



Ministry
of the
Environment

Ministère
de
l'Environnement

AMENDED PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE
NUMBER A150902
Issue Date: May 24, 2007

Ontario

The Corporation of the Township of Perth East
PO Box 455, 25 Mill Street East
Milverton, Ontario
N0K 1M0

Site Location: South Easthope Landfill
Lot 26, Concession 5
Perth East Township, County of Perth

You have applied in accordance with Section 27 of the Environmental Protection Act for approval of:

For the use and operation of a 5.0 hectare landfiling site within a total site area of 29.6 hectares, being known as the South Easthope Landfill

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

- a) "Regulation 347" means Ontario Regulation 347 R.R.O. 1990
- b) "Owner" means the Corporation of the Township of Perth East;
- c) "Reasonable Use Guideline" means the Ministry Guideline B-7 entitled "Incorporation of the Reasonable Use Concept into MOE Groundwater Management Activities, dated April 1994, as amended
- d) "Director" means Director, Section 39, Environmental Protection act, R.S.O. 1990, C.E-19 as amended;
- e) "District Manager" means the District Manager in the London District Office, Southwestern Region, Ontario Ministry of the Environment;
- f) "Certificate" means this Provisional Certificate of Approval including all Notices of Amendment;
- g) "Ministry" means the Ontario Ministry of the Environment;
- h) "Point of Compliance" means the boundary at which MOE Guideline B-7 shall be evaluated;
- i) "CAZ" means the Contaminated Attenuation Zone;
- j) "EPA" means the Environmental Protection Act, R.S.O. 1990, C.E-19 as amended; and
- k) "OWRA" mean the Ontario Water Resource Act, R.S.O 1990, Chapter O.40

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

TERMS AND CONDITIONS

I. GENERAL

Compliance

1. The *Owner* and *Operator* shall ensure compliance with all the conditions of this Certificate and shall ensure that any person authorized to carry out work on or operate any aspect of the *Site/System* is notified of this *Certificate* and the

conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

2. Any person authorized to carry out work on or operate any aspect of the *Site/System* shall comply with the conditions of this *Certificate*.

In Accordance

3. Except as otherwise provided for in this *Certificate*, the *Site* shall be designed, developed, built, operated and maintained in accordance with the application for this *Certificate*, dated November 21, 2006, and the supporting documentation listed in Schedule A.

Interpretation

4. Where there is a conflict between a provision of any document, including the application, referred to in this *Certificate*, and the conditions of this *Certificate*, the conditions in this *Certificate* shall take precedence.

5. Where there is a conflict between the application and a provision in any documents listed in Schedule "A", the application shall take precedence, unless it is clear that the purpose of the document was to amend the application and that the *Ministry* approved the amendment.

6. Where there is a conflict between any two documents listed in Schedule "A", other than the application, the document bearing the most recent date shall take precedence.

7. The conditions of this *Certificate* are severable. If any condition of this *Certificate*, or the application of any condition of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this *Certificate* shall not be affected thereby.

Other Legal Obligations

8. The issuance of, and compliance with, this *Certificate* does not:

- a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement; or
- b. limit in any way the authority of the *Ministry* to require certain steps be taken or to require the *Owner* and *Operator* to furnish any further information related to compliance with this *Certificate*;

Adverse Effect

9. The *Owner* and *Operator* shall take steps to minimize and ameliorate any adverse effect on the natural environment or impairment of water quality resulting from the *Site*, including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.

10. Despite an *Owner*, *Operator* or any other person fulfilling any obligations imposed by this *Certificate* the person remains responsible for any contravention of any other condition of this *Certificate* or any applicable statute, regulation, or other legal requirement resulting from any act or omission that caused the adverse effect to the natural environment or impairment of water quality.

Change of Owner

11. The *Owner* shall notify the *Director*, in writing, and forward a copy of the notification to the *District Manager*, within 30 days of the occurrence of any changes in the following information:

- i. the ownership of the *Site*;
- ii. the *Operator* of the *Site*;
- iii. the address of the *Owner* or *Operator*;
- iv. the partners, where the *Owner* or *Operator* is or at any time becomes a partnership and a copy

of the most recent declaration filed under the *Business Names Act*, R. S. O. 1990, c. B.17, shall be included in the notification;

12. No portion of this *Site* shall be transferred or encumbered prior to or after closing of the *Site* unless the *Director* is notified in advance and sufficient financial assurance is deposited with the *Ministry* to ensure that these conditions will be carried out. In the event of any change in *Ownership* of the works, other than change to a successor municipality, the *Owner* shall notify the successor of and provide the successor with a copy of this *Certificate*, and the *Owner* shall provide a copy of the notification to the *District Manager* and the *Director*.

Certificate of Registration

13. Pursuant to Section 197 of the *EPA*, no person having an interest in the *Site* shall deal in any way with the *Site* without first giving a copy of this *Certificate* to each person acquiring an interest in the *Site* as a result of the dealing.

14. Two copies of a completed Certificate of Prohibition, containing a registerable description of the *Site*, shall be submitted to the *Director* for the *Director's* signature within 60 calendar days of the date of this *Certificate* for any landfilled owned lands that are not yet registered on title to the landfill.

15. The Certificate of Prohibition shall be registered in the appropriate land registry office on title to the *Site* by the *Owner* within 10 calendar days of receiving the Certificate of Prohibition signed by the *Director*, and a duplicate registered copy shall be submitted to the *Director*.

Inspections

16. No person shall hinder or obstruct a *Provincial Officer* from carrying out any and all inspections authorized by the *OWRA*, the *EPA*, or the *PA*, of any place to which this *Certificate* relates, and without limiting the foregoing:

- a. to enter upon the premises where the approved works are located, or the location where the records required by the conditions of this *Certificate* are kept;
- b. to have access to, inspect, and copy any records required to be kept by the conditions of this *Certificate*;
- c. to inspect the *Site*, related equipment and appurtenances;
- d. to inspect the practices, procedures, or operations required by the conditions of this *Certificate*;
- and
- e. to sample and monitor for the purposes of assessing compliance with the terms and conditions of this *Certificate* or the *EPA*, the *OWRA* or the *PA*.

Information and Records Retention

17. Any information requested, by the *Ministry*, concerning the *Site* and its operation under this *Certificate*, including but not limited to any records required to be kept by this *Certificate* shall be provided to the *Ministry*, upon request, in a timely manner. Records shall be retained for two (2) years except for as otherwise authorized in writing by the *Director*.

18. The receipt of any information by the *Ministry* or the failure of the *Ministry* to prosecute any person or to require any person to take any action, under this *Certificate* or under any statute, regulation or other legal requirement, in relation to the information, shall not be construed as:

- a. an approval, waiver, or justification by the *Ministry* of any act or omission of any person that contravenes any term or condition of this *Certificate* or any statute, regulation or other legal requirement; or
- b. acceptance by the *Ministry* of the information's completeness or accuracy.

II. Design, Operations and Maintenance

19. (1) Approval is hereby granted to design and operation in accordance with Item 1 through 10 in Schedule "A".

(2) The maximum capacity for the site is 272,000 cubic meters including final cover.

20. Any changes to the Site Design and Operation Manual shall be submitted to the *Director* for acceptance prior to their implementation.

21. A sign shall be posted in a prominent location at the *Site* entrance clearly stating the *Owner's* name, Operator's name, Provisional Certificate of Approval Number, the hours of operation and contact telephone number to call with complaints or in the event of an emergency.

22. No burning or incineration of any materials shall be permitted at the *Site*.

23. Cover shall be placed over the entire working face with a minimum thickness of 150 mm of soil cover or an approved thickness of alternative cover material on a weekly basis.

24. Intermediate Cover shall be placed in areas where landfilling has been temporarily discontinued for six (6) months or more. A minimum thickness of 300 mm of soil cover or an approved thickness of alternative cover material shall be placed.

25. Clean wood chips may be used as weekly cover material (150 mm thickness)

26. The *Owner* shall undertake litter pick-up around the property in the early spring and late fall, including the fenceline and any surface water bodies on the property. The owner shall also undertake regularly scheduled litter pick-ups around the site between the months of May and September or as required after blustery days.

27. The Vector/Vermin control plan be undertaken by the *Owner* in accordance with the Vector/Vermin Control Plan set out in Schedule "B".

III. Record Keeping

28. The *Owner* shall establish and maintain a written record of daily operations at the *Site*. This record must be in a form of a log or a dedicated electronic file and it shall include as a minimum the following information:

- a) date of record;
- b) hours of operation;
- c) an approximation of the type, amount and source of waste received;
- d) an estimate on the amount of recyclable materials (depending on item - i.e. number of containers, number of tires, appliances, batteries) removed from the site by the licensed hauler retained by the owner;

29. The *Owner* shall establish and maintain a written record of all environmental emergency situations at the *Site*. This record shall be in the form of a log or a dedicated electronic file and it shall include, as a minimum, the following information:

- a) type of the emergency situation and the resulting environmental impact;
- b) actions taken to address the impact; and
- c) actions taken to prevent the re-occurrence of a similar emergency situation in the future.

30. The *Owner* shall establish and maintain a written record of complaints received about the *Site*. The records shall be kept at the municipal office. This record shall be in the form of a log or a dedicated electronic file and it shall include, as a minimum, the following information:

- a) date and time of any complaints received at the Site and their nature;
- b) name, address and telephone number of the complainant;

- c) nature of the complaint;
- d) date and description of any remedial actions taken to address the received complaints; and
- e) actions taken to prevent the re-occurrence of a similar incident, in the future.

31. The *Owner* shall establish and maintain a written record of the site inspections. This record shall be in the form of a log or a dedicated electronic file and it shall include, as a minimum, the following information:

- a) date and time of inspection;
- b) name, title and signature of trained personnel conducting the inspection; and
- c) a listing of all equipment, fencing, signs, etc. inspected and any deficiencies observed; and
- d) recommendations for remedial action and the completion date of such action.

32. The *Owner* shall establish and maintain a written record of all occurrences of unapproved waste landfilled at the *Site*. This record shall be in a form of a log or a dedicated electronic file and it shall include, as a minimum, the following information:

- a) waste generator (if known);
- b) type of unapproved waste;
- c) an approximation on the amount of unapproved waste;
- d) nature of unapproved waste;
- e) steps taken to remove waste material; and
- f) actions taken by the *Owner* to prevent recurrence.

33. The *Owner* shall retain at the Municipal Office for a minimum of two (2) years from the date of their creation, or longer if requested in writing by the *District Manager*, all records and information relating to or resulting from the activities approved under this Certificate, and shall make all records and information available at all times for inspection by a Provincial Officer. A copy of the Design, Operations and Maintenance Plan shall be kept at the *Site*.

IV. Environmental Monitoring and Trigger Mechanisms

34. (1) Groundwater and surface water monitoring shall be undertaken by the *Owner* in accordance with the environmental monitoring program set out in Schedule "C".

(2) The *Owner* may make request to changes to the monitoring program to the *District Manager* in accordance with the recommendations of the annual report as described in Condition 41 (2).

(3) Within fourteen (14) days of receiving the written correspondence from the District Office confirming that the District Office is in agreement with the proposed changes to the environmental monitoring program identified in Condition 34(2), the *Owner* shall forward a letter identifying the proposed changes and a copy of the correspondences from the District Manager and all other correspondences and responses related to Condition 34(2) and 41(2), to the *Director* requesting the *Certificate* be amended to approve the proposed changes to the environmental monitoring plan.

(4) In the event any other changes to the environmental monitoring program are proposed outside of the recommendation of the annual report, the *Owner* shall follow current ministry procedures for seeking approval for amending the Certificate of Approval.

35. The groundwater trigger mechanism plan and contingency plan is approved in accordance with Items 8 and 9 in Schedule "A".

36. In the event of a confirmed exceedance of a site-specific trigger level relating to leachate mounding or groundwater or surface water impacts due to leachate at the site's point of compliance, the *Owner* shall immediately notify the District Manager, and an investigation into the cause and the need for implementation of remedial or contingency actions shall be

carried out by the Owner in accordance with the approved trigger mechanisms and associated contingency plans.

37. If monitoring results, investigative activities and/or trigger mechanisms indicate the need to implement contingency measures, the Owner shall ensure that the following steps are taken:

- a.) The *Owner* shall notify the *District Manager*, in writing of the need to implement contingency measures, no later than 30 days after confirmation of the exceedances;
- b.) Detailed plans, specifications and descriptions for the design, operation and maintenance of the contingency measures shall be prepared and submitted by the *Owner* to the *Director* for approval; and
- c.) The contingency measures shall be implemented by the *Owner* upon approval by the *Director*.

38. The *Owner* shall ensure that any proposed changes to the site-specific trigger levels for leachate impacts to the surface water or groundwater, shall be approved in advance by the *Director* via an amendment to this *Certificate*.

V. Leachate Treatment System

39. The *Owner* shall provide to the *District Office* in writing no later than seven (7) days after implementation, any changes in the design, operation and maintenance plan relating to the LTS.

40. The owner shall submit to the *District Manager* in writing, no later than thirty (30) days prior to implementation, any plans to implement upgrades to the LTS.

VI. Annual Report

41. (1) By no later than **June 30, 2007**, and by every other June 30 thereafter, the proponent shall submit, to the MOE *District Manager*, an annual report. The report shall be prepared by an qualified professional engineer, hydrogeologist and/or surface water specialist. The report shall contain, but is not limited to, the following information:

- a) a summary of type and quantity of incoming waste accepted during the reporting period;
- b) a summary of total amount of waste received at the site, remaining capacity and remaining life expectancy of the site;
- c) a summary of the site's operation procedure and compliance as per the Design and Operation Plan;
- d) a summary of recycling operations;
- e) a section of text describing the landfill's hydrogeologic setting;
- f) a location map illustrating the site relative to nearby existing groundwater and surface water features, based on known information;
- g) a site plan(s) illustrating the approved landfill footprint and currently filled area;
- h) a water table contour map;
- i) stratigraphic cross-sections which clearly illustrate the subsurface distribution of geological materials;
- j) the report shall document sampling protocols, and describe any problems encountered during the sampling runs which may have impacted the reliability of analytical results;
- k) all data shall be interpreted by the author(s) and shall be presented in a form that is easy to follow. All analytical results for all parameters must be presented in tabular form. All analytical results for the critical contaminants must be presented graphically on time-series graphs, and must be compared to the trigger levels in accordance with the environmental contingency plan that was established in the reasonable use assessment. Trends of ground water quality must be presented graphically on Piper or Durov plots and interpreted.
- l) the report shall identify the "Reasonable Use" (Guideline B-7) of the ground water

that is to be impacted. The report should also identify expected and worst-case impacts;

m) the report shall include the calculation of major ion balances for the groundwater sample analytical results. The % difference between the sums (expressed as milliequivalents per litre) of major cations and major anions shall be calculated. The % difference is defined as:

$$\frac{3 \text{ cation} - 3 \text{ anion}}{3 \text{ cation} + 3 \text{ anion}} \times 100 = \underline{\hspace{2cm}}$$

If the analytical result of a ground water sample has an anion-cation balance % difference of greater than $\pm 10\%$, the Owner must take action to determine the cause of the imbalance, and ensure that it is addressed in future groundwater sampling and analyses;

n) the report shall include a comparison of the results of surface water sampling to the PWQOs or Interim PWQOs described in Water Management, MOEE, July 1994, as amended from time to time;

o) discussion of the Site's Contaminated Attenuation Zone (CAZ);

p) QA/QC protocol shall be described; and

q) the report shall include conclusions and recommendations of the author(s), especially as they concern future sampling parameters, frequency and protocol.

r) a discussion on the effects of the LTS to the groundwater system and the landfill.

s) copies of the boreholes logs for the site.

(2) In the event the *Owner* recommends any changes to the environmental monitoring plan in the Annual Report, the *Owner* shall provide a cover letter with the submission of the annual report that clearly indicates the report contains proposed changes to the environmental monitoring plan and request the District Office review the proposed changes. The cover letter shall be addressed to the *District Manager*.

VI. Closure Plan

42. At least 2 years prior to the anticipated date of closure of this *Site*, the *Owner* shall submit to the *Director* for approval, with copies to the *District Manager*, a detailed site closure plan pertaining to the termination of landfilling operations at this *Site*, post-closure inspection, maintenance and monitoring, and end use, based on the Landfill Closure Section of the Design and Operations Report. The plan shall include the following:

- a. a plan showing the *Site* appearance after closure;
- b. a description of the proposed end use of the *Site*;
- c. a descriptions of the procedures for closure of the *Site*, including:
 - i. advance notification to the public of the landfill closure;
 - ii. posting of a sign at the Site entrance indicating the landfill is closed and identifying any alternative waste disposal arrangements;
 - iii. completion, inspection and maintenance of the final cover and landscaping;
 - iv. site security;
 - v. removal of unnecessary landfill-related structures, buildings and facilities;
 - vi. final construction of any control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas; and
 - vii. a schedule indicating the time-period for implementing sub-conditions i) to vi) above.

- d. descriptions of the procedures for post-closure care of the Site, including:

- i. operation, inspection and maintenance of the control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
 - ii. record keeping and reporting; and
 - iii. complaint contact and response procedures;
- e. an assessment of the adequacy of and need to implement the contingency plans for leachate and methane gas; and
- f. an updated estimate of the contaminating life span of the *Site*, based on the results of the monitoring programs to date.

43. The *Site* shall be closed in accordance with the closure plan as approved by the *Director*.

Schedule "A"

1. Letter dated November 29, 2004 to Mr. Glenn Schwendinger, Township of Perth East from Mr. Mike Jones, Azimuth Environmental Consulting providing a Vector/Vermin Plan for the South Easthope and Ellice Landfills.
2. Report entitled "*Trigger Mechanism and Contingency Plan and the Design and Operations Plan for the South Easthope Landfill*" prepared for the Corporation of the Township of Perth East by Azimuth Environmental Consulting Inc. dated February 2005.
3. Letter dated May 5, 2005 addressed to Mr. Glenn Schwendinger, Corporation of the Township of Perth East from Mr. Dale I. Gable, Ministry of the Environment providing comments and requesting additional information on the submitted Design and Operations Plan.
4. Letter dated June 7, 2005 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Mike Jones, Azimuth Environmental Consulting Inc. providing a response to May 5, 2005 letter.
5. Letter dated September 14, 2005 addressed to Mr. Glenn Schwendinger, Corporation of the Township of Perth East from Mr. Dale I. Gable, Ministry of the Environment providing additional comments and requesting additional information on the submitted Design and Operations Plan.
6. Letter with supporting documentation dated December 1, 2005 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Mike Jones, Azimuth Environmental Limited Inc. providing a response to September 14, 2005 letter. The supporting documentation included the following:
 - i. Figure No. 2 - Site Location prepared by Azimuth Environmental Consultants Inc. (Project No. 02-055);
 - ii. Figure No. 2 - Site Layout prepared by Azimuth Environmental Consultants Inc. (Project No. 02-055) dated February 2005;
 - iii. Figure No. 3 - Final Contours prepared by Azimuth Environmental Consultants Inc. (Project No. 02-055) dated February 2005;
 - iv. Figure No. 4 - Waste Cell Phasing prepared by Azimuth Environmental Consultants Inc. (Project No. 02-055) dated February 2005;
 - v. Figure No. 5 - Site Configuration prepared by Azimuth Environmental Consultants Inc. (Project No. 02-055) dated February 2005.
7. Letter dated December 11, 2006 addressed to Mr. Bud Markham, Township of Perth East from Mr. Dale Gable, Ministry of the Environment requesting additional information on the updated information
8. Updated report dated February 2007 entitled "*Trigger Mechanisms and Contingency Plan and the Design and Operations Plan for the South Easthope Landfill*" prepared for the Township of Perth East by Azimuth Environmental Consultants Inc.
9. Letter dated February 26, 2007 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Mike Jones, Azimuth Environmental Consultants Inc. providing a response to comments on the pressure trench, trigger mechanisms and borehole logs.
10. Email from Mr. Mike Jones, Azimuth Environmental Inc. addressed to Mr. Dale Gable, Ministry of the Environment

providing a copy of the existing borehole logs for the site.

Schedule "B"

This Schedule forms part of the Certificate of Approval No. A151001. It describes the Vector/Vermin Control Plan referred to in Condition 27.

1. The site and site buildings shall be inspected on a regular basis as part of the normal site operations. Inspection for animal signs shall be noted on daily operations and shall be logged in the operation logs.
2. Site staff shall note the presence of any animals during standard site operations.
3. Litter collected from around the site as required by Condition 9 shall be placed in the working face.
4. Cover material as required under Condition 6 and 7 shall be placed and maintained to minimize any open refuse.
5. Ensure that the active landfilling face is minimized
6. Recyclables and recovered materials shall be segregated and removed from the site as soon as complete transfer loads are available or before the end of the year, whichever occurs first. This shall minimize the amount of cover available to animals. Materials with standing water are drained or overturned to minimize opportunities for water supply and breeding potential.
7. Grassed areas around the site are not cut since this reduces the loafing potential for gulls. Longer grass could obscure views of approaching predators so that gulls do not feel safe minimizing their residence time at the property. At selected times of the year, long grass can encourage proliferation of insects that are a food source and can encourage the presence of wildlife, however, this shorter duration event is considered to be less important and to date not pose a significant concern such that a change is warranted.
8. If wildlife is evident and populations are increasing above nuisance levels, the site operator shall undertake action to eliminate the attracting mechanism.
9. If rodents or mammals are the issue, the owner shall call a commercial extermination/pest control company to undertake a control program. The pest control company will set up traps and kill significant vermin to return the population to its non-nuisance levels.
10. If vectors are avian, the control program, must also consider controls available under the Migratory Bird Act. If a migratory bird is involved, the owner is limited to disturbance of nesting sites before hatching of young. Other disturbances techniques for adult birds could be used.
11. Activities shall be discussed in the annual monitoring program.

Schedule "C"

This Schedule forms part of the Certificate of Approval No. A151001. It describes the groundwater and surface water monitoring program referred to in Condition 34.

C.1. Groundwater

C.1.1 Groundwater Monitoring Program Objectives

The overall goal of the groundwater monitoring program is to detect and assess effects of the landfill on local water resources. The following objectives have been identified to achieve this goal:

- a) to monitor groundwater quality in the groundwater system;
- b) to identify and characterize movement of leachate related contaminants in the systems;
- c) to evaluate the effectiveness of the attenuation zone; and

d) to determine the need for implementation of contingency plans.

C.1.2 Monitoring Plan

The groundwater monitoring plan shall be carried out by the Owner to address the stated objectives and will include:

C.1.2.1 Landfill Monitoring Frequency

The groundwater monitoring program shall be conducted twice per year during the spring and fall.

C.1.2.2 Groundwater Monitor Sampling Locations

Table C-1 identifies the groundwater monitors sampling locations. If a monitoring well is dry or damaged then that well does not have to be sampled that sampling event. Static water levels shall be collected in all the groundwater monitors prior to purging and sampling:

Table C-1: Groundwater Sampling Location

OW-2	OW-3	OW-4A
OW-4B		

C.1.2.3 Analytical Parameters

The parameters which shall be measured in the field, along with the chemical and physical laboratory analyses which shall be collected on the groundwater samples from the groundwater monitors, shall include the following:

Table C-2: Analytical Parameters

pH (field)	Alkalinity	Nickel
pH (lab)		Selenium
Temperature(field)		Strontium
Conductivity (field)	Fluoride	Biochemical Oxygen Demand
Conductivity (lab)	Sulphate	Titanium
Bicarbonate	Magnesium	Zinc
Hardness as(Calcium Carbonate)	Potassium	Phenols
Chloride	Mercury	Total Phosphorus
Nitrite	Total Organic Carbon	Iron
Nitrate	Orthophosphate	Manganese
Calcium	Sodium	Phosphorus
Bromide		VOC(s)
Ammonia Nitrogen	Arsenic	
Total Dissolved Solids	Boron	
Colour	Chromium	
Aluminium	Copper	
Barium	Lead	
Cadmium		

C.1.2.4 Groundwater Monitor Inspections

Any groundwater monitoring well found to be damaged, not functioning or otherwise improperly maintained, shall within a reasonable time be properly repaired or replaced. The District Manager shall be notified prior to any well being replaced.

C.1.2.5 Groundwater Monitoring Protocols

Standard and/or generally accepted groundwater sampling (including well development, sample collection, storage and transport) and analytical protocols shall be adhered to during all groundwater monitoring sessions. Groundwater elevation measurements shall be of the static groundwater elevation within the groundwater monitoring well measured prior to well development.

C.1.2.6 Method Detection Limits

All laboratory analyses on groundwater samples shall be performed by an accredited analytical laboratory and the detection limits (MDLs) for the specific analyses should commensurate with the standards established in the current Ontario Drinking Water Quality Objectives.

C.2. Surface Water

C.2.1 Surface Water Monitoring Program Objectives

The primary goal of the Surface Water Monitoring Program is to monitor for any landfill-related impairment of surface water above Provincial Water Quality Objectives (PWQOs). Where the concentration of a specific parameter already exceeds the PWQO in background surface waters, the aim is to allow no further deterioration of surface water quality.

C.2.2 Monitoring Plan

The surface water monitoring plan shall be carried out by the Owner to address the stated objectives and will include:

C.2.2.1 Landfill Monitoring Frequency

The surface water monitoring program shall be conducted twice per year during the spring and late summer/early fall.

C.2.2.2 Surface Water Sampling Locations

Table C-3: Surface Water Sampling Locations

SW 1	SW 2	SW 3
Leachate Ponds		

C.2.2.3 Analytical Parameters

The parameters which shall be measured in the field, along with the chemical and physical laboratory analyses which shall be collected on the surface water samples, shall include the following:

Table C-4: Surface Water Analytical Parameters

pH (field)	Alkalinity	Nickel
pH (lab)	Fluoride	Selenium
Temperature(field)	Sulphate	Strontium
Conductivity (field)	Magnesium	Biochemical Oxygen Demand
Conductivity (lab)	Potassium	Titanium
Bicarbonate	Reactive Silica	Zinc
Hardness as(Calcium Carbonate)	Total Organic Carbon	Phenols
Chloride	Orthophosphate	Total Phosphorus
Nitrite	Sodium	Iron
Nitrate	Turbidity	Manganese
Calcium	Arsenic	Molybdenum
Bromide	Boron	Phosphorus
Ammonia Nitrogen	Chromium	VOC(s)
Total Dissolved Solids	Copper	
Colour	Lead	
Aluminium	Mercury	
Barium	Total Suspended Solids	
Cadmium		

C.2.2.4 Surface Water Monitoring Protocols

Standard and/or generally accepted surface water sampling (sample collection, storage and transport) and analytical protocols shall be adhered to during all surface water sampling sessions.

C.2.2.5 Method Detection Limits

All laboratory analyses on surface water samples shall be performed by an accredited analytical laboratory and the detection limits (MDLs) for the specific analyses should commensurate with the standards established in the current Provincial Water Quality Objectives.

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

- 1. The reason for Condition Nos. (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (16), (17), and (18) is to clarify the legal rights and responsibilities of the Owner.*
- 2. The reason for Condition Nos. (13), (14) and (15) are included, pursuant to subsection 197(1) of the EPA, to provide that any persons having an interest in the Site are aware that the land has been approved and used for the purposes of waste disposal.*
- 3. The reasons for Condition Nos. (19), (20), (21), (22), (23), (24), (25) and (26) are to ensure the landfill is operated in accordance with Ministry standards, and to ensure the long-term protection of the health and safety of the public and the environment.*
- 4. The reason for Condition No. (27) is to incorporate the submitted Vector/Vermin Plan into the Certificate.*
- 5. The reasons for Condition Nos. (28), (29), (30), (31), (32), (33) and (34) is to ensure the monitoring and reporting are completed in accordance with Ministry standards, and to ensure the long-term protection of the health and safety of the public and the environment.*
- 6. The reasons for Condition Nos. (35), (36), (37) and (38) is to ensure the owner has a plan with an organized set of*

procedures for identifying and responding to potential issues relating to groundwater and surface water contamination near or at the site's compliance point.

7. The reason for Condition Nos. (39) and (40) are added to ensure that Owner informs the Ministry on plans for any proposed changes to the leachate treatment system.

8. The reasons for Condition No. (41) are to ensure the Owner submits an annual summary report to the Ministry so that the landfilling operation can be evaluated to ensure compliance with the Ministry's requirements on annual operations and monitoring. This is to ensure the long-term protection of the health and safety of the public and the environment.

9. The reason for Condition Nos. (42) and (43) is to ensure the Owner has an established approved plan for the closure and post-closure maintenance of the landfill site. This is to ensure the long-term health and safety of the public and the environment.

This Provisional Certificate of Approval revokes and replaces Certificate(s) of Approval No. A150902 issued on November 14, 1988

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 and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. 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 waste disposal site is located;

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

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
2300 Yonge St., Suite 1700
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

The Director
Section 39, *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**

The above noted waste disposal site is approved under Section 39 of the Environmental Protection Act.

DATED AT TORONTO this 24th day of May, 2007

Tesfaye Gebrezghi, P.Eng.
Director
Section 39, *Environmental Protection Act*

DG/
c: District Manager, MOE London - District

Mike Jones, Azimuth Environmental Consulting Inc.