximum operating range within the approved operating range of the Facility.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

MONITORING

- 1. The Company shall monitor the parameters of the Biofilters, either as specified in the Manual of the Biofilters manufacturer, or as deemed necessary in accordance with site operational conditions. The results of monitoring of these parameters shall be recorded in a log.

OPERATION AND MAINTENANCE

- 2. The Company shall ensure that the Facility is properly operated and maintained at all times. The Company shall:

- (1) prepare, not later than three (3) months after the date of this Certificate, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Facility, including:
 - (a) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the equipment suppliers;
 - (b) emergency procedures, including procedures to minimize environmental impacts in case of power failure and no air flow to the Biofilters;
 - (c) procedures to monitor and record the performance of the Biofilters, including but not limited to the parameters monitored and the frequency of monitoring of those parameters;
 - (d) procedures for any record keeping activities relating to operation and maintenance of the Facility; and
 - (e) a Fugitive Odour Management Plan, identifying elements of operation of the Facility that are sources of fugitive odour emissions, for example odours associated with movement of materials in the Facility, and outlining the operational controls to achieve the objective of managing and minimizing emissions of odour associated with those fugitive odour sources in order to mitigate impacts on the Sensitive Receptors;
 - (f) all appropriate measures to minimize noise, odorous and dust emissions from all potential sources;
- (2) implement the procedures, measures and recommendations of the Manual.
3. The Company shall keep all doors of the Receiving Building fully closed at all times, except when being used for necessary personnel and/or vehicle entrance and exit.
4. The Company shall ensure that the Receiving Building is kept under adequate negative pressure whenever there are compostable materials inside the building.

SOURCE TESTING

5. The Company shall perform Source Testing to determine the rates of emission of odour from the Biofilters exhausts.
6. The Company shall submit, not later than three (3) months from the date of this Certificate, to the Manager a test protocol including the Pre-test Information for the Source Testing required by the Source Testing Code. The Company shall finalize the test protocol in consultation with the Manager. At least three (3) source tests shall be conducted during the Source Testing for each exhaust.

7. The Company shall not perform Source Testing required under this Certificate until the Manager has accepted the test protocol.
8. The Company shall complete the Source Testing not later than six (6) months after acceptance of the test protocol by the Manager, or within a period agreed or directed by the Manager or the District Manager.
9. The Company shall notify the District Manager and the Manager in writing of the location, date and time of any impending Source Testing required by this Certificate, at least fifteen (15) days prior to the Source Testing.
10. The Company shall submit a report on the Source Testing to the Director, District Manager and the Manager not later than two (2) months after completing the Source Testing. The report shall be in the format described in the Source Testing Code, and shall also include, but not be limited to:
 - (1) an Executive Summary;
 - (2) records of weather conditions such as ambient temperature and relative humidity, all operating conditions of the Facility including quantities of materials in the Receiving Building, quantities of materials in the windrows, and quantities of materials in the compost piles, etc, and the operating conditions of the Biofilters such as the air flow rate through each biofilter;
 - (3) results of the Source Testing; and
 - (4) the results of dispersion calculations indicating the maximum 10-minute average concentration of odour at the Point of Impingement and at the most impacted Sensitive Receptor calculated in accordance with Schedule "A", using the results of the Source Testing as the rates of emissions of odour from the biofilters and the rates of emissions of odour from all other sources as outlined in the ESDM Report.
11. The Director may not accept the results of the Source Testing if:
 - (1) the Source Testing Code or the requirements of the Manager and/or the District Manager were not followed; or
 - (2) the Company did not notify the District Manager and the Manager of the Source Testing; or
 - (3) the Company failed to provide a complete report on the Source Testing.
12. If the Director does not accept the results of the Source Testing, the Director may require re-testing.

RECORD RETENTION

13. The Company shall retain, for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the recording activities required by this Certificate, and make these records available for review by staff of the Ministry upon request. The Company shall retain:

- (1) all records on the operation, maintenance, repair and inspection of the Equipment;
- (2) all records of fan failure such that there is no air flow through the Biofilters;
- (3) all measures taken to minimize odorous emissions from all potential sources; and
- (4) all records of environmental complaints; including:
 - (a) a description, time and date of each incident to which the complaint relates;
 - (b) wind direction at the time of the incident to which the complaint relates; and
 - (c) a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition No. 1 is included to provide the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Biofilters.
2. Conditions No. 2 to 4, inclusive, are included to emphasize that the Facility must be maintained and operated according to a procedure that will result in compliance with the Act, the regulations and this Certificate.
3. Conditions No. 5 to 12, inclusive, are included to require the Company to gather accurate information so that compliance with the Act, the regulations and this Certificate can be verified.
4. Condition No. 13 is included to require the Company to retain records and provide information to the Ministry so that compliance with the Act, the regulations and this Certificate can be verified.

SCHEDULE "A"

Procedure to calculate and record the 10-minute average concentration of odour at the Point of Impingement and the most impacted Sensitive Receptor

- (a) Calculate and record one-hour average concentrations of odour at the Point of Impingement and at the most impacted Sensitive Receptor, employing the AERMOD atmospheric dispersion model using the five (5) years of hourly local meteorological dataset approved by the Emission Monitoring and Reporting Branch of the Ministry on September 27, 2007 that can provide results reported as individual one-hour average odour concentrations.
- (b) Convert and record each of the one-hour average concentrations predicted over the five (5) years of hourly local meteorological data at the Point of Impingement and at the most impacted Sensitive Receptor to 10-minute average concentrations using the One-hour Average to 10-Minute Average Conversion described below.
- (c) Record and present the 10-Minute Average concentrations predicted to occur over a five (5) year period at the Point of Impingement and at the most impacted Sensitive Receptor in a histogram. The histogram shall identify all predicted 10-minute average odour concentration occurrences in terms of frequency, identifying the number of occurrences over the entire range of predicted odour concentration in increments of not more than 1/10 of one odour unit. The maximum 10-minute average concentration of odour at the Sensitive Receptor will be considered to be the maximum odour concentration at the most impacted Sensitive Receptor that occurs and is represented in the histogram, disregarding outlying data points on the histogram as agreed to by the Director.

One-hour Average To 10-minute Average Conversion

Use the following formula to convert and record one-hour average concentrations predicted by the AERMOD atmospheric dispersion model to 10-minute average concentrations:

$$X_{10\text{min}} = X_{60\text{min}} * 1.65$$

where $X_{10\text{min}}$ = 10-minute average concentration
 $X_{60\text{min}}$ = one-hour average concentration

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 2103-5V9L43 issued on March 11, 2004.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as

amended, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, S.O. 1993, Chapter 28, the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street, 6th Floor
Suite 605
Toronto, Ontario
M5S 2B1

AND

The Director
Section 9, *Environmental Protection Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at www.ene.gov.on.ca, you can determine when the leave to appeal period ends.

The above noted works are approved under Section 9 of the Environmental Protection Act.

DATED AT TORONTO this 2nd day of April, 2009



Victor Low, P.Eng.
Director

Section 9, *Environmental Protection Act*

RW/

c: District Manager, MOE Niagara District Office
Brad Bergeron, RWDI Air Inc.