

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER A032203

Issue Date: December 16, 2023

Waste Management of Canada Corporation
5768 Nauvoo Rd
Warwick, Ontario
N0M 2S0

Site Location: Twin Creeks Environmental Centre
5768 Nauvoo Rd Watford
Warwick Township, County of Lambton
N0M 2S0

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the use and operation of a 101.8 hectare waste disposal site (landfill) within a total site area of 301 hectares.

For the purpose of this environmental compliance approval, the following definitions apply:

"Agricultural Waste" for the purposes of this ECA, is defined as municipal yard waste, wood chips, food waste and minimal amounts of solid manure which would only be accepted or used for the purpose of seeding or operating an active aerobic compost pile and does not include liquid manure;

"AQMP " means an Air Quality Monitoring Program;

"Construction Phase " is defined as the period of time from the start of construction of Phase 1 of the expanded landfill to the date of first receipt of waste in Phase 1;

"Contaminating Lifespan" refers to the period of time, after closure until the site finally produces contaminants at concentrations below levels which have unacceptable health or environmental effects;

"Crown " means Her Majesty the Queen in the Right of Ontario;

"Director " means any Ministry employee appointed in writing by the Minister pursuant to section 5 of the EPA as a Director for the purposes of Part II.1 of the EPA;

“District Manager ” means the District Manager in the Ministry of the Environment, Conservation and Parks Sarnia District Office;

“District Office ” means the Ministry of the Environment, Conservation and Parks Sarnia District Office;

“EA” refers to the document titled “Warwick Landfill Expansion Environmental Assessment” , dated September 2005, which includes Discussion Papers 1 through 9 included in the Appendices A to F of the Environmental Assessment. EA also includes responses from the Owner dated:

1. March 10, 2006 “Waste Unit’s Final Comments Dated March 8, 2006”
2. February 14, 2006 “Leachate Recirculation”
3. February 14, 2006 “Response to February 1, 2006 Correspondence”
4. January 13, 2006 “Waste Management Response to Comments received from Warwick Landfill Expansion EA” including attachments entitled:
 - i. Response to the Township of Warwick;
 - ii. Response to Thomson Rogers;
 - iii. Table of responses to various agencies, public and First Nations Submissions;
 - iv. Landfill Gas Assessment, Warwick Landfill Baseline Conditions Report prepared by RWDI dated January 12, 2006;
 - v. Memo dated March 10, 2006;
 - vi. June 12, 2006 “Response to May 1, 2006 Ministry Review ”;

“EAA” refers to the Ontario Environmental Assessment Act, R.S.O. 1990, c.E.18, as amended;

"Environmental Compliance Approval" or "ECA" or "Approval" means this entire provisional Environmental Compliance Approval document, issued in accordance with Section 20.2 of the EPA , and includes any schedules to it, the application and the supporting documentation listed in schedule "A";

“Environmental Inspector” refers to the individual employed by the Ministry of the Environment, Conservation and Parks to inspect the Site;

"EPA " means Environmental Protection Act , R.S.O. 1990, c.E.19, as amended;

“EPB” refers to the Environmental Permissions Branch of the Ministry of the Environment, Conservation and Parks;

"Hydraulic Trap" indicates a situation where hydraulic gradients from the surrounding soil are inward toward the landfill waste and associated leachate collection system;

"Mini-Transfer Area" means the mini-transfer public convenience drop-off area as described and identified in the June 2009 Development & Operations Report that is identified in Item 59 of Schedule "A" and whose location is identified as "Expansion Mini-Transfer" in figure MT2 that is contained in the 2009 Development & Operations Report;

“MECP” or “Ministry” refers to the Ontario Ministry of the Environment, Conservation and Parks;

"Operation Phase" is defined as the period of time from the date that Phase 1 of the expanded landfill area first receives waste until the landfill site reaches final capacity;

“Operator ” has the same meaning as “operator” as defined in s.25 of the EPA;

“Owner ” means Waste Management of Canada Corporation and its successors and assigns;

"O. Reg. 101/94" means Ontario Regulation 101/94 as amended;

"OWRA" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;

“PA ” means the Pesticides Act , R.S.O. 1990, c.P.11, as amended;

"Preparation Report" refers to a report documenting that the subsequent stage of the landfill has been constructed in accordance with the approved design plans and specifications;

“Poplar System” is the irrigation area located on top of the cap of the Existing Site (old landfill) that is used for the phytoremediation of leachate that is generated at the Site per Items 63 through 65 of Schedule “A” and Figure 2 of Item 16 on Schedule "A";

“Poplar Plantation” is the irrigation area located on native soil to the south of the Site that is used for the phytoremediation of irrigation liquid that satisfies the Effluent Limit criteria per the OWRA Section Approval for the Site, Item 39 of Schedule “A”, and Appendix N11 of Item 30 on Schedule "A";

"Provincial Officer" means any person designated in writing by the Minister as a provincial officer pursuant to section 5 of the OWRA or section 5 of the EPA or section 17 of PA;

"PWQO" refers to the Provincial Water Quality Objectives;

"Recyclable Waste" means waste that are glass, plastic, aluminium or steel cans, gypsum wallboard, newspapers, cardboard and/or other materials for which there is a secured market;

“Regional Director” refers to the Director of the Ministry of the Environment’s Southwestern Regional Office;

"Regulation 232 " or "Reg. 232" or "O. Reg. 232/98" means Ontario Regulation 232/98 (Landfilling Sites) made under the EPA, as amended;

"Regulation 347 " or "Reg. 347 " or "O. Reg. 347" means Regulation 347, R.R.O. 1990, made under the EPA, as amended;

“Site” refers to the Twin Creeks Landfill Site and lands owned by the Owner described as:

Firstly, Part of Lots 19 and 20, Concession 3, S.E.R., and Part of Lot 20, 21 and 22, Concession 4, S.E.R. and Part of the Road Allowance between Lots 21 and 22, Concession 4, S.E.R., shown as Parts 1, 2 and 3 on Plan 25R-9125 and Part 2 on Plan 25R-1903, Save and Except Part 1 on Plan 25R-6184, Township of Warwick, County of Lambton; and

Secondly, Part of Lot 20, Concession 3 S.E.R., shown as Part 1 on Plan 25R-6184, Township of Warwick, County of Lambton;

"Traditional agricultural crop production" means standard crop production, nursery and horticultural crops, agro-forestry, conservation uses but not greenhouses or any accessory agricultural buildings and structures;

"Undertaking" refers to the proposed undertaking as described in the Warwick Landfill Expansion Environmental Assessment;

"WIFN" refers to Walpole Island First Nation; and

"WPLC" refers to the Warwick Public Liaison Committee.

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

TERMS AND CONDITIONS

1.0 GENERAL

Compliance

- 1.1 This Approval revokes all previous Approvals and Notices of Amendment issued under Part V of the Environmental Protection Act for this Site. The approval given herein, including the terms and conditions set out, replaces all previously issued Approvals and related terms and conditions under Part V of the Act for this Site.
- 1.2 The Owner and Operator shall ensure compliance with all the conditions of this Approval and shall ensure that any person authorized to carry out work on or operate any aspect of the Site is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- 1.3 Any person authorized to carry out work on or operate any aspect of the Site shall comply with the conditions of this Approval.

In Accordance

- 1.4 Except as otherwise provided by this Approval, the Site shall be designed, developed, built, operated and maintained in accordance with the documentation listed in the attached Schedule "A".
- 1.5 (a) Construction and installation of aspects described in Schedule "A" must be completed within 5 years of the later of:
1. the date this Approval is issued; or
 2. if there is a hearing or other litigation in respect of the issuance of this Approval, the date that this hearing or litigation is disposed of, including all appeals.
- (b) Notwithstanding Condition 1.5(a), ongoing constructed aspects that are pertinent to the Major Works identified in Conditions 4.1 to 4.7 including the landfill liner, landfill capping, landfill gas management infrastructure, leachate collection and recirculation infrastructure shall be constructed in accordance with the documentation in the attached Schedule "A" that pertain to the final design of the Site.
- (c) This Approval ceases to apply in respect of the aspects of the Site that have not been constructed or installed before the later of the dates identified in Conditions 1.5(a).

Interpretation

- 1.6 Where there is a conflict between a provision of any document listed in Schedule "A" in this Approval, and the conditions of this Approval, the conditions in this Approval shall take precedence.
- 1.7 Where there is a conflict between the application and a provision in any document listed in Schedule "A", the application shall take precedence, unless it is clear that the purpose of the document was to amend the application and the Ministry approved the amendment.
- 1.8 Where there is a conflict between any two documents listed in Schedule "A", the document bearing the most recent date shall take precedence.
- 1.9 The conditions of this Approval are severable. If any condition of this Approval, or the application of any condition of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

Other Legal Obligations

- 1.10 The issuance of, and compliance with, this Approval does not:
- (a) relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement; and
 - (b) limit in any way the authority of the Ministry to require certain steps be taken or to require the Owner and Operator to furnish any further information related to compliance with this Approval.

- (c) The Owner shall ensure that:
 - (i) all equipment discharging to atmosphere are approved under Section 9 of the ECA where applicable; and
 - (ii) all effluent is discharged in accordance with the OWRA where applicable.

Adverse Effect

- 1.11 The Owner and Operator shall take steps to minimize and ameliorate any adverse effect on the natural environment or impairment of water quality resulting from the present, past and historical operations at the Site. Such steps may include accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.
- 1.12 Despite an Owner, Operator, or any other person fulfilling any obligations imposed by this Approval, the person remains responsible for any contravention of any other condition of this Approval or any applicable statute, regulation, or other legal requirement resulting from any act or omission that caused the adverse effect to the natural environment or impairment of water quality.
- 1.13 At no time shall the Owner or Operator allow the discharge of a contaminant that causes or is likely to cause an adverse effect be permitted.

Change of Ownership

- 1.14 The Owner shall notify the Director, in writing, and forward a copy of the notification to the District Manager, within 30 days of the occurrence of any changes in the following information:
 - (a) the ownership of the Site;
 - (b) the Operator of the Site;
 - (c) the address of the Owner or Operator; and
 - (d) the partners, where the Owner or Operator is or at any time becomes a partnership and a copy of the most recent declaration filed under the Business Names Act, R. S. O. 1990, c. B.17, shall be included in the notification.
- 1.15 No portion of this Site shall be transferred or encumbered prior to or after closing of the Site unless the Director is notified in advance and sufficient financial assurance is deposited with the Ministry to ensure that these conditions will be carried out.
- 1.16 In the event of any change in ownership of the Site, other than change to a successor municipality, the Owner shall notify the successor of and provide the successor with a copy of this Approval, and the Owner shall provide a copy of the notification to the District Manager and the Director.

Registration on Title Requirement

- 1.17 Prior to dealing with the property in any way, the Owner shall provide a copy of this Approval and any amendments, to any person who acquires an interest in the property as a result of the dealing.
- 1.18 (a) If not already completed, within ninety (90) calendar days from the date of issuance of this

Approval, the Owner shall submit to the Director a completed Certificate of Requirement which shall include:

- (i) a plan of survey prepared, signed and sealed by an Ontario Land Surveyor, which shows the area of the Site where waste has been and is to be deposited at the Site;
 - (ii) proof of ownership of the Site;
 - (iii) a letter signed by a member of the Law Society of Upper Canada or other qualified legal practitioner acceptable to the Director, verifying the legal description provided in the Certificate of Requirement;
 - (iv) the legal abstract of the property; and
 - (v) any supporting documents including a registerable description of the Site.
- (b) If not already completed, within fifteen (15) calendar days of receiving a Certificate of Requirement authorized by the Director, the Owner shall:
- (i) register the Certificate of Requirement in the appropriate Land Registry Office on the title to the property; and
 - (ii) submit to the Director and the District Manager, written verification that the Certificate of Requirement has been registered on title.

Registration on Title Requirement - Contaminant Attenuation Zone (CAZ)

1.19 If not already completed, or if required at any time, within thirty (30) calendar days from the date of establishing a contaminant attenuation zone (CAZ) (overburden and/or bedrock aquifers) in either fee simple or by way of a groundwater easement, the Owner shall submit to the Director a completed Certificate of Requirement which shall include:

- (a) If rights are obtained in fee simple, the Owner shall provide:
- (i) documentation evidencing ownership of the CAZ obtained in compliance with Regulation 232, as amended;
 - (ii) a completed Certificate of Requirement and supporting documents containing a registerable description of the CAZ; and
 - (iii) a letter signed by a member of the Law Society of Upper Canada; or other qualified legal practitioner acceptable to the Director, verifying the legal description of the CAZ.
- (b) within fifteen (15) calendar days of receiving a Certificate of Requirement signed or authorized by the Director, the Owner shall:
- (i) register the Certificate of Requirement in the appropriate Land Registry Office on the title to the property; and
 - (ii) submit to the Director and the District Manager, a written verification that the Certificate of Requirement has been registered on title.
- (c) If rights are obtained by way of a groundwater easement, the Applicant shall:
- (i) provide a copy of the agreement for the easement;
 - (ii) provide a plan of survey signed and sealed by an Ontario Land Surveyor for the CAZ; and
 - (iii) submit proof of registration on title of the groundwater easement to the Director and District Manager;
- (d) The Owner shall not amend, or remove, or consent to the removal of the easement or CAZ from title without the prior written consent of the Director.

Certificate of Withdrawal of Requirement

- 1.20 If the Applicant wants to withdraw the Certificate of Requirement, the Applicant shall:
- (a) submit to the Director, a request for a Certificate of Withdrawal of Requirement; and its supporting documents, outlining the reasons for the Withdrawal of the Requirement.
 - (b) submit to the Director:
 - (i) a plan of survey of the area where waste was deposited signed and sealed by an Ontario Land Surveyor and for the Site or CAZ;
 - (ii) the legal abstract of the Site or CAZ – or area where waste was deposited;
 - (iii) completed Certificate of Withdrawal of Requirement containing a registerable description of the Site or CAZ or area where waste was deposited; and
 - (iv) a letter signed by a member of the Law Society of Upper Canada or other qualified legal practitioner acceptable to the Director verifying the legal description of the Certificate of Withdrawal of Requirement.
 - (c) within fifteen (15) calendar days of receiving a Certificate of Withdrawal of Requirement authorized by the Director, the Applicant shall:
 - (i) register the Certificate of Withdrawal of Requirement in the appropriate Land Registry Office on the title to the Site or CAZ or area where waste was deposited; and
 - (ii) submit to the Director and District Manager a copy of the registered document together with a copy of the PIN Abstract confirming the registration.

Inspections by the Ministry

- 1.21 No person shall hinder or obstruct a Provincial Officer from carrying out any and all inspections authorized by the OWRA, the EPA, the PA, the SDWA or the NMA, of any place to which this Approval relates, and without limiting the foregoing:
- (a) to enter upon the premises where the approved works are located, or the location where the records required by the conditions of this Approval are kept;
 - (b) to have access to, inspect, and copy any records required to be kept by the conditions of this Approval;
 - (c) to inspect the Site, related equipment and appurtenances;
 - (d) to inspect the practices, procedures, or operations required by the conditions of this Approval; and
 - (e) to sample and monitor for the purposes of assessing compliance with the terms and conditions of this Approval or the EPA, the OWRA, the PA, the SDWA or the NMA.

Information and Record Retention

- 1.22
- (a) Except as authorized in writing by the Director, all records required by this Approval shall be retained at the Site for a minimum of two (2) years from their date of creation.
 - (b) The Owner shall retain all documentation listed in Schedule “A” for as long as this Approval is valid.
 - (c) All information and logs required in Condition 9.1 shall be kept at the Site until they are included in the Annual Report.

- (d) The Owner shall retain employee training records as long as the employee is working at the Site.
- (e) The Owner shall make all of the above documents available for inspection upon request of Ministry staff.

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

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

1.24 The Owner shall ensure that a copy of this Approval, in its entirety and including all its Notices of Amendment, and documentation listed in Item #1 of Schedule "A", are retained at the Site or the Owner's office at all times.

1.25 Any information related to this Approval 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, RSO 1990, CF-31.

2.0 FINANCIAL ASSURANCE

2.1 a. The Financial Assurance shall be submitted as required to the Director, Financial Assurance as defined in Section 131 of the Environmental Protection Act. The Financial Assurance shall be in a form acceptable to the Director and shall provide sufficient funds for the analysis, closure, ongoing and long-term monitoring and reporting, post-closure maintenance and care of the Site.

1. On the following dates, the Owner shall ensure the maximum amount of financial assurance has been submitted to the Director in a form acceptable to the Director as follows:

Payment Date	Amount
By March 31, 2021	\$32,459,985.00
By March 31, 2022	\$35,256,829.00
By March 31, 2023	\$37,164,501.00
By March 31, 2024	\$39,434,722.00

b. Commencing on March 31, 2024 and on a four year basis thereafter, the Owner shall provide to the Director a re-evaluation of the amount of the Financial Assurance to facilitate the actions required under Condition 2.1.a. The re-evaluation shall include an assessment based on any new information relating to the environmental conditions of the Site and shall include the costs of additional monitoring and/or implementation of alternative measures required by the Director upon review of the annual reports. The Financial Assurance must be submitted to the Director within thirty (30) days of written acceptance of the re-evaluation by the Director; and

c. The amount of Financial Assurance is subject to review at any time by the Director and may be amended at his/her discretion. If any Financial Assurance is scheduled to expire or notice is

received, indicating Financial Assurance will not be renewed, and satisfactory methods have not been made to replace the Financial Assurance at least sixty (60) days before the Financial Assurance terminates, the Owner shall forthwith replace the Financial Assurance with cash.

3.0 WARWICK PUBLIC LIAISON COMMITTEE and FIRST NATIONS

WPLC

- 3.1 The Owner shall continue and maintain the WPLC. The WPLC shall serve as a focal point for dissemination, review and exchange of information and monitoring results relevant to the operation of the undertaking. In addition, the purpose of the WPLC will be to provide community review of the development, operation (current and proposed) and ongoing monitoring, closure and post-closure care related to the landfill Site.
- 3.2 The general mandate of the WPLC shall include:
- a. Review operations and provide regular input to the Owner with respect to all matters pertaining to landfill Site operation, including issues pertaining to ongoing operations, monitoring, the need for contingency plans or remedial measures, response to community complaints, the need for changes to the ECA , post-closure monitoring and maintenance, and development of the proposed end use for the landfill Site;
 - b. Review operational and monitoring reports;
 - c. Consider and make recommendations to the Owner regarding outside consulting advice in respect of the landfill Site;
 - d. Facilitate ongoing dialogue between the Owner, the Environmental Inspector and the community, including residents and businesses in the immediate vicinity of the landfill Site;
 - e. Provide reports regularly to the community on the activities of the WPLC, the landfill operations and landfill related issues and seek public input on these activities and issues;
 - f. Monitor the Owner's complaint response program and make recommendations to the Owner with respect to this program; and
 - g. Provide recommendations to the Owner with respect to unresolved complaints.
- 3.3 The WPLC shall not exercise any supervisory, regulatory, approval, legal or other decision making role with respect to the operations (current and proposed) at the Site.
- 3.4 The Owner shall provide for the administrative costs of operating the WPLC, including the cost of meeting places and clerical services.
- 3.5 The WPLC shall operate under a Terms of Reference of the committee. Suggestions to revise the WPLC Terms of Reference may be made at any meeting that a quorum is present. No changes to the Terms of Reference can be made until the committee members mutually agree to changes. Any changes shall be provided to the Ministry for information purposes.
- 3.6 The Community members shall be appointed by the WPLC. The community member positions are intended to be available to individuals that are not members of groups already represented on the

WPLC and have an interest in the operation of the landfill. The WPLC shall encourage individuals who reside in close proximity to the landfill to participate. A community member is defined as a taxpayer and/or resident of Warwick Township.

- 3.7 The function of the Ministry member will be to provide advice, information and input to other members as required.
- 3.8 The WPLC shall determine the appropriate meeting frequency and review it on an annual basis.
- 3.9 Minutes and agendas of meetings shall be printed and distributed as per the mailing list on a timely basis.
- 3.10 The WPLC shall have reasonable access to the Site and its landfill related facilities for the purpose of carrying out its objective and mandate and the Owner's consultants' reports relating to Site operations shall be provided to the WPLC.
- 3.11 The Owner shall provide the WPLC with access to the Owner's consultants as required and consultants reports in accordance with protocols agreed to between the Owner and the WPLC.
- 3.12 Unless disclosure would be contrary to the Freedom of Information and Protection of Privacy Act ,the WPLC, the Township of Warwick and Walpole Island First Nation are to be provided all formal submissions and correspondence related to the site operations by the Owner at the same time as these items are submitted to the Ministry, the Township of Warwick Council or any other body.
- 3.13 The Owner shall allow access to the landfill site during normal operating hours, to enable any individual member of the WPLC and member of the public recommended by local representatives on the WPLC, to observe operations. An individual member of the WPLC must contact the operator to arrange for a Site pass, be accompanied by an operators representative at all times and follow all safety procedures.
- 3.14 All recommendations made to the Owner with respect to ongoing landfill operations, monitoring and the implementation of contingency measures shall be discussed at joint meetings between representatives of the Owner and the WPLC. The purpose of these meetings will be to arrive at an agreement between the Owner and WPLC with respect to implementation of the recommendations.
- 3.15 The Owner will disclose all monitoring results to the WPLC and deliver to the WPLC all documents and information (except as may be privileged) relevant to the operation of the landfill.

First Nation and Township of Warwick Consultation

- 3.16 During the process of submission of an application to amend any approvals for the Site, the Owner shall:
 - a. discuss with WIFN and the Township of Warwick (Township) the proposed application prior to submission of the WIFN application to the Director;

- b. provide the same documents to WIFN and Township that are provided to the Director in respect of the amendments; and
- c. provide the Director, either prior to or at the same time of application submission, with a statement how WIFN and Township comments were considered by the Owner.

4.0 CONSTRUCTION, INSTALLATION and PLANNING

Major Works

4.1 For the purposes of this ECA the following are Major Works:

- a. gas management system;
- b. leachate collection system; and
- c. liner.

- 4.2
- a. A final detailed design shall be prepared for each Major Work to be constructed at the Site consistent with the conceptual design of the Site as presented in the Supporting Documentation, specifically Items 66, 67, and 68 of Schedule "A".
 - b. Geonet may substitute a component of the 0.3 metres of granular in the secondary drainage layer in accordance with Items 54 to 57 inclusive on Schedule "A". The Owner shall ensure that the Quality Assurance/Quality Control procedure detailed in Item 57 of Schedule "A" is followed during installation of the geonet material.

4.3 The final detailed design of each Major Work shall include the following:

- a. design drawings and specifications;
- b. a detailed quality assurance / quality control (QA/QC) program for construction of the major work, including necessary precautions to avoid disturbance to the underlying soils; and
- c. details on the monitoring, maintenance, repair and replacement of the engineered components of the major work, if any.

4.4 Any design optimization or modification that is inconsistent with the conceptual design shall be clearly identified, along with an explanation of the reasons for the change.

4.5 The final detailed design of each Major Work shall be submitted to the Director and copied to the District Manager.

4.6 Each major work shall be constructed in accordance with the approved final detailed design and the QA/QC procedures shall be implemented as proposed by the Owner. Any significant variances from the conceptual design for the Site as detailed in Items 66, 67 and 68 of Schedule "A" shall be subject to approval by the Director.

4.7 As-built drawings for all Major Works shall be retained on Site and made available to Ministry staff for inspection.

Subsequent Stages

4.8 At least six (6) months prior to the anticipated completion of landfilling in each stage of the Site, a final detailed design for the subsequent stage shall be submitted to the Director. Any significant variances from the conceptual design for the Site as detailed in Items 66, 67 and 68 of Schedule "A" shall be subject to approval by the Director.

4.9 No person shall deposit any waste at the subsequent stage until a written Preparation Report in accordance with O. Reg. 232/98, Section 19 has been submitted to the Director and District Manager documenting that:

- a. all construction;
- b. QA/QC activities;
- c. Site conditions; and,
- d. all details of the construction of the Site;

are in accordance with the approved design plans and specifications.

4.10 Approval to proceed with landfilling or construction of each subsequent stage shall be dependent on groundwater, air quality and surface water monitoring results acceptable to the Director. If monitoring results are not acceptable to the Director then remedial action must be taken and completed before landfilling may proceed in the subsequent stage.

Geotechnical Engineer

4.11 A qualified professional geotechnical engineer shall inspect the excavation and construction underlying the Site and provide a report addressing whether the construction proceeded in accordance with approved detailed design plans, specifications and QA/QC procedures. The report shall be included in the Preparation Reports for each stage of the landfill.

Environmental Inspector

4.12 In accordance with conditions 18 and 19 of the EA approval dated January 15, 2007 known as Item 1 on Schedule "A", the Owner shall provide funding to the Ministry for the provision of an Environmental Inspector to inspect the Site, at any reasonable time on such terms and conditions, as deemed appropriate by the District Manager of the District Office and outlined in a written agreement with the Owner. Within the agreement, the Owner shall commit to providing, as a minimum, the following:

- a. Adequate office facilities, communication equipment, and means of transportation for the Environmental Inspector; and,
- b. Reimbursement to the MECP semi-annually for the costs and associated expenses of the

Environmental Inspector.

- 4.13 The Owner shall provide funding for an Environmental Inspector on Site based on the following:
- a. Construction Phase/Operations Phase- Full-time, on-Site inspector with the inspector being on Site a full day each day for five (5) days per calendar week for the first two years of the operation phase.
- 4.14
- a. Every two (2) years commencing on February 1, 2012, the Owner shall prepare and submit a report to the District Manager detailing the status and need for a Environmental Inspector based on discussions with the Township of Warwick, WIFN and the WPLC regarding the inspection frequency for the Environmental Inspector. The inspection frequency of the Environmental Inspector shall remain as per the requirements outlined in Condition 4.13 during the operation phase until a decision is made by the District Manager on the appropriate inspection frequency.
 - b. Notwithstanding Conditions 4.12 to 4.14 (1) and 15.3, inclusive, the Environmental Inspector's duties may, in consultation with the Owner, be increased, reduced, suspended or terminated on such terms and conditions as deemed appropriate by the District Manager and, for greater certainty, the District Manager may require an Environmental Inspector to be on-Site for up to seven days per week in cases of apparent significant non-compliance with the conditions of the EA approval or any approval issued for the Site under the EPA until such non-compliance is resolved.

5.0 OTHER WORKS

Berm Construction

- 5.1 All berm slopes associated with this approval shall be no greater than 3:1.

Diversion Area

- 5.2 The diversion area will be located to the east of the treated leachate storage lagoons.

Cell 12

- 5.3
- a. Cell 12 will be used as a monofil of contaminated soils until redeveloped and incorporated into the Expansion Site in accordance with Items 66 through 68 of Schedule "A".
 - b. The management of the Cell 12 monofill shall be in accordance with the procedures and practices consistent with other previous monofill operations at the Site.

Landscape

- 5.4 The Owner shall ensure the landscape plan is carried out in accordance with Item 72 and 80 of Schedule "A", as amended from time to time.

6.0 GENERAL OPERATIONS

Proper Operation

- 6.1 The Site shall be properly operated and maintained at all times. All waste shall be managed and disposed of in accordance with the EPA , Regulation 347 , Regulation 232 , and the requirements of this ECA. At no time shall the discharge of a contaminant that causes or is likely to cause an adverse effect be permitted.
- 6.2 The Owner shall ensure that the MECP's Guideline B-7, Reasonable Use Concept, is applied at the Site boundaries.
- 6.3
- a. Landfilling operations shall be conducted in accordance with Items 66 through 71 of Schedule "A" attached to this ECA.
 - b. The Owner shall ensure the operations and procedures manual for the the Site includes discussions on the following items:
 - a. Health and safety;
 - b. Operation and maintenance of the Site;
 - c. Waste disposal area and development;
 - d. Nuisance management;
 - e. Leachate management;
 - f. Landfill gas management;
 - g. Surface water/Storm water management;
 - h. Inspections and monitoring;
 - i. Contingency plans and emergency procedures;
 - j. Complaints; and,
 - k. Reporting and record keeping.
 - c. The operations and procedures manual shall be:
 - a. retained at the Site;
 - b. reviewed on an annual basis and updated by the Owner as required; and
 - c. be available for inspection by Ministry staff.

Waste Type

- 6.4 Only the following types of waste shall be accepted at the Site:
- a. municipal, industrial, commercial and institutional solid non-hazardous waste generated within the Province of Ontario, including non-hazardous contaminated soil.

Capacity

- 6.5 The Owner shall only accept and deposit waste at the Site as long as there is available capacity as defined by the final contours for the Site approved by this ECA . The approval permits disposal of waste at the Site to fill an air space of 26,508,000 cubic metres (including waste, daily and interim cover material). This capacity includes the capacity of the existing and expansion landfill areas.

Yearly Waste Limit

- 6.6 a. The Owner can receive up to a maximum of 1,400,000 tonnes per year of waste including contaminated soil for disposal at the Site.
- b. The amount of tire shred that may be received to process is 7,160 tonnes/year.
- c. Up to a maximum of 100 tonnes per day of solid non-hazardous waste, white goods and metals, recyclable waste, wood waste, and leaf and yard waste that are deposited by the public using small vehicles at the Mini-Transfer Area of the Site may be transferred from the Site by a waste hauler or waste haulers that has an ECA to another waste disposal site.

Service Area

- 6.7 Only waste that is generated in the Province of Ontario shall be accepted at the Site.

Landfilling of Sludge

- 6.8 A thickness of at least 2 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.

Asbestos Waste

- 6.9 Any waste that is considered asbestos waste shall be handled in accordance with Section 17 of O. Reg. 347 as amended from time to time.
- 6.10 A suitable sized excavation for the asbestos waste shall be made by the Owner in a location away from the active landfilling face.
- 6.11 All asbestos waste shall be inspected to ensure that the asbestos waste is properly bagged or contained and free from puncture, tears or leaks.
- 6.12 The asbestos waste shall be placed in the excavation to avoid damage to the containers and to prevent dust and spillage.
- 6.13 Upon completion of the unloading and deposition of the asbestos in the excavation, at least 125 centimetres of cover or waste material shall be placed over the asbestos.

6.14 All asbestos waste shall be deposited to a level no higher than 1.25 metres below the general elevation of the disposal area to ensure that daily cover material removal in the future does not encounter the asbestos waste.

Waste Limits

6.15 No waste, including daily cover, intermediate cover or final cover layer, shall be landfilled outside the limits of the base and final cover contours presented in Items 66 through 71 of Schedule "A" (the Development and Operations Plan) attached to this ECA .

Site Use

6.16 The area inside the fencing indicated in Appendix N18 of Item 30 of Schedule "A" shall be used for waste disposal purposes only. The remainder of the Site outside the fenced area shall be used for traditional agricultural crop production only.

Waste Inspection

6.17 All loads of waste must be properly inspected by trained Site personnel prior to disposal at the Site and waste vehicles must be diverted to appropriate areas for waste disposal.

Waste Deposit

6.18 The Owner shall deposit waste in a manner that minimizes exposure area at the landfill working face and waste shall be compacted before cover is applied.

Burning Waste Prohibited

6.19 Burning of waste at the Site is prohibited.

Signage

6.20 A sign shall be maintained at the main entrance/exit to the Site on which is legibly displayed the following information:

- a. the name of the Site and Owner;
- b. the number of the ECA;
- c. the name of the Operator;
- d. the normal hours of operation;
- e. the allowable and prohibited waste types;
- f. a warning against unauthorized access;
- g. the telephone number to which complaints may be directed;
- h. a twenty-four (24) hour emergency telephone number (if different from above); and
- i. a warning against dumping outside the Site.

- 6.21 The Owner shall install and maintain signs to direct vehicles to working face and recycling areas.
- 6.22 The Owner shall maintain signs at recycling depot informing users what materials are acceptable and directing users to appropriate storage area.

Hours of Operation

- 6.23 Waste shall only be accepted at the Site during the following time periods:
 - a. 7 AM to 7 PM - Monday to Saturday.
- 6.24 On-site equipment used for daily Site preparation and closing activities shall only be used during:
 - a. 6 AM to 8 PM - Monday to Saturday.
- 6.25 With prior written approval of the District Manager, the time periods may be extended to accommodate seasonal or unusual quantities of waste or such factors as determined to be reasonable to the District Manager.
- 6.26 The Owner may provide limited hours of operation provided that the hours are posted at the landfill gate and that suitable notice is provided to the public of any change in operating hours.
- 6.27 Upon reasonable notice to the District Manager, contingency actions may take place outside normal hours of operation. Emergency response may occur at any time as required.

Site Security

- 6.28 During non-operating hours, the Site entrance and exit gates shall be locked and the Site shall be secured against access by unauthorized persons.

Fencing

- 6.29 The entire area as shown in Figure 12 in Item 66 of Schedule "A" shall be fenced by the Owner with a 6 foot high wire woven highway-type paige fence.

Site Access

- 6.30 Access to and exit from the Site for the transportation of waste shall under normal circumstances be permitted from County Road 79.

Access Roads

- 6.31 a. On-Site roads shall be provided and maintained in a manner that vehicles hauling waste to and on the Site may travel readily and safely on any operating day. During winter months, when the Site is in operation, roads must be maintained to ensure safe access to the landfill working face.

- b. Access roads must be clear of mud, ice and debris which may create hazardous conditions.

Vermin, Dust, Litter, Odour, Noise, Traffic

- 6.32 The Site shall be operated and maintained such that vermin, vectors, dust, litter, odour, noise and traffic do not create a nuisance.

Scavenging

- 6.33 The Owner shall ensure that there is no scavenging as defined in O. Reg. 347 at the Site.

Dust

- 6.34 The Owner shall control fugitive dust emissions from on Site sources including but not limited to on-Site roads, stockpiled cover material and, closed landfill area prior to seeding especially during times of dry weather conditions. If necessary, major sources of dust shall be treated with water and/or dust suppression materials to minimize the overall dust emissions from the Site.
- 6.35 Dust shall be managed as per the Best Management Practices Plan (Dust) prepared by RWDI listed as Item 83 in Schedule "A".

Litter Control

- 6.36 The Owner shall take all practical steps to prevent escape of litter from the Site. All loose, windblown litter shall be collected and disposed of at the landfill working face.
- 6.37 Litter pickup will occur at least weekly on the Owner's property during all weather conditions.
- 6.38 The Owner will respond to litter complaints within one (1) business day of the complaint being received.
- 6.39 Litter shall be managed in accordance with the Best Management Practices plan prepared by RWDI listed as Item 25 on Schedule "A".

Odour

- 6.40 Odour shall be managed in accordance with the Best Management Practices Plan (Odour) prepared by RWDI listed as Item 84 in Schedule "A".

Noise

- 6.41 The Owner shall comply with noise criteria in MECP Guideline entitled "Noise Guidelines for Landfill Sites" dated October 1998 as amended from time to time and the Site shall comply with the limits set in Publication NPC205. Bird bangers may be used at the Site for gull control provided that they produce

reference impulsive sound not exceeding 125 dBAI at 5 metres from the bird banger.

- 6.42 Noise monitoring at the Site shall be undertaken by the Owner as per the document entitled "Environmental Noise Monitoring Program for the Warwick Landfill", dated June 15, 2007 prepared by Aercoustics Engineering Limited listed as Item 73 on Schedule "A".

Alteration of Best Management Plans for Odour, Dust and Litter

- 6.43 The Owner shall use the Best Management Plans (BMP's) for dust, odour and litter at the Site in accordance with the applicable Conditions approved by this ECA. The Owner may submit changes in writing to the Director for approval to amend the BMP(s). At the same time any changes to the BMP's are submitted to the Director, the Owner shall provide the proposed changes to the BMP's to the Township of Warwick, WPLC and WIFN.

Surface Water

- 6.44 The Owner shall take all appropriate measures to minimize surface water from coming in contact with waste. Temporary berms and ditches shall be constructed around active waste disposal areas to prevent extraneous surface water from coming in contact with the active working face.
- 6.45 The Owner shall not discharge surface water to receiving water bodies without an approval under the EPA.
- 6.46 If surface water ponding occurs in any surface water ditches having a drainage slope less than 0.5%, the Owner shall regrade the ditches.

Application of Cover Material

- 6.47 Cover material shall be applied as follows:
- a. Daily Cover - At the end of each working day, the entire working face shall be covered with a minimum thickness of 150 mm of soil cover or an approved alternative cover material;
 - b. Intermediate Cover - In areas where landfilling has been temporarily discontinued for six (6) months or more, a minimum thickness of 300 mm of soil cover or an approved alternative cover material shall be placed;
 - c. Final Cover - In areas where landfilling has been completed to final contours, a minimum 1.85 metre thick layer of final cover soil shall be placed. Fill areas shall be progressively completed and rehabilitated as landfill development reaches final contours; and
 - d. Topsoil - In areas where landfilling has been completed to final contours and where final cover has been placed, a minimum 0.15 metres thick layer of topsoil shall be placed.

Cover Materials Allowed

- 6.48 The following materials, in the corresponding thickness, may be used as an alternative to soil as a daily and intermediate cover:
- a. Contaminated soil that satisfies the Schedule IV Toxicity Characteristic Leaching Procedure (TCLP) criteria as outlined in O. Reg. 347 as amended from time to time;
 - b. Wood chips (daily);
 - c. Automobile Shredder Residue (ASR) (daily); or
 - d. Tarps (daily).
- 6.49 The use of any other alternative materials as daily or intermediate cover material is subject to approval by the Director.
- 6.50 Use of alternative daily or intermediate cover materials shall be discontinued within two (2) working days of receipt of written notification from the District Manager, stating that the use of the alternative daily or intermediate cover materials at the Site has proven to be environmentally unsuitable.

Automobile Shredder Residue as Daily Cover

- 6.51
- a. Automobile Shredder Residue (ASR) may be used as a daily cover at the Site on an on-going basis from the issuance of this Approval.
 - b. The Owner shall cease the use of ASR if written notification is received from the District Manager indicating that there are environmental concerns due to the use of ASR as daily cover based on the testing of the ASR required by Condition 6.52.
 - c. The Owner may re-commence the use of ASR upon the Owner submitting an action plan that is acceptable to the District Manager that can address the environmental concerns which were raised due to the the use of ASR as daily cover.
- 6.52 Automobile Shredder Residue samples of the daily cover material are to be taken on semi-annual basis (Spring and Fall) and submitted for analysis of O. Reg. 347 Schedule IV Inorganics, VOC's, and PAH's. Automobile Shredder Residue is to conform with the specifications of a non-hazardous waste under O. Reg. 347 as amended from time to time. Semi-Annually testing results are to be submitted to the District Manager upon receipt. The frequency of O. Reg. 347 testing of the daily cover material can be reduced subject to approval of the District Manager.

Contaminated Soil as Daily or Intermediate Cover

- 6.53 Contaminated soil equal to or below 10% of the TCLP value and/or 0.4 mg/L benzene may be landfilled in Cells 8, 10 and/or 12.
- 6.54 If confirmatory testing of the contaminated soil to be landfilled in Cells 8, 10 and/or 12 indicates an

exceedance of 10% of the TCLP value and/or 0.4 mg/L of benzene, but satisfies the TCLP criteria as in O.Reg. 347, the soil may be used as daily and/or intermediate cover, and or landfilled as waste.

- 6.55 If the contaminated soil received at the Site does not meet the TCLP value, the contaminated soil shall be classified as a hazardous waste and shall be disposed of at a site that is approved to receive and dispose of hazardous waste.
- 6.56 Contaminated soil that satisfies the TCLP criteria may be used as daily and/or intermediate cover in the Expansion Site of the landfill. Contaminated soils may not be used on outside slopes which drain into the surface water system.
- 6.57 Contaminated soil used for daily and/or intermediate cover shall be sampled on a quarterly basis and submitted for analysis of O.Reg. 347 Schedule IV Inorganics, VOCs, PAHs and PCBs. Quarterly testing results shall be included in the annual report. The frequency of O. Reg. 347 testing of the cover material may be reduced subject to agreement of the District Manager.
- 6.58 Contaminated soil for use as daily cover and/or intermediate cover shall be stockpiled in areas of the Site that have a leachate collection system installed below.
- 6.59 Surface water run off from the contaminated soils stockpile which exceeds the Provincial Water Quality Objectives shall not be discharged through the surface water management system.
- 6.60 The Owner must ensure that measures are in place for the on Site treatment and disposal of any contaminated run off from the contaminated soils stockpile.
- 6.61 Prior to receipt at the Site, each source of contaminated soils which are to be used as daily or intermediate cover shall be tested to determine if the soils meet the criteria in this ECA and a copy of the test results shall be kept in the daily records for the Site as required.

7.0 SITE OPERATIONS

Landfill Reclamation

- 7.1 The Owner shall restrict stockpiling of contaminated soil from Cells 8, 10 and 12 to sections of the landfill footprint that have a liner and leachate collection system.

Waste Processing and Composting

- 7.2 Waste Processing and composting is allowed at the location outlined in Item 49 on Schedule "A" subject to the following conditions:
 - a. Prior to the commencement of any waste processing or composting operations at the Site, the Owner shall ensure that air (Section 9 EPA) and noise approvals are obtained;
 - b. Prior to the start of composting operations at the Site, the Owner shall submit to the District

- Manager a contingency plan for any odour problems that may occur;
- c. The total combined amount of waste that may be received at the Site for processing and composting shall not exceed 36,000 tonnes per year and the maximum daily amount to be received at the Site shall not exceed 700 tonnes per day;
- d. The amount of waste that may be received at the Site for composting shall not exceed 7,500 tonnes per year;
- e. Material acceptable for processing and composting at the site shall include leaf, yard, agricultural waste, concrete, asphalt, wood and tires;
- f. The bins for diversion shall be emptied on an as needed basis to prevent odours and operational problems. The Ministry may at any time instruct that a bin be emptied;
- g. The Owner shall ensure that waste processing and composting is undertaken in a safe manner, and that all waste is properly handled, processed and contained so as not to pose any threat to the general public and site personnel;
- h. All noise generating processing activities in the waste diversion area including concrete/asphalt/crushing, wood chipping and tire shredding shall only occur between 07:00 to 19:00; and
- i. Any runoff that comes into contact with waste in the waste processing/composting area shall be managed in such a fashion to ensure compliance with Condition 8.5 of this ECA.

7.3 The Owner shall ensure that composting at the Site is undertaken in accordance with O.Reg 101/94 as amended from time to time and the Ministry document entitled "Interim Guidelines for the Production and Use of Aerobic Compost in Ontario " dated November 2004 as amended from time to time and the following requirements:

- a. Only leaf and yard waste, Agricultural Waste as defined in Item 3 in Schedule "A" and wood (not including painted or treated wood or laminated wood) may be accepted at the compost area.
- b. Leaf and yard waste is defined as waste consisting of natural Christmas trees and other plant materials but not tree limbs or other woody materials in excess of seven (7) centimetres in diameter.
- c. The composting site shall only receive material for composting from May 1st to November 1st each year.
- d. Leaf and yard waste, Agricultural Waste and wood may not be stored for more than four (4) days before it is composted.
- e. During composting, the Owner shall provide the composting mass with adequate ventilation to ensure that aerobic conditions are maintained.
- f. Cured compost must be analyzed for the parameters listed in Table 1 of O.Reg. 101/94 and shall not be removed from the Site unless it has been sampled and analyzed.
- g. Cured compost is defined as meeting the specifications in Sections 7.2 to 7.5 inclusive of the Interim Guidelines for the Production and Use of Aerobic Compost in Ontario" dated November 2004 as amended from time to time and can be used on an unrestricted basis.
- h. Compost is designated a waste if the compost contains a substance listed in Table 1 of O. Reg. 101/94 that has a concentration greater than the concentration listed in Column 2.
- i. Controlled compost is defined as compost that is designated a waste under the previous condition but has concentrations less than the concentrations listed in Column 3 of Table 1

in O. Reg. 101/94.

- j. Controlled compost may not be removed from the site except for direct shipment to the intended user.
- k. Material from the composting process that fails to meet the "Interim Guidelines for the Production and Use of Aerobic Compost in Ontario" dated November 2004 shall be deemed to be a waste under O. Reg. 347 and shall be disposed of accordingly.
- l. The person to whom controlled compost is shipped shall be given a copy of the chemical analysis of the compost and a notice that states that the compost is controlled compost and that sets out the terms and conditions of the compost's exemption from Part V of the EPA. A copy of this notice shall be kept on file at the Site.
- m. The District Manager may at any time and at his absolute discretion instruct that any or all of the waste materials from the composting or processing operations or the processed waste from the composting or processing operations to be either landfilled or directed to be utilized for specific uses and in specific locations.

7.4 Record keeping for the composting operation shall be kept as follows:

- a. Records about each composting mass shall be kept including temperatures of the mass, when the temperatures were measured, when the mass was turned, information about the curing process and details about significant problems that occurred during composting or curing. This information shall be kept at the Site for at least three years after the mass was cured;
- b. Records shall be kept of the analyses of compost. Any laboratory records shall be kept as part of the record. A record of an analysis shall be kept for at least three years after the analysis is performed; and
- c. A record shall be kept of the name, address and telephone number of each person to whom controlled compost is shipped. The record shall be kept for at least ten (10) years after the shipment.

Tire Shred

7.5 The management and placement of tire shreds at the Site shall be in accordance with the Fire Protection and Prevention Act as follows:

- a. No individual tire shred pile shall be more than 3 metres in height and 100 square metres in area. Six (6) metres of space shall be provided between all piles. Fifteen (15) metres is to be provided from property lines and thirty (30) metres shall be provided from tree lines;
- b. A buffer of 4.5 metres is to be provided for grass or weeds from the edge of the tire pile to the edge of the pad.
- c. A firebreak of 22 metres shall be provided between the two areas of 16 piles each.

7.6 If the total stockpiled tire shreds exceeds 300 cubic metres, the storage period shall not exceed 90 (ninety) days.

7.7 The total amount of tire shreds stored on Site shall be recorded in a log book and made available to the Ministry for inspection.

Backup Power

7.8 The Owner shall maintain adequate backup power at the Site in order to ensure scale facility and landfill gas blower on site continue to operate and are not damaged due to an extended power outage. A power supply connection at each leachate collection pumping station shall be maintained by the Owner that will permit a portable generator to be connected during a power outage.

Landfill Gas

7.9 All buildings are to be free of any landfill gas accumulation. The Owner shall provide adequate ventilation systems to relieve landfill gas accumulations in buildings if necessary.

Landfill Gas Management

7.10 The Owner shall, manage landfill gas in accordance with Items 66 through 68, Items 75 through 77, and Item 81 of Schedule "A" and based on the landfill gas management system constructed under the authority of the EPA Approval issued which may be amended or replaced from time to time.

Cleaning of Leachate Collection System

7.11 The leachate collection system piping for each stage of the landfill shall be inspected annually for the first five years after waste placement and then as often as future inspections indicate to be necessary. Additionally, leachate collection pipes must be cleaned whenever an inspection indicates that cleaning is necessary.

7.12 In areas where leachate collection pipe slopes are less than 0.5%, the leachate collection pipes shall be inspected semi-annually for the first three (3) years after waste placement and then as often as future inspections indicate to be necessary. Additionally, leachate collection pipes must be cleaned whenever an inspection indicates that cleaning is necessary. After the three (3) year period, inspection and cleaning of the leachate collection pipes shall be in accordance with the previous condition.

Leachate Collection System

7.13 All leachate collection pipes for Cell 12 shall be sloped at a minimum of 0.5%.

7.14 The Owner shall install 250 mm diameter perforated leachate collection pipes with perforations located at the 10:30, 4:30, 1:30 and 7:30 positions.

7.15 The stone for the leachate collection system shall have the following specifications:

- a. D85 shall be greater than 37 mm where D85 is described as the stone diameter such that,

- when measured by weight, 85% of the stones in the layer have a smaller diameter;
- b. D10 shall be greater than 19 mm where D10 is the stone diameter such that, when measured by weight, 10% of the stones in the layer have a smaller diameter;
- c. D60/D10 shall be less than 2; and,
- d. One per cent (1%) of the stones may pass a #200 sieve.

7.16 A minimum of 50 mm of stone shall be placed below the leachate collection pipes and a minimum of 250 mm of stone shall be placed above any leachate collection pipes.

7.17 The Owner shall ensure that the leachate collection system is constructed under the supervision of a qualified consultant.

Hydraulic Trap

7.18 The Owner shall ensure that a hydraulic trap is developed and maintained beneath the Expansion Area and shall ensure that a maximum leachate head of 300 mm on the landfill liner is not exceeded.

Renewable Natural Gas (RNG) Facility

7.19 The Renewable Natural Gas Facility shall be constructed and operated in accordance with Items 88 to 89 in Schedule A.

7.20 The Owner shall ensure that the flares of the RNG facility have adequate capacity to handle all the landfill gas collected, and the blowers shall be able to draw a vacuum of no less than 100 inches of water column.

7.21 The Owner shall ensure that the capacity of the landfill gas blower/flare facility and the RNG facility be assessed each time of the gas collection system expansion. The owner shall upgrade the landfill gas blower/flare facility or the RNG facility, if necessary, to ensure there is adequate capacity to handle the expected maximum landfill gas flow.

7.22 Prior to the operation of the RNG facility, the Owner shall ensure that the following documents are updated and training provided to employees involved in the RNG operation:

- a. the Best Management Practices Plan for odour in accordance with Item 90 of Schedule A;
- b. the Operation and Maintenance Manual for the RNG facility.

7.23 The Owner shall maintain daily operational record of the RNG facility at the site, and ensure the following information for the RNG facility are included in the annual report:

- a. the total amount of landfill gas processed at the RNG facility;
- b. the total amount of processed renewable natural gas sent to the off-site network;
- c. the total amount of off-specification landfill gas that was flared;
- d. a summary of the RNG facility operational disruptions and the response;
- e. a summary of adverse effects such as odour, spills, fire emergency, etc., and the remediation

- implemented; and
- f. an assessment of the adequacy of the RNG facility treatment capacity and the need for system upgrade.

8.0 LEACHATE MANAGEMENT

Leachate Recirculation

- 8.1 Prior to implementing the leachate recirculation program , a report on the moisture content of the incoming waste and the actual field capacity of the waste in situ shall be submitted to the Director.
- 8.2 The Director may at any time, terminate leachate recirculation at the Site if, in the Ministry's opinion, adverse effects on the environment are observed.
- 8.3 Before starting leachate recirculation, the Owner shall provide to the Director a monitoring program to ascertain the effectiveness of the leachate recirculation process.
- 8.4 Leachate recirculation shall not occur in any above grade locations until final cover has been installed on exterior side slopes.

Leachate Management Plan

- 8.5 The Owner's leachate management plan shall not include any direct discharge of leachate or treated leachate from the Site, even as a contingency option, to surface waters, including Bear Creek. The Owner shall not discharge leachate or treated leachate to surface waters, including Bear Creek from the Site.

Leachate Treatment Plant

- 8.6 (1) (a) Within a minimum of three (3) years prior to closure of the landfill Site, the Owner shall ensure that a leachate treatment system is installed and operational at the Site.
- (b) Leachate from the Site not sent to the operational drip irrigation area(s) approved under Condition 8.7 shall be disposed of off-Site at a location approved by the District Manager until the leachate treatment system required by Condition 8.6 (1)(a) is approved and operational.
- (c) Any waste from the leachate treatment system that is to be disposed of in the landfill must be classified as a solid non-hazardous waste.
- (d) The Owner shall implement all items within the document entitled Leachate Management Framework, listed as Item 86 in Schedule "A". These items include new and existing leachate monitor locations (wells, mini piezometers, and sump), leachate monitoring, leachate level reporting, Leachate Management Plan by March 31, 2020 and updated

every 3 years, and the Leachate Treatment Facility Study to be completed at least 7 years prior to closure of the landfill.

- (2) As part of the financial assurance calculation in Section 2.0, the Owner shall provide to the Director for approval, a detailed financial assurance plan including the cost of leachate transportation and disposal for the landfill site during the period preceding the initiation of the leachate treatment system. In addition, the Owner shall provide to the Director for approval a financial assurance plan detailing the capital cost of the on-Site leachate treatment system.

Phytoremediation of Leachate - Existing and Proposed Poplar Plantations

8.7 On-Site phytoremediation may occur at the Poplar System and Poplar Plantation in accordance with the following conditions:

- a. The Owner shall ensure that there is a 100 metre grassed buffer at all times from the Poplar Plantation to the Kersey drain.
- b. Irrigation of leachate onto either the Poplar Plantation or the Poplar System shall not occur in the following instances:
 - i. Between the dates of October 16 to April 30;
 - ii. On frozen or snow covered ground conditions;
 - iii. Under conditions that will cause ponded water or runoff;
 - iv. Conditions where surface water ponding within the area is occurring;
 - v. Where no poplar trees are currently planted;
 - vi. In areas within a drip irrigation area where trees have been harvested more than a frequency greater than every other tree;
 - vii. In areas within a drip irrigation area that has been fully harvested clear of trees and the trees have not started to coppice.
- c. If weather forecasts indicate a rainfall storm greater than 12.5 mm/hour will occur, the Owner shall within 1 hour before the storm, shut off all irrigation of the poplar forest.
- d. Irrigation zones shall be individually assessed by the Owner for suitability of irrigation after rainfall events greater than 12.5 mm.
- e. Records shall be kept for the Poplar System and Poplar Plantation areas as follows:
 - i. quantities and dates of application of pesticides and herbicides;
 - ii. inspection notes regarding tree growth rates and health;
 - iii. inspection notes regarding condition and growth of underlying vegetative landfill cover (ie grass);
 - iv. observed pooling and/or runoff of irrigated liquid;
 - v. observations of any odours; and,
 - vi. weather conditions records as may be obtained from the nearest Environment Canada Weather Office which may include daily high and low temperatures, wind velocity and direction, and precipitation quantities.

- f. Irrigation onto either the Poplar System or the Poplar Plantation shall be as follows:
- i. Detailed records shall be kept of the quantities of irrigation liquid that are applied, including the dates of application onto either drip irrigation area;
 - ii. Operations in a given drip irrigation area must immediately stop if contamination problems in surface water or groundwater, which are attributable to the operation of the noted drip irrigation area, are found to be occurring. Recommencement of operations may proceed only upon further written notification of the District Manager;
 - iii. Operations of a given drip irrigation area must be discontinued immediately if operation of the noted drip irrigation area causes surface runoff from the footprint area or if operations cause surface ponding within the drip irrigation area; operations cannot be restarted during that application day and can only be restarted after surface ponding has evaporated or infiltrated or conditions causing the runoff or ponding have been rectified;
 - iv. If there are any stoppages of operations under the requirements of items ii) or iii) above, then the District Manager shall be notified immediately; and,
 - v. If odours attributable to one of the drip irrigation areas become a problem at the site, then the District Manager shall be so informed in writing and the operation of the noted drip irrigation area shall be stopped pending further instructions from the District Manager;
- g. (1) Monitoring of the drip irrigation Poplar System and the Poplar Plantation shall be in accordance with Items 63 through 65 of Schedule "A".
- (2) Monitoring frequencies and analyses for the following items shall be as follows:
- i. Daily inspections for ponded water or saturated soil during irrigation;
 - ii. Monthly testing of irrigation liquid quality during the irrigation season;
 - iii. Soil samples should be taken annually from grade to a depth of 0.6 m minimum and 0.9 m maximum;
 - iv. Annual soil analyses shall be conducted annually per Section 3.1 of Item 63 of Schedule "A", in addition to pH, electrical conductivity, cation exchange capacity, and sodium absorption ratio;
 - v. Leaf Tissue analyses once per year in the fall; and
 - vi. Crop inspection once per year in the fall.
- h. Reporting on the drip irrigation areas shall be part of the annual monitoring report for the Site and shall include but not be limited to the following:
- i. results and an analysis of the results of the monitoring programs for the drip irrigation areas;
 - ii. assessment of the results of the vegetation as related to the stated objectives for the Poplar System and Poplar Plantation facilities construction and operations;

- iii. assessment of the need to change the monitoring program for the drip irrigation areas and a recommendation of the required changes;
 - iv. tabulation and assessment of the volumes of leachate produced by the landfill, and those volumes which may be applied to the existing drip irrigation areas;
 - v. a report on operational problems identified during the operation of the drip irrigation areas and a discussion of each problem and details of what was done to rectify each problem;
 - vi. a Site plan which shows the location of the areas planted with both trees and grass cover and the vegetation used on those areas;
 - vii. an assessment of the monitoring results pertaining to the use of trees as vegetation on the final cover.
- i. The Director retains the right to request that the Owner conduct additional studies, suspend operations or require the Owner to provide additional methods to handle leachate at the Site in addition to or as a replacement to the drip irrigation areas.
 - j. If the Director requests removal of the drip irrigation areas, the Owner shall:
 - i. remove the irrigation equipment and the trees from the noted drip irrigation area. For the Poplar System, removal of trees shall include removal of tree stumps and most roots, excavate the trench to the maximum depth of root depth penetration on each tree row, and then replace, remould and recompact the excavated material;
 - ii. the landfill cover shall be restored to the same condition as it was in prior to commencement of the Poplar System and a blend of suitable grasses shall be seeded as necessary; and,
 - iii. within 6 months of completion of the noted drip irrigation area closure activities, submit to the Director a report outlining the work that has been completed.
 - k. Electrical conductivity of the shallow soil (maximum depth of 0.15 m) beneath the drip irrigation areas shall be monitored on a weekly basis during irrigation.
 - l. If salt levels are building up in the soil or additional irrigation with leachate is found to be detrimental to the health of the poplars, the leachate application rate shall be reduced or terminated.

Wood Waste and Leaf Litter

- m. Any wood waste or leaf litter that is produced in the Poplar System or Poplar Plantation shall be managed in accordance with Item 63 of Schedule "A".

Other Items

- n. (1) Drip irrigation rates for the Poplar Plantation shall be no greater than the rate specified

in the EPA approval for the Site.

- (2) Drip irrigation rates for the Poplar System shall be no greater than the rates noted in Item 63 of Schedule "A".
- o. No drip irrigation shall occur within fifty (50) metres of any surface watercourse or drain.
- p. (1) Leachate to be used for drip irrigation on the Poplar Plantation shall not exceed the treated leachate effluent criteria specified in the EPA approval for applicable industrial sewage works for the Site.

(2) Leachate to be used for drip irrigation on the Poplar System shall not exceed the treated leachate effluent criteria specified in the Item 63 through 65 in Schedule "A".
- q. The use of the Poplar Plantation to manage irrigation leachate will not be permitted without first providing the District Manger with at least two (2) months written notice of the anticipated irrigation liquid application date. The use of surface water to encourage tree growth will be permitted and will not be considered as irrigation liquid.
- r. Monitoring and the associated reporting for the Poplar Plantation will commence at least two (2) months prior to irrigation liquid application and continue until two (2) years after cessation of irrigation liquid application to the Poplar Plantation.

Leachate Storage Tanks

- s. The leachate storage tanks shall be inspected by a licenced plumber on an annual basis.
- t. The leachate storage tanks shall be cleaned and sediment removed at least once every two (2) years.

9.0 INSPECTIONS AND RECORDS

Inspections

9.1 The Owner shall inspect the Site monthly for the following items but not limited to these items:

- a. Erosion rills;
- b. General settlement areas or depressions;
- c. Shear and tension cracks;
- d. Condition of surface water drainage works;
- e. Erosion and sedimentation in surface water drainage system;
- f. Presence of any ponded water;
- h. Adequacy of cover material;
- i. Evidence of vegetative stress, distressed poplars or side slope plantings;
- j. Condition of groundwater monitoring wells and gas wells;

- k. Presence of insects, vermin, rodents and scavenging animals;
- l. Condition of fence surrounding the Site; and
- m. General Site appearance.

9.2 The Owner shall inspect the Site weekly for presence of leachate seeps.

Daily Inspections and Log Book

9.3 An inspection of the entire Site and all equipment on the Site shall be conducted each day the Site is in operation to ensure that the site is being operated in compliance with this ECA . Any deficiencies discovered as a result of the inspection shall be remedied immediately, including temporarily ceasing operations at the Site if needed.

9.4 A record of the inspections shall be kept in a daily log book or a dedicated electronic file that includes:

- i. the name and signature of person that conducted the inspection;
- ii. the date and time of the inspection;
- iii. the list of any deficiencies discovered;
- iv. the recommendations for remedial action; and
- v. the date, time and description of actions taken.

9.5 A record shall be kept in a daily log book of all refusal of waste shipments, the reason(s) for refusal, and the origin of the waste, if known.

Monthly Records

9.6 Monthly Site inspection records in the form of a written log or a dedicated electronic file shall include but not be limited to the following:

- a. the type, geographic source, date and time of arrival, hauler, and quantity (tonnes) of all waste received at the Site;
- b. the area of the Site in which waste disposal operations are taking place;
- c. a calculation of the total quantity (tonnes) of waste received at the Site during each operating day and each operating week;
- d. Results of any test done to determine the acceptability of waste at the Site;
- e. A reference for each load of solid non-hazardous industrial waste received, to the client and type of solid non-hazardous industrial waste;
- f. the amount of any leachate removed, or treated and discharged from the Site;
- g. a record of litter collection activities and the application of any dust suppressants;
- h. a record of the daily inspections;
- i. a description of any out-of-service period of any control, treatment, disposal or monitoring facilities, the reasons for the loss of service, and action taken to restore and maintain service;
- j. type and amount of daily, intermediate and final cover used;
- k. maintenance and repairs performed on equipment employed at the Site;

- l. complaints received and actions taken to resolve them;
- m. emergency situations and actions taken to resolve them; and
- n. any other information required by the District Manager.

9.7 The Owner shall maintain on record at the Site for each client disposing of solid non-hazardous waste at the Site, a description of each type of solid non-hazardous waste received from the client and documentation to demonstrate that the Owner has taken reasonable care to ensure that waste classified as either hazardous or liquid industrial waste under O. Reg. 347 as amended from time to time, is not disposed of at the Site.

Record Retention

9.8 Except as authorized in writing by the Director, all records required by this ECA shall be retained at the Site for a minimum of two (2) years from their date of creation.

9.9 The Owner shall retain all documentation listed in Schedule "A" for as long as this ECA is valid.

9.10 All monthly Site inspection records are to be kept at the Site until they are included in the Annual Report.

9.11 The Owner shall retain employee training records as long as the employee is working at the Site.

9.12 The Owner shall make all of the above documents available for inspection upon request of Ministry staff.

9.13 The Owner shall retain, either on-Site or in another location and notify the District Manager of this location, copies of the annual reports referred to in the preceding condition and any associated documentation of compliance monitoring activities and shall continue to do so for a period of at least two (2) years after the closure of the Site.

10.0 TRAINING

Employees and Training

10.1 A training plan for all employees that operate any aspect of the Site shall be developed and implemented by the Operator . Only trained employees shall operate any aspect of the Site or carry out any activity required under this ECA . Employees must provide proof of training to the Ministry upon request. For the purpose of this ECA "trained" means knowledgeable either through instruction or practice in:

- a. the relevant waste management legislation including EPA, O. Reg. 347 and O. Reg. 232/98 , regulations and guidelines;
- b. major environmental and occupational health and safety concerns pertaining to the waste to be handled;

- c. the proper handling of wastes;
- d. the management procedures including the use and operation of equipment for the processes and wastes to be handled;
- e. the emergency response procedures;
- f. the specific written procedures for the control of nuisance conditions;
- g. the terms, conditions and operating requirements of this ECA; and
- h. proper inspection, receiving and recording procedures and the activities to be undertaken during and after a load rejection.

11.0 COMPLAINTS PROCEDURES

- 11.1 If at any time, the Owner receives complaints regarding the operation of the Site , the Owner shall respond to these complaints according to the following procedure:
- a. The Owner shall record and number each complaint, either electronically or in a log book, and shall include the following information: the nature of the complaint, the name, address and the telephone number of the complainant if the complainant will provide this information, the time and date of the complaint, specific details of operations that were occurring, any changers from normal operations, types of waste loads (including source) and other on Site activities;
 - b. The Owner, upon notification of the complaint, shall initiate appropriate steps to determine all possible causes of the complaint, proceed to take the necessary actions to eliminate the cause of the complaint and forward a formal reply to the complainant; and
 - c. The Owner shall complete and retain on-Site a report written within one (1) week of the complaint date, listing the actions taken to resolve the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents.
- 11.2 The Owner shall designate a person to receive any complaints and to respond with a written notice of action as soon as possible. The Owner shall post the Site complaints procedure at the Site entrance. All complaints and the Owner's actions taken to remedy the complaints must be summarized in the Annual Report.
- 11.3 The Company shall notify the District Manager, Township of Warwick and WIFN, in writing, of each environmental complaint within two (2) business days of the complaint. The notification shall include:
- 1. this Approval number;
 - 2. a description of the nature of the complaint;
 - 3. the time and date of the incident to which the complaint relates.
- 11.4 The Company shall report all environmental complaints to the WPLC at the next WPLC meeting.

12.0 EMERGENCY SITUATIONS

- 12.1 In the event of a fire or discharge of a contaminant to the environment, Site staff shall contact the MECP Spills Action Centre (1-800-268-6060) and the District Office of the MECP forthwith.
- 12.2 The Owner shall submit to the District Manager a written report within three (3) days of the spill or incident, outlining the nature of the incident, remedial measures taken and measures taken to prevent future occurrences at the Site.
- 12.3 The Owner shall ensure that adequate fire fighting and contingency spill clean up equipment is available in accordance with Item 66 of Schedule "A" and that emergency response personnel are familiar with its use and location.

13.0 MONITORING

Groundwater Monitors

- 13.1 The Owner shall ensure all groundwater monitoring wells are properly capped, locked and protected from damage.
- 13.2 In areas where landfilling is to proceed around monitoring wells, the wells must be decommissioned in accordance with O. Reg. 903 as amended from time to time and then replaced when waste placement and capping is completed.
- 13.3 Any groundwater monitoring wells included in the monitoring program shall be assessed, repaired, replaced or decommissioned as required.
- 13.4 The Owner shall repair or replace any monitoring well which is destroyed or in any way made inoperable for sampling such that no more than one sampling event is missed.
- 13.5 All monitoring wells that are no longer required as part of the groundwater monitoring program shall be decommissioned in accordance with good standard practice that will prevent contamination through the abandoned well and in accordance with O. Reg. 903. A report on the decommissioning shall be provided in the annual monitoring report for the period during which the well was decommissioned.

Monitoring Program

- 13.6 Monitoring programs shall be carried out for groundwater, surface water, landfill gas in accordance with the Environmental Monitoring Plan, as amended from time to time listed as Item 39 and Appendix H of Item 68 of Schedule "A". Surface water will also be evaluated as per Item 91 of Schedule "A".
- 13.7 The Owner shall ensure that Biochemical Oxygen Demand, Total Suspended Solids, Total coliform, Fecal coliform and E. Coli are added to the parameter list to be sampled for surface water station SS19.

- 13.8 Air Quality, Dust, Hydrocarbon, and Volatile Organic Carbon monitoring shall be undertaken in accordance with Item 85 in Schedule "A".
- 13.9 Air quality monitoring shall be in accordance with the canister method (USEPA TO-14/15) .
- 13.10 Noise monitoring shall be undertaken by the Owner at the Site in accordance with Item 28 on Schedule "A" including any noise monitoring in response to noise complaints.
- 13.11 No alterations to the groundwater, air quality, noise or surface water monitoring programs shall be implemented prior to receiving written approval from the District Manager. The Owner shall give all requests to the Township of Warwick, the WPLC and WIFN at the same time or prior to the time that such request is made to the District Manager.

14.0 CONTINGENCY PLANS AND TRIGGER MECHANISMS

Hydraulic Containment

- 14.1 If the leachate level elevation in any of the pumping stations wells listed below rise above their respective trigger level, the Owner shall take additional groundwater levels within four (4) weeks as detailed in Figure 2 of Item 39 and Appendix H of Item 68 of Schedule "A".

Monitoring location Trigger Leachate Elevation (mASL)

- PS1 232.7
- PS3 232.6
- PS5 232.8
- PS7 233.4

The assessment process for leachate levels is detailed in Figure 2 of Appendix H of Item 68 on Schedule "A".

Groundwater Quality

- 14.2 The trigger concentration for groundwater quality shall be 80% of the Guideline B-7 values for parameters that have an Ontario Drinking Water Quality Standards value.
- 14.3 Groundwater chemical concentrations must be assessed with the trigger concentrations within six (6) weeks of sample collection.
- 14.4 The assessment process for groundwater quality is detailed in Figure 3 of Item 39 and Appendix H of Item 68 of Schedule "A".

Surface Water Quality

- 14.5 The trigger mechanisms for surface water quality shall be one of the following:

- a. Where off Site surface water quality satisfies the Ministry's PWQO, the respective PWQO shall be used as a trigger concentration; or
- b. Where the background surface water quality naturally exceeds the PWQO, the background concentration should be considered in evaluating and updating the trigger concentration.

14.6 Surface water quality results will be assessed in accordance with the requirements established under the Industrial Sewage Works component of the EPA approval for the Site.

14.7 The assessment process for surface water quality is detailed in Figure 4 of Appendix H of Item 68 in Schedule "A".

Landfill Gas

14.8 If landfill gas concentrations exceed 10% LEL, the Owner shall undertake additional monitoring, assess the source and pathway of methane to determine if the elevated concentrations are landfill related.

14.9 If the elevated concentrations are landfill related, the Owner shall undertake contingency measures.

General Contingency Measures

14.10 In the event a result of a monitoring test exceeds the trigger mechanisms detailed above, the Owner shall:

- a. notify the District Manager, the WPLC, WIFN and the Township of Warwick of any trigger level exceedances within twenty four (24) hours of receipt of the results;
- b. conduct an investigation into the cause of the adverse result and submit a report to the District Manager that includes an assessment of whether contingency measures need to be carried out;
- c. if contingency measures are needed, submit detailed plans, specifications and descriptions for the design, operation and maintenance of the contingency measures, and a schedule as to when these measures will be implemented, to the Director and notify District Manager; and
- d. implement the required contingency measures upon approval by the Director.

15.0 REPORTING

Semi Annual Volume Determination

15.1 The Owner shall undertake semi-annual air space surveys of the bottom and top waste contours to determine the estimated air space used for waste disposal in the prior six months. The air space survey shall include daily cover material and shall take into account settlement. The first air space survey shall be undertaken by no later than February 2012 with an air space survey being completed semi-annually

after the completion of the first air space survey, until landfill Site closure.

- 15.2 Wastes which the Owner has been ordered to dispose of at the Site by any ministry, department or agency of the federal or Provincial Crown shall be excluded from the air space survey calculations.
- 15.3 Each air space survey shall be conducted by an Ontario Land Surveyor or other qualified consultant and such air space survey shall be provided to the District Manager. The Owner shall keep a copy of each air space survey on-Site and make them available to MECP personnel upon request.

Quarterly Monitoring Reports

- 15.4 The Owner shall submit quarterly monitoring reports to the Township of Warwick, WIFN, District Manager and the WPLC within sixty (60) days of the end of the calendar quarterly reporting period starting September 30, 2012.
- 15.5 Each report will include the following:
- a. a summary of monitoring activities and results;
 - b. a summary of any exceedences and related operator responses;
 - c. any complaints received and operator response;
 - d. a summary of mitigation activities for noise, dust, litter, air quality or other taken during the quarter in accordance with the Best Management Practices;
 - e. any proposed improvements to monitoring or operating procedures; and
 - f. any implemented improvements to monitoring or operating procedures that have been identified to address or reduce impacts.

Annual Report

- 15.6 A written report on the development, operation and monitoring of the Site , shall be completed annually (the "Annual Report"). The Annual Report shall be submitted to the Regional Director , the District Manager, the Township of Warwick, WIFN, and the WPLC, by March 31st of each year, and shall cover the 12 month period preceding December 31st.
- 15.7 The Annual 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 the need to amend the monitoring programs;
 - b. 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;
 - c. an assessment of the effectiveness of the Poplar Plantation and the Poplar System for leachate;
 - d. an assessment of the effectiveness of the on Site leachate treatment facility;
 - e. Site plans showing the existing contours of the Site;

- f. areas of landfilling operation during the reporting period;
- g. areas of intended operation during the next reporting period;
- h. areas of excavation during the reporting period;
- i. the progress of final cover, vegetative cover, and any intermediate cover application;
- j. previously existing site facilities;
- k. facilities installed during the reporting period;
- l. Site preparations and facilities planned for installation during the next reporting period;
- m. calculations of the volume of waste, daily and intermediate cover, and final cover 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;
- n. a calculation of the remaining capacity of the Site, an estimate of the remaining Site life and a comparison of actual capacity used to approved Site capacity;
- o. a summary of the quantity of any leachate or pre-treated leachate removed from the Site or leachate treated and discharged from the Site;
- p. a summary of the weekly, maximum daily and total annual quantity (tonnes) of waste received at the Site;
- q. a summary of any complaints received and the responses made;
- r. a discussion of any operational problems encountered at the Site and corrective action taken;
- s. an update summary of the amount of financial assurance which has been provided to the Director;
- t. a report on the status of all monitoring wells and a statement as to compliance with Ontario Regulation 903;
- u. any other information with respect to the site which the District Manager or Regional Director may require from time to time;
- v. a statement of compliance with all conditions of this ECA and other relevant Ministry requirements, guidelines and regulations;
- w. summary of inspections undertaken at the Site;
- x. a summary of recycling, processing and composting efforts undertaken including the amount of recyclable received, amount of processed material and composted material each year;
- y. any changes in operations, equipment or procedures employed at the Site; and
- z. recommendations regarding any proposed changes in operations of the Site.

16.0 SITE CLOSURE

Closure Plan

- 16.1 At least two (2) years prior to closure or when 90% of the site capacity is reached, whichever comes first, the Owner shall submit to the Director for approval, with copies to the District Manager, the Township of Warwick, WIFN and the WPLC, a detailed Site closure plan pertaining to the termination of landfilling operations at this Site , post-closure inspection, maintenance and monitoring, and end use. The 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. a description 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. a schedule indicating the time-period for implementing sub-conditions i) to vi) above.
- e. descriptions of the procedures for post-closure care of the Site, including:
 - i.) operation, inspection and maintenance of the control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
 - ii) record keeping and reporting; and
 - iii) complaint contact and response procedures;
- f. an assessment of the adequacy of and need to implement the contingency plans for leachate and methane gas;
- g. an updated estimate of the contaminating life span of the Site , based on the results of the monitoring programs to date; and
- h. an update of the cost estimates for financial assurance and the amount which has been provided to the Director to date.

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

End Use

16.3 The Owner shall consult with affected stakeholders on the proposed end uses as committed to in Item 35 of Schedule "A" prior to the submission of its closure report under the EPA. The proposed end use activities should be consistent with the types of activities consulted upon during the EA.

Closure of the Site

16.4 Upon closure of the Site, the following features will be inspected, recorded on a quarterly basis and maintained as required on a seasonal basis:

- a. evidence of settlement;
- b. possible leachate seeps and springs;
- c. cover soil integrity;
- d. vegetative cover;

- e. surface water drainage works;
- f. erosion and sediment in surface water drainage system; and
- g. groundwater monitoring wells.

- 16.5 A vegetative cover consisting of vegetation that is suited to local conditions and that is capable with minimal care of providing vigorous, plentiful cover no later than its 3rd growing season shall be established over all completed areas to control erosion and maximize evapotranspiration. The Owner shall complete planting as soon as possible after reaching final contours.
- 16.6 If weather conditions do not allow timely placement of final and vegetative cover, silt curtains shall be employed to minimize silt loadings to surface water bodies.

SCHEDULE "A"

1. Document entitled "Environmental Assessment Act Section 9 Notice of Approval to Proceed with the Undertaking", Re: An Environmental Assessment for Warwick Landfill Expansion, Waste Management of Canada Corporation, EA File Number: EA-02-08-02-03, dated January 15, 2007.
2. Application for a Provisional Certificate of Approval for the Warwick Landfill, dated March 27, 2006.
3. Document entitled "Development and Operations Plans Warwick Landfill Expansion Volume 1 of 2" dated March 2006 prepared by Henderson, Paddon and Associates Limited.
4. Document entitled "Development and Operations Plans Warwick Landfill Expansion Volume 2 of 2" dated March 2006 prepared by Henderson, Paddon and Associates Limited.
5. Document entitled "Assessment of Geotechnical Design Requirements New Landfill Facility Warwick, Ontario" prepared by Alston Associates Inc., dated July 31, 2006.
6. Document entitled "2006 Poplar System Monitoring Report Warwick Landfill Site Township of Warwick Ontario" prepared by Jagger Hims Limited, dated January 2007.
7. Document entitled "Warwick Landfill Expansion Contaminating Lifespan Review" prepared by Jagger Hims Limited, dated March 2006.
8. Drawing No. 105716-111 entitled " Proposed Final Contours and Stormwater Management Plan" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
9. Drawing No. 105716-112 entitled " Landfill Bottom Contours (Top of Primary Gravel)" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
10. Drawing No. 105716-113 entitled "Landfill Perimeter Sections" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
11. Drawing No. 105716-114 entitled " Landfill Perimeter Sections" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
12. Drawing No. 105716-115 entitled "Leachate Collection Sump Details" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
13. Drawing No. 105716-116 entitled "Proposed Primary Leachate Collection System" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
14. Drawing No. 105716-117 entitled "Proposed Secondary Leachate Collection System" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
15. Drawing No. 105716-118 entitled "Landfill Sections" prepared by Henderson Paddon and Associates

Limited, dated February 24, 2006.

16. Drawing No. 105716-119 entitled "Landfill Perimeter Sections" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
17. Drawing No. 105716-120 entitled " Landfill Perimeter Sections" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
18. Drawing No. 105716-125 entitled "Details and Sections" prepared by Henderson Paddon and Associates Limited, dated February 24, 2006.
19. Letter dated April 16, 2007 from Frank Ford, Henderson Paddon and Associated Limited to Wilf Ruland, Citizens Environmental Consulting.
20. Letter dated May 2, 2007 from Frank Ford, Henderson Paddon and Associated Limited to Wilf Ruland, Citizens Environmental Consulting.
21. Letter dated June 1, 2007 from Greg Washuta, P. Eng., M. Eng., Senior Waste Engineer, Ministry of the Environment to Reid Cleland, Waste Management of Canada Corporation.
22. Drawing No. 106716-127A entitled "Plough Furrow Surface Water Distribution Warwick Landfill" prepared by Henderson Paddon and Associates Limited, dated March 21, 2007.
23. Drawing No. 106716-F215 entitled "Proposed Mini-Transfer Area" prepared by Henderson Paddon and Associates Limited, dated March 29, 2007.
24. Report entitled "Best Management Practices Plan (Dust) Warwick Landfill Watford, Ontario " prepared by RWDI Air Inc., dated December 11, 2007.
25. Report entitled "Best Management Practices Plan (Litter) Warwick Landfill Watford, Ontario " prepared by RWDI Air Inc., dated December 11, 2007.
26. Report entitled "Best Management Practices Plan (Odour) Warwick Landfill Watford, Ontario " prepared by RWDI Air Inc., dated December 11, 2007.
27. Document entitled "Appendix F Air Quality Monitoring Plan and Letter", prepared by RWDI, dated November 29, 2007.
28. Document entitled "Environmental Noise Monitoring Program for the Warwick Landfill" , prepared by Aercoustics Engineering Limited, dated November 21, 2007.
29. Document entitled "Proposed Expansion of WM Warwick Landfill Predicted Noise Impact" , prepared by Aercoustics Engineering Limited, dated June 15, 2007.
30. Document entitled "Application for Approval of ECA of Approval A032203 Warwick Township

County of Lambton MOE. Reference No. 0539-6N7TRY Part 1 of 2" , dated July 13, 2007, prepared by Henderson Paddon and Associates Limited.

31. Document entitled "Application for Approval of ECA of Approval A032203 Warwick Township County of Lambton MOE. Reference No. 0539-6N7TRY Part 2 of 2- Financial Assurances" , dated August 22, 2007, prepared by Henderson Paddon and Associates Limited.
32. Letter dated July 27, 2007 from Dan Toner, Assistant Director, Laboratory Services Branch to Tesfaye Gebrezghi, Supervisor- Waste Unit, MOE.
33. Table 6.1 entitled "Phasing-Analysis for Leachate Quantities WM- Warwick Landfill Expansion" prepared by Henderson Paddon and Associates Ltd., dated August 17, 2007.
34. Letter dated August 20, 2007 from John DeYoe, RWDI to Frank Ford, Henderson Paddon and Associates Limited.
35. Discussion Paper 9 entitled "Impact Management Plan" and all Appendices dated October 2005 prepared by Waste Management of Canada Corporation.
36. Letter Report and attachments dated May 10, 2001 from Frank C. Ford of Henderson, Paddon Environmental to Mark Turner, Environmental Assessment and Approvals Branch.
37. Development and Operations Report - Canadian Waste Services Inc. - Warwick Landfill, Warwick Township - Revised, dated October 1997, prepared by Henderson Paddon Environmental Inc.
38. Consolidated Report Leachate Management Plan - Canadian Waste Services Inc. - Warwick Landfill - Warwick Township dated July 2001 prepared by Henderson Paddon Environmental Inc.
39. Environmental Monitoring Plan - Warwick Landfill - Township of Warwick, Ontario dated December 2007, prepared by Jagger Hims Limited.
40. Letter dated October 11, 2007 from Brad Bergeron, RWDI to Greg Washuta, Senior Waste Engineer, Ministry of the Environment.
41. Report entitled "Stormwater Management Plan Poplar Irrigation Area Warwick Landfill Expansion Watford, Ontario" dated December 2007, prepared by Henderson Paddon Environmental Inc.
42. Letter dated November 21, 2007 from Kevin Smith, Aercoustics Engineering Limited to Wayne Jenken, Waste Management of Canada Corporation.
43. E-mail and attachments dated February 12, 2008 from Brad Bergeron, RWDI Air Inc. to Greg Washuta, Senior Waste Engineer, EAAB, MOE.
44. E-mail and attachments dated January 29, 2008 from Brad Bergeron RWDI Air Inc. to Greg Washuta, Senior Waste Engineer, EAAB, MOE.

45. Letter dated March 3, 2008 from Wayne Jenken, Landfill Engineer, WMCC to Ian Parrott, Manager, ECA of Approval Review Section, EAAB, MOE.
46. Letter dated June 13, 2008 from Frank Ford, Senior Environmental Engineer, Henderson Paddon and Associates Limited to Greg Washuta, P. Eng., Senior Waste Engineer, Waste Unit, EAAB, MOE.
47. Application for a Provisional Certificate of Approval for a Waste Disposal Site for the Twin Creeks Landfill Site, signed and dated December 11, 2008.
48. Letter dated December 11, 2008 from Reid Cleland, District Landfill Manager, WMCC to Doris Dumais, Approvals Director, EAAB, MOE.
49. Report entitled "Cell 12 Project and Changes Affecting The Warwick Landfill Expansion" and attached appendices, created by Henderson Paddon & Associates Limited, dated August 2008.
50. Application for a Provisional Certificate of Approval for a Waste Disposal Site for the Twin Creeks Landfill Site, dated August 11, 2008.
51. Letter dated December 18, 2008 from Greg Washuta, Senior Waste Engineer, Waste Unit, EAAB, MOE to Reid Cleland, District Landfill Manager, WMCC.
52. Letter dated December 18, 2008 from Wayne Jenken, Landfill Engineer, WMCC to Greg Washuta, Senior Waste Engineer, Waste Unit, EAAB, MOE.
53. Letter dated December 18, 2008 from Jason Balsdon and Brent Langille, Jagger Hims Limited to Wayne Jenken, Landfill Engineer, WMCC.
54. Application for a Provisional Certificate of Approval for a Waste Disposal Site for Waste Management of Canada Corporation's Twin Creeks Landfill Site, signed and dated January 16, 2009.
55. Report and Appendix A entitled "Waste Management of Canada Corporation Twin Creeks Landfill Use of Geonet for Secondary Drainage Layer" prepared by Henderson Paddon and Associates, dated January 2009.
56. Letter dated March 18, 2009 from Greg Washuta Senior Waste Engineer, Waste Unit, EAAB, MOE to Reid Cleland, Landfill Manager, WMCC.
57. Letter report and appendices A, B and C dated April 9, 2009 from Jeff Armstrong, Genivar Consultants LP to Greg Washuta, Senior Waste Engineer, Waste Unit, EAAB, MOE.
58. Application for a Waste Disposal Site Certificate of Approval dated April 28, 2009 and signed by Reid Cleland, District Manager, Waste Management of Canada Corporation.
59. Report produced by Genivar Consultants LP entitled "Development & Operations Report for a Waste

Transfer Station Application" dated June 2009.

60. November 24, 2009 e-mail from Jeff Armstrong of Genivar Consultants LP to Jim Chisholm, Senior Review Engineer with the Ministry of Environment indicating that the application is for an existing mini transfer area but flexibility is being applied for to direct the waste collected at this area to alternate waste disposal sites.
61. November 24, 2009 e-mail from Jim Chisholm, Senior Review Engineer with the Ministry of Environment to Jeff Armstrong, Genivar Consultants LP, requesting information about how the Mini-Transfer Area already located at the landfill is covered by the existing Certificate of Approval and the December 21, 2009 e-mail response from Jeff Armstrong to Jim Chisholm to his November 24, 2009 e-mail, outlining that the Mini-Transfer Area is covered by the 1997 Design and Operation Report that is identified in Item 37 and attached page 7-4 of the report in which Section 7.8 dealt with the Mini-Transfer Area.
62. January 24, 2011, 12:11PM, e-mail from Wayne Jenken, Area Landfill Engineer, Waste Management of Canada Corporation to Jim Chisholm, Senior Review Engineer with the Ministry of Environment indicating that the original Mini Transfer Area moved to the new location on November 2009 and that the old location for the Mini Transfer Area has been removed. The e-mail also made suggested changes to a draft of the Notice.
63. Document entitled "Twin Creeks Landfill - Expansion of Poplar Cap Irrigation System for Existing Waste Disposal Area January 2010" prepared for Waste Management of Canada Corporation by Genivar Consultants LP dated January 2010.
64. Letter dated November 2, 2010 addressed to Mr. Reid Cleland, Waste Management of Canada Corporation from Mr. Greg Washuta, Ministry of the Environment providing comments and requesting additional information on MOE Reference File No. 1486-829MCN.
65. Document entitled "Twin Creeks Landfill, Watford, ON 091-13089-00 (91730R) - Application for Approval for Expansion of Poplar Plantation (South Fill Area) - Response to MOE Comments Letter dated November 2, 2010" prepared for Waste Management of Canada Corporation by Genivar Consultants LP dated December 2, 2010.
66. Report entitled "Development and Operations Plan - Warwick Landfill Expansion - Volume 1 of 3" prepared for WMCC by Henderson Paddon & Associates dated March 2008.
67. Report entitled "Development and Operations Plan - Warwick Landfill Expansion - Volume 2 of 3" prepared for WMCC by Henderson Paddon & Associates dated March 2008.
68. Report entitled "Development and Operations Plan - Warwick Landfill Expansion - Monitoring Plans - Volume 3 of 3" prepared for WMCC by Henderson Paddon & Associates dated March 2008.
69. Letter dated May 6, 2009 addressed to Mr. Reid Cleland, WMCC from Mr. Greg Washuta, Ministry of the Environment providing ministry review comments on the Development and Operations Plan

70. Letter dated August 19, 2009 addressed to Mr. Reid Cleland, WMCC from Mr. Greg Washuta, Ministry of the Environment providing comments from the Township of Warwick, Walpole Island First Nation and the Warwick Public Liaison Committee on the Development and Operations Plan
71. Letter dated November 12, 2009 addressed to Mr. Greg Washuta, Ministry of the Environment from Mr. Wayne Jenken, WMCC.
72. Drawing set entitled "Twin Creeks Landfill - Landscaping and Signage Detail Construction Drawings" prepared by Schollen & Company Inc. and dated July 4, 2008. The drawing set consists of the following:
- i. Cover page entitled "Twin Creeks Landfill - Landscaping and Signage Detail Construction Drawings" prepared by Schollen & Company Inc. and dated July 4, 2008;
 - ii. Drawing No. L-1 entitled "Landscape Plan - Screening Berm";
 - iii. Drawing No. L-1A entitled "Landscape Detail at Intersections - Screening Berm"
 - iv. Drawing No. L-2 entitled "Landscape Plan - Screening Berm";
 - v. Drawing No. L-3 entitled "Landscape Plan - Screening Berm & Area F";
 - vi. Drawing No. L-4 entitled "Landscape Plan - Screening Berm";
 - vii. Drawing No. L-5 entitled "Landscape Plan - Screening Berm and Area G (North)";
 - viii. Drawing No. L-6 entitled "Landscape Plan - Screen Planting Area G (South)";
 - viii. Drawing No. L-7 entitled "Landscape Plan - Screen Planting and Creek Area A and Area B";
 - ix. Drawing No. L-8 entitled "Landscape Plan - Screen Planting Areas C, D and E";
 - x. Drawing No. L-9 entitled "Landscape Plan - Restoration Planting Area H";
 - xi. Drawing No. LD-1 entitled "Landscape Detail Plan ";
 - xii. Drawing No. LD-2 entitled "Landscape Notes and Master Plant List"; and
 - xiii. Drawing No. LD-3 entitled "Signage Details";
73. Application for a Certificate of Approval for a Waste Disposal Site dated April 6, 2011 submitted by Waste Management of Canada Corporation for Provisional Certificate of Approval No. A032203 requesting approval for use of an alternative daily cover material and amended Best Management Practices for Odour.. The supporting documentation for the application included the following:
- i. Cover letter dated April 7, 2011 addressed to Mr. Tes Gebrezghi, Ministry of the Environment from Mr. Reid Cleland, Waste Management of Canada Corporation;
 - ii. Report entitled "Best Management Practices Plan (Odour) Warwick Landfill" prepared for Waste Management of Canada Corporation by RWDI Air Inc. (Project No. 1100800) dated April 7, 2011;
 - iii. Letter dated March 24, 2011 addressed to Mr. Wayne Jenken, Waste Management of Canada Corporation from Mr. Peter Pickfield, Garrod Pickfield; and
 - iv. Email dated March 22, 2011 at 3:32 p.m. sent to Mr. Peter Pickfield, Garrod Pickfield from Mr. Wayne Jenken.
74. Letter dated October 4, 2011 addressed to Mr. Tesfaye Gebrezghi, Ministry of the Environment from

Mr. Reid Cleland, Waste Management of Canada requesting an amendment to Condition 167 (a). The supporting documentation attached to the letter included the following:

- a. Application for a Certificate of Approval for a Waste Disposal Site dated October 4, 2011;
- b. Provisional Certificate of Approval A032203 Notice No. 7 dated June 1, 2011;
- c. Letter from Wayne Jenken, WMCC to Don Bruder, Township of Warwick dated February 23, 2011;
- d. Letter from Wayne Jenken, WMCC to Don Bruder, Township of Warwick dated May 26, 2011;
- e. Letter from Peter Pickfield, Garrod Pickfield LLP to Reid Cleland, WMCC dated September 14, 2011;
- f. Letter from Wayne Jenken, WMCC to Dean Jacobs, Walpole Island First Nations dated July 14, 2011;
- g. Email from Kent Hunter, Neegan Burnside to Wayne Jenken dated September 19, 2011 at 3:54 p.m.;
- g. Email from Wayne Jenken, WMCC to Kent Hunter, Neegan Burnside dated September 20, 2011 at 1:52 p.m.;
- h. Email from Kent Hunter, Neegan Burnside to Wayne Jenken dated September 27, 2011 at 10:23 a.m.;
- i. WPLC meeting minutes dated September 15, 2011; and
- j. WPLC meeting minutes dated April 7, 2011.

75. Letter dated May 22, 2012 addressed to Ms. Agatha Garcia Wright, Director, Ministry of the Environment from Mr. Wayne Jenken, Waste Management of Canada Corporation requesting amendment to Condition No. 7.10 (Landfill Gas Management). The letter included the following supporting documentation:

- i. Letter report entitled "Early Vertical Gas Well Collection System" dated May 2012 and addressed to Mr. Reid Cleland, Waste Management of Canada Corporation from Mr. Frank Ford, GENIVAR Inc.;
- ii. Drawings No. 102 and G111 - Landfill Gas Collection System;
- iii. Landfill Gas Headers, Gas Building with Blowers and Landfill Gas Flaring System Design Drawings and Design and Operations Plan for Modifications;
- iv. Description of Phase 1 of the Gas Collection System;
- v. Revised Section 4.7 of the Design and Operations Plan;
- vi. Application to Amend Environmental Compliance Approval No. A032203 and supporting documents;
- vii. Consultation Summary and Records with Stakeholders; and
- viii. Design Drawings for Amended Landfill Gas Management System.

76. Letter dated July 26, 2012 addressed to Mr. Reid Cleland, Waste Management of Canada Corporation from Mr. Dale Gable, Ministry of the Environment requesting additional information on the location of the proposed gas extraction wells.

77. Letter dated August 9, 2012 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Frank

Ford, GENIVAR Inc. providing details on the location of the gas wells.

78. Letter Report dated May 9, 2012 addressed to Ms. Agatha Garcia Wright, Director, Ministry of the Environment from Mr. Wayne Jenken, Waste Management of Canada requesting Conditions 6.48 to 6.61 be amended. The letter report included the following Sections:
- i. Environmental Compliance Approval application signed by Reid Cleland, WMCC and dated May 9, 2012;
 - ii. Proof of legal name and zoning;
 - iii. Record of consultation with Township of Warwick;
 - iv. Record of consultation with Walpole First Island First Nation; and
 - v. Record of consultation with WPLC.
79. Letter report dated September 26, 2012 addressed to Ms. Agatha Garcia-Wright. Director, Environmental Approvals Branch, Ministry of the Environment from Mr. Philip Janisse and Mr. Brent Langille, RWDI Inc. requesting the time frame for the use of ASR be extended and the sampling frequency for the ASR be reduced.
80. Letter dated October 15, 2012 and supporting drawings addresses to Ms. Agatha Garcia-Wright. Director, Environmental Approvals Branch, Ministry of the Environment from Mr. Wayne Jenken, Waste Management of Canada Corporation detailing the proposed changes to the landscape plan for the Site. The supporting drawings include the following drawing prepared by Schollen and Company Inc (Contract No. 27007) dated June 2012:
- i. Cover page entitled "Twin Creeks Landfill Expansion - Landscape and Details Drawings" dated June 29, 2012
 - ii. Drawing No. L-1 entitled "Landscape Plan - Screening Berm";
 - iii. Drawing L-1A entitled "Landscape Detail at Intersections - Screening Berms";
 - iv. Drawing L-2 entitled "Landscape Plan - Screening Berm";
 - v. Drawing L-3 entitled "Landscape Plan - Screening Berm and Area F";
 - vi. Drawing L-4 entitled "Landscape Plan - Screening Berm";
 - vii. Drawing L-5 entitled "Landscape Plan - Screening Berm and Area G";
 - viii. Drawing L-6 entitled "Landscape Plan - Area G Planting Area";
 - ix. Drawing L-7 entitled "Landscape Plan - Area A and Area B Screen Planting and Creek";
 - x. Drawing L-8 entitled "Landscape Plan - Area C, D and E Screen Planting";
 - xi. Drawing L-9 entitled "Landscape Plan - Area H Restoration Planting";
 - xii. Drawing LD-1 entitled "Landscape Detail Plan";
 - xiii. Drawing LD-2 entitled "Landscape Notes and Master Plant List";
 - xiv. Drawing LD-3 entitled "Signage Details";
 - xv. Drawing LD-4 entitled "Details"; and
 - xvi. Drawing LD-5 entitled "Details".
81. Letter dated November 13, 2013 addressed to Agatha Garcia-Wright, Director, Ministry of the Environment from Wayne Jenken, Waste Management of Canada Corporation requesting amendment to Condition 8.6 (a). The following supporting documentation was attached to the memorandum.

- i. Amended Environmental Compliance Approval Number A032203 issued December 13, 2011
 - ii. Amended Environmental Compliance Approval Number A032203 Notice No. 1 issued February 29, 2012
 - iii. Application to Amend Environmental Compliance Approval No. A032203 with Signature of Reid Cleland in Section 1.4
 - iv. Record of Consultations with Stakeholders
82. Application package dated May 4, 2016 and received on May 16, 2016 including all subsequently submitted supporting documentation and drawings, including the amendment to the D&O plan and associated drawings.
83. Report titled "Twin Creeks Landfill Site: Best Management Practices Plan (Dust) - Version 7" prepared by RWDI Air Inc., dated May 19, 2017.
84. Report titled "Twin Creeks Landfill Site: Best Management Practices Plan (Odour) - Version 8" prepared by RWDI Air Inc., dated May 19, 2017.
85. Report titled "Twin Creeks Landfill Site: Ambient Air Quality Monitoring Plan (Revision #3)" prepared by RWDI Air Inc., dated May 18, 2017.
86. "WM Twin Creeks Landfill Site, Leachate Management Framework" prepared by HDR, dated November 29, 2017.
87. Application for a an amendment to ECA No. A032203 to provide detailed design for the construction of Cell 4 in response to Condition 4.8. Signed by Reid Cleland and dated October 16, 2018. The supporting documentation for the application included the drawing set titled "Waste Management of Canada Corporation, Twin Creeks Landfill Expansion, Warwick Township, Landfill Base Preparation Cell 4." Prepared by WSP Group, October, 2018. The drawing set consists of the following:
- i. Drawing No. 106716P-400 - "Title Sheet";
 - ii. Drawing No. 106716P-401 - "March 2018 Existing Conditions Plan";
 - iii. Drawing No. 106716P-402 - "Cell 4 - Bottom of Excavation - West";
 - iv. Drawing No. 106716P-403 - "Cell 4 - Bottom of Excavation - East";
 - v. Drawing No. 106716P-404 - "Cell 4 - Top of Primary Clay Liner - West";
 - vi. Drawing No. 106716P-405 - "Cell 4 - Top of Primary Clay Liner - East";
 - vii. Drawing No. 106716P-406 - "Cell 4 - Temporary Clay Seal - West";
 - vii. Drawing No. 106716P-407 - "Cell 4 - Temporary Clay Seal - East";
 - viii. Drawing No. 106716P-408 - "Cell 4 - Section and Details";
 - ix. Drawing No. 106716P-409 - "Cell 4 - Section and Details";
 - x. Drawing No. 106716P-410 - "Cell 4 - Section and Details";
 - xi. Drawing No. 106716P-411 - "Cell 4 - Pumping Station PS5/PS6 Plans and Sections";
 - xii. Drawing No. 106716P-412 - "Cell 4 - Pumping Station PS5/PS6 Plans and Sections";
 - xiii. Drawing No. 106716P-413 - "Cell 4 - Sections and Details"; and

xiv Drawing No. 106716P-414 - "Cell 4 - Sections and Details".

88. Environmental Compliance Approval Application signed by Wayne Jenken dated April 28, 2023, for establishment of a Renewable Natural Gas Facility at the Site.
89. Report entitled "Twin Creeks Environmental Centre Renewable Natural Gas Facility Design and Operations Report" dated April 28, 2023 prepared by WSP.
90. Report entitled "Twin Creeks Landfill: Best Management Practices Plan (Odour) - Version 9" dated November 17, 2023 prepared by RWDI.
91. Letter dated February 27, 2014 from Mike Moroney, District Manager of MECP to Angela McLachlan, Environmental Compliance Manager, Twin Creeks Landfill, WMCC.

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

Conditions 1.1, 1.2, 1.3, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.14, 1.15, 1.23, and 1.24 are to clarify the legal rights and responsibilities of the Owner and Operator under this Approval.

Conditions 1.4 and 1.5 are to ensure that the Site is designed, 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.

Condition 1.12 is to ensure that the Site is operated under the corporate name which appears on the application form submitted for this approval and to ensure that the Director is informed of any changes.

Condition 1.14 is to restrict potential transfer or encumbrance of the Site without the approval of the Director and to ensure that any transfer of encumbrance can be made only on the basis that it will not endanger compliance with this Approval.

Conditions 1.15 and 1.16 are to ensure that the successor is aware of its legal responsibilities.

Conditions 1.17, 1.18, 1.19, and 1.20 clarify that the Part II.1 Director is an individual with authority pursuant to Section 197 of the Environmental Protection Act to require registration on title and provide any person with an interest in property before dealing with the property in any way to give a copy of the Approval to any person who will acquire an interest in the property as a result of the dealing.

Condition 1.21 is to ensure that appropriate Ministry staff has ready access to the Site for inspection of facilities, equipment, practices and operations required by the conditions in this Approval. This Condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the Act, the OWRA, the PA, the NMA and the SDWA.

Condition 1.25 clarifies what information may be subject to the Freedom of Information Act.

Condition 2.1 is to require Financial Assurance for this company to ensure that sufficient funds are available to the Ministry to clean up the Site in the event that the Owner is unable or unwilling to do so.

Conditions 3.1 to 3.15 inclusive are necessary in order to establish a forum for the exchange of information and public dialogue on activities to be 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 environmental protection.

Condition 3.16 has been included in order to ensure that consultation with First Nations is undertaken during the submission of any application to amend any approval required by the Ministry.

Conditions 4.1 to 4.6 inclusive, 4.8, and 4.9 is to ensure that the Site is designed, constructed and operated in an environmentally acceptable manner, based on the conceptual design and operations for the Site.

Condition 4.7 is to ensure the availability of as-built drawings for inspection and information purposes.

Condition 4.10 has been specifically included to allow for optimization of design for subsequent stages based on operating experience and monitoring results and to ensure that any necessary remedial action is undertaken before landfilling may proceed in the next stage.

Condition 4.11 has been included to ensure that the site has been constructed in accordance with the approved design plans, specifications and QA/QC procedures and to ensure that there is not an adverse impact on the environment.

Condition 4.12 is to ensure that there is a person, reporting directly to the Ministry, with associated costs reimbursed by the Owner, who is responsible for inspecting the Site, based on the requirements in this ECA of Approval to ensure that the Site is operated in an environmentally acceptable manner.

Conditions 4.13, 4.14, 15.1, 15.2 and 15.3 is to specify the amount of days the environmental inspector is required to be on site based on the conditions in this approval and in accordance with the previously approved EA for the site.

Condition 5.1 is to ensure safe side slopes of the berm.

The reason for Condition 5.2 is to approve the diversion area based on the information submitted. This is ensure the protection of the environment and the public.

Condition 5.3 is to approve the use of Cell 12 for contaminated soil.

Condition 5.4 is to ensure the Owner carries out the landscape plan based on the submitted information.

Conditions 6.1 and 6.18 are included in order to ensure that waste disposal at the site is undertaken in accordance with applicable Ministry of the Environment regulations and guidelines. Compliance with these regulations and guidelines will ensure that the site does not cause and adverse effect on the environment.

Conditions 6.4 and 6.7 is to specify the approved areas from which waste may be accepted at the Site and the

types and amounts of waste that may be accepted for disposal at the Site, based on the Owner's application and supporting documentation.

Condition 6.5 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. Approval to landfill beyond these limits would require an application with supporting documentation submitted to the Director.

Condition 6.6 specifies the maximum amount of waste that may be received at the site based on the previously approved Environmental Assessment for the site.

Condition 6.8 has been inserted to minimize the potential for clogging of the 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.

Conditions 6.9 to 6.14 inclusive have been included in order to ensure asbestos waste is handled and disposed of in accordance with O. Reg. 347 as amended from time to time. Proper handling and disposal of asbestos waste ensures that the asbestos waste does not cause an adverse impact on the environment and also does not affect human health.

Condition 6.16 is needed to make certain that uses at the site are for waste disposal purposes only and not any other uses which may cause an adverse impact on the environment and human health.

Condition 6.17 is necessary in order to ensure that all waste loads are inspected and waste that is disposed of at the site is in accordance with the terms and conditions in this ECA of Approval.

Condition 6.19 is to ensure that open burning of municipal waste is not permitted because of concerns with air emissions, smoke and other nuisance affects, and the potential fire hazard.

Conditions 6.20 through 6.22 inclusive are to ensure that users of the Site are fully aware of important information and restrictions related to Site operations under this ECA of Approval.

Conditions 6.23 to 6.27 inclusive are to specify the normal hours of operation for the landfill Site and a mechanism for amendment of the hours of operation.

Conditions 6.28 to 6.30 inclusive are to specify site access to/from the Site and to ensure the controlled access and integrity of the Site by preventing unauthorized access when the Site is closed and no site attendant is on duty.

Condition 6.31 is needed in order to make certain that the waste received at the site is in accordance with the ECA and O. Reg. 347.

Condition 6.32 has been included is to ensure that access roads are clear and do not pose a safety hazard to the general public.

Condition 6.33 is for the protection of public health and safety and minimization of the potential for damage to environmental control, monitoring and other works at the landfill Site. Scavenging is the uncontrolled removal of material from waste at a landfill site.

Conditions 6.34 to 6.40 inclusive are to ensure that the Site is operated, inspected and maintained in an environmentally acceptable manner and does not result in a hazard or nuisance to the natural environment or any person.

Condition 6.41 is to ensure that noise from or related to the operation of the landfill is kept to within Ministry limits and does not result in a hazard or nuisance to any person.

Condition 6.42 is included to ensure that noise monitoring is undertaken in accordance with the noise monitoring program prepared and to ensure that an independent acoustic audit is completed in accordance with the Ministry's requirements.

Condition 6.43 is to clarify when the Best Management Plans can be amended and the mechanism for amending the Best Management Plans.

Condition 6.44 is to ensure that appropriate measures are taken in order to prevent surface water from contacting waste so as not to cause an adverse effect on the environment.

Conditions 6.45 and 7.18 is to specify other approvals required for works and activities related to the operation of this Site as a landfill.

Condition 6.46 has been included is in order to prevent ponding in on site ditches and any adverse impact on the environment and human health.

Condition 6.47 is to ensure that landfilling operations are conducted in an environmentally acceptable manner. 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.

Condition 6.48 to 6.61 inclusive is to specify the approval requirements for use of alternative cover material at the Site.

Condition 7.1 is necessary so that runoff from contaminated soils does not create and adverse impact on the environment.

Conditions 7.2 and 7.3 are included in order to ensure that the composting and processing operations at the site are conducted in a fashion in accordance with Ministry's regulations, guidelines and so as not to pose a threat to human health or the environment.

Conditions 7.4, 9.3, 9.4, 9.5, 9.6 and 9.7 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 ECA of Approval, the EPA and its regulations.

Conditions 7.5 and 7.6 inclusive have been included are to ensure tire shred storage in accordance with the Fire Protection and Prevention Act and to protect the natural environment.

Condition 7.7 is to ensure that backup power is available so that all facilities remain operational during a power disruption thus preventing any adverse impacts on the environment.

Condition 7.8 has been inserted in order to ensure that concentrations of landfill gas do not pose a hazard to human health or the environment.

Condition 7.9 is to ensure that landfill gas is built and managed in accordance with the Ministry's requirement and regulation.

Condition 7.10 is needed in order to ensure that an adequate landfill gas management system is installed at the site in order to protect human health and the environment.

Conditions 7.11 and 7.12 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. As the landfill reaches the more stable methane producing stage, pipe cleaning may be required less frequently.

Condition 7.13 has been added to ensure adequate flow of leachate in the leachate collection pipes.

Conditions 7.14 to 7.17 are to ensure that the leachate collection system is designed and built in accordance with Regulations and the ministry's requirements.

Condition 7.18 is included is in order to prevent off site migration of leachate which may cause an adverse effect on the environment.

Condition 7.19 is to approve the proposed Renewable Natural Gas facility for processing of the landfill gas and converting into quality natural gas.

Conditions 7.20 and 21 are to ensure the RNG facility has adequate capacity and the operation of the landfill gas collection system is not impacted.

Condition 7.22 is to ensure the RNG facility is properly operated and does not result in any unacceptable impacts to the environment.

Condition 7.23 is to ensure operational record of the RNG facility is maintained for evaluation of the system performance and identification of improvement measures.

Conditions 8.1 to 8.4 inclusive are needed to ensure leachate recirculation is undertaken in accordance with the ministry's requirements and leachate recirculation does not pose an adverse impact on the environment.

Condition 8.5 is in accordance with EA condition 22 and protects the natural environment from any impacts due to discharge of raw or treated leachate to adjacent creeks.

Condition 8.6 is to ensure that a fully functional leachate treatment system is in place on site prior to waste placement.

Condition 8.7 clarifies the responsibilities of the owner, the requirements of the ministry, the authority of the Ministry and protects the natural environment and human health.

Conditions 9.1 and 9.2 are needed to ensure regular inspections of the site are conducted in order to protect the natural environment.

Conditions 9.8 to 9.12 inclusive is to ensure that accurate waste records are maintained to ensure compliance with the conditions in this ECA of Approval (such as fill rate, site capacity, record keeping, annual reporting, and financial assurance requirements), the EPA and its regulations.

Conditions 9.13, 15.4, 15.5 and 15.6 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. An annual report is an important tool used in reviewing site activities and for determining the effectiveness of site design.

Condition 10.1 is to ensure that the Site is supervised and operated by properly trained staff in a manner which does not result in a hazard or nuisance to the natural environment or any person.

Conditions 11.1, 11.2, 11.3 and 11.4 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 environmental protection.

Conditions 12.1 and 12.2 are to ensure that the Ministry is informed of any spills or fires at the Site and to provide public health and safety and environmental protection.

Condition 12.3 is contained in the ECA to guarantee that appropriate measures are taken by the County to prevent future occurrences of spills or fires at the site and to protect public health and safety and the environment.

Conditions 13.1 to 13.5 inclusive are to ensure protection of the natural environment and the integrity of the groundwater monitoring network.

Conditions 13.6 through 13.11 inclusive are to demonstrate that the landfill site is performing as designed and 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.

Conditions 14.1 through 14.10 inclusive are to ensure that the Owner 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. A leachate contingency plan is a specific requirement of Reg. 232.

Conditions 16.1 and 16.2 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.

Condition 16.3 ensures proper public consultation about the end use of the Site is undertaken and that the end use activities are consistent with those identified during the EA process.

Conditions 16.4 to 16.6 ensure that certain activities are undertaken upon closure of the site in order to ensure that the closed site does not affect the natural environment.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). A032203 issued on February 4, 2023

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me, the Ontario Land Tribunal and in accordance with Section 47 of the *Environmental Bill of Rights*, 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Notice") shall state:

- a. 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;
- b. 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:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. 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:

Registrar*

The Minister of the Environment,

The Director appointed for the purposes of
Part II.1 of the *Environmental Protection Act*

Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

Conservation and Parks
777 Bay Street, 5th Floor
Toronto, Ontario
M7A 2J3

and

Ministry of the Environment,
Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.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 <https://ero.ontario.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*.

DATED AT TORONTO this 16th day of December, 2023



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

RL/

c: District Manager, MECP Sarnia
Cristina Olarte, WSP