

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER A030303

Issue Date: October 31, 2024

Waste Management of Canada Corporation
3965 Okemos Rd Waste Management, Closed Sites Management Group- Mideast, No. B4
Okemos, Michigan
USA 48864

Site Location: 4052 Oil Heritage Road
Petrolia Town, County of Lambton
N0N 1R0

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 26.02 hectare landfilling site within a total site area of 41.23 hectares

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

"Adverse Effect" is as defined in the Environmental Protection Act, R.S.O. 1990.

"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 V of the EPA;

"District Manager" means the District Manager of the local district office of the Ministry for the Region in which the Site is geographically located;

"Environmental Compliance Approval" or "ECA" or "Approval" means this entire provisional Environmental Compliance Approval document, issued in accordance with Section 20.3 of the EPA , and includes any schedules to it, the application and the supporting documentation listed in schedule "A";

"EPA " or "Act" means *Environmental Protection Act* , R.S.O. 1990, c. E. 19, as amended from time to time;

"Ministry" or "MECP" or "MOE" refers to the Ontario Ministry of the Environment, Conservation and Parks;

"**OWRA**" means the *Ontario Water Resources Act* , R.S.O. 1990, c.0.40;

"**Operator** " means any person, other than the Owner's employees, authorized by the Owner as having the charge, management or control of any aspect of the site;

"**Owner**" means any person that is responsible for the establishment or operation of the site being approved by this ECA, and includes Waste Management of Canada Corporation;

"**PA** " means the *Pesticides Act* , R.S.O. 1990, c. P-11, as amended from time to time;

"**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;

"**Regulation 232**" or "**Reg. 232**" means Ontario Regulation 232/98 (New Landfill Standards) made under the EPA, as amended from time to time;

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

"**Site**" means the entire waste disposal site, described in this ECA, located at 4052 Oil Heritage Road South, 1/2 Lot 16, Concession 10, in the Town of Petrolia, County of Lambton.

"**System**" means the drip irrigation/poplar/willow tree leachate treatment system.

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

TERMS AND CONDITIONS

I GENERAL

Compliance

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Site is notified of the ECA and the conditions herein and shall take all reasonable measures to ensure the person complies with the same.
2. Any person authorized to carry out work on or operate any aspect of the Site shall comply with the conditions of this ECA .

In Accordance

3. Except as otherwise provided for in this ECA , the Site shall be designed, developed, constructed, operated and maintained in accordance with the applications for this ECA and the supporting documentation incorporated into this ECA in Schedule "A".

Other Legal Obligations

4. The issuance of, and compliance with, this ECA does not:
 - a. relieve any person of any obligation to comply with any provision of the EPA or any other applicable statute, regulation or other legal requirement; or
 - b. limit in any way the authority of the Ministry to require certain steps be taken or to request that any further information related to compliance with this ECA be provided to the Ministry ;

unless a provision of this ECA specifically refers to the other requirement or authority and clearly states that the other requirement or authority is to be replaced or limited by this ECA.

Adverse Effect

5. The Owner or Operator remain responsible for any contravention of any other condition of this ECA or any applicable statute, regulation, or other legal requirement resulting from any act or omission that caused an adverse effect or impairment of air and/or water quality.

Furnish Information

6. Any information requested by the Director or a Provincial Officer concerning the Site and its operation under this ECA , including but not limited to any records required to be kept by this ECA shall be provided in a timely manner.
7. 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 ECA or under any statute, regulation or subordinate legal instrument, 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 condition of this ECA or any statute, regulation or other subordinate legal requirement; or
 - b. acceptance by the Ministry of the information's completeness or accuracy.
8. Any information related to this ECA 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.

Interpretation

9. This ECA revokes and replaces the previous Environmental Compliance Approval and all subsequent amendments issued to this Site.
10. Where there is a conflict between a provision of any document, including the application, referred to in this ECA , and the conditions of this ECA, the conditions in this ECA shall take precedence.
11. Where there is a conflict between the application and a provision in any documents listed in Schedule "A", the application shall take precedence, unless it is clear that the purpose of the document was to amend the application and that the Ministry approved the amendment in writing.
12. Where there is a conflict between any two documents listed in Schedule "A", other than the application, the document bearing the most recent date shall take precedence.
13. The conditions of this ECA are severable. If any condition of this ECA , or the application of any condition of this ECA to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this ECA shall not be affected thereby.

Certificate of Requirement

14. Pursuant to Section 197 of the EPA , no person having an interest in the Site shall deal with the Site in any way without first giving a copy of this ECA to each person acquiring an interest in the Site as a result of the dealing.
15. In the event any additional land is acquired that will be included as part of the Site, two (2) copies of a completed Certificate of Requirement, containing a registerable description of the Site , shall be submitted to the Director for the Director's signature within sixty (60) calendar days of a notice being issued for the Site that incorporates the land into the ECA.
16. In the event any additional land is acquired that will be included as part of the Site as discussed in Condition 15 then the Certificate of Requirement shall be registered in the appropriate land registry office on title to the Site and a duplicate registered copy shall be submitted to the Director within ten (10) calendar days of receiving the Certificate of Requirement signed by the Director.

No Transfer or Encumbrance

17. 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 is satisfied with the arrangements made to ensure that all conditions of this ECA will be carried out and that sufficient financial assurance is deposited with the Ministry to ensure that these conditions will be carried out.

Change of Owner

18. 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 ;
 - 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; and
 - e. the name of the corporation where the Owner or Operator is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the Corporations Information Act , R. S. O. 1990, c. C.39, shall be included in the notification.
19. In the event of any change in the ownership of the Site, other than a change to a successor municipality, the Owner shall notify in writing the succeeding owner of the existence of this ECA, and a copy of such notice shall be forward to the Director and District Manager .

Inspections by the Ministry

20. No person shall hinder or obstruct a Provincial Officer from carrying out any and all inspections authorized by the EPA, OWRA or the PA , of any place to which this ECA 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 ECA are kept;
 - b. to have access to, inspect, and copy any records required to be kept by the conditions of this ECA ;
 - c. to inspect the Site, related equipment and appurtenances;
 - d. to inspect the practices, procedures, or operations required by the conditions of this ECA ; and
 - e. to sample and monitor for the purposes of assessing compliance with the terms and conditions of this ECA, or the EPA, OWRA or the PA.

Financial Assurance

21. (1) The Owner shall submit to the Director, Financial Assurance, as defined in Section 131 of the Act, to cover the costs for site closure, post-closure care, and contingency plans for the Site. The Financial Assurance shall be in a form acceptable to the Director and shall be submitted as per the following schedule:

Date	Financial Assurance Amount
By March 31, 2022	\$7,289,173

By March 31, 2023	\$7,218,470
By March 31, 2024	\$7,148,124
By March 31, 2025	\$7,087,479

- (2) By no later than **March 31, 2026**, and every four years thereafter, the Owner shall submit a Financial Assurance Re-Evaluation Report to the Director for approval, with copies to the District Manager. The re-evaluation report shall include:
- i. updates of the discount, interest and inflation rates associated with the requirements for financial assurance in this ECA including justifications and sources of the proposed rates;
 - ii. re-evaluation of the contaminating life span taking into consideration of the site monitoring data;
 - iii. updates of the cost estimates on which the amounts associated with the requirements for financial assurance in this ECA are based, that take into consideration the following:
 - (1) total amount of waste landfilled;
 - (2) empirical leachate generation rates;
 - (3) empirical and theoretical landfill gas generation rates;
 - (4) any measures that have been carried out or need to be carried out to prevent and ameliorate any adverse effect that relates to the site;
 - (5) annual inspection, maintenance, and monitoring costs, including costs for leachate treatment and disposal and landfill gas use or discharge; and
 - (6) updates on required Contingency Cost for the Site.
 - iv. detailed financial assurance calculation prepared in accordance with the Financial Assurance Guideline (Guideline F-15, 2005).
- (3) The Financial Assurance must be submitted to the Director within ten (10) days of written acceptance of the re-evaluation submitted under Sub-condition (2) by the Director.
- (4) Commencing on March 31, 2019, the Owner shall prepare and maintain at the Site an updated re-evaluation of the amount of Financial Assurance required to implement the actions required under Sub-condition (1) for each of the intervening years in which a re-evaluation is not required to be submitted to the Director under Sub-condition (2) . The re-evaluation shall be made available to the Ministry, upon request.
- (5) 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 Financial Assurance shall forthwith be replaced by cash.

II SITE OPERATIONS

Signs

22. A sign shall be installed and 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 Approval;
 - c. the name of the Operator;
 - d. the normal hours of operation;
 - e. the allowable and prohibited waste types;
 - f. the telephone number to which complaints may be directed;
 - g. a twenty-four (24) hour emergency telephone number (if different from above); and
 - h. a warning against dumping outside the Site.

Waste Type

23. (1) Only the following types of waste shall be accepted at the Site:
- a. Municipal waste;
 - b. Solid non-hazardous institutional, commercial, and industrial wastes.
- (2) No liquid industrial waste or hazardous waste shall be disposed of on this Site.
24. (1) The Owner shall ensure all incoming loads are inspected by a trained attendant to ensure only waste approved under this Approval are received at this Site;
- (2) If any incoming waste load is known to, or is discovered to, contain unapproved waste, that load shall not be accepted at the Site; and
- (3) If any unapproved waste is discovered on-Site, that waste shall be immediately disposed of in accordance with the EPA and Reg. 347.

Capacity

25. The Owner shall only accept and deposit waste at the site as long as the total capacity does not exceed 4,749,000 cubic meters and there is available capacity as defined by the final contours for the Site as shown in Item 22 of Schedule "A" approved by this ECA.
26. (1) Solid non-hazardous wastes received at the Site for disposal shall not exceed 365,000

tonnes per year of municipal waste and Institutional, Commercial and Industrial waste from the Province of Ontario.

- (2) Wastes received at the Site for disposal shall not exceed a maximum of 2,000 tonnes per day and the annual average shall not exceed 1,000 tonnes per day, over a 365 day period.

Service Area

27. Only waste that is generated within the Province of Ontario shall be accepted at the Site.

Hours of Operation

28. (1) Waste shall only be accepted at the Site from 7:00 am to 6:00 pm, Monday to Friday and 7:00 am to 3:00 pm on Saturday. Associated landfilling activities related to start up and movement of equipment can take place one hour before and after waste is received at the Site. This does not restrict equipment maintenance on the Site.
- (2) With the prior written approval from the District Manager, the time periods may be extended to accommodate seasonal or unusual quantities of waste.

Site Security

29. No waste shall be received, landfilled or removed from the Site unless a site supervisor or attendant is present and supervises the operations during operating hours. The Site shall be closed when a site attendant is not present to supervise landfilling operations.
30. The Site shall be operated and maintained in a secure manner, with access to the Site regulated and perimeter of the Site secured by fencing or natural features. During non-operating hours, the Site entrance and exit gates shall be locked and the Site shall be secured against access by unauthorized persons.

Litter Control

31. All loose, windblown litter shall be collected and disposed of at an approved disposal facility.

Vermin, Scavenging, Dust, Litter, Odour, Noise, etc.

32. The Site shall be operated and maintained such that the vermin, vectors, dust, litter, odour, noise and traffic do not create a nuisance.
33. No scavenging is to occur at the Site.

Burning Waste Prohibited

34. Burning of waste at the Site is strictly prohibited at this Site.

Citizens Liaison Committee

35. The Owner shall establish and maintain a Citizens Liaison Committee (CLC) for the purposes of discussing the operation, development and closure of this Site. The make-up of this CLC shall be submitted to the District Manager, Sarnia District Office for information.

TIRE STORAGE/PROCESSING FACILITY

36. The tire storage/processing facility shall be operated in accordance with Items 12 through 16 in Schedule "A".
37. The maximum amount of whole tires permitted to be stored at the site shall not exceed 1200 cubic meters.

USE OF TIRE SHREDS IN LEACHATE COLLECTION LAYER

38. (a) Tire shreds is permitted to be used as an alternative for gravel in the leachate collection layer at the Site in accordance with the conditions in this amendment and as described in Items 12 to 16 in Schedule "A".
- (b) The Owner shall include as part of the annual reporting requirements a discussion detailing the performance of the tire shred material, any difficulties encountered and efforts undertaken to resolve them. Based on the performance of the tire shred, the Director may rescind the use of tire shreds in the leachate collection layer and require contingency measures to be undertaken to ensure adequate leachate removal in the affected areas.

MONITORING OF TIRE SHRED PERFORMANCE

39. (1) In the event the Owner implements the use of tire shred as an alternative material in the Leachate Collection System, the Owner shall conduct the monitoring program to evaluate the overall performance of the granular section and tire shred section of the leachate collection system in accordance with Items 17 through 21 in Section "A".
- (2) The leachate levels within the landfilling area of the site shall be monitored on a quarterly basis at minimum.
- (3) The Owner shall include as an item in the annual report a discussion on the results of the LCS monitoring program and any impacts the tire shred is having as an alternative material in the LCS.
- (4) In the event the Owner wishes to amend the monitoring program as approved by Condition 39 (1) and (2), the Owner shall submit an application to the Director requesting that the program be amended.

ARTIFICIAL WETLAND PILOT PROJECT

40. (1) The Artificial Wetland Pilot Project shall be conducted in accordance with Item 29 through 32 and 50 in Schedule "A"
- (2) Within 120 days of construction completion of the artificial wetland project, the Owner shall submit to the District Manager, a construction report detailing the construction activities and any design changes made during construction. The report shall include but not be limited to the following topics:
- i. drawing(s) of the "as-built" final cover;
 - ii. a description of the various construction stages;
 - iii. quality assurance/control measures for the construction; and
 - iv. any changes to the design.
- (3) The pilot project is permitted to be operated until December 31, 2014. A written notice shall be submitted to the Director upon completion of the pilot project.
- (4) For continued use of the artificial wetland after the pilot project period has expired, the Owner shall submit a written request to the Director requesting that the pilot project status be removed from the artificial wetland project and continued operation be permitted.

Leachate Drip Irrigation/Poplar Tree System

41. (1) The 6.0 hectare (consisting of five (5) phases) on-site drip irrigation leachate/poplar/willow treat system (System) shall be operated in accordance with Items 22 through 28 in Schedule "A".
- (2) For each phase of the System, the Owner shall within one (1) day of completion of planting of the poplar/willow forest notify the District Manager in writing that the planting has been completed.
- (3) The Owner shall ensure records shall be kept for the each phase of the System as follows:
- i) Daily records of volumes of water/leachate applied to Phases;
 - ii. quantities and dates of application of pesticides and herbicides;
 - iii) inspection notes regarding tree growth rates and health;
 - iv) inspection notes regarding condition and growth of underlying vegetative landfill cover (ie grass);
 - v) observed pooling, breakouts on sideslopes and/or runoff of irrigated water/leachate;
 - vi) observations of any odours
 - vii) records as may be obtained from the nearest Environment Canada Weather Office on weather conditions which include daily high and low

temperatures, wind velocity and direction, and precipitation quantities.

- (5) The Owner shall ensure any occurrence of leachate breakouts is reported to the District Office in writing within four (4) days of event being documented.
 - (6) The Owner shall ensure that the irrigation of leachate / water for the System include the following:
 - i) detailed records shall be kept of the quantities of irrigation leachate/water that are applied, including the dates of application;
 - ii) Operations must immediately stop if leachate contamination problems in surface water or groundwater, which are attributable to the operation of the System, are found to be occurring. Recommencement of operations may proceed only upon further written notification of the District Manager.
 - iii) Operations must be discontinued immediately if operations cause 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 of the appropriate District Office of the Ministry shall be notified immediately.
 - (7) If odours attributable to the System become a problem at the Site, then the District Manager shall be so informed in writing forthwith. In addition, the Owner shall notify the District Office and verbally inform the District Manager that an odour issue has occurred and a written notification shall be submitted to the District Office forthwith.
 - (8) In the event Condition No. 41(7) occurs, the operation of the system shall be stopped pending further instructions from the District Manager or when approved implement the steps of the odour control plan.
 - (9) All spills and upsets shall be immediately reported to the Ministry's Spills Action Centre (SAC) and shall be recorded in a log as to the nature of the spill or upset, and the action taken for clean-up, correction and prevention of future occurrences.
42. Attributable odours from the System shall be addressed in the Site's odour control plan.
43. The Owner shall submit an annual report on the System By no later than **June 30** of each year, under separate cover from the annual report for the Site, shall be submitted to the District Manager. The report shall include but not be limited to the following Items:

- a. results and an analysis of the results of the monitoring programs for the System;
- b. assessment of the results of the System as related to the stated objectives for the construction and operations;
- c. assessment of the need to change the monitoring program and a recommendation of the required changes;
- d. tabulation and assessment of the volumes of leachate produced by the landfill, and those volumes which may be treated or recirculated by these methods;
- e. a report on operational problems identified during the operation of the System and a discussion of each problem and details of what was done to rectify each problem;
- f. assessment of the need for operational changes for the System and a recommendation of the required changes;
- g. a Site plan which shows the location of the areas planted with poplar, willow trees and grass cover.
- h. an assessment of the monitoring results pertaining to the use of poplar trees as vegetation on the final cover

44. If, in the opinion of the Director that the System is unsuccessful based upon the annual report required under Condition No. (43), the poplar and willow trees shall be removed by the Owner forthwith and the following tasks must be completed:

- a. Remove the Irrigation equipment and trees from the site. Removal shall include removal of tree stumps and most roots, excavate the trench to the full cap depth on each tree row, 1.5 metres wide, and then replace, remould and recompact the excavated material
- b. the landfill cover shall be restored to the same condition as it was in prior to commencement of the System and a blend of suitable grasses shall be seeded as necessary.

Landfill Gas Collection System

- 45. (1) The construction and operation for the expansion to the gas collection system shall be completed in accordance with Items 33 through 36 in Schedule "A".
- (2) Within **one hundred and twenty (120)** days after completion of the expansion of the gas collection system the Owner shall submit to the District Manager, a construction report summarizing the work completed and provide "as-built" drawings for the project.
- 46. The landfill gas management system design report for the Petrolia Landfill Site listed as Item 42 in Schedule "A" is approved for compliance with Section 11.1 (1) of Ontario Regulation 347.
- 47. The annual report submitted to the District Manager shall include an assessment of the operation of

the landfill gas collection and utilization system, including but not limited to the following:

- i) total volume of landfill gases collected during the reporting year expressed in cubic metres and adjusted to standard 25⁰ C, 101.3 kPa,
- ii) percentage of methane contained in the collected gases expressed as an average value of the total volume of gases collected over the reporting period,
- iii) any changes to the gas collection system implemented over the reporting period including any extensions of the collection system, installation of new extraction wells, replacement wells, and any other extraction wells that have been mothballed or decommissioned.
- iv) any other changes to the gas collection and utilization system implemented over the reporting period including the utilization facility.
- v) any updates to the inspection and maintenance plan as a result of changes made to the gas collection system during the reporting period.
- vi) any updates to the Operations Manual.

Leachate Extraction System

- 48. Approval is granted for the installation of a leachate extraction system at the Site in accordance with Items 39 through 41 in Schedule "A".
- 49. Within 90 days of construction completion of the leachate extraction system, the Owner shall submit to the District Manager a construction report detailing the construction activities and any design changes made to the system during construction. This report shall include but not be limited to the following topics:
 - i) "as-built" drawing(s) of the location of the system;
 - ii) a description of the various construction stages;
 - iii) quality assurance/quality control plan for the construction; and
 - iv) any changes to the design of the system.
- 50. Operation of the leachate extraction system shall cease if as a direct result of such activity problems with leachate spill or odours occur until such time as they are rectified.
- 51. The Owner shall install adequate insulation on the above-ground portion of the leachate gravity main should leachate freezing in this pipe become an issue.

III. MONITORING PROGRAM

- 52. Monitoring programs shall be carried out for groundwater, surface water, leachate, and landfill gas in accordance the monitoring program listed as Item 52 in Schedule "A".
- 53. In the event a result of a monitoring test carried out under a monitoring program does not comply with the trigger criteria developed in accordance with the Ministry's regulations and guidelines and approved by the Ministry, the Owner shall:
 - a. 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; and
- b 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
 - c implement the required contingency measures upon approval by the Director.

IV. COMPLAINTS AND EMERGENCIES

Complaints Procedure

54. 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 and the time and date of the complaint;
 - 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.

Spill Contingency and Emergency Response

55. The Owner shall take immediate measures to clean-up all spills, related discharges and process upsets of wastes. All spills and upsets shall be immediately reported to the Ministry's Spills Action Centre at (416) 325-3000 or 1-800-268-6060 and shall be recorded in a written log or an electronic file format, referred to in Condition 60 of this ECA, as to the nature of the spill or upset, and the action taken for clean-up, correction and prevention of future occurrences.
56. (a) An up-to-date Emergency Response Plan shall be maintained at all times, in a central location available to all staff, and a copy shall be submitted to the District Manager, the local Municipality and the Fire Department. The Emergency Response Plan shall be reviewed on an annual basis and updated, if necessary. The revised version of the Emergency Response Plan shall be submitted to the District Manager, the local Municipality and the Fire Department for comments and concurrence.
- (b) The Owner shall ensure that the contingency equipment and materials outlined in the Emergency Response Plan are immediately available on every piece of mobile construction or transport equipment at all times, in a good state of repair, and fully

operational.

- (c) The Owner shall ensure that all operating personnel are fully trained in the use of the contingency equipment and materials outlined in the Emergency Response Plan, and in the procedures to be employed in the event of an emergency.

Training

- 57. A training plan shall be maintained for all employees that operate the Site. Only Trained Personnel may operate the Site or carry out any activity required under this ECA.
- 58. As a minimum, operators of the Site shall be trained with respect to the following areas:
 - (a) terms and conditions requirements of this ECA;
 - (b) use and operation of equipment and management of the Site;
 - (c) operating, monitoring and inspection procedures;
 - (d) any environmental concerns pertaining to the waste to be handled;
 - (e) specific written procedures for refusal of unacceptable waste loads;
 - (f) relevant waste management legislation, regulations, including, but not limited to the Act, and O. Reg. 347;
 - (g) emergency response procedures; and
 - (h) specific written procedures for the control of adverse effect conditions.

V. INSPECTION AND RECORD KEEPING

Site Inspection

- 59. (a) An inspection of the Site and all equipment on the Site shall be conducted on a daily basis to ensure that:
 - (i) the Site is secure;
 - (ii) the operation of the Site is not causing any adverse effects on the environment; and
 - (iii) 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.
- (b) The Owner shall ensure the Site inspections are carried out only by Trained Personnel, in accordance with the training requirements listed in Condition 58.

Record Keeping

- 60. A record of the inspections required by Condition 59 shall be kept in a log book or in an electronic file that includes the following information:

- (a) the name and signature of person that conducted the inspection;
- (b) the date and time of the inspection;
- (c) a list of any deficiencies discovered;
- (d) any recommendations for remedial actions; and
- (e) the date, time and description of actions taken.

Daily Log Book

61. A daily log shall be maintained in written or electronic format and shall include the following information:
- a. the type, date and time of arrival, hauler, and quantity (tonnes) of all waste and cover material 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. the amount of any leachate removed, or treated and discharged from the Site;
 - e. a record of litter collection activities and the application of any dust suppressants;
 - f. a record of all refusal of waste shipments, the reason(s) for refusal, and the origin of the waste, if known
 - g. a record of the daily inspections including the name and signature of person that conducted the inspection, the date and time of the inspection, the list of any deficiencies discovered, the recommendations for remedial action, and the date, time and description of actions taken; and
 - h. 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.
62. Any information requested, by the Director or a Provincial Officer, concerning the Site and its operation under this ECA, including but not limited to any records required to be kept by this ECA shall be provided to the Ministry, upon request.

V. ANNUAL REPORT

63. By **June 30** of each calendar year, the Owner shall prepare and submit to the District Manager, an Annual Report for the previous calendar year. Each report shall include, as a minimum, the following information:
- a. site plans showing the existing conditions of the Site;
 - b. a calculation of the remaining capacity of the Site and an estimate of the remaining Site life;
 - c. a summary of the quantity of any leachate or pre-treated leachate removed from the Site or leachate treated and discharged from the Site during each operating week;
 - d. a summary of the weekly, maximum daily and total annual quantity (tonnes) of waste received at the Site;
 - e. 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;
- f. 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;
- g. a summary of any complaints received and the responses made;
- h. a discussion of any operational problems encountered at the Site and corrective action taken;
- i. an update summary of the amount of financial assurance which has been provided to the Director;
- j. any changes to the Design and Operations Report and the Closure Plan that have been approved by the Director since the last Annual Report;
- k. a report on the status of all monitoring wells and a statement as to compliance with Ontario Regulation 903; and
- l. any other information with respect to the Site which the District Manager may require from time to time.

VII. CLOSURE PLAN

- 64. (a) The Site shall be closed in accordance with the Closure Plan approved by the Director and listed as Item 52 in Schedule "A" .
- (b) Within ten (10) days of closure of the Site, the Owner shall notify the Director, in writing, confirming that the Site has been closed in accordance with the Closure Plan
- (c) The updated Closure Plan is hereby approved and Item 52 in Schedule "A" is replaced.

VIII. POST-CLOSURE CARE AND OPERATIONS

- 65. (a) The Owner shall continue to operate and maintain the leachate collection system and landfill gas management system unless otherwise approved by the Director.
 - (b) General site maintenance activities shall be carried out in accordance with the updated Closure Plan.
 - (c) Site monitoring program shall be carried out as described in Section 10 of the updated Closure Plan.
66. After the landfill is closed, the Site may continue to accept municipal waste and recyclables in the public drop-off and transfer area, subject to the following restrictions:
- (a) only waste and recyclables generated within the the Township of Enniskillen shall be accepted;
 - (b) the operation hours for the public drop-off and transfer area shall be:
8am - 4pm Monday to Friday, and
8am - 12pm Saturday
 - (c) the amount of waste and recyclables accepted in the drop-off and transfer area shall not exceed 100 tonnes per day;
 - (d) the total amount of waste and recyclables stored in the drop-off and transfer area shall not exceed 300 tonnes; and
 - (e) the annual total amount of waste and recyclables accepted in the drop-off and transfer area shall not exceed 28,600 tonnes.

Controlled Methane Release and Measurement Study

67. Approval is hereby granted for the conduct of controlled methane release experiment (the Experiment) on the closed Petrolia Landfill site, all in accordance with the ECA application and supporting document listed as Items 62 and 63 in Schedule A.
68. Once installed, the pipeline system for the controlled methane release and measurement study may remain in place for repeat experiments. Each experiment study shall be completed within 15 days of commissioning, with an allowable extension of up to an additional 10 days if necessary to ensure data quality and account for any unforeseen operational delays, and subject to the follow limitations:
- the total natural gas released shall not exceed 15.0 tonnes;
 - the maximum gas release rate shall not exceed 860 kg/hr;
 - the total acetylene released shall not exceed 240 kg; and
 - the maximum acetylene release rate shall not exceed 3.0 kg/hr.
69. Signs shall be placed at the Experiment area to indicate the study taking place and prevent unauthorized entry.
70. The Owner shall ensure that any personnel working on the Experiment is adequately trained with respect to the following:
- (a) terms and conditions requirements of this ECA;
 - (b) use and operation of equipment involved in this project;
 - (c) specific written procedures for the experiment; and
 - (d) the Safe Operating Plan, and the emergency response procedures included in Item 61 of Schedule A.
71. The Owner shall ensure that the existing landfill gas collection system and site monitoring are not impacted by the Experiment.
72. Prior to the commencement of each experiment, the Owner shall provide notification to the District Manager of the works to be conducted.
73. (a) The Experiment shall conclude no later than December 31, 2026.
- (b) Within 14 days of completion of the final experiment, the project area shall be cleaned up, with any pipeline and equipment used for the Experiment disassembled and removed from the Site, and excess soil disposed of at an approved site in accordance with Item 61 of Schedule A.
74. Upon completion of the final Experiment and site clean up, the Owner shall provide written notification to the District Manager of the project completion.

Schedule "A"

Schedule "A" forms part of this ECA:

1. Report entitled "Operation and Management, Petrolia Landfill Site" prepared by Conestoga-Rovers and Associates Limited, dated May, 1981.
2. Report entitled "Hydrogeologic Investigation, Petrolia Landfill Site", prepared by Conestoga-Rovers and Associates Limited, dated May, 1981.
3. Letter dated December 21, 1982 from Mr. M.G. Kriby, Clerk-Administrator, Town of Petrolia to Conestoga-Rovers and Associates Limited indicating resolutions of council with respect to amending the service area.
4. Revised report Section 3.1.10.A entitled "Locating and Plugging of Abandoned Oil and Gas Wells", prepared in compliance with the Ministry of Natural Resources recommendations.
5. Letter dated March 26, 1982 from Conestoga-Rovers and Associates Limited to the Town of Petrolia outlining the amendments to the operation and management and hydrogeological reports on the Petrolia Landfill Site.
6. Application for a Provisional Certificate of Approval for a Waste Disposal Site, dated November 9, 2001, requesting approval for a rate and service area change.
7. Report titled "Design & Operations Report, Petrolia Landfill Site, Town of Petrolia", prepared for Canadian waste Services by Earth Tech Canada Inc., dated November, 2001.
8. Resolution of Lambton County Council, dated July 3, 2002 in which a motion was carried "That the County agree to the undertaking by CWS to utilize County Road #4 (Petrolia Line) and County Road #8 (Forest Line) for outbound trucks in order to reduce the impact of the additional traffic on the Village of Wyoming;" and further, "That the County support the proposed amendment of the CWS (Petrolia Landfill) Certificate of Approval to allow for an increase in the fill rate to 365,000 t. annually (300,000 t. ICI + 65,000 t. County wastes) as well as a service area of the Province of Ontario".
9. The report titled, "Environmental Monitoring Plan, Petrolia Landfill Site, Town of Petrolia, Ontario", dated November 2002, prepared by Jagger Hims Limited.
10. The report titled, "Contingency Plan, Petrolia Landfill Site, Town of Petrolia, Ontario", dated November 2002, prepared by Jagger Hims Limited.
11. The report titled, "Petrolia Landfill Site, Emergency Closure Plan", dated November 2002, prepared by Earth Tech Canada Inc.
12. Application for a Provisional Certificate of Approval for a Waste Disposal Site and supporting documentation submitted by Waste Management of Canada for the Petrolia Landfill Site (PCA No.

030303) requesting an amendment to permit the operation of a tire storage/processing facility and to permit the use of tire shred as an alternative to granular material for the leachate collection blanket. The application was signed by Mr. Reid Cleland, Waste Management of Canada and dated April 19, 2006. The supporting documentation included the following:

- i. Report entitled "Proposed Amendment to Design and Operation Report Acceptance and Use of Tire Shred" prepared for Waste Management Corporation by Henderson Paddon and Associated Ltd. dated April 2006 (Project No. 104719) and re-edited in June 2006
13. Letter dated June 2, 2006 addressed to Mr. Reid Cleland, Waste Management of Canada Corporation from Mr. Dale Gable, Ministry of the Environment requesting additional information pertaining to tire storage, processing and leachate concerns.
14. Letter dated June 30, 2006 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Frank Ford, Henderson Paddon and Associates Ltd. providing a response to the additional information request on the proposed facility and tire shred.
15. Letter dated July 10, 2006 addressed to Mr. Reid Cleland, Waste Management of Canada Corporation from Mr. Dale Gable, Ministry of the Environment discussing air approval requirements and fire code requirements.
16. Letter dated August 23, 2006 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Frank Ford, Henderson Paddon and Associates Ltd. providing a letter from the local fire department indicating that the facility appear to meets the fire codes and outlining the fire departments emergency requirements for the facility.
17. Letter dated January 3, 2007 and supporting documentation addressed to the Director, Section 39, EPA from Mr. Michael J. Hirlehey, Waste Management providing the monitoring plan to evaluate the overall performance of the granular and alternative material for the leachate collection system. The supporting documentation included the following:
 - i. Letter report dated January 3, 2007 addressed to Mr. Reid Cleland, Waste Management from Mr. Brent Langille and Mr. Jason Balsdon, Jagger Hims Limited providing a monitoring plan to evaluate the overall performance of the granular and alternative material for the leachate collection system.
18. Letter dated March 23, 2007 addressed to Mr. Reid Cleland, Waste Management from Mr. Dale Gable, Ministry of the Environment requesting additional information on LCS monitoring plan.
19. Letter dated March 27, 2007 and supporting documentation addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Michael Hirlehey, Waste Management providing additional information on the LCS monitoring program.
20. Letter dated April 11, 2007 addressed to Mr. Michael Hirlehey, Waste Management from Mr. Dale Gable, Ministry of the Environment providing comments and requesting additional information on

monitoring frequency for the LCS monitoring program.

21. Letter dated May 7, 2007 and supporting documentation addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Michael Hirlehey providing a response letter from Jagger Hims on the monitoring frequency.
22. Report entitled "Proposed Amendment to Design and Operations Report: Final Cap Contour Modifications and On-Site Leachate Treatment with a Poplar Forest" prepared for Waste Management by Henderson Paddon & Associates Limited dated February 2007.
23. Email dated May 25, 2007 addressed to Mr. Frank Ford, Henderson Paddon and Associates Limited from Mr. Hugh Guerts, Ministry of the Environment providing surface water review comments with regards to the on-site leachate treatment with a poplar forest system.
24. Letter dated May 28, 2007 addressed to Mr. Hugh Guerts, Ministry of the Environment from Mr. Frank Ford, Henderson Paddon and Associates Limited providing a response to the May 25, 2007 email.
25. Letter dated May 31, 2007 addressed to Mr. Reid Cleland, Waste Management of Canada Corporation from Mr. Dale Gable, Ministry of the Environment providing comments on the proposed leachate treatment operation (poplar forest).
26. Letter dated May 28, 2007 addressed to Mr. Hugh Guerts, Ministry of the Environment from Mr. Frank Ford, Henderson Paddon and Associates providing a response with regards to sampling, operations and reporting on the proposed pilot project.
27. Email dated June 1, 2007 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Frank Ford, Henderson Paddon and Associates Limited providing a response on the system phasing, growing season and odour issues.
28. Letter dated November 23, 2007 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Frank Ford, Henderson Paddon and Associates Limited provided an addendum requesting that up to 25 percent of the plantings be hybrid willows.
29. Application for Approval signed by Michael Hirlehey, Waste Management of Canada Corporation requesting approval for a pilot project for the construction and operation of artificial wetland. The supporting documentation included the following:
 - i. Drawing No. 106719-1A prepared by Henderson Paddon and Associates Limited dated September 14, 2006
30. Letter dated October 16, 2007 addressed to Mr. Michael Hirlehey, Waste Management of Canada Corporation from Mr. Dale Gable, Ministry of the Environment requesting additional construction and design detail on the proposed artificial wetland.
31. Letter dated November 20, 2007 addressed to Mr. Dale Gable, Ministry of the Environment from Mr.

Lloyd Rozema, Aqua Treatment Technologies Inc. providing drawings the shown the information pertaining to the additional sizing and construction details on the artificial wetland.

32. Fax dated November 29, 2007 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Michael Hirlehey, Waste Management of Canada Corporation providing a drawing of the location of the facility.
33. Letter report and supporting documentation dated August 8, 2008 addressed to Ms. Doris Dumais, Ministry of the Environment from Mr. Donald Campbell, Conestoga-Rovers and Associates requesting approval for an amendment to the Provisional Certificate of Approval for the Petrolia Landfill Site. The amendment is to permit an upgrade to the site's gas collection system. The supporting documentation includes the following:
 - i. Cover letter dated August 8, 2008 addressed to Ms. Doris Dumais, Ministry of the Environment providing an overview of the project;
 - ii. Application for a Provisional Certificate of Approval for a Waste Disposal Site signed by Mr. Reid Cleland, Waste Management of Canada dated August 8, 2008;
 - iii. Amended "Landfill Gas Management" section of the Design and Operations Report (EarthTech 2001)
 - iv. Drawing No. 1: Petrolia Landfill - Existing Landfill Gas Collection Layout prepared by Conestoga-Rovers and Associates (Project Number 53164-40) dated August 8, 2008;
 - v. Drawing No. 2: Petrolia Landfill - Landfill Gas Collection System Upgrades Layout prepared by Conestoga-Rovers and Associates (Project Number 53164-40) dated August 8, 2008;
 - vi. Drawing No. 3: Petrolia Landfill - Typical Landfill Gas Collection System Details Layout prepared by Conestoga-Rovers and Associates (Project Number 53164-40) dated August 8, 2008; and
 - vii. Sheet No P-35: Waste Management -Typical LFG Collection Well - Above Ground Wellhead, Soil, Cap
34. Letter dated August 29, 2008 addressed to Mr. Reid Cleland, Waste Management of Canada Corporation from Mr. Dale Gable, Ministry of the Environment requesting additional information for the gas collection system.
35. Letter dated September 10, 2008 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. David Barton, Conestoga-Rovers and Associates providing additional drawings and information on odour, dust and sediment controls during construction. The drawings included the following:
 - i. Figure 1: Petrolia Landfill - LFG Lateral Pipe Trench (Typical) prepared by Conestoga-Rovers and Associates (Project Number 53164-50) dated September 8, 2008;
 - ii. Figure 2: Petrolia Landfill - Sub-Header Pipe Trench (Typical) prepared by Conestoga-Rovers and Associates (Project Number 53164-50) dated September 8, 2008;
 - iii. Figure 3: Petrolia Landfill - Infiltration Sink (Typical) prepared by Conestoga-Rovers and Associates (Project Number 53164-50) dated September 8, 2008;
 - iv. Table 1 - Gas Extraction Well Schedule;

- v. Drawing No. 1: Petrolia Landfill - Plan and Profile Sta 0+000 to Sta. 0+375 prepared by Conestoga-Rovers and Associates (Project Number 53164-20) dated September 10, 2008;
 - vi. Drawing No. 2: Petrolia Landfill - Plan and Profile Sta 0+375 to Sta. 0+725 prepared by Conestoga-Rovers and Associates (Project Number 53164-20) dated September 10, 2008;
 - vii. Drawing No. 3: Petrolia Landfill - Plan and Profile Sta 0+725 to Sta. 1+100 prepared by Conestoga-Rovers and Associates (Project Number 53164-20) dated September 10, 2008
 - viii. Drawing No. 4: Petrolia Landfill - Plan and Profile Sta 1+100 to Sta. 1+450 prepared by Conestoga-Rovers and Associates (Project Number 53164-20) dated September 10, 2008;
 - ix. Drawing No. 5: Petrolia Landfill - Plan and Profile Sta 1+450 to Sta. 1+700 prepared by Conestoga-Rovers and Associates (Project Number 53164-20) dated September 10, 2008;
 - x. Drawing No. 6: Petrolia Landfill - Plan and Profile Sta 1+700 to Sta. 2+010 prepared by Conestoga-Rovers and Associates (Project Number 53164-20) dated September 10, 2008; and
 - xi. Drawing No. 7: Petrolia Landfill - LFG Collection Field Layout prepared by Conestoga-Rovers and Associates (Project Number 53164-20) dated September 10, 2008
36. Email dated September 11, 2008 addressed to Mr. Dale Gable, Ministry of the Environment from Mr. Michael Hirlehey, Waste Management of Canada Corporation providing additional information on the gas utilization facility. The supporting documentation including the following:
- i. Figure 1: Petrolia Landfill - Site and Point of Reception Plan Acoustic Assessment Report prepared by Conestoga-Rovers and Associates (Project Number 51327-50) dated July 21, 2008;
 - ii. Figure 2: Petrolia Landfill - Noise Source Locations and Elevation Plan Acoustics Assessment Report prepared by Conestoga-Rovers and Associates (Project Number 51327-50) dated July 11, 2008;
 - iii. Figure 3: Petrolia Landfill - Site Plan Application for Amendment to CofA (Air) prepared by Conestoga-Rovers and Associates (Project Number 51327-50) dated July 21, 2008;
 - iv. Figure 4: Petrolia Landfill - Air Dispersion Modelling Plan Application for Amendment to CofA (Air) prepared by Conestoga-Rovers and Associates (Project Number 51327-50) dated July 21, 2008;
 - v. Figure 5: Petrolia Landfill - Proposed Utilization Facility prepared by Conestoga-Rovers and Associates (Project Number 53164-50) dated September 11, 2008; and
 - vi. Specifications and Technical Data Sheets for Caterpillar Gas Engine Generator (G3516).
37. Report entitled "Environmental Screening Report - Petrolia Landfill Site Service Area Adjustment for Combined Waste Stream Petrolia, Ontario" dated March 2009 prepared by Jagger Hims Limited.
38. Letter dated May 13, 2009 addressed to the Director, Ministry of the Environment from Jason Balsdon, Jagger Hims Limited regarding submission of Statement of Completion for the Environmental Screening Process.
39. Letter dated May 12, 2009 addressed to the Director, Environmental Assessment and Approvals Branch, Ontario Ministry of the Environment from David Barton, Conestoga-Rovers & Associates regarding application for amendment to Certificate of Approval No. A030303 Petrolia Landfill Site. The

application seeks approval for a leachate extraction system at the Petrolia Landfill and includes the following documentations:

- i. completed amendment application for Waste Disposal Site form (PIBs 4181);
 - ii. design drawings including Existing Conditions, Layout, and Details of the proposed leachate extraction system;
 - iii. excerpt of Design and Operations Report, Section 5 "Leachate Management", and Section 7 "Leachate Recirculation System", Earth Tech Canada Inc., 2001; and
 - iv. amended Design and Operations Report Section 5 "Leachate Management", Earth Tech Canada Inc., 2001.
40. Letter dated October 14, 2009 addressed to Reid Cleland, Waste Management of Canada Corporation from Rick Li, Ministry of the Environment providing review comments on the design of the leachate extraction system.
 41. Letter dated October 27, 2009 addressed to Rick Li, Ministry of the Environment from David Barton, Conestoga-Rovers & Associates providing responses to the Ministry's comments dated October 14, 2009.
 42. Letter report dated June 26, 2009 regarding "Design Report Under Ontario Section 11.1 (1) Regulation 347 - Petrolia Landfill" prepared by RWDI Air Inc.
 43. Letter report dated November 27, 2009 prepared by GENIVAR Consultants LP regarding the Application for Approval Waste Disposal Sites, Update to Financial Assurance Petrolia Landfill, County of Lambton.
 44. Letter dated April 8, 2010 addressed to Reid Cleland, Waste Management of Canada Corporation from Rick Li, Ministry of the Environment providing comments on the updated financial assurance evaluation (Item 38).
 45. Letter dated April 21, 2010 addressed to Rick Li, Ministry of the Environment from GENIVAR Consultants LP providing response to MOE's April 8, 2010 letter.
 46. Email dated May 3, 2010 to Jeff Armstrong of GENIVAR Consultants LP from Rick Li, Ministry of the Environment providing additional comments on contingency cost and contaminating life span.
 47. Email dated July 2, 2010 to Jeff Armstrong of GENIVAR Consultants LP from Rick Li, Ministry of the Environment providing comments on discounting of post closure care costs, contingency cost and the contaminating life span evaluation.
 48. Letters dated July 9, 2010 and July 7, 2010 addressed to Rick Li, Ministry of the Environment from GENIVAR Consultants LP respectively providing response to MOE's July 2, 2010 email. A revised

financial assurance calculation table is attached to the letters.

49. Letter dated July 19, 2010 to Jeff Armstrong of GENIVAR Consultants LP from Rick Li, Ministry of the Environment providing comments on contaminating life span evaluation.
50. Application for a Certificate of Approval for a Waste Disposal Site to Amend C of A No. A030303 signed by Reid Cleland, Waste Management Canada Corporation on April 19, 2011.
51. Letter addressed to Tesfaye Gebrezghi and Mike Parker of Ministry of the Environment dated November 10, 2010 from Michael Hirlehey, Waste Management Canada Corporation regarding "O. Reg232/98 Site Preparation Report 2010 South Cell Stage 2 - Northern and Southern Sections, Petrolia Landfill Site", and the Appendix "CQA/CQC Summary Report for 2010 South Cell Stage 2 Expansion at Petrolia Landfill Site" dated December 10, 2010 prepared by GENIVAR.
52. Report entitled "Petrolia Landfill Updated Closure Plan" dated April 2012 revised February 2016, and prepared by RWDI.
53. Report entitled "Petrolia Landfill Site Updated Financial Assurance Report 2012" dated August 29, 2012 prepared by RWDI.
54. Letter dated March 4, 2013 to Michael Hirlehey, Waste Management of Canada Corporation from Rick Li, Ministry of the Environment providing comments on the Updated Financial Assurance Report 2012.
55. Letter dated March 18, 2013 to Rick Li, Ministry of the Environment from RWDI regarding response to MOE comments on Financial Assurance Re-Evaluation.
56. Letter dated April 15, 2013 to Michael Hirlehey and Wayne Jenken, Waste Management of Canada Corporation from Rick Li, Ministry of the Environment providing additional comments on the Updated Financial Assurance Report.
57. Letter dated May 13, 2013 to Rick Li, Ministry of the Environment from RWDI regarding Financial Assurance Re-Evaluation Response to MOE Comments 2.
58. Letter dated October 25, 2013 to Michael Hirlehey and Wayne Jenken, Waste Management of Canada Corporation from Rick Li, Ministry of the Environment regarding additional comments on the Financial Assurance Re-evaluation.
59. Letter dated December 12, 2013 to Rick Li, Ministry of the Environment from RWDI regarding Financial Assurance Re-Evaluation Response to MOE Comments 3.
60. Environmental Compliance Approval Application for Small Research and Development Projects dated October 13, 2023, submitted by Waste Management of Canada Corporation.
61. Email dated October 23, 2023 from Rafee Hossain, Fluxlab to Rick Li, MECP regarding site cleanup and restoration plan for the Petrolia Landfill methane emissions measurement R & D project.

62. Environmental Compliance Approval Application for approval of Controlled Methane Release Experiment dated July 25, 2024, submitted by Waste Management of Canada Corporation.
63. Attachment for Environmental Compliance Approval, Project Name: Controlled Methane Release Experiment, dated July 2024 prepared by Fluxlab for Waste Management.

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

1. *The reason for inclusion of the definitions is to define the specific meaning of terms and simplify the wording of conditions in this ECA.*
2. *The reason for Conditions 1 and 2 is 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.*
3. *The reason for Conditions 3, 4, 5, 9, 10, 11, 12 and 13 is to clarify the legal rights and responsibilities of the Owner under this ECA.*
4. *Conditions 6 and 7 are included to ensure that the appropriate Ministry staff have ready access to information and the operations of the Site, which are approved under this ECA.*
5. *Condition 8 has been included in order to clarify what information may be subject to the Freedom of Information Act.*
6. *Conditions 14 to 16 inclusive are included, pursuant to subsection 197(1) of the EPA, to provide that any persons having an interest in the Site are aware that the land has been approved and used for the purposes of waste disposal.*
7. *The reasons for Condition 17 are 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 ECA.*
8. *The reasons for Conditions 18 and 19 are 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.*
9. *The reason for Condition 20 is to ensure that appropriate Ministry staff have ready access to the Site for inspection of facilities, equipment, practices and operations required by the conditions in this ECA. This condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the EPA and OWRA.*
10. *The reason for Condition 21 is to update the financial assurance to ensure that sufficient funds are available to the Ministry to close the landfill, and to carry out all expected post-closure*

care activities and any contingencies in the event that the Owner is unable or unwilling to do so.

- 11. The reason for Condition 22 is to ensure that users of the Site are fully aware of important information and restrictions related to Site operations and access under this Environmental Compliance Approval.*
- 12. The reason for Conditions 23 and 24 is to specify the types of waste that may be accepted for disposal at the Site and to ensure unqualified wastes are not accepted at the Site.*
- 13. The reasons for Conditions 25 and 26 is to specify the amounts of waste that may be accepted for disposal at the Site, based on the Owner's application and supporting documentation.*
- 14. The reasons for Conditions 27 is to specify the service area from which waste may be accepted for disposal at the Site.*
- 15. The reason for Condition 28 is to specify the hours of operation for the Site.*
- 16. The reason for Conditions 29 and 30 is 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.*
- 17. The reasons for Conditions 31, 32 and 33 is to ensure that the Site is operated and maintained in an environmentally acceptable manner and does not result in a hazard or nuisance to the natural environment or any person.*
- 18. The reason for Condition 34 is to prevent burning of waste at the site for the protection of public health and safety.*
- 19. The reason for Condition 35 is to ensure that interested members of the Public have a formal representative group that can be involved in discussing the development and operation of the site with the Company.*
- 20. The reason for Condition 36 is to approve and incorporate the storage and processing facility tires into the ECA.*
- 21. The reason for Condition 37 is to clearly specify the amount of whole tires that can be stored at the site based on submission and comments from the local fire department. This is to ensure the long-term health and safety of the public and the environment.*
- 22. The reason for Condition 38 is to approve the incorporate the use of tire shred as an alternative material to granular material in the leachate collection system into the ECA and to ensure that any issues/impacts/performance due to the tire shred is reporting to the Ministry. This is to ensure the long-term health and safety of the public and the environment.*
- 23. The reason for Condition No. 39 is to approve and incorporate the monitoring program for the*

leachate collection system and to ensure the Owner is aware of the monitoring frequency of the leachate levels and the requirements for seeking amendment to the program.

24. *The reasons for Condition 40 is to approve the proposed pilot project to treat leachate at the site. This is to ensure the proposed facility is constructed as per the submitted information.*
25. *The reasons for Condition 41 is to approve the construction and operation of the system based on the information submitted and set out administrative conditions for operation and record keeping. This is to ensure the long term health and safety of the public and the environment.*
26. *The reasons for Condition No. 42 is to ensure the Owner have an established plan for addressing odours caused by the system. This is to ensure the long term health and safety of the public and the environment.*
27. *The reason for Condition No. 43 is to ensure the Owner submits an annual report to the District Manager informing the MOE on the status of the system and any problems that have occurred in the past year.*
28. *The reason for Condition No. 44 is to ensure the Owner is aware that should the system not operation in an environmentally friendly manner as planned in the application submission, the Director has the authority to cease operations of the system.*
29. *The reason for Condition No. 45 is to approve the upgrades to the gas collection system.*
30. *The reason for Condition 46 is to approve the design report regarding landfill gas management system submitted under Section 11.1 of Regulation 347.*
31. *The reason for Condition 47 is to ensure the performance of landfill gas collection and utilization system is assessed regularly.*
32. *The reason for Conditions 48 through 51 is to approve the installation of a leachate extraction system through the landfill gas (LFG) extraction wells to improve the efficiency of the LFG collection system.*
33. *The reason for Condition 52 is 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.*
34. *The reason for Conditions 53 is 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.*
35. *The reason for Condition 54 is to ensure that any complaints regarding the Site operations are responded to in a timely manner, and to ensure that the District Office is informed of any complaints with respect to the operation of the Site, which would indicate problems with the operation of the Site*

and non-compliance with the Act.

36. *The reason for Conditions 55 and 56 is to minimize the environmental impact resulting from emergency situations that may occur during the operation of the Site.*
37. *The reason for Conditions 57 and 58 is to ensure that all operators of the Site are properly trained in the operation of the equipment used at the Site, in the emergency response procedures, etc.*
38. *The reason for Condition 59 is to ensure that the Site is regularly inspected to identify any deficiencies of Site operations.*
39. *The reason for Condition 60 is to ensure that the records of Site inspections are properly retained and are available to the Ministry as required.*
40. *The reason for Conditions 61 and 62 is to ensure that detailed records of Site inspections are recorded and maintained for inspection and information purposes.*
41. *The reason for Condition 63 is 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.*
42. *The reason for Condition 64 is to ensure that the Site is closed in accordance with Ministry standards and to protect the health and safety of the environment.*
43. *The reason for Condition 65 is to ensure the Site is maintained in a manner that does not cause adverse impact to the environment after site closure.*
44. *The reason for Condition 66 is to approve the post closure site operation and specify the limitations.*
45. *The reason for Conditions 67 to 74 is to approve a research project to be conducted on the Site for study of methane measurement technologies under controlled release condition.*

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). A030303 issued on March 9, 2022

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

and

The Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th Floor
Toronto, Ontario
M7A 2J3

and

The Director appointed for the purposes of
Part II.1 of the *Environmental Protection Act*
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 31st day of October, 2024



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

RL/

c: District Manager, MECP Sarnia
Dave Risk, St. Francis Xavier University