



Ontario

Ministry
of the
Environment

Provisional Certificate No. A 110302

Rec'd CRA

PROVISIONAL CERTIFICATE OF APPROVAL WASTE DISPOSAL SITE

Under The Environmental Protection Act, 1971 and the regulations and subject to the limitations thereof, this Provisional Certificate of Approval is issued to:

Haldimand-Norfolk Sanitary Landfill Inc.,
124 Princess Dr.,
Hamilton, Ontario
L8L 3L3

for the use and operation of a 6 hectare (15 acre) landfilling site

all in accordance with the following plans and specifications:

1. Application and supporting information forms
2. Site Plan of Landfilling Site A 110302

Located: Part Lot 24, Concession 1 N
Town of Haldimand (formerly
Township of North Cayuga)
Regional Municipality of Haldimand-Norfolk

which includes the use of the site only for the disposal
of the following categories of waste (NOTE: Use of the site for additional categories of
wastes requires a new application and amendments to the Provisional Certificate of
Approval) Domestic, 2% non-hazardous solid industrial and other (limited to
miscellaneous debris such as fencing from agriculture and 0.25% processed
organic waste from Caledonia STP) wastes.

and subject to the following conditions:

THIS IS A TRUE COPY OF THE
ORIGINAL CERTIFICATE MAILED

ON OCT 8 - 1980

Signed

Dated this 7th day of October, 1980

Director, Section 39,
The Environmental Protection Act, 1971



Ministry
of the
Environment

Ministère
de
l'Environnement

AMENDMENT TO PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE
NUMBER A110302
Notice No. 2

Haldimand-Norfolk Sanitary Landfill Inc.
Courtney Park Centre, 6435 Dixie Road, Unit #30
Mississauga, Ontario
L5T 1X4

Site Location: Edwards Landfill Site
Pt Lot 24, Conc. 1 NTR., East Side of Brooks Road
Haldimand County,

You are hereby notified that I have amended Provisional Certificate of Approval No. A110302 issued on October 7, 1980 as amended August 22, 2002 for a Waste Disposal Site, consisting of 6 hectares (15 acres) waste fill area within a total site area of 12.4 hectares (30.6 acres), as follows:

Pursuant to Condition 2 of the Notice dated August 22, 2002, approval is hereby granted for the re-design of the Edwards Landfill Site;

all in accordance with the application for approval dated October 18, 2002 as amended and referred to in a cover letter dated December 1, 2003, and supporting documentation as listed in Schedule "A" which is attached to this Provisional Certificate of Approval, and forms part of the Certificate.

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

DEFINITIONS:

- g. "Mitigation Measures" means measures appropriate to prevent and ameliorate adverse effects (as defined in the EPA) that relate to this Site during the operational life of the Site and following closure of the Site;
- h. "QA/QC" means quality assurance and quality control;
- i. "OWRA" means Ontario Water Resources Act, R. S. O. 1990
- j. "Certificate" means the Provisional Certificate of Approval, A110302, issued in accordance with the Environmental Protection Act, including any amendments to the Provisional Certificate of Approval and the Schedule(s),
- k. "D & O" means Design and Operations Report;
- l. "District Manager" means the District Manager of the Hamilton District Office, West-Central Region, Ontario Ministry of the Environment, or his/her representative;

- m. "Properly trained staff" means an employee who has received training as per condition of this Certificate;
- n. "PLC" means the Public Liaison Committee established for this Landfilling Site, as described in the conditions in this Certificate;
- o. "VOC" means Volatile organic compound;
- p. "Regional Director" means the Director of West-Central Region, Ontario Ministry of the Environment, or his/her representative;
- q. "RUC" means Reasonable Use Criteria.
- r. "CRA" means Conestoga-Rovers & Associates

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

TERMS AND CONDITIONS

GENERAL

- 4. Except as otherwise provided by these conditions, the Site shall be designed, developed, used, maintained and operated, and all facilities, equipment and fixtures shall be built and installed, in accordance with the Application for a Certificate of Approval for a Waste Disposal Site dated October 18, 2002, and supporting documentation, and plans and specifications listed in Schedule "A".
- 5. The requirements specified in this Certificate are the requirements under the Environmental Protection Act, R.S.O. 1990. The issuance of this Certificate in no way abrogates the Owner/Operator's legal obligations to take all reasonable steps to avoid violating other applicable provisions of this legislation and other legislation and regulations.
- 6. The requirements of this Certificate are severable. If any requirement of this Certificate, or the application of any requirement of this Certificate to any circumstance, is held invalid, the application of such requirement to other circumstances and the remainder of this Certificate shall not be affected in any way.
- 7. The Owner/Operator shall ensure compliance with all the terms and conditions of this Certificate. Any non-compliance constitutes a violation of the Environmental Protection Act, R.S.O. 1990 and is grounds for enforcement.
- 8.
 - (a) The Owner/Operator shall, forthwith upon request of the Director, District Manager, or Provincial Officer (as defined in the Act), furnish any information requested by such persons with respect to compliance with this Certificate, including but not limited to, any records required to be kept under this Certificate; and
 - (b) In the event the Owner/Operator provides the Ministry with information, records, documentation or notification in accordance with this Certificate (for the purposes of this condition referred to as "Information"),
 - (i) the receipt of Information by the Ministry;

- (ii) the acceptance by the Ministry of the Information's completeness or accuracy; or
- (iii) the failure of the Ministry to prosecute the Owner/Operator, or to require the Owner/Operator to take any action, under this Certificate or any statute or regulation in relation to the Information;

shall not be construed as an approval, excuse or justification by the Ministry of any act or omission of the Owner/Operator relating to the Information, amounting to non-compliance with this Certificate or any statute or regulation.

9. The Owner/Operator shall allow Ministry personnel, or a Ministry authorized representative(s), upon presentation of credentials, to carry out any and all inspections authorized by Section 156, 157 or 158 of the Environmental Protection Act, R.S.O. 1990, Section 15, 16 or 17 of the Ontario Water Resources Act, R.S.O. 1990, or Section 19 or 20 of the Pesticides Act, R.S.O. 1990, as amended from time to time, of any place to which this Certificate relates; and, without restricting the generality of the foregoing, to:
 - a. enter upon the premises where the records required by the conditions of this Certificate are kept;
 - b. have access to and copy, at reasonable times, any records required by the conditions of this Certificate;
 - c. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations required by the conditions of this Certificate; and
 - d. sample and monitor at reasonable times for the purposes of assuring compliance with the conditions of this Certificate.
10. (a) Where there is a conflict between a provision of any document referred to in Schedule "A", and the conditions of this Certificate, the conditions in this Certificate shall take precedence; and
(b) Where there is a conflict between documents listed in Schedule "A", the document bearing the most recent date shall prevail.
11. The Owner/Operator shall ensure that all communications/correspondence made pursuant to this Certificate includes reference to the Provisional Certificate of Approval number, A110302.
12. The Owner/Operator shall notify the Director in writing of any of the following changes within thirty (30) days of the change occurring:
 - a. change of Owner or Operator of the Site or both;
 - b. change of address or address of the new Owner;
 - c. any change of name of the company, and a copy of the most current "Initial Notice or Notice of Change" (form 1 or 2 of O. Reg. 182, Chapter C-39, R.R.O. 1990 as amended from time to time),

filed under the Corporations Information Act shall be included in the notification to the Director; and

- d. change in directors or officers of the company, and a copy of the most current "Initial Notice or Notice of Change" as referred to in 12(c), supra.
13. In the event of any change in ownership of the Site, the Owner/Operator shall notify, in writing, the succeeding owner of the existence of this Certificate, and a copy of such notice shall be forwarded to the Director.
14. Any information relating to this Certificate and contained in Ministry files may be made available to the public in accordance with the provisions of the Freedom of Information and Protection of Privacy Act, R.S.O. 1990, C. F-31.
15. All records and monitoring data required by the conditions of this Certificate must be kept on the Site for a minimum period of two (2) years from the date of their creation.

TRANSFERRAL OR ENCUMBRANCE OF SITE

16. 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 in writing and is satisfied with the arrangements made to ensure that all terms and conditions of this Certificate will be carried out and sufficient financial assurance (EPA, Part XII) is deposited with the Ministry, to ensure that these terms and conditions will be carried out.

SERVICE AREA

17. Waste categories of Industrial, Commercial and Institutional (known as "ICI waste"), generated from within the geographic boundaries of the **Province of Ontario** may be received for disposal at this Site. No municipal waste generated and/or transferred from outside the local County of Haldimand shall be received for disposal at this Site.

WASTE TYPES

18. Only **solid non-hazardous municipal waste**, including residential, commercial, institutional, and industrial wastes, including contaminated soils; and processed organic waste (i.e., dewatered sewage sludge from the Caledonia Sewage Treatment Plant), shall be received for disposal at this Site. **No hazardous waste or liquid industrial waste**, as defined in Reg. 347 and amended by Reg. 558/00, shall be disposed at this Site.

WASTE FILL RATE

19. The Site is limited to receiving **9.07 tonnes (10 tons) of waste per day** and **2812 tonnes per calendar year**.

WASTE PLACEMENT

20. No waste shall be landfilled outside of the **limit of the 6 hectares (15 acres) footprint fill area**, surrounded by a minimum 30 metres wide buffer on the east, north, and west sides, and approximately 37 metres to 158 metres wide buffer on the south side as shown on Drawings 3, 4, 5, or 6, all dated October 2002, included in the "Design and Operations Report", Item 2, in Schedule "A", as amended by Item 8 in Schedule "A" attached to this Certificate. The Site shall be developed in a progressive manner from east (Stage 1) to west (Stage 3) and landfilling shall be carried out sequentially in stages 1 to 3 as shown on Drawing 6, "Site Sequencing and Monitoring Plan" dated October 2002, included in the "Design and Operations Report", Item 2, in Schedule "A", as amended by Item 8 in Schedule "A" attached to this Certificate.
21. No waste shall be landfilled below the **base contours** shown on Drawing 4, "Base Contours for Waste Disposal", dated October 2002, included in the "Design and Operations Report", Item 2, in Schedule "A" as amended by Item 8 in Schedule "A" attached to this Certificate.
22. No waste shall be landfilled at any time above the **final contours** shown on Drawing 3, Final Contour Plan, dated October 2002, included in the "Design and Operations Report", Item 2, in Schedule "A" as amended by Item 8 in Schedule "A" attached to this Certificate. The maximum elevation of the fill area, including final cover, shall be **206.75 metres above sea level**. Final slopes above grade at the time of site closure within the waste fill area shall be within the range of 4H:1V (25%) and 20H:1V (5%).

COMPACTED CLAY LINER

23. Following excavation and/or backfilling, the foundation (sub-base) for the clay liner shall be proof rolled to ensure conformance of the soil quality and the designed hydraulic conductivity of 2×10^{-8} cm/sec or less, as documented in the Design and Operations Report, Item 2, in Schedule "A", as amended by Item 8 in Schedule "A", attached to this Certificate.
24. A compacted clay liner shall be installed in the base and sideslopes of the fill area, having a minimum thickness of **750 mm**, compacted in at least **5 lifts**, each lift not exceeding **0.15 metre** in compacted thickness, and to achieve a hydraulic conductivity of 2×10^{-8} cm/sec or less, in accordance with the Design and Operations Report, Item 2, in Schedule "A", as amended by Item 8 in Schedule "A" attached to this Certificate.
25. The excavation and/or backfilling of the foundation (sub-base) for the clay liner, and the installation of the compacted clay liner in the base and sideslopes of the fill area, shall be carried out under the direction and full-time supervision of a soils technician under the direction of a qualified geotechnical professional engineer. Responsibilities of the geotechnical professional engineer shall include maintaining the quality of the sub-base and the compacted clay liner in terms of evaluating soil suitability, water content, compaction effort and density, and to verify that the clay liner and the sub-base are constructed according to the technical specifications given in the Design and Operations Report, Item 2 in Schedule "A", as amended by Item 8 in Schedule "A" attached to this Certificate.

SITE PREPARATION REPORT

26. Following the development of a new cell in each stage, and prior to receipt of waste for disposal in the newly developed Stage, a written Site Preparation Report, prepared by a qualified geotechnical professional engineer shall be submitted to the District Manager, documenting all construction, and QA/QC activities and procedures. The Site Preparation Report shall include subsequent inspection reports for the Site, and must confirm that there is no evident cracking in the constructed liner or significant occurrence of clods, stones, branches or other material that could shorten the service life of the constructed liner or significantly increase the hydraulic conductivity of the liner. No landfilling of wastes shall occur on any portion of the liner and leachate collection system until the District Manager has received a Site Preparation Report, from the qualified professional geotechnical engineer indicating that the portion of the base liner of the leachate containment system has been constructed as required by this Certificate.

GEOMEMBRANE

27. A geomembrane shall be installed in the waste fill area, and shall be made of a 1.5 mm. high density polyethylene (HDPE), placed in direct and uniform contact with the underlying compacted clay liner. The geomembrane shall be protected against puncturing and load-induced damage at all times, including during installation. During installation, care shall also be taken to:
- a. remove wrinkles in the geomembrane;
 - b. minimize stress concentration;
 - c. ensure high quality seams;
 - d. minimize differential settlement;
 - e. minimize exposure to ultraviolet light;
 - f. prevent damage due to sliding;
 - g. prevent damage due to installation in cold conditions; and
 - h. prevent damage due to rodents.
28. The geomembrane shall be installed under the directions of a qualified inspector, who is approved by the manufacturer of the geomembrane. Responsibilities of the qualified inspector shall include inspection, sampling, and testing, to confirm the installation in accordance with the recommendations of the manufacturers, design drawings and specifications, and QA/QC procedures.

SITE DEVELOPMENT AND SITE DECOMMISSIONING

29. Prior to commencement of construction/development activities at the Site, the Owner/Operator shall consult with the Ministry of Natural Resources (MNR) on the proposed timing and procedures for construction/development of the Site, to ensure that ecological disturbances is kept to a minimum. A copy of minutes of meeting held shall be submitted to the District Manager, demonstrating how the advice of the Ministry of Natural Resources was considered in the construction/development plan. The Owner/Operator shall communicate with the MNR annually to review the impact on the ecosystem and shall detail in the Annual Report how the MNR recommendations were addressed and any comments received.
30. Upon receipt of this Certificate, the Owner/Operator shall forthwith carry out site decommissioning, of the former waste disposal area through excavation of the waste and subsequent backfilling of the

excavated area with clean uncontaminated soil, in accordance with the "Site Decommissioning Plan", Item 4 in Schedule "A", and the Design and Operations Report, (Section 6.0), Item 2 in Schedule "A", as amended by Item 8 in Schedule "A" attached to this Certificate. The excavated waste shall be segregated with all liquid and hazardous waste removed and disposed at appropriate licensed hazardous waste disposal facility. The segregated excavated waste classified as **solid non-hazardous waste** may be deposited in the newly developed Stage 1.

31. Within three (3) months following the completion of decommissioning work at the Site, a written report shall be submitted to the District Manager. The report shall include documentation pertaining to all decommissioning, construction, and QA/QC activities and procedures, and provide an assessment of any residual impacts from the existing waste. The results of the assessment shall be incorporated into the mass balance model and compared to the modeling results obtained to date. Should the modeling indicate the presence of residual contaminants, the Owner/Operator shall undertake the necessary remedial activities forthwith.

LEACHATE CHARACTERIZATION AND DISPOSAL

32. Upon commencement of landfilling, the Owner/Operator shall commence developing the projected leachate quality profile, updated leachate quantity estimate generated, and the appropriate long-term leachate management plan for the Site. The results of the leachate management plan shall be included in the first annual report for the Site, as required by this Certificate.
33. Leachate generated at the landfill Site shall be collected and disposed off-site in accordance with Section 4.5 in the Design and Operations Report, Item 2 in Schedule "A", as amended by Item 8 in Schedule "A", attached to this Certificate. Leachate and/or contaminated water collected at the Site shall not be discharged to the natural environment at any time. Leachate generated from the leachate collection system shall be pumped, transported and disposed of, as long as necessary during operation and following closure of this Site, at an off-site facility that is licensed to receive and treat leachate as per leachate generated at this Site in terms of quality and quantity. Any alternative leachate management and disposal plan must receive prior written approval of the District Manager.

LANDFILL GAS MANAGEMENT

34. Prior to commissioning of the leachate holding tank and/or the on-site building, a minimum of eight landfill gas monitoring probe nests shall be installed at the Site, at locations which shall include the southwest corner of the site, in the vicinity of the leachate storage tank and adjacent to the on-site building, all locations as identified on Drawing 6, "Site Sequencing and Monitoring Plan" dated October 2002, included in the "Design and Operations Report", Item 2 in Schedule "A", as amended by Item 8, attached to this Certificate. Each nest shall consist of two probes, with the probes screened at separate depths from each other, below ground surface, as required.
35. All landfill gas monitoring probes shall be monitored monthly (methane concentration and pressure) during frozen ground conditions (i.e., December 1 through April 30), and at least quarterly, otherwise (i.e., May through November).

SUBSURFACE MIGRATION OF LANDFILL GAS

36. The Owner/Operator shall ensure that all buildings and structures containing enclosed spaces at the Site, shall be situated, constructed and monitored in a manner which minimizes the potential for explosive hazards due to landfill gas. The Owner/Operator shall install and maintain in good working condition, methane detection and alarm equipment (with active venting or with an effective passive venting system to relieve any possible landfill gas accumulation) for all enclosed buildings at the Site. The Owner/Operator shall submit "Project Notification" to the Ministry of Labour, in accordance with the requirements of the Occupational Health and Safety Act. A carbon copy of the "Project Notification" shall be submitted to the District Manager of the Ministry of the Environment, for information.
37. The Owner/Operator shall ensure that site design plans, specifications and descriptions for the control of landfill gas are such that the subsurface migration of landfill gas meets the requirements of the Ministry's Landfill Standards Guideline, Section 4.10, including but not limited to the following:
- a. The concentration of methane gas below the ground surface at the Site boundary must be less than 2.5 per cent by volume;
 - b. The concentration of methane gas in any on-Site building or enclosed structure, and in the area immediately outside the foundation or basement floor of the building or structure, if the building or structure is accessible to any person or contains electrical equipment or a potential source of ignition, must be less than 1.0 per cent by volume
 - c. Sub-condition (b) does not apply to a leachate collection, storage or treatment facility or a landfill gas collection or treatment facility for which specific health and safety measures and procedures are in place relating to the risk of asphyxiation and the risk of explosion; and
 - d. The concentration of methane gas from the Site in any off-Site building or enclosed structure, and in the area immediately outside the foundation or basement floor of the building or structure, must be less than 0.05 per cent by volume (i.e. not present).
38. If the measured gas concentration at a gas probe exceeds the applicable limit listed in Condition 37 above, the District Manager shall be notified immediately. The gas concentrations shall be re-measured immediately and daily for a period of up to three (3) consecutive days. If these readings confirm that the applicable limit has been exceeded, the Owner/Operator shall forthwith, implement appropriate control measures.

AIR AND DUST MONITORING DURING SITE DECOMMISSIONING

39. Air monitoring program shall be implemented at the Site and at the Site boundary during the decommissioning activities. The air monitoring program shall consist of VOC canister sampling and analyses, as per USEPA TO14A method or acceptable equivalent, together with real time monitoring for Volatile Organic Compounds (VOCs), by handheld photoionization detector (PID), in accordance with Section 2.5, in the Site Decommissioning Plan, Item 4, in Schedule "A", as amended by Item 8, in Schedule "A" attached to this Certificate.

40. Based on the initial analytical results, the VOC canister sampling air monitoring program may be terminated subject to the prior approval by the Director via amendment to Condition 39 above. Where problems develop after the termination of the VOC canister sampling, the Director reserves the right to require reinstatement of the VOC canister sampling air monitoring program at any time.
41. Within four (4) days following VOC canister sampling, the analytical results of the air monitoring data shall be submitted to the District Manager. The submission shall include, as a minimum, a map of the sampling locations relative to the targeted excavation area, and wind speed and direction at the time of sampling.
42. Dust monitoring program shall be implemented at the Site and at the Site boundary during the excavation activities, in accordance with the "Site Decommissioning Plan", (Section 2.5.1), Item 4 in Schedule "A", as amended by Item 8, in Schedule "A" attached to this Certificate. The dust monitoring program shall consist of real time monitoring for dust, using a digital dust meter for particulate matter, and shall comply with the Ministry's point of impingement (POI) standard of $100 \mu\text{g}/\text{m}^3$ for PM_{10} particulate matter.
43. The Owner/Operator shall submit a weekly report of dust measurements to the District Manager. Dust concentration at or above the $100 \mu\text{g}/\text{m}^3$ standard shall be reported to the Ministry within 24 hours of the occurrence, and remedial action implemented forthwith.

GROUNDWATER WELLS/MONITORS

44. Within 60 days following completion of Site decommissioning activities, pursuant to Condition 30 above, the Owner/Operator shall install nested monitoring wells in the bedrock aquifer, and conduct bedrock aquifer investigation at the Site. The nested monitoring wells shall be installed at locations which shall include a location in close vicinity of OW4-91, MW1-01 and at the northwest corner of the Site. Notwithstanding the time requirement of this Condition, the nested monitoring well at the northwest corner of the Site may be installed later but prior to construction of Stage 3. Immediately upon their installation, the nested bedrock wells shall be included in the monitoring program pursuant to Schedule C, attached to this Certificate, and monitored in order to,
 - a. characterize the vertical and horizontal hydraulic gradient in magnitude and direction;
 - b. characterize the vertical groundwater velocity and to determine the groundwater flow direction in the regional bedrock aquifer at the Site.

The results of the bedrock aquifer investigation shall be used to validate the groundwater model used in the hydrogeological assessment of the Site, as documented in the Hydrogeologic Performance Assessment Report", Item 3, in Schedule "A", as amended by Item 8, in Schedule "A", attached to this Certificate.

45. Within 60 days of the date of this Certificate, the Owner/Operator shall submit a written report to the District Manager. The report shall include an updated survey for on-site wells, including the two wells of

the former Cayuga Gypsum Mine, the Belliveau well (located at 225 Brooks Road, Cayuga, Ontario), the Passfield well (located at 460 Townline Road, Cayuga, Ontario), and monitoring wells OW1A/B-85, OW3A/B-85, OW5A/B-91, and MW2. The survey shall identify water well users within 1000 metres radius of the Site, and shall include an assessment of the type, condition, location, reference top elevation, groundwater elevations/contours, to confirm groundwater flow direction and suitability of the wells for use as long-term groundwater monitors for the Site.

46. All on-site and off-site monitoring wells installed under the monitoring program, shall be properly capped, locked and protected from interference and/or damage. Any monitoring wells included in the ongoing monitoring program that are damaged or found to be unreliable, shall be, repaired, replaced with a new one, or properly decommissioned in accordance with O Reg 903, and a report on the well abandonment included in the annual report.
47. The Owner/Operator shall replace any on-site and off-site monitoring wells installed under the monitoring program, which are destroyed or in any way made inoperable for sampling, so that no more than one regular sampling event is missed.
48. As part of the investigation under Condition 45 above, the Owner/Operator shall, with the consent of the Gypsum Mine owner, enter the mine property and conduct a survey to identify any nearby Gypsum Mine and its associated underground structures. Any influence of these underground structures on the bedrock aquifer, shall be assessed by the landfill Owner/Operator and a written report of the findings shall be submitted to the District Manager.
49. Within 60 days of the date of this Certificate, the Owner/Operator shall submit a report prepared by a qualified professional engineer, to the satisfaction of the District Manager, to re-assess the analyses and interpretations of the results of the "Off-site Soil and Groundwater Quality Investigation, downgradient (west) of the former waste disposal area", dated October 22, 2003, prepared by Conestoga-Rovers and Associates, Item 9 in Schedule "A", with respect to the Reasonable Use Criteria (RUC), Guideline B-7. Where the assessment indicates non-compliance with RUC, the submission shall include a remedial action plan and implementation schedule to the satisfaction for the District Manager.

SURFACE WATER MANAGEMENT

50. Prior to construction of the works, the Owner/Operator shall submit an application to the Director, copy to the District Manager, and obtain approval under Section 53 (Sewage Works) of the OWRA for surface water management works, including the stormwater management pond. Surface water and stormwater shall be managed in accordance with the stormwater management plan in the Design & Operations Report (Section 4.6), Items 2 in Schedule "A", as amended by a Letter dated October 23, 2003, from Conestoga-Rovers & Associates, to the Ministry, included in Item 8, in Schedule "A" attached to this Certificate.
51. Stormwater runoff generated from the active waste fill area shall be considered contaminated and treated as leachate. The Owner/Operator shall ensure that any precipitation falling onto active waste fill areas, not under interim cover, shall be directed to the leachate collection system. If necessary, granular sumps shall be dug into the waste to facilitate drainage of contaminated stormwater towards the leachate

collection system.

ENVIRONMENTAL MONITORING

52. The Owner/Operator shall carry out monitoring programs for groundwater, leachate, surface water, and landfill gas, as summarised in Schedule "C" attached to this Certificate, and described in the Design & Operations Report (Sections 8.0 to 8.5, and in Appendix G), Item 2, in Schedule "A", as amended by letter dated October 23, 2003, from Conestoga-Rovers & Associates, to the Ministry, included in Item 8, in Schedule "A" attached to this Certificate, and in accordance with any related OWRA approvals issued for this Site. The Owner/Operator shall ensure that any proposed changes to the monitoring programs under this Certificate shall be approved in advance by the Director via an amendment to this Certificate.
53. Within three (3) months of the date of this Certificate, the Owner/Operator shall establish additional surface water sampling stations in the wetlands, off-site, subject to gaining consent of the property owner for access, and on-site, as part of the routine water monitoring program for the landfill site. Appropriate sampling stations shall be determined and reviewed with the Ministry prior to installation.
54. Within 1 year of the date of this Certificate, the Owner/Operator shall hire a qualified professional engineer to investigate the groundwater and surface water flow paths at the site and assess the interaction between groundwater and the on-site and adjacent wetlands, and/or determine whether direct runoff enters the wetlands. The findings of this investigation, including a remedial action plan and implementation, if required, shall be submitted to the District Manager.
55. Within 6 months of the date of this Certificate, the Owner/Operator, shall hire an appropriate qualified professional who, in consultation with the Ministry of Natural Resources, conduct an assessment of the impacts of the landfill operation on the adjacent natural heritage features and functions, and a report submitted to the District Manager, copy to the Ministry of Natural Resources. The assessment shall include, but not limited to the following:
 - a. documenting and describing natural heritage features and functions, prior to any construction/development;
 - b. discussing potential impacts of the landfill operation on the ecological functions provided by the site and the adjacent lands, as natural corridors and habitat for breeding birds, of particular conservation concern;
 - c. discussing potential impacts to the natural heritage features and functions caused by the removal or alteration of features on the site.
 - d. discussion of any remedial actions.
56. By January 31, 2006, the Owner/Operator shall develop a comprehensive Compliance and Trigger Level Monitoring Program, based on the surface water, groundwater and leachate database established for the Site. The program shall be submitted to the Director for approval.

TRIGGER MECHANISMS AND CONTINGENCY PLANS

57. In the event of a confirmed exceedance of a site-specific trigger level established as per Condition 56

above, relating to leachate mounding or groundwater or surface water impacts due to leachate, the Owner/Operator 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/Operator in accordance with the approved trigger mechanisms and associated contingency plans described in the Design & Operations Report (Sections 9.0 to 9.4), Items 2, in Schedule "A", as amended by Item 8, in Schedule "A" attached to this Certificate.

58. The Owner/Operator shall ensure that any proposed changes to the site-specific trigger levels for leachate impacts to the groundwater and surface water, shall be approved in advance by the Director via an amendment to this Certificate.
59. If monitoring results, investigative activities and and/or trigger mechanisms indicate the need to implement contingency measures, the Owner/Operator shall ensure that the following steps are taken:
 - a. The Owner/Operator shall notify the District Manager, the County of Haldimand and PLC, in writing, of the need to implement contingency measures;
 - b. Detailed plans, specifications and descriptions for the design, operation and maintenance of the contingency measures shall be prepared and submitted forthwith, by the Owner/Operator to the District Manager for approval; and
 - c. The contingency measures shall be implemented forthwith, by the Owner/Operator upon approval by the District Manager.

SITE SUPERVISION AND SECURITY

60. No waste shall be received, landfilled or removed from the Site unless a properly trained site supervisor or attendant is present and supervises the operations during operating hours. The Site shall be closed when a site attendant is not present to supervise landfilling operations.
61. During non-operating hours, the Owner/Operator shall ensure that the Site entrance and exit gates are locked and the Site secured against access by unauthorized persons.

SITE STAFF TRAINING PLAN

62. The Owner/Operator shall develop and maintain a training plan for Site operations employees and shall ensure that all site operations employees have been adequately trained and received on-going training with respect to the following, as amended:
 - a. Terms, conditions and operating requirements of this Certificate, A110302 and Notices for the Site;
 - b. the operation, inspection, and maintenance of the Site with respect to the approved design and operations documents;

- c. Relevant waste management legislation and regulations;
- d. Environmental concerns related to waste management at the Site;
- e. Occupational Health and Safety concerns related to waste management at the Site; and
- f. Emergency procedures and contingency plans in case of fire, spills, off-site impacts and any other emergency situations.

HOURS OF OPERATION

- 63. The Site shall be opened from **06:00 am to 6:00 pm, Monday to Friday, and from 6:00 am to 2:00 pm on Saturdays**, for site preparation, site maintenance and daily cover activities. The operating hours for receipt of waste for disposal at the Site shall be from **7:00 am to 5:00 pm, Monday to Friday, and from 7:00 am to 1:00 pm, on Saturday**. The Site shall be closed on statutory holidays.
- 64. The hours of operation may be amended from time to time to accommodate seasonal or unusual demand, based on prior consultation with the PLC and concurrence from the District Manager.

SITE OPERATIONS

- 65. Landfilling operations shall be conducted by area method in which waste shall be filled and compacted over the prepared base or on previously filled areas, as applicable, in layers and covered with daily cover at the end of each work day, in accordance with the Design and Operations Report (Section 7.4), Item 2 in Schedule "A", as amended by Items 8, in Schedule "A" attached to this Certificate.

NUISANCE CONTROL

- 66. The Owner/Operator shall take all reasonable steps to prevent off-site nuisance impacts, including visual impacts, transfer of waste, mud and/or dust from the site unto public roads due to landfill operations at the Site, and shall take all reasonable steps to ensure that the Site is inspected daily, as per Condition 91 in this Certificate, by trained personnel for any situation which may cause an adverse effect, as defined in the EPA, and to ensure that the Site is being operated in accordance with the Certificate for the Site.
- 67. The Owner/Operator shall implement control measures for litter, noise, odour, and dust, in accordance with Sections 7.6 to 7.9 in the Design and Operations Report, Item 2 in Schedule "A", as amended by Item 8 in Schedule "A" attached to this Certificate. Effectiveness of the control measures shall be reviewed and monitored regularly and updated/revised, as required, based on operational experience and complaints.
- 68. The Owner/Operator shall implement control measures for rodents, birds, vector and vermin in accordance with Section 7.10 in the Design and Operations Report, Item 2, in Schedule "A", as amended by Item 8, in Schedule "A" attached to this Certificate. Effectiveness of the control measures shall be reviewed, monitored regularly and updated/revised, as required, based on operational experience and complaints. In the event that the population of rodents, birds, or other vector or vermin become a

nuisance due to the ineffectiveness of the control measures, the Owner/Operator shall employ the services of a licensed Exterminator to conduct extermination of the rodents, birds, or other vector or vermin in a manner that is appropriate.

69. The Owner/Operator shall install visual screening berms, in accordance with the Design and Operations Report (Section 7.9), Item 2 in Schedule "A", as amended by Item 8, in Schedule "A" attached to this Certificate, and shall inspect and maintain as required, during the operating life of the landfill Site.
70. Scavenging (as defined in Reg. 347) of deposited and/or stockpiled waste, and open burning of wastes, are prohibited at the Site. Controlled removal of recycleable/reusable material from the Site may only occur in a designated paved area on the Site, and shall be supervised.
71. The Owner/Operator shall conduct inspections and ensure that appropriate controls are in place to prevent the acceptance of liquid industrial waste and hazardous waste and to prevent the acceptance of waste from outside the approved service area. Records of violations by haulers or waste generators shall be maintained in the daily records for the Site operations. The Owner/Operator shall ensure that any waste refused for disposal leaves the Site immediately, and the District Manager notified forthwith, of all waste load refusals at the Site related to requirements in this Certificate, including service area and waste types.
72. The Owner/Operator shall ensure that the leachate collection system piping in the fill area and the connecting forcemain piping which leads to the leachate holding tank, shall be cleaned out at least once per year with a high pressure wash, and video inspections conducted, as necessary, to confirm that the pipes are clean and to determine the need for more frequent cleaning. Assessment of the need to amend the cleaning frequency shall be based on regular inspections of the leachate collection system and monitoring results.
73. A thickness of at least 5 metres of compacted waste and cover material shall be maintained between any landfilled sludge (solid non-hazardous as per Reg. 347) and the granular leachate collection layer and leachate monitoring wells.

SIGNAGE

74. Signs shall be placed at the landfill Site entrance/exit indicating, at a minimum, the following:
 - a. Name of the landfill and name of the Owner/Operator;
 - b. the Ministry's Certificate of Approval Number, A110302;
 - c. Days and hours of operation and public use;
 - d. Telephone number/contact for the Owner/Operator;
 - e. Area served by the landfill;
 - f. Types of waste accepted and prohibited;
 - g. Overview of landfill complaints procedure, including a phone number for registering a complaint;
 - h. Unauthorized entry is prohibited; and
 - i. A warning against dumping wastes outside the Site.

75. Signs shall also be posted along internal access roads controlling vehicle speed, turning movements and to direct vehicles to the working face and other designated areas and facilities at the Site, as appropriate. All landfill signs shall be kept legible, in good repair, and cleaned when required.

DAILY, INTERIM AND FINAL COVERS

76. Daily, interim and final cover material shall be applied in accordance with the Design & Operations Report, (Section 7.4), Items 2 in Schedule "A", as amended by Items 8, in Schedule "A" (Responses to Agency Comments, July 2003, amended October 2003) in Schedule "A" attached to this Certificate, and as follows:
- a. **Daily Cover** - At the end of each working day, the entire working face shall be compacted and covered with a minimum thickness of 150 mm of soil cover or an approved thickness of alternative cover material. Prior to placing waste at the start of the next operating day, the existing daily cover material shall be scarified or removed to the extent practical, to ensure vertical hydraulic connection is maintained between layers of waste and to promote percolation of leachate downwards to the leachate collection system.
 - b. **Interim Cover** - In areas where landfilling ceases temporarily for a period of 6 months or more, a minimum thickness of 300 mm of soil shall be placed as interim cover. The quality of soil for use as interim cover shall, as a minimum, meet the criteria for Industrial/Commercial land use specified in Table A in the Ministry's "Guideline for Use at Contaminated Sites in Ontario", revised February 1997.
 - c. **Final Cover** - Final cover shall be applied progressively as areas of the landfill reach final waste elevations within the fill area. Prior to placement of final cover, the Owner/Operator shall submit for the approval of the Director, a report detailing the specifications, including particle size distribution of the final cover soil which shall confirm the designed infiltration rate of 0.15 m/year, as well as the protocols for testing and acceptance for on-site and off-site final cover soils. All areas of final cover shall be graded and vegetated as soon as practically possible. The final soil cap shall be regularly inspected and maintained after the installation and during the post-closure period. Without limiting the above, the Owner/Operator shall ensure for a minimum of five years after completion of the cap that the Site shall be inspected at least on a quarterly basis to ensure that there is positive drainage along the cap and that during the frost free period of the first two years following completion, such inspections shall be monthly. If any inspection indicates that there is an area of ponding or zero slope, the Owner/Operator shall take all steps necessary to provide positive drainage and rehabilitate the final cover as soon as practically possible.

ALTERNATIVE DAILY AND INTERIM COVER MATERIAL

77. Alternative materials to soil may be used as daily and interim cover material, based on an application with supporting information and applicable fee for a trial use or permanent use, submitted by the Owner/Operator to the Director, copied to the District Manager and the PLC, and as approved by the

Director via an amendment to this Certificate. The alternative material shall be non-hazardous according to Reg. 347 and will be expected to perform at least as well as soil in relation to the following functions:

- a. Control of blowing litter, odours, dust, landfill gas, gulls, vectors, vermin and fires;
- b. Provision for an aesthetic condition of the landfill during the active life of the Site;
- c. Provision for vehicle access to the active tipping face; and
- d. Compatibility with the design of the Site for groundwater protection, leachate management and landfill gas management.

FINANCIAL ASSURANCE

78. A financial assurance in the amount of **\$6,364,786.00** as specified in the Financial Assurance Report, included in Item 1, in Schedule "A" as amended by Item 11, in Schedule "A", attached to this Certificate, shall be provided by the Owner/Operator to the Director, in a form and manner acceptable to the Director. This amount shall be sufficient to pay for compliance with and performance of any action specified in this Certificate of Approval, including the closure and post-closure care of the Site and contingency plans for the Site, as required in the Ministry's Landfill Standards Guideline, Sections 5.1.1 and 5.2.1.
79. The financial assurance may be provided in one or more of the following forms: cash, irrevocable letter of credit and/or surety bond, or some other form, all satisfactory to the Director. This Certificate of Approval No. A110302, shall be included on any correspondence related to the financial assurance that is to be submitted to the Director.
80.
 - (a) The financial assurance may be provided in stages, as per Schedule "B3" attached to this certificate, as long as the amount that has been provided is always greater than the minimum amount determined in accordance with the formulae given in Schedules "B1" and "B2" attached to this Certificate and based on the Ministry's Landfill Standards Guideline, as amended. By January 31 of each year, the Owner/Operator shall provide to the Director, the financial assurance due as per Schedule "B3", with the first stage amount of **\$509,183.00** for year 2004, payable within 30 days prior to receiving waste at the Site, but no later than six (6) months of the date of this Certificate.
 - (b) By January 31 of each year, the Owner/Operator shall provide to the Director, copy to the District Manager, the estimation of costs and the amount of financial assurance as per Schedules "B1" and "B2", for the end of the preceding calendar year, to confirm the financial assurance amount posted as per Schedule "B3", in advance of that year. Any short fall of the minimum amount determined from Schedules "B1" and "B2", shall be provided to the Director forthwith.
81. The Owner/Operator shall submit to the Director, copy to the District Manager, a report regarding the review of financial assurance required by the conditions in this Certificate, by March 31, 2005, and at intervals of not more than three (3) years thereafter. The report shall include:

- a. Updates of the discount, interest and inflation rates associated with the requirements for financial assurance in this Certificate, including justifications and sources of the proposed rates; and
 - b. A report prepared by a qualified professional engineer which updates the cost estimates on which the amounts associated with the requirements for financial assurance in this Certificate, are based. The report shall take into consideration actual amounts of waste landfilled; projected rate of fill; progressive capping of completed fill areas; leachate generation rates; landfill gas generation rates; contaminating life span of the landfill with respect to groundwater, surface water and landfill gas; and any changes projected in the contingency works, or other Mitigation Measures, and annual inspection, maintenance, and monitoring costs, including any costs for leachate treatment and/or disposal and landfill gas discharge.
82. In the event that any Mitigation Measures have been carried out, the report in Condition 81 shall describe the Mitigation Measures remaining to be carried out and a certification by the Owner/Operator as to the work which has been done and materials supplied by the Owner/Operator relating to the Mitigation Measures, the fair value thereof, and the balance required to be retained as financial assurance to carry out remaining Mitigation Measures.
83. Requirements for financial assurance for this Site may be amended by the Director, from time to time, via an amendment to this Certificate, with appeal provisions under the EPA, based on a review of the financial assurance submitted by the Owner/Operator pursuant to Condition 81, or on such grounds as the Director considers necessary or advisable in relation to carrying out the purpose of financial assurance for this Site, including changes in economic factors, such as the interest, discount and inflation rates. The Owner/Operator shall provide any additional amount of financial assurance according to the next requirement date as per Condition 80, or as directed by the Director.
84. Release of financial assurance amounts required by conditions in this Certificate may only be made to the Owner/Operator upon an application by the Owner/Operator to the Director, copy to the District Manager, with supporting information, and when the Director is satisfied that the amount released is not required to carry out any remaining Mitigation Measures.
85. The financial assurance provided for this Site may be used by the Director to pay for expenses related to any planned or unplanned closure of the Site if the Owner/Operator fails, on the request of the Director or the District Manager, to perform the work or cover the expenses. The Owner/Operator shall ensure that any amount of the financial assurance used by the Director is replaced within six (6) months after it is used, unless the Director directs otherwise.

PUBLIC LIAISON COMMITTEE (PLC)

86. The Owner/Operator shall forthwith take all reasonable steps to establish, maintain and participate in a landfill Public Liaison Committee (PLC), which is to function within terms of reference for the PLC, as prepared in consultation with the interested members of the affected public, and as amended from time to time according to appropriate amending procedures. A copy of the terms of reference shall be provided to the District Manager. The PLC shall serve as a forum for dissemination, consultation,

review and exchange of information regarding the operation of the landfill Site, including environmental monitoring, maintenance, complaint resolution, and new approvals or amendments to existing approvals related to the operation of this landfill Site.

87. The Owner/Operator shall develop Terms of Reference for the PLC in consultation with interested parties, including landowners within a minimum 500 metre distance of the Site and other individuals and groups affected by the continued use of the landfill Site. The membership of the PLC shall include a Senior staff member from the County of Haldimand, and at least one member from Haldimand-Norfolk Sanitary Landfill Inc.
88. Copies of all reports or other submissions required by the conditions of this Certificate shall be made available to the PLC and the County of Haldimand, in accordance with the deadlines specified in the Conditions.
89. The Owner/Operator shall provide to the PLC and the County of Haldimand, reasonable notice and opportunities to make comments regarding any proposed amendment to this Certificate. The Owner/Operator shall forward to the Director for consideration any written comments received by the Owner/Operator and advise the Director of the essence of any verbal comments received by the Owner/Operator regarding such proposed amendment.

COMPLAINTS PROCEDURE

90. Within three months of the date of this Certificate, the Owner/Operator, in conjunction with the PLC, shall establish a public complaints response procedure for the landfill Site. The Owner/Operator shall establish and publicise forthwith, a telephone number as a "hot line" for complaints about the operation and maintenance of the landfill Site. The Owner/Operator shall be responsible for responding to a complaint in accordance with the public complaints response procedure.

INSPECTION AND RECORD KEEPING

91. The Site shall be inspected daily by landfill personnel to verify that nuisance factors associated with housekeeping procedures such as dust, litter, and odour, are under control. The Owner/Operator shall ensure that records of observations made during site inspections and daily records of Site operations, are made for each operating day during the operation of the Site, in accordance with Section 8.6 in the Design and Operations Report, Item 2, in Schedule "A", as amended by Items 8, in Schedule "A", attached to this Certificate, and that the records are retained at the Site for at least two years after they are made.
92. The Owner/Operator shall maintain a daily written record of site inspections at the site in a log book. The record shall include the following:
 - a. date and time of the inspection;
 - b. name, title and signature of trained personnel conducting the inspection;
 - c. listing of all general site areas, fencing, gates, systems inspected and deficiencies observed; and
 - d. recommendations for remedial action and the date the remedial action, if necessary, was completed.

93. Daily records shall be maintained at the Site in a log book and shall include:
- a. the date, time of arrival, name of hauler, vehicle license plate number, type, origin and quantity (tonnes) of all waste and cover material received at the site, and of all wastes rejected by the site;
 - b. the area of the Site in which waste disposal operations are taking place;
 - c. any complaints from the public received by the Owner/Operator concerning landfilling operations and a description of the action taken by the Owner/Operator in response;
 - d. the amount of leachate removed from the Site and hauled to a licensed receiver's facility off-site;
 - e. a record of litter collection activities and the application of dust suppressants;
 - f. a record of the inspections of any control, treatment, disposal or monitoring facilities; and
 - g. a description of any service interruption period of any control, treatment, disposal or monitoring facilities, the reasons for the loss of service, and action taken to restore and maintain service.
 - h. results of any tests done to determine the acceptability of waste at the site.

ANNUAL REPORT

94. The Owner/Operator shall prepare an Annual Report on the development, operations and monitoring of the Site, based on Section 8.7 in the Design and Operations Report (Items 2) in Schedule "A" as amended by Items 8, in Schedule "A" attached to this Certificate, or as from time to time amended. The report shall be prepared by a qualified consultant, and submitted to the District Manager, with copies to the Regional Director, the PLC and the County of Haldimand, by **April 30** each year, commencing 2005, and shall cover the preceding calendar year. The report shall include the following:
- a. The results and an interpretive analysis of the results of all leachate, groundwater, surface water, and landfill gas monitoring, including an assessment of leachate elevation data with respect to trigger elevations; shallow aquifer watertable elevation mapping and groundwater flow direction; regional aquifer piezometric elevation mapping and groundwater flow direction; and an assessment of the need to amend the monitoring programs and trigger mechanisms or to implement contingency measures;
 - b. Review and assessment of the effectiveness of the nuisance control programs, including the following information:
 - i. Impact and status of the Site operation on the wetlands;
 - ii. Implementation and effectiveness of active control measures;
 - iii. Changes undertaken, or required, to improve the effectiveness of nuisance control programs.
 - c. An assessment of the operation and performance of all engineered facilities, the need to amend the design or operation of the Site, and the adequacy of and need to implement the contingency plans;
 - d. Site plans showing the existing contours of the Site; areas of landfilling operation during the reporting period; areas of intended operation during the next reporting period; areas of

- excavation during the reporting period; the progress of final cover, vegetative cover, and any intermediate cover application; the progress of liner placement and leachate collection system placement; previously existing site facilities; facilities installed during the reporting period; and site preparations and facilities planned for installation during the next reporting period;
- e. Calculations of the volume of waste, daily and intermediate cover, final cover, and liner and leachate collection system material deposited or placed at the Site during the reporting period and a calculation of the total volume of Site capacity used during the reporting period;
 - f. A calculation of the remaining capacity of the Site and an estimate of the remaining Site life;
 - g. A summary of the quantity of any leachate removed and hauled from the Site to a licensed receiver during each operating week;
 - h. Summaries of the monthly, maximum daily (as available), and total annual quantity (tonnes) of waste received at the Site;
 - i. a summary of any public complaints received by the Owner/Operator and the responses made;
 - j. a discussion of any operational problems encountered at the Site and corrective action taken;
 - k. an update of the cost estimate for financial assurance and the amount which has been provided to the Director;
 - l. the status of compliance with all conditions of this Certificate, including the inspection, monitoring and reporting requirements in the conditions of this Certificate;
 - m. the extent to which the monitoring results indicate compliance with the conditions of this certificate, PWQO, ODWO, the Reasonable Use Guideline and any other relevant statutes and guidelines; and
 - n. any other information with respect to the Site which the Regional Director or District Manager may require from time to time.

SITE CLOSURE PLAN

95. At least two (2) years prior to the anticipated date of closure of this Site or the date 90 per cent of the total waste disposal volume is reached, whichever occurs first, the Owner/Operator, shall submit to the Director for approval, with copies to the District Manager, the Ministry of Natural Resources, the County of Haldimand and the PLC, a detailed Site Closure Plan pertaining to the termination of landfilling operations at this Site, post-closure inspection, maintenance and monitoring, and end-use plan for the Site. The Site closure plan shall include the following:
- a. A plan showing Site appearance after closure;

- b. A description of the proposed end-use of the Site;
- c. Descriptions of the procedures for closure of the Site, including:
 - i. advance notification of 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; and
 - vi. final construction of any control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
- d. Description 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 landfill gas; and
- f. An updated estimate of the contaminating life span of the Site, based on the results of the monitoring programs to date;
- g. An update of the cost estimate for financial assurance and the amount which has been provided to the Director.

SCHEDULE "A"

This Schedule "A" forms part of this Certificate. If there is a conflict between documents listed in Schedule "A", the document bearing the most recent date shall apply:

Selected Supporting Documentation -

1. A binder entitled "Application to Amend Provisional Certificate of Approval, No. A110302, Edwards Landfill Site, Haldimand County, November 4, 2002, prepared by Conestoga-Rovers & Associates (CRA); with an "Application for Provisional Certificate of Approval for a Waste Disposal Site, dated October 18, 2002, signed by Frank Campbell, President, as amended by a letter dated December 1, 2003, from Thomas Kolodziej, P. Eng., CRA to Dickson Odame-Osafo, P. Eng. Environmental Assessment and Approvals Branch, Ministry of the Environment, regarding corrected application form and letter of intent from Quantex Technologies Inc. Included in this binder are the following attachments:
 - a. Client/Owner/Operator Verification Documentation
 - b. Public Consultation Summary
 - c. Site Location Maps
 - d.. Financial Assurance Plan, October 2002.
2. Design and Operations Report, Edwards Landfill Site, Haldimand County, Ontario, dated October, 2002, revised November 2003, prepared by CRA., with the following drawings attached:

Drawing 18235-00 -007 - 1	Surrounding Property Plan	Site Location Plan
Drawing 18235-00 -007 - 2	Existing Conditions	
Drawing 18235-00 -007 - 3	Final Contour Plan	
Drawing 18235-00 -007 - 4	Base Contours for Waste Disposal	
Drawing 18235-00 -007 - 5	Top of Waste Contours	
Drawing 18235-00 -007 - 6	Site Sequencing and Monitoring Plan	
Drawing 18235-00 -007 - 7	Leachate Collection System	
Drawing 18235-00 -007 - 8	Typical Sections	
Drawing 18235-00 -007 - 9	Leachate Collection System Details	
Drawing 18235-00 -007 - 10	Stormwater Drainage Details	
Drawing 18235-00 -007 - 11	Site Layout for Decommissioning Activities.	
3. Hydrogeologic Performance Assessment - Updated Design, Edwards Landfill Site, October 2002, prepared by CRA
4. Site Decommissioning Plan, Edwards Landfill Site, October 2002, amended November 2003, prepared by CRA.

5. Waste Characterization Activities, Edwards Landfill Site, January 2002, prepared by CRA.
6. Phase II Environmental Site Investigation, Edwards Landfill Site, June 5, 2001, prepared by CRA.
7. Hydrogeologic Assessment, Edwards Landfill Site, November 1992, prepared by Henderson, Paddon Environmental Inc.
8. A binder entitled "Responses to Agency Comments, Application for Approval of Waste Disposal Site, Updated Design, for Edwards Landfill Site", dated July 2003, revised October 2003, prepared by CRA, with responses to Agency comments in the following sections:
 - Section 1 Responses (letter dated August 12, 2003) to MOE comments dated June 30, 2003, regarding comments on Site operations and compliance, and financial assurance;
 - Section 2 Responses to MOE comments dated June 12, 2003, regarding comments on Site design;
 - Section 3 Responses to MOE comments dated May 20, 2003, regarding comments on Site hydrogeology and surface water conditions;

A letter dated October 23, 2003, from Thomas Kolodziej, P. Eng., CRA to Dickson Odame-Osafo, P. Eng. Environmental Assessment and Approvals Branch, Ministry of the Environment, regarding Response to Ministry of the Environment letter dated October 2, 2003 with respect to Surface Water Comments;

 - Section 4 Responses to MOE letter dated April 30, 2003, regarding Haldimand County comments dated January 17, 2003;
9. A report entitled "Off-Site Investigation", dated October 22, 2003, from Thomas Kolodziej, P. Eng., CRA to Dickson Odame-Osafo, P. Eng. Environmental Assessment and Approvals Branch, Ministry of the Environment, regarding soil and groundwater quality investigation to delineate the extent of previous disposal operations impact on off-site water quality.
10. A letter dated December 1, 2003, from Thomas Kolodziej, P. Eng., CRA to Dickson Odame-Osafo, P. Eng. Environmental Assessment and Approvals Branch, Ministry of the Environment, regarding corrected application form, dated October 18, 2002, signed by Frank Campbell, and attached letter of intent from Quantex Technologies Inc. dated November 26, 2003.
11. A letter dated April 5, 2004, from Thomas Kolodziej, P. Eng., CRA, to Dickson Odame-Osafo, P. Eng. Environmental Assessment and Approvals Branch, Ministry of the Environment, regarding Response to Agency Comments dated March 23, 2004, Financial assurance.

SCHEDULE "B "

This Schedule "B" forms part of Provisional Certificate of Approval No. A110302 dated October 7, 1980 as amended August 22, 2002.

FINANCIAL ASSURANCE

B.1 Closure & Post-Closure Care

$$A = B \times (C/D)$$

where,

A = the minimum amount of financial assurance that must be provided for closure and post-closure care;

B = the total amount of financial assurance expressed as the present value at the estimated date of closure, in dollars current at that date, of an amount sufficient to cover the estimated costs for,

- (a) the planned closure of the largest area that will require final cover at any one time during the operation of the Site, including the costs of final cover and landscaping;
- (b) care and maintenance of the final cover and landscaping for the contaminating life span of the Site; and
- (c) all other expected post-closure care activities for the contaminating life span of the Site, including monitoring, analysis and reporting, the design, construction, operation, maintenance and replacement of engineered facilities and the disposal of wastes from the facilities, but not including any additional activities in the contingency plans for the Site.

C = the cumulative amount of waste that has already been deposited at the Site; and

D = the total amount of waste that will be deposited at the Site pursuant to the conditions in this Certificate of Approval.

B.2 Contingency Plans

$$F = \$0.50 \times W \times (I2/I1)$$

where,

- F = the amount of the financial assurance for contingencies;
- W = the cumulative number of tonnes of waste that have been deposited in the landfilling Site at the time the amount of financial assurance is calculated;
- I1 = the 1997 Annual Average Non-Residential Building Construction Price Index for Toronto, determined with reference to the same base year as is applicable to I2, as published by Statistics Canada under the authority of the *Statistics Act* (Canada); and
- I2 = the most recent Annual Average Non-Residential Building Construction Price Index for Toronto available at the time the amount of the financial assurance is calculated, as published by Statistics Canada under the authority of the *Statistics Act* (Canada).

B.3 Schedule of Payment for Financial Assurance

YEAR	TOTAL ANNUAL ACCUMULATED FINANCIAL ASSURANCE MOUNT
2004	\$509,183.00
2005	\$2,329,512.00
2006	\$4,149,840.00
2007	\$5,970,169.00
2008	\$6,364,786.00

SCHEDULE C

This Schedule "C" forms part of this Certificate. If there is a conflict between information provided in documents listed in Schedule "A", the information in this Schedule "C" shall apply:

GROUNDWATER, SURFACE WATER, LEACHATE AND LANDFILL GAS MONITORING PROGRAMS

Monitoring Activity	Monitoring Location	Monitoring Frequency	Monitoring Parameters
Groundwater Levels	All on-Site wells (see Note 1);	Semi-annually in May, July and November	N/A
Groundwater Quality	All on-Site wells (see Note 1 for the list of wells);	Annually in July	Inorganic chemistry, metals, PAHs, and VOCs (see Notes 2, 3, 4, and 5)
	Selected wells (TBD)	Semi-annually in May and November	Indicator parameters (see Note 7)
Surface Water Flow	SW1, SW2, SW3, SW4, and SW5 (at Wetlands)	Monthly during the first year of Site operations and subsequently on a quarterly basis in March, May, August, and November	N/A
Surface Water Quality	SW1, SW2, SW3, SW4 and SW5 (at Wetlands)	Semi-annually in March and August	Indicator parameters (see Note 8)
		Semi-annually in May and November	Inorganic chemistry, metals, PAHs and VOCs (See Notes 2, 3, 4 and 5)
Leachate Quality	leachate collection system	Annually in July	Inorganic chemistry, metals, PAHs, and VOCs, (see Notes 2, 3, 4, and 5)
Leachate Mounding	Within deposited Waste and leachate collection Systems	Quarterly	Depth of leachate mound.
Landfill Gas	Gas Probes GP1 to GP8	Monthly - December 1 through April 30, starting the third year of Site operation. Quarterly - May through November	% lower explosive limit (LEL) Methane concentration and pressure

NOTES:

1. **Monitoring Wells:** OW1A/1B-91, OW3A/3B-91, OW4A/4B-91, OW5A/5B/5C-91, OW6A/6B-92, OW8A/8B-92, OW9A/9B-92, MW1A/1B-01, MW2A/2B/2C-01; Cayuga Gypsum Mine Wells located on the Cayuga Gypsum Mine property to the west of the Site; the Belliveau well (located at (located at 225 Brooks Road, Cayuga, Ontario), the Passfield well (located at 460 Townline Road, Cayuga, Ontario); and any well constructed pursuant to Condition 44 of this Certificate.
2. **Inorganic chemistry parameters:** alkalinity, ammonia, hardness, nitrate, nitrite, TKN, chloride, sulfates, DOC, TDS, suspended solids, phenol, BOD5, COD, pH, total phosphorus, potassium, conductivity, calcium;
3. **Metals:** arsenic, barium, beryllium, boron, cadmium, total chromium, copper, iron, lead, magnesium, manganese, mercury, silver, sodium, zinc, vanadium, thallium, molybdenum, cobalt, nickel;
4. **PAHs:** naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(j)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, benzo(ghi)perylene;
5. **VOCs:** chloromethane, vinyl chloride, bromomethane, chloroethane, trichlorofluoromethane, acetone, 1,1-dichloroethene, dichloromethane, trans-1,2-dichloroethene, methyl-t-butyl ether, 1,1-dichloroethane, methyl ethyl ketone, cis-1,2-dichloroethene, chloroform, 1,2-dichloroethane, 1,1,1-trichloroethane, carbon tetrachloride, benzene, 1,2-dichloropropane, trichloroethene, bromodichloromethane, cis-1,3-dichloropropene, methyl isobutyl ketone, trans-1,3-dichloropropene, 1,1,2-trichloroethane, toluene, 2-hexanone, dibromochloromethane, 1,2-dibromoethane, tetrachloroethene, 1,1,1,2-tetrachloroethane, chlorobenzene, ethylbenzene, m,p,o-xylenes, bromoform, styrene, 1,1,2,2-tetrachloroethane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene;
6. **Comprehensive list of parameters (groundwater):** alkalinity, ammonia, arsenic, barium, boron, benzo(a)pyrene, cadmium, calcium, chloride, chromium, conductivity, copper, ethylbenzene, iron, lead, magnesium, manganese, mercury, naphthalene, nitrate, nitrite, TKN, pH, total phosphorus, potassium, silver, sodium, TDS, sulphate, zinc, benzene, 1,4 dichlorobenzene, dichloromethane, toluene, vinyl chloride, xylenes, COD, DOC, and phenol;
7. **Indicator parameters (groundwater):** alkalinity, ammonia, barium, boron, calcium, chloride, conductivity, iron, magnesium, nitrate, pH, sodium, TDS, sulphate, COD, and DOC;
8. **Indicator parameters (surface water):** alkalinity, ammonia, chloride, conductivity, iron, nitrate, nitrite, TKN, pH, total phosphorus, TDS, suspended solids, sulphate, BOD5, COD, phenol, temperature, and dissolved oxygen;
9. **Comprehensive list of parameters (surface water):** alkalinity, ammonia, arsenic, barium, benzo(a)pyrene, boron, cadmium, chloride, chromium, conductivity, copper, ethylbenzene, iron, lead, mercury, naphthalene, nitrate, nitrite, total kjeldahl nitrogen, pH, total phosphorus, total dissolved solids,

suspended solids, sulphate, zinc, biochemical oxygen demand (BOD5), chemical oxygen demand, phenol, temperature, and dissolved oxygen.

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

1. The reason for **Conditions 4 and 65** is to ensure that the landfill Site is designed, developed, operated, monitored and maintained in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider.
2. The reason for **Conditions 5, 6, 7, 8, 10 and 14** is to clarify the legal rights and responsibilities of the Owner.
3. The reason for **Condition 9** is to ensure that appropriate Ministry staff have ready access to the Site for inspection of facilities, equipment, practices and operations required by the conditions in this Certificate of Approval. This condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the EPA and OWRA.
4. The reason for **Condition 11** is to ensure that all correspondence relevant to this Certificate of Approval is properly identified by the Certificate of Approval number for ease of reference.
5. The reasons for **Conditions 12 and 16** are to restrict potential transfer or encumbrance of the Site without the approval of the Director and to ensure that any transfer or encumbrance can be made only on the basis that it will not endanger compliance with this Certificate of Approval.
6. **Condition 13** is 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.
7. The reason for **Condition 15** is to ensure the availability of records, including drawings for inspection and information purposes.
8. The reasons for **Conditions 17, 18 and 19** are to specify the approved area from which waste may be accepted at the Site, the types of waste that may be accepted for disposal at the Site, and the maximum rates at which this Site may receive waste, based on the Owner's application and supporting documentation.
9. The reason for **Conditions 20, 21, and 22** is to specify restrictions on the extent of landfilling at this Site based on the Owner's application and supporting documentation. These limits define the approved volumetric capacity of the site.
10. The reason for **Conditions 23, 24 and 27** is to ensure that the Site is designed, constructed and operated in an environmentally acceptable manner, based on the design and operations for the Site.
11. The reasons for **Conditions 25 and 28** are to ensure that the Site has been prepared and constructed in accordance with the approved design, and to ensure that the engineered facilities are properly installed and constructed to meet the design specifications and performance objectives.
12. The reasons for **Conditions 26 and 31** are to confirm that Site conditions are as expected and

preparation and construction within a new landfill cell proceed in accordance with approved design plans, technical specifications and QA/QC activities and procedures, and to confirm that any contamination and/or waste from the former waste disposal operations is properly decommissioned.

13. The reason for **Condition 29** is to ensure that ecological disturbance is kept to a minimum in order to preserve the natural heritage features and functions
14. The reason for **Condition 30** is to ensure that any contamination and/or waste resulting from former disposal operation at the Site are removed and disposed appropriately off-site. Condition 30 also provides that only waste classified as solid non-hazardous from the decommissioned waste may be transferred into the clay-lined landfilling area.
15. The reason for **Condition 32** is to determine the current and projected leachate quality and quantity generated at this Site as landfilling proceeds, and to implement an appropriate long-term leachate management plan for this Site.
16. The reason for **Condition 33** is to ensure that leachate generated at this Site is disposed of in an environmentally acceptable manner.
17. The reason for **Conditions 34 to 38** is to ensure that landfill gas generated at this Site is monitored and managed in an environmentally acceptable manner.
18. The reason for **Conditions 39 to 43** is to ensure that atmospheric emissions resulting from the Site decommissioning is managed in an environmentally acceptable manner.
19. The reasons for **Conditions 44, 45, 48, 49, 52, and 56** are to demonstrate that the landfill site performs as designed and that the impacts on the natural environment are acceptable. Regular monitoring allows for the analysis of trends over time and ensures that there is an early warning of potential problems so that any necessary remedial/contingency action can be taken.
20. The reason for **Conditions 46 and 47** is to ensure protection of the natural environment and the integrity of the groundwater monitoring network at the Site.
21. The reasons for **Conditions 50 and 51** are to ensure that surface water and stormwater is managed in an environmentally acceptable manner.
22. The reasons for **Conditions 53 to 55** are to ensure that monitoring and reporting mechanisms are in place so that the wetland and ecosystem are not adversely affected by landfill leachate.
23. The reasons for **Conditions 57 to 59** are to ensure that the Owner/Operator follows a plan with an organized set of procedures for identifying and responding to unexpected but possible problems at the Site. A remedial action / contingency plan is necessary to ensure protection of the natural environment and public health and safety.
24. The reasons for **Conditions 60 and 61** are to ensure that the Site is supervised by properly trained staff

in a manner which does not result in a hazard or nuisance to the natural environment or any person and to ensure a controlled access and integrity of the Site by preventing unauthorized access when the Site is closed and no site attendant is on duty.

25. The reason for **Condition 62** is to ensure that the Site is operated by properly trained staff in a manner which does not result in a hazard or nuisance to the natural environment or any person.
26. The reasons for **Conditions 63 and 64** are to specify the hours of operation for the landfill Site and a mechanism for amendment of the hours of operation, as may be necessary.
27. The reason for **Conditions 66 to 69, and 71** is to ensure that the Site is operated in an environmentally acceptable manner for protection of the natural environment and public health and safety.
28. The reasons for **Condition 70** are to ensure that unacceptable air emissions, smoke, potential fire hazard, and uncontrolled removal of material from waste at the Site are avoided. Open burning and scavenging of deposited waste may be detrimental to the public health and safety and damage to the natural environment.
29. The reasons for **Condition 72** are to minimize the potential for clogging of leachate collection pipes and to ensure effective operation of the leachate collection system components for as long as they are required. Failure to clean out these components on a regular basis may result in a decrease in their service lives. Regular cleaning of the leachate collection pipes is especially important during stages of landfilling when the level of both organic and inorganic constituents in the leachate is high and, consequently, the potential for clogging due to encrustation is greatest.
30. The reasons for **Condition 73** are to minimize the potential for clogging of the leachate drainage layer and to minimize temperature effects on the leachate collection system. Failure to maintain the specified minimum thickness of waste and cover material may result in a decrease in the service life of the drainage layer.
31. The reason for **Conditions 74 and 75** is to ensure that users of the Site are fully aware of important information and restrictions related to Site operations and access under this Certificate of Approval.
32. The reason for **Condition 76** is to ensure that daily and intermediate cover is used to control potential nuisance effects, to facilitate vehicle access on the site, and to ensure an acceptable site appearance is maintained. The proper closure of a landfill site requires the application of a final cover which is aesthetically pleasing, controls infiltration, and is suitable for the end use planned for the site.
33. The reason for **Condition 77** is to specify the approval requirements for use of alternative cover material at the Site.
34. The reason for **Conditions 78 to 85** is to provide for the availability of funds to carry out any necessary mitigation, closure, long-term care and monitoring of the Site
35. The reason for **Conditions 86 to 89** is to establish a forum for the exchange of information and public

dialogue on activities carried out at the landfill Site. Open communication with the public and local authorities is important in helping to maintain high standards for site operation and protection of the natural environment.

36. The reason for **Condition 90** is to ensure that any complaints regarding landfill operations at this Site are responded to in a timely and efficient manner.
37. The reasons for **Conditions 91 to 93** are to provide for the proper assessment of effectiveness and efficiency of site design and operation, their effect or relationship to any nuisance or environmental impacts, and the occurrence of any public complaints or concerns. Record keeping is necessary to determine compliance with this Certificate of Approval, the EPA and its regulations.
38. The reasons for **Condition 94** are to ensure that regular review of site development, operations and monitoring data is documented and any possible improvements to site design, operations or monitoring programs are identified, and to ensure that potential impacts on the local wetland are reviewed/updated regularly. An annual report is an important tool used in reviewing site activities and for determining the effectiveness of site design.
39. The reasons for **Condition 95** are to ensure that final closure of the Site is completed in an aesthetically pleasing manner and to ensure the long-term protection of the natural environment.

This Notice shall constitute part of the approval issued under Provisional Certificate of Approval No. A110302 dated October 7, 1980

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 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., 12th Floor
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

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

AND

The Director
Section 39, *Environmental Protection Act*
Ministry of Environment and Energy
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 waste disposal site is approved under Section 39 of the Environmental Protection Act.

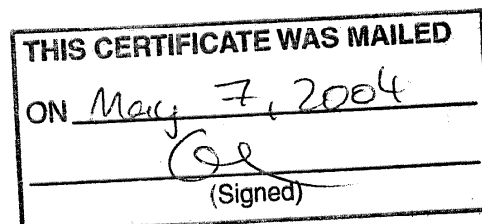
DATED AT TORONTO this 5th day of May, 2004



Ian Parrott, P.Eng.
Director
Section 39, *Environmental Protection Act*

DO/

c: District Manager, MOE Hamilton - District
Gregory D. Ferraro/ Donald C. Campbell, Conestoga-Rovers & Associates



Ministry of the Environment
Environmental Assessment and
Approvals Branch
Floor 12A
2 St Clair Ave W
Toronto ON M4V 1L5
Fax: (416) 314-8452
Telephone: (416) 314-8317

Ministère de l'Environnement
Direction des évaluations et des
autorisations environnementales
Étage 12A
2 av St Clair O
Toronto ON M4V 1L5
Télécopieur : (416) 314-8452
Téléphone : (416) 314-8317

Februray 10, 2005

Frank Campbell
Haldimand-Norfolk Sanitary Landfill Inc.
6435 Dixie Road, Unit #30
Mississauga, Ontario
L5T 1X4

Dear Mr. Campbell:

**Re: Edwards Landfill Site
Provisional Certificate of Approval A110302**

Please find attached Notice No. 3 which amends the above Certificate of Approval which approves your application for an increase in the daily fill rate for ICI waste at the Edwards Landfill Site. This Notice also includes additional conditions that you must comply with.

I would also like to take this opportunity to remind you that you must comply with all of the conditions on the Certificate of Approval which were previously imposed by the Director.

The EBR notice for this decision will be posted shortly. Should you have any concerns or questions regarding this Notice, please do not hesitate to contact me at (416) 314-8317.

Sincerely,



Ian Parrott, P.Eng.
Supervisor, Waste Unit
Director, Section 39, EPA

c: G. Carpentier – District Manager, Hamilton District Office



Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDMENT TO PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE
NUMBER A110302
Notice No. 3

Haldimand-Norfolk Sanitary Landfill Inc.
Courtney Park Center, 6435 Dixie Road, Unit No. 30
Mississauga, Ontario
L5T 1X4

Site Location: Edwards Landfill Site
Part of Lot 24, Concession 1, NTR, East Side of Brooks Road
Haldimand County.

You are hereby notified that I have amended Provisional Certificate of Approval No. A110302 issued on October 7, 1980, as amended August 22, 2002 and May 5, 2004 for a Waste Disposal Site, consisting of 6 hectares (15 acres) waste fill area within a total Site area of 12.4 hectares (30.6 acres), as follows:

FILL RATE INCREASE FROM 9.07 TONNES/DAY TO 500 TONNES/DAY

Approval is hereby granted to revise the waste fill rate at the landfill Site from 9.07 tonnes per day to 500 tonnes per day. The fill rate consists of the addition of 490.93 tonnes per day of Institutional, Commercial and Industrial (ICI) waste to the existing approved rate of 9.07 tonnes (10 tons) of waste per day, all in accordance with the application, supporting documentation, and terms and conditions of approval specified in this Notice.

DOCUMENTATION

12. Binder entitled " Application to Amend Waste Fill Rate, Provisional Certificate of Approval No. A110302' Edwards Landfill Site, 160 Brooks Road, Cayuga, Ontario, May 26, 2004", prepared by Conestoga-Rovers & Associates, with an Application for Provisional Certificate of Approval for a Waste Disposal Site" dated May 26, 2004, signed by Frank Campbell, President, Haldimand-Norfolk Sanitary Landfill Inc., as amended by attachment to a letter dated September 9, 2004.
13. Report entitled "Traffic Impact Study, Edwards Landfill Site, Haldimand County", dated August, 2004, prepared by McCormick Rankin Corporation.
14. Letter dated September 9, 2004, from Gregory D. Ferraro, Conestoga-Rovers & Associates, to Dickson Odame-Osafo, Ministry of the Environment, regarding response to comments (June 29, 2004) on application for fill rate amendment to 500 tonnes per day.

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

TERMS AND CONDITIONS

WASTE FILL RATE

Condition 19 of the Notice dated May 5, 2004 is hereby amended such that the new Condition 19 reads as follows:

19. The maximum rate at which the Site may receive waste is 500 tonnes per day, and shall consist of up to 491.0 tonnes per day of Institutional, Commercial and Industrial (ICI) waste, and 9.0 tonnes per day of non-hazardous municipal waste.

Condition 30 of the Notice dated May 5, 2004 is hereby amended such that the new Condition 30 reads as follows:

30. By March 11, 2005, the Owner/Operator shall commence the works involved with the site decommissioning of the former waste disposal area through excavation of the waste and subsequent backfilling of the excavated area with clean uncontaminated soil, in accordance with the "Site Decommissioning Plan", Item 4 in Schedule "A", and the Design and Operations Report, (Section 6.0), Item 2 in Schedule "A", as amended by Item 8 in Schedule "A" attached to the Certificate. The excavated waste shall be segregated with all liquid and hazardous waste removed and disposed at appropriate licensed hazardous waste disposal facility. The segregated excavated waste classified as **solid non-hazardous waste** may be deposited in the newly developed Stage 1 of the Site.

The following new conditions are hereby added:

TRAFFIC CONTROL

96. By March 31, 2005, the Owner/Operator shall retain a qualified consultant to carry out study to assess the suitability of Brooks road to sustain the traffic volumes and loads associated with the Site operations. The findings of this study, including a proposed improvement/upgrade, if required, and implementation schedule, shall be submitted to the District Manager, copy to the County of Haldimand.
97. The Owner/Operator shall ensure that vehicles carrying materials to and from the Site enroute along Haldimand County Road #56 and Highway #3. This condition does not apply to vehicles for local pick-up of Institutional, Commercial and Industrial (ICI) waste and local residents, using the landfill facility for waste disposal.
98. The Owner/Operator shall ensure that advance warning signage are installed along Highway #3, in both directions, on the approach to Brooks Road, to alert drivers that turning trucks should be expected at the intersection.

Reasons

The reasons for this amendment to the Certificate of Approval No. A110302 are as follows:

1. The reason for **Condition 19** is to specify the maximum rate at which this Site may receive waste, based on the Owner's application and supporting documentation.
2. The reason for **Condition 30** is to ensure that any contamination and/or waste resulting from former disposal operation at the Site are timely removed and disposed appropriately off-site under favourable seasonal conditions to avoid nuisance and/or adverse environmental impacts. Condition 30 also provides that only waste classified as solid non-hazardous from the decommissioned waste may be transferred into the clay-lined landfilling area at the Site.
3. The reason for **Condition 96** is to ensure that public roads servicing the Site have adequate capacity to withstand the increased truck volume and heavy-loads resulting from the Site operations.
4. The reason for **Conditions 97 and 98** is to ensure that truck traffic impact on the immediate local community is limited to the existing main roads. Condition 98 also provides for public safety against the increased traffic.

This Notice shall constitute part of the approval issued under Provisional Certificate of Approval No. A110302 dated October 7, 1980

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 waste disposal site is located;

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

This Notice must be served upon:

The Secretary*

The Environmental

The Director

Environmental Review Tribunal
2300 Yonge St., 12th Floor
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

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

AND

Section 39, *Environmental Protection Act*
Ministry of Environment and Energy
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 waste disposal site is approved under Section 39 of the Environmental Protection Act.

DATED AT TORONTO this 10th day of February, 2005



Ian Parrott, P.Eng.
Director
Section 39, *Environmental Protection Act*

DO/

c: District Manager, MOE Hamilton - District
Gregory D. Ferraro/ Donald C. Campbell, Conestoga-Rovers & Associates



Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDMENT TO PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE
NUMBER A110302
Notice No. 4
Issue Date: January 9, 2007

Haldimand-Norfolk Sanitary Landfill Inc.
6435 Dixie Rd, No. 30
Mississauga, Ontario
L5T 1X4

Site Location: Edwards Landfill Site
Lot 24, Concession 1 NTR, N. Cayuga
Haldimand County,

You are hereby notified that I have amended Provisional Certificate of Approval No. A110302 issued on July 10, 1980, as subsequently amended August 22, 2002, May 5, 2004 and February 10, 2005 for the operation of a Waste Disposal Site, consisting of 6 hectares (15 acres) waste fill area within a total Site area of 12.4 hectares (30.6 acres) , as follows:

AMENDMENT TO NOTICE #3 DATED FEBRUARY 10, 2005

Pursuant to an Order of the Environmental Review Tribunal in file No. 05-026, dated November 22, 2006, Notice #3 dated February 10, 2005 is hereby amended in accordance with the following documentation which are added to Schedule "A" and form part of the Provisional Certificate of Approval A032014, and subject to the following terms and conditions:

Documentation

15. Report entitled "Geotechnical Investigation - Brooks Road Assessment, Haldimand County, Ontario", dated March 18, 2005, prepared by Inspec-Sol Inc.
16. Letter received July 18, 2005, from Edward WW. Martin, Haldimand County, to Donald C. Campbell, Conestoga-Rovers & Associates, regarding Haldimand County, Engineering Division staff comments on report entitled "Geotechnical Investigation on Brooks Road Assessment, Haldimand County, Ontario", dated March 18, 2005 (Document #15 above).
17. Letter dated August 17, 2005, from Donald C. Campbell, Conestoga-Rovers & Associates, with attached letter dated August 17, 2005, from Hassan Gilani and Bruce Polan, Inspec-Sol Inc., to Edward W. Martin, Manager, Environmental Services Division, Haldimand County, accepting Haldimand County staff recommendations in the letter received July 18, 2005, above.

Terms and Conditions

Condition 19 of Notice #3 dated February 10, 2005 is hereby amended by increasing the daily fill rate, such that the new Condition 19 reads as follows:

19. The maximum rate at which the Site may receive waste shall be 500 tonnes per day, and shall consist of Institutional, Commercial and Industrial (ICI) solid non-hazardous waste.

Condition 96 of Notice #3 dated February 10, 2005 is hereby revoked and replaced with the following condition:

96. Prior to the acceptance of waste at the Site, the Owner/Operator shall:

- (a) apply a 300 mm thick granular "A" layer of gravel, meeting all applicable Haldimand County and Ontario Provincial Standards Specification (OPSS) to the 'Improvement Area' which is that area of Brooks Road, between Highway #3 (also known as Talbot Road) and Townline Road;
- (b) provide an initial double surface treatment to the 'Improvement Area' meeting OPSS;
- (c) pave the entranceway/exit to the landfill and the parking area for the landfill Site, as well as 30 metres of the road approach on Brooks Road to the entranceway/exit to the Site, extending both north and south of the entranceway/exit, in base asphalt and top coat. The thickness of asphalt shall be a base coarse of 60 mm (HL8), and a surface coarse of 50 mm (HL3);
- (d) comply with an agreement dated November 27, 2006, between the Owner/Operator and the Haldimand County, with respect to maintenance and remedial work to the 'Improvement Area'.

Condition 97 of Notice #3 dated February 10, 2005 is hereby revoked and replaced with the following condition:

97. The Owner/Operator shall ensure that vehicles carrying waste or materials to and from the Site shall only travel along Haldimand County Road #56 and Highway #3. This condition does not apply to vehicles that transport Institutional, Commercial and Industrial (ICI) waste that has been collected only within Haldimand County and west of Brooks Road, provided that the Owner/Operator shall ensure that at no time shall any vehicle carrying waste or materials to and from the Site travel along Townline Road to access the Site.

The reasons for this amendment to the Certificate of Approval No. A110302, are as follows:

1. This Notice of Amendment is issued as directed by an Order of the Environmental Review Tribunal in file No. 5-026, dated November 22, 2006.
2. The reasons for **Condition 19** are to specify the maximum rate at which this Site may receive waste, based on the Owner's application and supporting documentation; and to ensure that only Institutional, Commercial and Industrial solid non-hazardous waste is received and deposited at the Site.
3. The reason for **Condition 96** is to ensure that public road servicing the Site (described as "Improvement Area") meets the applicable standards. Condition 96 also ensures that the "Improvement Area" is maintained regularly as per agreement between the Owner/Operator of the Site and Haldimand County.
4. The reason for **Condition 97** is to ensure that truck traffic impact on the immediate local community is limited to the existing main roads.

This Notice shall constitute part of the approval issued under Provisional Certificate of Approval No. A110302 dated July 10, 1980

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

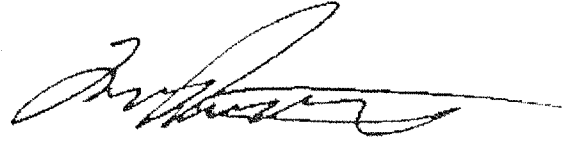
The Director
Section 39, *Environmental Protection Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* 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 9th day of January, 2007



Ian Parrott, P.Eng.
Director
Section 39, *Environmental Protection Act*

DO/

c: District Manager, MOE Hamilton - District
Frank Campbell, Haldimand-Norfolk Sanitary Landfill Inc.

JUL 30 2007

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18235



Ontario

Ministry
of the
Environment

Ministère
de
l'Environnement

AMENDMENT TO PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE
NUMBER A110302

Notice No. 5

Issue Date: July 19, 2007

Haldimand-Norfolk Sanitary Landfill Inc.
6435 Dixie Road, No. 30
Mississauga, Ontario
L5T 1X4

Site Location: Edwards Landfill Site
Part of Lot 24, Concession 1, NTR
Haldimand County.

You are hereby notified that I have amended Provisional Certificate of Approval No. A110302 issued on July 10, 1980, as subsequently amended for a waste disposal Site, consisting of 6 hectares (15 acres) waste fill area within a total site area of 12.4 hectares (30.6 acres), as follows:

1. UPDATED FINANCIAL ASSURANCE

Pursuant to Condition 81 of the Certificate, the updated financial assurance is hereby incorporated in the Provisional Certificate of Approval No. A110302, to reflect the financial assurance required based on current economic factors, as provided in a letter dated March 31, 2005, from CRA to the Ministry of the Environment, listed as Item 18 in Schedule "A", attached to this Certificate;

2. SCHEDULE OF PAYMENT FOR FINANCIAL ASSURANCE

Schedule "B3" of the Certificate dated May 5, 2004, is hereby revoked and replaced with a revised Schedule "B3" attached to this Certificate. The revised Schedule "B3" sets out a new schedule of payment for the Financial Assurance;

all in accordance with the documentation listed below and subject to the terms and conditions in this Certificate.

Documentation

The following documentation is included in Schedule "A" and forms part of the Certificate No. A110302:

18. Letter dated March 31, 2005, from Thomas Kolodziej, P. Eng., CRA to Ian Parrott, Ministry of the Environment, Re; Financial Assurance Update, Condition 81, Certificate of Approval No. A110302, Edwards Landfill Site, 160 Brooks Road, Cayuga, Ontario.

19. Letter dated March 21, 2007, from Gregory D. Ferraro, P. Eng., CRA to the Director, Section 39, EPA, Ministry of the Environment, Re: Condition 56, Certificate of Approval No. A110302, Edwards Landfill Site, 160 Brooks Road, Cayuga, Ontario.
20. Documentation entitled "Edwards Landfill Site Public Liaison Committee, Terms of Reference", Reference: CRA18235TofROct04

Conditions

1. Condition 30 of Notice #3 dated February 10, 2005 is hereby amended by adding the following

Within thirty (30) days of Stage 1 becoming available to receive waste, the Owner/Operator shall submit to the District Manager a detailed schedule for the excavation of the existing waste, which excavation shall commence no later than November 1, 2007. By the end of the first week of each calendar month, the Owner/Operator shall submit to the District Manager, a monthly status report regarding the activities on the development, decommissioning and operation of the site, with the first status report due by July 27, 2007, until the excavation of the existing waste is fully completed.

2. Condition 56 of the Certificate is hereby revoked and replaced with a new Condition 56 as follows:

56. By June 30, 2008, the Owner/Operator shall develop a comprehensive Compliance and Trigger Level Monitoring Program, based on the surface water, groundwater and leachate database established for the Site. The program shall be submitted to the Director for approval.

3. Condition 78 of the Certificate is hereby revoked and replaced with a new Condition 78 as follows:

78. An updated financial assurance in the amount of **\$7,582,482.00** as specified in a letter entitled "Financial Assurance Update", Item 19 in Schedule "A" attached to this Certificate, shall be provided by the Owner/Operator to the Director, in a form and manner acceptable to the Director. This amount shall be sufficient to pay for compliance with and performance of any action specified in this Certificate of Approval, including the closure and post-closure care of the Site and contingency plans for the Site, as required in the Ministry's Landfill Standards Guideline, Sections 5.1.1 and 5.2.1.

4. Condition 80 of the Certificate is hereby revoked and replaced with a new Condition 80 as follows:

80. (a) The financial assurance may be provided in stages, as per the revised Schedule "B3" attached to this certificate, as long as the amount that has been provided is always greater than the minimum amount determined in accordance with the formulae given in Schedules "B1" and "B2" attached to this Certificate and based on the Ministry's Landfill Standards Guideline, as amended. By January 31 of each year, the Owner/Operator shall provide to the Director, the financial assurance due as per the revised Schedule "B3", with the first stage amount of **\$606,599.00** for year 2007, payable within 30 days prior to receiving waste at the Site, but no later than six (6) months of the date of this Certificate.

- (b) By January 31 of each year, the Owner/Operator shall provide to the Director, copy to the District Manager, the estimation of costs and the amount of financial assurance as per Schedules "B1" and "B2", for the end of the preceding calendar year, to confirm the financial assurance amount posted as per the revised Schedule "B3", in advance of that year. Any short fall of the minimum amount determined from Schedules "B1" and "B2", shall be provided to the Director forthwith.

PUBLIC LIAISON COMMITTEE (PLC)

5. Condition 86 of the Certificate is hereby revoked and replaced with a new Condition 86 as follows:

86. The Owner/Operator shall forthwith, establish, maintain and participate in a landfill PLC, which shall function in accordance with the Terms of Reference for the PLC, as amended from time to time, listed as Item 20 of Schedule "A", attached to this Certificate. Any amendment to the Terms of Reference must be approved by the District Manager. The PLC shall serve as a forum for dissemination, consultation, review and exchange of information regarding the operation of the landfill Site, including environmental monitoring, maintenance, complaint resolution, and new approvals or amendments to existing approvals related to the operation of this landfill Site.

6. Condition 87 of the Certificate is hereby revoked and replaced with a new Condition 87 as follows:

87. The Owner/Operator shall invite representation from the following groups to participate on the PLC:
- (a) the County of Haldimand;
 - (b) Haldimand Against Landfill Transfer (HALT);
 - (c) Six Nations of the Grand River;
 - (d) landowners within a minimum 500 metre distance of the Site;
 - (e) residents of Haldimand County; and
 - (f) Lower Grand River Land Trust.

The number of representatives from each group shall be as specified in the Terms of Reference approved by the District Manager.

The following new condition is hereby added to the Certificate

99. (a) The Owner/Operator shall reimburse the Crown for costs incurred by the Crown to retain a dedicated Provincial Officer who will function as an Environmental Inspector for the Site for the duration of the decommissioning activities at the Site. The Terms of Reference for the Environmental Inspector shall be determined on an annual basis by the Regional Director following consultation with the Owner/Operator. The Terms of Reference shall, as a minimum, specify the following:
- i. the duties of the Environmental Inspector;

- ii. the annual costs of the Environmental Inspector;
 - iii. any support equipment or facilities such as office space, telephone equipment required to carry out the the required duties;
 - iv. the work hours of the Environmental Inspector.
- (b) After the decommissioning activities have been completed, the Regional Director may exercise his/her discretion to reduce the number of hours per week that the Environmental Inspector is required.
- (c) A copy of the Terms of Reference shall be provided to the PLC.

REVISED SCHEDULE "B "

This revised Schedule "B" forms part of Provisional Certificate of Approval No. A110302 dated October 7, 1980, as amended August 22, 2002, and as subsequently amended by this Notice.

FINANCIAL ASSURANCE

B.1 Closure & Post-Closure Care

$$A = B \times (C/D)$$

where,

A = the minimum amount of financial assurance that must be provided for closure and post-closure care;

B = the total amount of financial assurance expressed as the present value at the estimated date of closure, in dollars current at that date, of an amount sufficient to cover the estimated costs for,

- (a) the planned closure of the largest area that will require final cover at any one time during the operation of the Site, including the costs of final cover and landscaping;
- (b) care and maintenance of the final cover and landscaping for the contaminating life span of the Site; and
- (c) all other expected post-closure care activities for the contaminating life span of the Site, including monitoring, analysis and reporting, the design, construction, operation, maintenance and replacement of engineered facilities and the disposal of wastes from the facilities, but not including any additional activities in the contingency plans for the Site.

C = the cumulative amount of waste that has already been deposited at the Site; and

D = the total amount of waste that will be deposited at the Site pursuant to the conditions in this Certificate of Approval.

B.2 Contingency Plans

$$F = \$0.50 \times W \times (I2/I1)$$

where,

F = the amount of the financial assurance for contingencies;

W = the cumulative number of tonnes of waste that have been deposited in the landfilling Site at the time the amount of financial assurance is calculated;

I1 = the 1997 Annual Average Non-Residential Building Construction Price Index for Toronto, determined with reference to the same base year as is applicable to I2, as published by Statistics Canada under the authority of the *Statistics Act* (Canada); and

I2 = the most recent Annual Average Non-Residential Building Construction Price Index for Toronto available at the time the amount of the financial assurance is calculated, as published by Statistics Canada under the authority of the *Statistics Act* (Canada).

Revised B.3 Schedule of Payment for Financial Assurance

YEAR	TOTAL ANNUAL ACCUMULATED FINANCIAL ASSURANCE AMOUNT
2007	\$606,599.00
2008	\$1,148,746.00
2009	\$3,317,336.00
2010	\$5,485,926.00
2011	\$7,582,482.00

The reason(s) for this amendment to the Certificate of Approval is (are) as follows:

1. The reason for the amendment to Condition 30 is to provide specific timelines and monitoring on the activities carried out at the site, all for the benefit of the environment.
2. The reason for the amendment to Condition 56 is to allow re-commencement of landfill activities to establish sufficient database from the updated design and operating conditions of the site.
3. The reasons for the amendment to Conditions 78 and 80 are to update the financial assurance for the Site to reflect the variations in the amount required based on current economic factors, and to set new payment schedule for the financial assurance to replace the lapsed schedule. The financial assurance must be sufficient and up-to-date to pay for compliance with and performance of any action specified in the Certificate.
4. The reason for the amendment to Conditions 86 and 87 is to clarify statements in the conditions.
5. The reason for Condition 99 is that it is in the public interest to require the provision of a dedicated inspector during the Site decommissioning and remediation activities.

This Notice shall constitute part of the approval issued under Provisional Certificate of Approval No. A110302 dated July 10, 1980

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 19th day of July, 2007



Ian Parrott, P.Eng.
Director
Section 39, *Environmental Protection Act*

DO/

c: District Manager, MOE Hamilton - District

Thomas Kolodziej, Conestoga Rovers & Associates



AMENDMENT TO PROVISIONAL CERTIFICATE OF APPROVAL
WASTE DISPOSAL SITE

NUMBER A110302

Notice No. 6

Issue Date: February 14, 2011

Haldimand-Norfolk Sanitary Landfill Inc.
6435 Dixie Rd, No. 30
Mississauga, Ontario
L5T 1X4

Site Location: Edwards Landfill Site
North Cayuga
Lot 24, Concession 1 NTR
Haldimand County,

You are hereby notified that I have amended Provisional Certificate of Approval No. A110302 issued on October 7, 1980, as subsequently amended for a Waste Disposal Site, consisting of 6 hectares (15 acres) waste fill area within a total site area of 12.4 hectares (30.6 acres), as follows:

ADMINISTRATIVE AMENDMENT

Pursuant to an Order of the Environmental Review Tribunal in file No. 05-026, dated November 22, 2006, Notice #2 dated May 5, 2004 is hereby amended, to correct Condition 17 and Condition 18 in Notice #2, to reflect the Order of the Environmental Review Tribunal in file No. 05-026, dated November 22, 2006.

SERVICE AREA

Condition 17 in *Notice #2 dated May 5, 2004* is hereby amended by deleting the last sentence, such that the new Condition 17 reads as follows:

17. Waste categories of Industrial, Commercial and Institutional (known as "ICI waste"), generated from within the geographic boundaries of the **Province of Ontario** may be received for disposal at this Site.

WASTE TYPES

Condition 18 in *Notice #2 dated May 5, 2004* is hereby amended by deleting the word "municipal" from the condition, such that the new Condition 18 reads as follows:

18. Only **solid non-hazardous** Industrial, Commercial and Institutional **waste** (known as "ICI waste"), including contaminated soils, and processed organic waste (i.e., dewatered sewage sludge from the Caledonia Sewage Treatment Plant), shall be received for disposal at this Site. **No hazardous waste or liquid industrial waste**, as defined in Reg. 347, as amended by Reg. 558/00, shall be disposed at this Site.

The reason(s) for this amendment to the Certificate of Approval is as follows:

Conditions **17** and **18** are amended to reflect the Order of the Environmental Review Tribunal in file No. 05-026, dated November 22, 2006, to clarify the service area and waste types that may be disposed at the Site.

This Notice shall constitute part of the approval issued under Provisional Certificate of Approval No. A110302 dated October 7, 1980

CONTENT COPY OF ORIGINAL

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
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

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 14th day of February, 2011

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

DO/
c: District Manager, MOE Hamilton - District
Frank Campbell, Haldimand-Norfolk Sanitary Landfill Inc.



AMENDMENT TO ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER A110302

Notice No. 7

Issue Date: October 9, 2012

2270386 Ontario Limited
162 Cumberland St, No. 300
Toronto, Ontario
M5R 3N5

Site Location: Brooks Road Landfill Site
160 Brooks Rd
Pt Lot 24, Conc. 1 NTR, North Cayuga
Haldimand County, Ontario

You are hereby notified that I have amended Approval No. A110302 issued on October 7, 1980, as subsequently amended for a Waste Disposal Site, consisting of 6 hectares (15 acres) waste fill area within a total site area of 12.4 hectares (30.6 acres), as follows:

1. CHANGE OF SITE NAME, OWNERSHIP/OPERATOR AND ADDRESS

Pursuant to an Order of the Ontario Superior Court of Justice in file No. 07-CL-7162, dated Thursday, April 5, 2012, approval is hereby granted for the change in the Ownership/Operator, and a change in the address of the Owner/Operator, and a change in the name of the site as follows:

A. The name and address of the Owner/Operator of the Site is changed:

FROM: HALDIMAND-NORFOLKS SANITARY LANDFILL INC.
6435 DIXIE ROAD, No. 30
MISSISSAUGA, ONTARIO
L5T 1X4

TO: 2270386 ONTARIO LIMITED
C/O JOEL MICKELSON
162 CUMBERLAND STREET, SUITE 300
TORONTO, ONTARIO
M5R 3N5, CANADA

B. The name of the Site is changed:

FROM: EDWARDS LANDFILL SITE

TO: BROOKS ROAD LANDFILL SITE;

2. UPDATED FINANCIAL ASSURANCE

Pursuant to Condition 81 in Notice #2 dated May 5, 2004, the financial assurance is hereby updated and incorporated into the Environmental Compliance Approval No. A110302, to reflect the financial assurance required based on the current economic factors, as provided in a letter dated January 25, 2012, revised March 13, 2012, from CRA to the Ministry of the Environment, listed as Items 21 and 22 respectively, in Schedule "A", attached to this Approval;

3. SCHEDULE OF PAYMENT FOR FINANCIAL ASSURANCE

Pursuant to Condition 80 in Notice #2 dated May 5, 2004, Schedule "B3" in Notice #5 dated July 19, 2007, is hereby revoked and replaced with a revised Schedule "B3" attached to this Approval. The revised Schedule "B3" sets out a new schedule of payment for the Financial Assurance;

all in accordance with the documentation listed below and subject to the terms and conditions in this Approval.

DOCUMENTATION

The following documentation is included in Schedule "A" and forms part of the Environmental Compliance Approval No. A110302:

21. Letter dated January 25, 2012, from Gregory D. Ferraro, P. Eng., Conestoga-Rovers & Associates to Agather Garcia-Wright, Director, Environment Approvals Branch, Ministry of the Environment, Re: Financial Assurance Update, Condition 81, Certificate of Approval No. A110302.

22. Letter dated March 13, 2012, from Gregory D. Ferraro, P. Eng., Conestoga-Rovers & Associates to Dickson Odame-Osafo, P. Eng., Senior Review Engineer, Environment Approvals Branch, Ministry of the Environment, Re: Response to Ministry of the Environment Comments dated February 21, 2012, Financial Assurance Update Environmental Compliance Approval No. A110302.

23. Letter dated April 19, 2012, from Brahm Rosen, S F Partners Inc., Receiver and Manager of Haldimand-Norfolk Sanitary Landfill, to the Director, Approvals Branch, Ministry of the Environment, Re: Notice of Change of Ownership and Change of Operator, Haldimand-Norfolk Sanitary Landfill Inc., Certificate of Approval # A110302.

24. E-mail of May 1, 2012, from Brahm Rosen, S F Partners Inc., Receiver and Manager of Haldimand-Norfolk Sanitary Landfill, to Ricki Allum, Approvals Branch, Ministry of the Environment, Re: Clarification/confirmation of items in the Notice of Change of Ownership and Change of Operator, Haldimand-Norfolk Sanitary Landfill Inc., Certificate of Approval # A110302.

25. Letter dated May 23, 2012, from Brahm Rosen, S F Partners Inc., Receiver and Manager of Haldimand-Norfolk Sanitary Landfill, to the Director, Approvals Branch, Ministry of the Environment, Re: Clarification of the name of transferee in the Notice of Change of Ownership and Change of Operator, Haldimand-Norfolk Sanitary Landfill Inc., Certificate of Approval # A110302.

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

DEFINITIONS:

Definition (b) in Notice #1 dated August 22, 2002 and in Notice #2 dated May 5, 2004 are hereby revoked and replaced by new definition (b) as follows:

(b) "Approval" or "ECA" means the Environmental Compliance Approval (formerly known as Provisional Certificate of Approval), issued in accordance with the Environmental Protection Act;

Definition (c) in Notice #1 dated August 22, 2002 is hereby revoked and replaced by new definition (c) as follows:

(c) "Owner" and "Operator" means 2270386 Ontario Limited.

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

TERMS AND CONDITIONS

1. Condition 78 of the ECA is hereby revoked and replaced with a new Condition 78 as follows:

78. An updated financial assurance in the amount of **\$9,233,916.00**, as specified in the Ministry of the Environment letter

dated April 25, 2012, based on the review of a letter entitled "Financial Assurance Update", Item 21, as revised by Item 22, Schedule "A", attached to this Approval, shall be provided by the Owner/Operator to the Director, in a form and manner acceptable to the Director. This amount shall be sufficient to pay for compliance with and performance of any action specified in this ECA, including the closure and post-closure care of the Site and contingency plans for the Site, as required in the Ministry's Landfill Standards Guideline, Sections 5.1.1 and 5.2.1.

2. Condition 80 of the ECA is hereby revoked and replaced with a new Condition 80 as follows:

80. (a) The financial assurance may be provided in stages, as per the revised Schedule "B3" attached to this Approval, as long as the amount that has been provided is always greater than the minimum amount determined in accordance with the formulae given in Schedules "B1" and "B2" attached to this Approval and based on the Ministry's Landfill Standards Guideline, as amended. By January 31 of each year, the Owner/Operator shall provide to the Director, the financial assurance due as per the revised Schedule "B3", with the amount due now (i.e., January 31, 2012) as **\$3,693,566.00** for year 2012, payable within 30 days of the date of this Approval.

(b) By December 31 of each year, the Owner/Operator shall provide to the Director, copy to the District Manager, the estimation of costs and the amount of financial assurance as per Schedules "B1" and "B2", for that calendar year, to confirm the financial assurance amount posted as per the revised Schedule "B3", in advance of that year. Any short fall of the minimum amount determined from Schedules "B1" and "B2", shall be provided to the Director forthwith.

REVISED SCHEDULE "B "

This revised Schedule "B" forms part of the Environmental Compliance Approval No. A110302 dated October 7, 1980, as amended August 22, 2002, and July 19, 2007, and as subsequently amended by this Notice.

FINANCIAL ASSURANCE

B.1 Closure & Post-Closure Care

$$A = B \times (C/D)$$

where,

A = the minimum amount of financial assurance that must be provided for closure and post-closure care;

B = the total amount of financial assurance expressed as the present value at the estimated date of closure, in dollars current at that date, of an amount sufficient to cover the estimated costs for,

(a) the planned closure of the largest area that will require final cover at any one time during the operation of the Site, including the costs of final cover and landscaping;

(b) care and maintenance of the final cover and landscaping for the contaminating life span of the Site; and

(c) all other expected post-closure care activities for the contaminating life span of the Site, including monitoring, analysis and reporting, the design, construction, operation, maintenance and replacement of engineered facilities and the disposal of wastes from the facilities, but not including any additional activities in the contingency plans for the Site.

C = the cumulative amount of waste that has already been deposited at the Site; and

D = the total amount of waste that will be deposited at the Site pursuant to the conditions in this ECA.

B.2 Contingency Plans

$$F = \$0.50 \times W \times (I2/I1)$$

where,

F = the amount of the financial assurance for contingencies;

W = the cumulative number of tonnes of waste that have been deposited in the landfilling Site at the time the amount of financial assurance is calculated;

I1 = the 1997 Annual Average Non-Residential Building Construction Price Index for Toronto, determined with reference to the same base year as is applicable to I2, as published by Statistics Canada under the authority of the *Statistics Act* (Canada); and

I2 = the most recent Annual Average Non-Residential Building Construction Price Index for Toronto available at the time the amount of the financial assurance is calculated, as published by Statistics Canada under the authority of the *Statistics Act* (Canada).

Revised B.3 Schedule of Payment for Financial Assurance

YEAR	TOTAL ANNUAL ACCUMULATED FINANCIAL ASSURANCE AMOUNT
2011	\$2,768,143.00
2012	\$3,693,566.00
2013	\$5,540,349.00
2014	\$7,387,133.00
2015	\$9,233,916.00

REASONS

The reason(s) for this amendment to the Approval is (are) as follows:

The reason for this amendment is to update the ECA to reflect the change of the ownership/Operator for the Site, as per the Order of the Ontario Superior Court of Justice in file No. 07-CL-7162, dated Thursday, April 5, 2012. Conditions 78 and 80 are amended to update the financial assurance for the Site to reflect the variations in the amount required based on current economic factors, and to set new payment schedule for the financial assurance to replace the lapsed schedule. The financial assurance must be sufficient and up-to-date to pay for compliance with and performance of any action specified in the ECA.

This Notice shall constitute part of the approval issued under Approval No. A110302 dated July 10, 1980, as amended.

In accordance with Section 139 of the Environmental Protection Act, 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 environmental compliance approval or each term or condition in the environmental compliance 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.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

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, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1 of
the 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) 212-6349, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 9th day of October, 2012

Tesfaye Gebrezghi, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

DO/
c: District Manager, MOE Hamilton - District
Gregory D. Ferraro, Conestoga-Rovers & Associates



AMENDMENT TO ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER A110302

Notice No. 8

Issue Date: June 6, 2013

2270386 Ontario Limited
 162 Cumberland St, No. 300
 Toronto, Ontario
 M5R 3N5

Site Location: Brooks Road Landfill Site
 160 Brooks Rd Part of Lot 24, Concession 1, North of Talbot Road
 Haldimand County,

You are hereby notified that I have amended Approval No. A110302 issued on October 7, 1980' as subsequently amended for a Waste Disposal Site, consisting of 6 hectares (15 acres) waste fill area within a total site area of 12.4 hectares (30.6 acres), as follows:

1. ALTERNATIVE DAILY COVER TRIAL MATERIAL - TARP

Pursuant to Condition 77 in Notice #2 of ECA, No. A 110302, dated May 5, 2004, approval is hereby granted for six (6) month trial use of tarp as an alternative daily cover material on the waste disposal site; and

2. ALTERNATIVE DAILY COVER MATERIALS - WOODCHIPS AND COMPOST

Pursuant to Condition 77 in Notice #2 of ECA, No. A 110302, dated May 5, 2004, approval is hereby granted for use of woodchips and compost as an alternative daily cover material on the waste disposal site;

all in accordance with the following supporting documentation and subject to the terms and conditions listed herein:

Documentation

The following items are hereby added to Schedule "A" and form part of the Environmental Compliance Approval No. A110302:

26. Environmental Compliance Approval Application dated May 16, 2012, signed by Richard Weldon, Vice President, 2270386 Ontario Limited.

27. Report entitled "Alternate Daily Cover (ADC)" Brooks Road Landfill, dated May 2012, prepared by GENIVAR Inc.

Terms and Conditions

Condition 76(a) in Notice #2 dated May 5, 2004, is hereby amended by adding compost and woodchips as daily cover materials, such that new **Condition 76(a)** reads as follows:

Daily Cover - Soil, Compost and Woodchips

76. (a) At the end of each working day, the entire working face shall be compacted and covered with a minimum thickness of 150 mm of soil, or compost, or woodchips as daily cover material. Prior to placing waste at the start of the next operating day, the existing daily cover material shall be scarified or removed to the extent practical, to ensure vertical hydraulic connection is maintained between layers of waste and to promote percolation of leachate downwards to the leachate collection system.

The following new terms and conditions are hereby added to the ECA No. A110302:

Alternative Daily Cover Trial Material - Tarp

100. (a) Tarp may be used as alternative daily cover material at the site, for a six-month trial period from the date of this Notice, as described in Item 27 of Schedule "A", listed under Documentation in this Notice.

(b) The trial use of tarp as alternative daily cover material may be extended in six-month trial increments up to two (2) years in total, each increment subject to a written approval of the District Manager prior to use, based on a report submitted under Condition 106 below.

101. The use of tarp as daily cover shall be limited to the sloped working face of the landfilling area, where waste deposition will be resumed the next site operating day, otherwise soil, or compost or woodchips cover shall be used in accordance with Condition 76(a) of the Certificate.

102. Under unforeseeable circumstances, where waste deposition cannot be resumed the next site operating day at the tipping face covered with tarp as alternative daily cover, the Owner/Operator shall use soil, or compost or woodchips cover in accordance with Condition 76(a) of the Certificate.

103. The use of tarp as a daily cover material shall be suspended at any time, and daily soil cover, or compost or woodchips shall be applied in accordance with Condition 76(a) of the Certificate, if the District Manager or a Provincial Officer instructs the Owner/Operator in writing to take such action, or as the Owner/Operator determines, due to unfavourable weather or mechanical conditions which do not permit the use of the tarp as daily cover.

104. A stockpile of soil, or compost, or woodchips containing three (3) days of cover needs shall be maintained on-site near the tipping area for use by the Owner/Operator when the alternative cover material (tarp) cannot be used.

105. (a) The Owner/Operator shall notify the District Manager, in writing, at least one (1) week prior to commencement of any six-month trial period.

(b) Tarp shall not be used as a daily cover material after any six-month trial period unless the Owner/Operator has submitted a report as required by Condition 106 below, and has obtained a written approval by the District Manager, that the use of tarp as a daily cover material at the site may continue.

(c) The Owner/Operator shall ensure that the Site inspection and record keeping as required in Condition 91 of Notice #2 dated May 5, 2004, includes data related to the trial use of tarp as a daily cover material, in its performance at least, as well as soil in relation to its functions to control blowing litter, odours, landfill gas if present, vectors, fires, ability to withstand weather conditions (wind, rain, snow, etc.), and provision for an aesthetic condition of the landfill during the active life of the site.

106. (a) Within two weeks preceding the end of any six-month trial period, the Owner/Operator shall submit to the District Manager, a report on the results of the trial use of tarp as a daily cover material, which is expected to perform at least, as well as soil in relation to its functions to control blowing litter, odours, landfill gas if present, vectors, fires, its ability to withstand weather conditions (wind, rain, snow, etc.), and provision for an aesthetic condition of the landfill during the active life of the site. The report shall identify any operational problems, environmental impacts encountered during the trial period, and how each was dealt with to resolve the problem and/or the impacts.

(b) At the end of the culmination of two (2) years of trial, should the Owner/Operator wish to continue further, the use of tarp as Alternative Daily Cover over a long-term, an application with supporting information and applicable fees, copied to the District Manager, must be submitted and approved by the Director via an amendment to this Certificate. The supporting information must justify the performance of the tarp as daily cover at least, as well as soil in relation to the following functions:

- i. control of blowing litter, odours, dust, landfill gas if present, seagulls, vectors, vermin and fires;
- ii. provision for aesthetic condition of the landfill during the active life of the site.

- iii. provision for vehicle access to the active tipping face; and
- iv. the report shall summarise any operational problems, environmental impacts encountered during the trial period, and how each was dealt with to resolve the problem and/or the impacts.

REASONS

The reason(s) for this amendment to the Approval is (are) as follows:

The reason for **Conditions 100 to 106** is to allow a trial period over a short periodic intervals to assess the performance of tarp as alternative daily cover material which is expected to perform at least, as well as soil in relation to the functions to control blowing litter, odours, landfill gas, vectors, fires, and provision for vehicular access to the tipping face and aesthetic condition of the landfill during the active life of the site.

This Notice shall constitute part of the approval issued under Approval No. A110302 dated October 7, 1980

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, S.O. 1993, c. 28 (Environmental Bill of Rights), 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 environmental compliance approval or each term or condition in the environmental compliance 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.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

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, Suite 1500
Toronto, Ontario
M5G 1E5

AND

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

AND

The Director appointed for the purposes of Part II.1 of
the 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) 212-6349, Fax: (416) 314-3717 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, 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.ebr.gov.on.ca, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

CONTENT COPY OF ORIGINAL

DATED AT TORONTO this 6th day of June, 2013

Tesfaye Gebrezghi, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

DO/
c: District Manager, MOE Hamilton - District
Frank Ford, Genivar Inc.