

**AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER A031813  
Issue Date: November 7, 2023

Clean Harbors Canada, Inc.  
4090 Telfer Rd  
Corunna, Ontario  
N0N 1G0

Site Location: Lots 8 and 9, Concession 10, geographic township of Moore  
St. Clair Township, County of Lambton

*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:*

a 140 hectare waste disposal site that is approved to receive, manage and dispose of the following wastes;

- hazardous and liquid industrial wastes limited to Waste Classes 111, 112, 113, 114, 121, 122, 123, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 211, 212, 213, 221, 222, 231, 232, 233, 241, 242, 251, 252, 253, 254, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 281, 282, 311, 321 and 331; and
- non-hazardous industrial wastes; and
- household hazardous wastes.

and consisting of the following facilities:

1. a 61 hectare hazardous waste landfill site;
2. a liquid waste incinerator;
3. a thermal desorption unit;
4. a transfer station;
5. a household hazardous waste depot;
6. processing facilities for treatment of subject wastes; and
7. a leachate pretreatment system.

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

"Approval" means this entire Environmental Compliance Approval, issued in accordance with section

39 of the EPA, and includes any schedules to it, the application and the supporting documentation listed in Schedule "A";

"CL/AC" means Community Liaison/Advisory Committee.

"Design and Operations Plan (2003)" means the document identified as Item (15) of Schedule "A".

"Design and Operations Plan (2015)" means the document identified as Item (22) of Schedule "A".

"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 in which the Site is geographically located;

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

"HHWD" means the Household Hazardous Waste Depot, the transfer station made available to residents to drop off liquid or solid residential waste that is considered to be hazardous;

"Incinerator" means the high temperature rotary kiln incinerator and associated air pollution control systems used for the disposal of liquid hazardous wastes;

"Landfill" means the 61 hectare landfill used for the disposal of hazardous waste;

"LDR" means Land Disposal Restrictions, the standards that are set out in sections 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84 and 85 of O. Reg. 347 which prohibit the disposal of listed and characteristic hazardous wastes on land until they have been treated to meet the treatment standards under O. Reg. 347.

"Leachate" means water that is generated from waste and from precipitation contacting waste;

"Leachate Pretreatment System" means the Dissolved Air Flotation system used to treat leachate from the landfill prior to it being used as quench in the incinerator;

"Ministry" means the Ontario Ministry of the Environment, Conservation and Parks, or successor, unless specific reference is made to another Ministry;

"NMA" means Nutrient Management Act, 2002, S.O. 2002, c.4, as amended;

"NORM" means Naturally Occurring Radioactive Material;

"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 and includes its successors or assignees;

"Owner" means any person that is responsible for the establishment or operation of the Site being

approved by this Approval, and includes Clean Harbors Canada, Inc., its successors and assignees;

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

"O. Reg. 347" means Ontario Regulation 347, R.R.O. 1990, as amended;

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

"Pretreatment Facilities" means the facilities used to treat hazardous wastes to regulatory requirements prior to disposal in the landfill;

"Process" means in relation to the liquid waste facilities at Clean Harbors Canada, Inc. site;

- i. the Receipt, segregation of the Incineration Waste into the appropriate storage or staging area, the Preparation of incinerator waste feed streams, Destruction of the Waste in the Incinerator, and segregation, handling and disposal of bottom ash and APC Residue
- ii. and "Processed" and "Processing" have a corresponding meaning;

"Process Water" means stormwater runoff from areas of the Facility Property where waste is handled, including the Central Processing Area, internal roadways, and areas where waste handling equipment is parked or staged.

"Professional Engineer" means an individual who holds a valid licence from Professional Engineers Ontario to practice engineering in Ontario.

"Property" or "Site" means all of the waste management operations and the property and associated buffer lands located at: Part of Lots 8 & 9 Concession 10 and part of Lots 8 & 9 Concession 9, formerly Township of Moore and now part of Township of St. Clair, County of Lambton Province of Ontario and being all of PINS 43293- 0053, 43293- 0055 ,43293-0056, 43293- 0065 & 43293-0066;

"Provincial Officer" means a person who is designated by the Ministry as a Provincial Officer for the purposes of the Environmental Protection Act, the Ontario Water Resources Act, the Pesticides Act, and their respective regulations;

"Receipt" means the formal acceptance of waste by the Owner after Section C of the manifest is signed at the Site as described in the Operating Manual. "Receive" and "Received" have a corresponding meaning;

"Regional Director" means the Regional Director of the Southwestern Region of the Ministry;

"QA/QC" means quality assurance/quality control;

"SDWA" means Safe Drinking Water Act, 2002, S.O. 2002, c.32, as amended;

"Spent Pot Liner Waste" means waste consisting of spent liners form electrolytic cells used in primary

aluminum smelting;

"Surface Water" means stormwater runoff from undeveloped portions of the Site, building roof drains, parking lots, the interior slopes of the perimeter berms, and capped landfill cells.

"TDU" means Thermal Desorption Unit used for the high temperature processing of wastes to remove volatile contaminants;

"Trained" means competent and knowledgeable in the following through instruction and practice:

- i. relevant waste management legislation, regulations and guidelines;
- ii. major environmental concerns pertaining to the waste to be handled;
- iii. occupational health and safety concerns pertaining to the processing and wastes to be handled;
- iv. emergency management procedures for the process and wastes to be handled;
- v. use and operation of the equipment to be used;
- vi. emergency response procedures;
- vii. company specific written procedures for the control of nuisance conditions; and
- viii. the requirements of this Approval.

"Transfer Station" means the part of the Site used for temporary storage of waste until it can be transferred to facilities on or off Site for further processing or disposal;

"Unused Tonnage" means the amount of waste, measured by weight (tonnage), that, if added to the amount of waste received at the Site in a previous calendar year, will sum to a maximum of 170,000 tonnes;

"Waste" means as defined in O.Reg. 347 and any material received or generated on Site for the purposes of landfilling, incineration, treatment or transfer to other waste disposal or recycling facilities. It does not include materials received or used in the processing of wastes.

"Waste Analysis Plan" means the Owner that treats waste in accordance with sections 75, 76, 77, 78, 79, 82 and 83 of O. Reg. 347 shall develop and follow a written plan that requires regular and detailed chemical and physical testing of representative samples of waste.

"Waste Class" means as defined in Appendix C of the publication entitled "Registration Guidance Manual for Generators of Liquid Industrial and Hazardous Waste", published by the Ministry of Environment and Energy and dated April 1995, as amended from time to time.

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

## TERMS AND CONDITIONS

### GENERAL

## **Compliance**

- 1.1 The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Site is notified of the Approval and the conditions herein and shall take all reasonable measures to ensure the person complies with the same.
- 1.2 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**

- 1.3 Except as otherwise provided for in this Approval, the Site shall be designed, developed, constructed, operated and maintained in accordance with the supporting documentation listed in Schedule "A".

## **Other Legal Obligations**

- 1.4 The issuance of, and compliance with, this Approval 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 Approval be provided to the Ministry;

unless a provision of this Approval 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 Approval.

## **Adverse Effect**

- 1.5 The Owner or Operator remain 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 or impairment of air and/or water quality.

## **Furnish Information**

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

1.8 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.

### **Interpretation**

- 1.9 This Approval revokes and replaces Environmental Compliance Approval A031813, including all Notices of Amendment that predate this Approval.
- 1.10 Where there is a conflict between a provision of any document, including the application, referred to in this Approval, and the conditions of this Approval, the conditions in this Approval shall take precedence.
- 1.11 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.
- 1.12 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.
- 1.13 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.

### **Certificate of Requirement**

- 1.14 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 Approval to each person acquiring an interest in the Site as a result of the dealing.
- 1.15 Within sixty (60) calendar days of the date of issuance of this Approval, the Owner shall submit to the Director, for the Director's signature, two (2) copies of a completed Certificate of Requirement, containing a registerable description of the Site.
- 1.16 In the event any additional land is acquired that will be included as part of the Site, then 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 Approval.

- 1.17 If a new or updated Certificate of Requirement is required in accordance with either Conditions 1.15 or 1.16, 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**

- 1.18 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 Approval 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**

- 1.19 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.

- 1.20 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 Approval, and a copy of such notice shall be forwarded to the Director and District Manager.

### **Inspections**

- 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.

- 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 by the Approval 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 Owner shall ensure that all communication made pursuant to this Approval will refer to Approval No. A031813.

## **2. Site Operations**

### **Service Area**

- 2.1 Except for the HHWD, the Site may only receive waste that is generated within Canada and the United States of America and its' territories. The HHWD may only receive waste generated by residential households in the County of Lambton.

### **Waste inspection**

- 2.2 All waste shall be inspected by Trained Personnel prior to being accepted at the Site to ensure that the waste is of a type approved for transfer, processing or disposal under this Approval.
- 2.3 In the event that a load of waste is refused, a record shall be made in the daily log of the reason the waste was refused and the origin of the waste, if known.

### **Waste Characterization and Treatment Standards**

- 2.4 All wastes received and treated at the Site, shall be characterized, treated, managed and landfilled in accordance with the standards and requirements of O. Reg. 347.

### **Design and Operations Plan**

- 2.5 By March 31, 2024, the Owner shall submit to the Director, for approval, an updated Design and



Operations Plan for the Site that includes the following:

- a. a consolidation of all historical, approved design plans for facilities at the Site;
- b. an updated Site Plan showing locations of landfilling cells, on-Site buildings, storage areas for waste/leachate and monitoring locations;
- c. specification of quantities of waste received and stored at each component of the Site and associated maximum storage times;
- d. revised plans for operation and maintenance of each component at the Site that reflect current and future operations;
- e. revised plans for decommissioning the S-pit;
- f. health and safety procedures;
- g. best management practices for mitigation of nuisance effects;
- h. drainage plans for surface water management within the Site;
- i. procedures for addressing public complaints about the Site;
- j. procedures for record keeping;
- k. contingency plans to be used to manage the Site's infrastructure during abnormal situations such as leachate seeps, power disruptions, equipment and pump failures, geotechnical failures or storm events; and
- l. updated monitoring programs for groundwater and biomonitoring.

### **Operational Flexibility**

- 2.6 After the submission required by Condition 2.5 has been approved by the Director, the Owner may make alterations to the operations part of the Design and Operations Plan provided that those alterations are documented in the Design and Operations Plan maintained at the Site and subject to the following conditions:
- a. the alterations do not involve the construction or the expansion of buildings that manage waste or changes to Major Works;
  - b. the alterations do not result in an increase to the landfill fill rate, landfill capacity, or the feedrate of waste to the incinerator, Transfer Station, HHW, DAF or TDU ;
  - c. the alterations do not result in new types of waste being added to any of the Site's operations;
  - d. the Owner has obtained any other approvals required by the Act or the OWRA;
  - e. a Professional Engineer has reviewed the alterations and provided written confirmation that the alteration will not result in a danger to the health and safety of people or the environment and does not conflict with any other regulatory instruments or requirements; and
  - f. A summary of the alterations are provided in the Annual Report and to the CL/AC on a quarterly basis.
- 2.7 The Owner must ensure that the Design and Operations Plan for the Site is continually updated and maintained at the Site. A complete and up to date version of the Design and Operations Plan must be provided to the District Manager by March 31<sup>st</sup> on an annual basis and must include a summary of changes made from the previous version.

### **3. Landfill**

- 3.1 The following categories of waste may be accepted for disposal at the landfill site:
- a. non-hazardous and hazardous solid industrial waste;
  - b. Naturally Occurring Radioactive Material (NORM) waste with an activity of up to 70 Bq/g;
  - c. wastes from the landfill pretreatment system;
  - d. the residues or contaminated materials from the clean-up of a spill that have a slump of less than 150 mm using the Test Method for the Determination of Liquid Waste ("slump test") as set out in O. Reg. 347;
  - e. solid wastes having a slump of less than 150 mm (using the slump test), of the following Waste Classes; 111-114 inclusive, 121-123 inclusive, 131-135 inclusive, 141-150 inclusive, 211-213 inclusive, 221, 222, 231-233 inclusive, 241, 242, 251-254 inclusive, 261-270 inclusive, 281, 282, 311, 321 and 331; and
  - f. Spent Pot Liner Waste.

### **Landfill Waste Restrictions**

- 3.2 The following wastes as defined in O. Reg 347 shall not be accepted for disposal in the landfill:
- a. ignitable wastes;
  - b. radioactive wastes, including NORM waste with an activity level of more than 70 Bq/g;
  - c. explosive wastes; and
  - d. reactive waste (excluding Spent Pot Liner (SPL) wastes).

Ignitable and Reactive wastes may be pretreated in the TDU prior to disposal in the landfill.

- 3.3 The maximum rate at which the landfill site may accept waste is 200,000 tonnes per calendar year.
- a. If a tonnage increase is required in a given calendar year, the Owner may receive additional waste above the stated maximum rate as follows:
    - i. If, for any of the five previous calendar years, the annual tonnage received at the Site was less than 170,000 tonnes, the Owner may apply the Unused Tonnage for the given year.
    - ii. The Owner may apply Unused Tonnage from a maximum of the previous five (5) calendar years.
    - iii. Unused Tonnage from a previous year once used, is no longer available to increase the maximum annual waste acceptance rate in a subsequent year.
    - iv. The Owner shall notify the District Manager in writing, ten (10) business days before using Unused Tonnage.
    - v. Notification shall include the total additional tonnage applied to the given year, and the Unused Tonnage used for each individual previous year(s).

- 3.4. Additional storage of liquid industrial wastes is hereby approved subject to the following:
- a. Two (2) tanks, each with a volume of 80,000 Litres, may be used to store liquid industrial wastes prior to solidification.
  - b. The tanks shall be equipped and maintained with spill containment as outlined in Item (30) of Schedule "A".
  - c. Waste classes can only be mixed together in the tanks after their compatibility has been confirmed.
  - d. Hazardous waste is not permitted to be stored in the tanks; and
  - e. The stored waste shall not be solidified or processed in the tanks.
- 3.5 The Owner shall ensure that only an area not exceeding 39,200 m<sup>2</sup> (up to 2 sub-cells) is open at any time for landfilling.

### **Hydraulic Control Layer**

- 3.6 The hydraulic control layer for the expanded landfill that overlies previously landfilled waste shall consist of a 0.15 m thick layer of 50 mm clear stone, underlain by a woven geotextile and overlain by a non-woven geotextile.

### **Cover**

- 3.7 Cover, consisting of low porosity, non-odourous waste, or clean fill, temporary membranes, or contaminated (non-hazardous) fill, shall be placed over the relevant portion of the active landfilling area on a given operating day, if:
- a. two or more off Site odour complaints are received by the Owner and/or the Ministry on the same day; and
  - b. the landfilling is considered to be the sole cause or a contributing cause of the complaints, by the Owner and/or the Ministry, following consultation with the Owner.
- 3.8 Interim cover, consisting of a clay layer 0.6 m thick, shall be progressively placed where landfilling has reached waste design contours or where landfilling has not occurred for a period of six months. If weather conditions delay the placement of interim cover, then notification must be provided to the District Manager which includes a revised schedule.

### **Landfill Cap**

- 3.9 Final Cover shall be placed when final design contours are reached. The final cover shall consist of:
- a. Topsoil: 0.15 m
  - b. Protective cover soil: 0.35 m
  - c. 175 mil biplanar geo-composite drainage layer

- d. 80 mil HDPE geomembrane
- e. Geosynthetic Clay Liner
- f. Interim clay cover: 0.6 m

- 3.10 The Landfill must be progressively capped and the 5.1 metre cap over the waste shall be constructed over Cells 1, 2, 3 and 16 as described in the **Design and Operations Plan (2003)** in order to minimize hydraulic conductivity to the degree that molecular diffusion is the dominant factor controlling the rate of contaminant migration.
- 3.11 The Owner shall conduct inspections of all installed final and interim cover materials, to identify any deficiencies in integrity, vegetation, slopes, drainage and leachate seeps. The frequency of inspections must be at least monthly and the results of the inspection recorded.

**Slopes:**

- 3.12 The final side slopes of the landfill expansion shall be a maximum of 4H:1V, with minimum 20H:1V top slope.

**Subgrade Cells Geotechnical Monitoring:**

- 3.13 Geotechnical monitoring shall be conducted during excavation of all cells with a bottom elevation of 182 mASL, as described in Section 3.4 of the **Design and Operations Plan (2003)**.

**Major Works:**

- 3.14 The following engineered design elements are considered to be Major Works:
- a. interim clay cap
  - b. hydraulic control layer
  - c. final cover including all elements, HDPE liner geosynthetic liner and geocomposite
  - d. perimeter leachate collection trench.
- 3.15 The Owner shall implement the quality assurance/quality control plans for the Major Works.
- 3.16 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 final design for the Site shall be subject to approval by the Director.
- 3.17 As-built drawings for all Major Works, excluding the interim clay cap, shall be prepared by a Professional Engineer, and retained on Site and made available to Ministry staff for inspection.

**Leachate:**

- 3.18 Leachate produced from the onsite landfill shall be stored within covered leachate ponds or within the leachate tank.

- 3.19 The leachate tank shall vent to a carbon bed or into the onsite incinerator.
- 3.20 Leachate at the base of the below grade landfill working face shall be managed in accordance with Design and Operations Plan (2015).
- 3.21 Leachate must be disposed of by:
- a. being incinerated in the on Site incinerator;
  - b. being treated in the leachate pretreatment system and being used as a source of quench water, in accordance with Condition 7; or
  - c. being disposed of off-Site at a facility approved to receive it.

**Pump Maintenance:**

- 3.22 The Owner shall develop a pump operations and maintenance plan, which shall include: operating and maintenance requirements, inspection frequency and a maintenance schedule.
- 3.23 The plan shall include all stormwater, leachate and groundwater pumps in operation or planned for the Site (once selected).
- 3.24 The plan shall be updated when changes are implemented to the pumps or pump operation and maintained on Site for review by the Ministry, if required.

**Surficial Sand and Gravel:**

- 3.25 Any surficial sand and gravel deposits in the area between the cell and the outside of the perimeter berm shall be removed prior to berm construction to prevent underdrain conditions from occurring.

**Access Roads:**

- 3.26 All access roads to the landfill site shall be maintained in accordance with procedures described in the **Design and Operations Plan (2015)** to minimize dust generation at the site and prevent tracking of waste and debris around and off of the Site.

**Closure plan**

- 3.27 Two (2) years prior to the landfill reaching its approved capacity, the Owner shall submit a report that identifies if there are any alterations to the closure activities that are in the Design and Operations Plan. If any alterations are proposed, these must be approved by the Director.

**Interim Storage**

- 3.28 The Owner is approved to temporarily store waste in accordance with Items (31), (32) and (33)

of Schedule "A", subject to the following conditions:

- a. No additional waste may be deposited into the temporary storage area;
- b. Pumps, lines and other equipment used to remove leachate from the storage area shall be protected from damage and maintained in good working order;
- c. The temporary storage area must be inspected daily to confirm the integrity of the containment berms, assess for the presence of leachate seeps and assess the potential for leachate to run over the top of the berms. With approval of the District Manager, the frequency of inspection can be reduced after the leachate collection system is operational. Written records of the inspections must be maintained which records the results of each inspection and description of any remedial measures that are undertaken.
- d. Any leachate from seeps must be collected and conveyed to the leachate collection system.
- e. If leachate seeps are detected after installation of the intermediate cover and leachate collection system, then the Owner must propose additional measures to prevent seeps, including consideration of removal of all waste from the storage area.
- f. Notification must be sent to the District Office thirty days prior to stored waste being removed from the temporary storage and landfilled.

### **Sub-Cell 3**

3.29 Extraction wells EW1a-01 and EW2a-01 shall be maintained and operated in order to maintain an inward and upward hydraulic gradient between Sub-Cell 3 and the Interface Aquifer. Any operational problems must be corrected within 3 months of the time of system failure. If the operational problems can not be corrected within 3 months, then notification must be provided to the District Manager which includes a revised schedule.

## **4. Environmental Monitoring**

### **Groundwater Monitoring**

4.1 The Owner shall conduct groundwater monitoring in accordance with Schedule "B".

### **Biomonitoring**

4.2 The Owner shall conduct biomonitoring in accordance with Schedule "C".

### **Leachate Collection System and Perimeter Trench Performance Monitoring**

4.3 The leachate collection system and perimeter trench performance monitoring program shall be conducted in accordance with Schedule "D" to confirm the performance of the perimeter collection trench and shall include measurements of leachate levels within the trench and the volume of leachate that is extracted at each of the sumps.

### **Monitoring Wells**

4.4 The Owner shall ensure all groundwater monitoring wells are properly capped, secured, maintained and

protected from damage.

- 4.5 All groundwater monitoring wells whether included in the monitoring program or not shall be assessed, maintained and properly abandoned (plugged and sealed) and replaced as required. All well construction and abandonment activities shall be done in accordance with the Wells Regulation (Regulation 903).
- 4.6 Monitoring wells which are damaged, destroyed, or in any way made inoperable for sampling shall be repaired or properly abandoned and replaced such that no more than two sampling events are missed.
- 4.7 Any monitoring well included in the monitoring program that is no longer required as part of the groundwater monitoring program may be properly abandoned (plugged and sealed) provided its removal from the monitoring program has been approved by the Director.
- 4.8 In addition to the requirements included in the Wells Regulation, all well construction, maintenance and abandonment activities for the groundwater monitoring wells relating to this Site shall be detailed in the annual monitoring report for the Site.

#### **Leachate Pretreatment Monitoring**

- 4.9 The leachate pretreatment system must be monitored in accordance with Schedule "E".

#### **Alterations to Monitoring Programs**

- 4.10 The Owner may request to make changes to the monitoring program(s) to the District Manager in accordance with the recommendations of the annual report. The Owner shall make clear reference to the proposed changes in a separate letter that shall accompany the annual report.
- 4.11 Within fourteen (14) days of receiving the written correspondence from the District Manager confirming that the District Manager is in agreement with the proposed changes to the environmental monitoring program, the Owner shall forward a letter identifying the proposed changes and a copy of the correspondences from the District Manager and all other correspondences and responses related to the changes to the monitoring program, to the Director requesting the Approval be amended to approve the proposed changes to the environmental monitoring plan prior to implementation.
- 4.12 In the event any other changes to the environmental monitoring program are proposed outside of the recommendation of the annual report, the Owner shall follow current Ministry procedures for seeking approval for amending the Approval.

### **5. LDR Pretreatment**

#### **Analysis of Solidified Product and Neutralized Liquid Waste**

- 5.1. For the landfill pretreatment system, each batch of neutralized liquid wastes and the solidified product are to be sampled and analyzed to ensure that the following specifications for moisture content and stability are met:

- a. the solidified waste product must have a moisture content of less than 35% weight/weight (w/w);
- b. the solidified waste product must exhibit a slump (as measured by the standard test method defined in O. Reg. 347) of less than 50% as initially prepared and must exhibit a resistance to penetration of not less than 15 psi on 24 hours curing.

**Processing Waste:**

- 5.2 The Site is approved to treat subject wastes in the Processing facility.
- 5.3 Treatment of inorganics to meet O. Reg 347 LDR requirements may occur within the LDR stabilization building and at the mix pits.
- 5.4 Water quenching treatment activities may occur in the LDR stabilization building and the mix pits on non-reactive solid and sludge waste streams which experience a temperature increase when they come in contact with water.

**Spent pot liner (SPL) treatment:**

- 5.5 Treatment of SPL shall only occur in the SPL area bays.

**Shredder:**

- 5.6 Shredding of drums and containers may occur in accordance with an Environmental Compliance Approval for air emissions.

**Container cleanouts:**

- 5.7 Cleaning of containers may occur in the pit area located south of the LDR stabilization building, and at the Spent Pot Liner (SPL) area bays or in the TDU dome.
- 5.8 Water from the cleanout of containers must be collected and treated to meet O. Reg 347 requirements.

**6. Thermal Desorption Unit**

- 6.1 The TDU is approved for the pre-treatment of organic hazardous solid and liquid (sludge) wastes, including non-hazardous solid and sludge wastes to meet LDR. After treatment in the TDU, the solid wastes can be landfilled after confirming that the LDR standards have been met.
- 6.2 The approved waste treatment rate for the TDU is a maximum of 36 tonnes per hour.
- 6.3 Wastes received for pre-treatment, which are analyzed and determined to require the same



treatment process may be mixed for purposes of creating a batch to ensure consistent operation of the TDU. The treated wastes shall be analyzed for the regulated constituents to ensure LDR standards are achieved.

- 6.4 Untreated wastes shall be stored under cover to prevent wind blown particles from creating potential environmental or safety concerns on or off the Site. Treated wastes shall also be stored under cover, as appropriate due to Site conditions, in its designated area and misted with water to prevent wind blown particles from creating a potential environmental or safety concerns on or off the Site.
- 6.5 Wastes accepted for treatment shall be received and stored in covered containers until they are ready to be processed. Once these wastes are ready to be processed in the designated processing area, additional odour monitoring shall be implemented until they are completely processed through the TDU. The wastes prepared and awaiting processing shall not be stored in the waste processing area for more than 5 consecutive days.
- 6.6 Treated wastes that do not meet LDR standards and cannot be landfilled can be reprocessed or they shall be transferred from the Site for disposal or further processing at an approved facility.
- 6.7 Uncondensed vapours from the operation of the TDU shall be directed to the on-site incinerator for disposal.
- 6.8 During periods when the on-site incinerator is shut down as a result of regular maintenance or in the event of an emergency, the TDU shall not be operated.

## **7. Leachate Pretreatment and Quench Water**

- 7.1 The wastewater pre-treatment system must also be operated in accordance with an Environmental Compliance Approval (Air).
- 7.2 Industrial waste from off-site generators must be stored in new or existing storage tanks or process water storage ponds that are designed to hold liquids.
- 7.3 All industrial waste that is received from an off-site generator shall be:
  - a. used in the on-site incinerator as quench;
  - b. disposed of in incinerator; or
  - c. transferred to another facility approved for the management of this type of waste.

## **8. Incinerator and Tank Farm**

- 8.1 The Incinerator and associated tank farm is approved for the receipt, storage and disposal of liquid industrial waste classes 111 – 114 inclusive; 121, 122, 123, 131 – 135 inclusive; 141 – 150

inclusive; 211 – 213 inclusive; 221, 222,231 – 233 inclusive; 241, 242, 251 – 254 inclusive; 261 – 270 inclusive; 281, 282, 311, 321, and 331.

- 8.2 The Owner shall ensure that the combined feed of all waste streams to the incinerator does not exceed 245 litres per minute.
- 8.3 The chlorine content of wastes fed into the incinerator shall not exceed 2% of organic chlorine by weight.
- 8.4 The total storage capacity of the incinerator tank farm shall not exceed 11,881,295 litres. Fuel, emulsion and lean waste liquids can be stored within any tank in the tank farm.
- 8.5 During periods of extended incinerator shut downs of greater than 7 days, the Owner is permitted to use Frac Tanks as temporary storage in accordance with the following:
  - a. the amount of liquid waste stored does not exceed 11,881,295 Litres.
  - b. secondary containment equivalent to a minimum of 110% of the Frac tanks' total capacity is provided;
  - c. the Frac Tanks are stored in either the off-loading area, in the off-spec storage area, or the yard located west of the incinerator;
  - d. filling and emptying of the Frac Tanks is done in a way that follows the Site's standard operating procedures for such work;
  - e. the volumes of waste stored in the Frac Tanks is recorded and updated on a weekly basis; and
  - f. all Frac tanks are emptied within sixty (60) days, cleaned and removed within ninety (90) days after the incinerator has commenced operation.

## **9. Transfer Station**

- 9.1 The Site is approved for temporary storage and transfer of the following waste classes: 111-114 inclusive, 121 – 123 inclusive, 131-135 inclusive, 141-150 inclusive, 211, 212, 213, 221, 222, 231, 233, 241, 242, 251-254 inclusive, 261-270 inclusive, 281, 282, 311, 321 and 331.
- 9.2 Wastes stored outside at the transfer station must be stored in covered, leak-proof containers, where surface water drainage is captured by the Site's process water retention ponds.
- 9.3 The Owner may transfer a maximum of 450 tonnes of waste off Site per day.
- 9.4 Storage time for wastes at the transfer station shall not exceed one hundred and eighty (180) calendar days.

## **10. Household Hazardous Waste Depot (HHWD)**

- 10.1 The Owner shall operation the Household Hazardous Waste Depot in accordance with the following:
  - a. All wastes generated by the transfer station shall be manifested and handled in accordance

with O. Reg 347;

- b. It shall only be operated between the hours of 7.00 AM to 5.00 PM on one Saturday per month.
- c. It shall only operate when a trained operator is in attendance.
- d. Batteries shall not be stored for greater than one (1) year and all other wastes shall not be stored for greater than six (6) months.
- e. The maximum amount of waste at the HHWD at any time, not including waste oil, shall not exceed 30 tonnes.
- f. The maximum amount of waste oil at the HHWD at any time shall not exceed 4,500 litres.
- g. Prior to being accepted, all incoming waste shall be visually inspected and shall only be permitted to be received at the Site if it is generated by a residential household and is a type of waste that can be managed by the landfill or the incinerator or transferred to another approved facility;
- h. If any incoming waste load is known to, or is discovered to, contain unacceptable waste, that load shall not be accepted at the Site; and
- i. If any unacceptable waste is discovered on-site, that waste shall be immediately be disposed of off-Site in accordance with the EPA and O. Reg 347.

## **11. Financial Assurance**

- 11.1. Within 60 days of issuance of this Approval, the Owner shall provide financial assurance in the amount of \$30,630,406.33. This financial assurance shall be in a form acceptable to the Director and shall provide sufficient funds for the analysis, transportation, site clean-up, monitoring and disposal of all quantities of waste permitted to be on Site at any one time.
- 11.2 Commencing on March 31, 2024 and every three (3) years 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 11.1. Additional financial assurance, if required, must be submitted to the Director within twenty (20) days of written acceptance of the re-evaluation by the Director.
- 11.3 The amount of financial assurance is subject to review at any time by the Director and may be amended at his/her discretion.
- 11.4 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.

## **Insurance and Securities for the Landfill Site**

- 11.6 A policy of environmental liability insurance providing coverage of at least \$5,000,000 per occurrence with an annual aggregate of at least \$10,000,000 shall be kept in force at all times including the closure of the site, until the Director is satisfied that it is no longer necessary to do so. The policy shall cover sudden and non-sudden emissions from the Site and shall cover bodily injury and property damage. If such insurance becomes unavailable, the Director shall

be notified immediately upon notice from the insurance institution and extra securities shall be deposited with the Director in order to maintain third party coverage.

- 11.7 The Owner shall provide the sum of \$25,000 to the Township of Moore to be held in trust by the Township for emergency water supply, if necessary. The Owner shall enter into an agreement with the Township respecting the administration of the trust fund including provisions for replenishment, payments and an administration fee.

## 12. Reporting

### Annual Report

- 12.1. By June 30<sup>th</sup> of each year, an annual monitoring report must be submitted to the District Manager reporting the results of the monitoring carried out during the previous calendar year. The Annual Report shall include but not be limited to the following information:
- a. the results and an interpretive analysis of the results of all Site monitoring programs, including an assessment of the need to amend the monitoring programs;
  - b. a summary of any drilling programs, geotechnical monitoring programs, and the results of any soil testing;
  - c. an assessment of the operation and performance of all Major Works, the need to amend the design or operation of the Site, and the adequacy of and need to implement the contingency plans;
  - d. Site plans showing the existing contours of the Site; areas of landfilling operation during the reporting period; areas of intended operation during the next reporting period; areas of excavation during the reporting period; any encountered gravel or sand lenses, the progress of final cover, vegetative cover, and any intermediate cover application; facilities existing, added or removed during the reporting period; and Site preparations and facilities planned for installation during the next reporting period;
  - e. calculations of the volume of waste, daily, intermediate cover, and final cover deposited or placed at the landfill during the reporting period and a calculation of the total volume of landfill capacity used during the reporting period;
  - f. a calculation of the remaining capacity of the Site and an estimate of the remaining Site life;
  - g. a summary of the monthly, maximum daily and total annual quantity (tonnes) of waste received at the Site for landfilling and pretreatment, including Waste Classes and origin;
  - h. a description of the amount of NORM waste received including a list of generators;
  - i. any Unused Tonnage applied to the current year;
  - j. a summary of any complaints received and the responses made;
  - k. a discussion of any operational problems encountered at the Site and corrective action taken;
  - l. a report on the status of all monitoring wells and a statement as to compliance with Ontario Regulation 903;
  - m. a list of all rejected loads, including reasons for any rejection;
  - n. A summary of all QA/QC sampling in accordance with the quality assurance/quality control plans for the Major Works, including interpretation and discussion of compliance

- with those plans.
- o. For the LDR Pretreatment, TDU, HHWD and Transfer Station, a monthly summary of the type (by Waste Class and characteristic) and quantities received, the total amount and type of reagents used in LDR pretreatment and the destination of the outgoing wastes;
  - p. For the Incinerator, a monthly summary of the type (by Waste Class and characteristic) and quantities of waste disposed of and the amounts of quench water consumed broken down by source;
  - q. a monthly summary of the total amount of leachate collected, stored, treated and disposed of.

### **Facility Monthly Report:**

12.2 By the last day of each month the Owner must provide the District Manager with a report covering the previous month of the following information:

- a. Thermal desorber unit CEM data for the whole month at 30 minute intervals as follows:
  - i. Feed hopper current;
  - ii. Thermal desorber unit drum temperature;
  - iii. ID fan current;
  - iv. Open or closed status of carbon bed valve;
  - v. Open or closed status of the incinerator vent line valve;
  - vi. Open or closed status of the operational shutdown stack valve;
  - vii. Tons processed per hour.
- b. Incinerator CEM data for the whole month at 30 minute intervals as follows:
  - i. Individual waste feeds in liters per minute;
  - ii. Totalized waste feeds in liters per minute;
  - iii. Primary zone, secondary zone, and spray dryer exit zone temperatures;
  - iv. Carbon monoxide;
  - v. Total hydrocarbons;
  - vi. Oxygen;
  - vii. Opacity six minute average;
  - viii. Opacity two hour average;
  - ix. Sulphur dioxide;
  - x. Hydrogen chloride
- c. A summary and description of any fluctuation from incinerator CEM limits.
- d. A summary of number of operating days and volumes processed during the month for the landfill, LDR stabilization building, thermal desorber unit, and incinerator;
- e. A listing of the quantities of waste stored at each part of the Site;
- f. Volume of leachate generated, treated and disposed of for the month. Total volume of leachate present on site.

### **Public Website**

12.3 The Owner shall maintain a public website that includes, but is not limited to the following documents:

- a. copies of the most current regulatory approvals for the Site issued under the EPA and OWRA;
- b. copies of the Annual Reports for the Site;
- c. summaries of monitoring data; and
- d. minutes of the CL/AC meetings.

### **13. CL/AC**

- 13.1 The Owner shall maintain the Community Liaison/Advisory Committee for the purposes of having an effective means of communicating with the local community in the vicinity of the Site. The minimum frequency of meetings must be quarterly.
- 13.2 The CL/AC shall receive, prior to submission to the Ministry, copies of any documents and reports relating to the updating of the Site's Design and Operations Report or any application to amend the Approval.

## Schedule "A"

### 1982 Incinerator Documents

1. The Application for a Certificate of Approval for a Waste Disposal Site (Processing), submitted by Nigel Guilford, Manager, Technical Development dated July 14, 1981.
2. The document submitted to the Ministry of the Environment by Tricil Limited and entitled, "Application for a Certificate of Approval for Plant modifications at Tricil (Sarnia), Corunna, Ontario".
3. Document submitted to the Ministry of the Environment by Tricil Limited entitled "Application for a Certificate of Approval for Plant modifications at Tricil (Sarnia) Limited, Corruna, Ontario — Supplementary Information".
4. The letter from Mr. N. G.H. Guilford, Manager, Technical Development, Tricil Limited to Mr. P.S. Isles, Supervisor, Waste Management Approvals Unit, Ministry of the Environment dated July 14, 1981.
5. The following drawings prepared by Tricil International Engineering Group, Division of Chemetics International Ltd. 2 Sheppard Ave. E., Suite 1200, Willowdale, Ontario:
  1. Sarnia Project, Site Plan, Drawing No. E-1052-2001 Rev. E, dated December 21, 1981 (Preliminary); and
  2. Sarnia Project Site Plan, Drawing No. 211—1052—01—2000 Rev. O, dated December 21, 1981 (Preliminary).
6. The "Application for a Certificate of Approval for a Waste Disposal Site (Transfer)" dated December 18, 1985 submitted by Eric Hunter for the installation of one 2,300 cubic metre surge tank and the Overview and Appendix submitted therewith.
7. The Tricil document entitled "Proposed, Improvement Phase Separation System for Sarnia Plant" dated September 29, 1986.
8. The "Application for a Certificate of Approval for a Waste Disposal Site (Processing) dated November 20, 1991 submitted by Eric Hunter for the Lean Tankage Replacement and supporting documentation.
9. The following drawings prepared by Miley Company Limited, Mississauga, Ontario for Laidlaw Environmental services Ltd., Burlington, Ontario, Site: Lambton Branch Corunna, Project Lean Tankage Replacement:
  1. Lean Tankage Replacement, Site Plan, Drawing No. 10—EI , Rev, D, dated September 17, 1991 (as commented);
  2. Lean Tankage Replacement, Foundation Plan & Details, Drawing No. 200-CFD-801 Rev. C, dated March 13, 1992 (issued for application);

3. Lean Tankage Replacement, Foundation Sections and Details Drawing No. 200-CFD-g02, Rev. C, dated March 13, 1992 (issued for application);
  4. Lean Tankage Replacement, Organic Waste Process Flow Diagram, Drawing No. 200-PFF-013, Rev. A4, dated April 1989.
10. The letter dated March 17, 1992 addressed to V. Petranovic, Engineer, Approvals Branch, Ministry of the Environment, from Mr. Dean C. Edwardson, Manager , Regulatory Affairs , Laidlaw Environmental Services Ltd.
  11. The letter dated April 13, 1992 addressed to Mr. H. O. Wigle, Ministry of the Environment from Mr. Dean C. Edwardson, Manager, Regulatory Affairs, Laidlaw Environmental Services Ltd.
  12. The letter dated April 16, 1992 addressed to Mr. V. Petranovic, Engineer, Approvals Branch, Ministry of the Environment from Mr. Dean C. Edwardson Manager Regulatory Affairs Laidlaw Environmental Services Ltd.
  13. The letter dated May 22, 1992 addressed to Mr. V. Petranovic, Engineer, Approvals Branch, Ministry of the Environment, from Mr. Dean C. Edwardson, Manager, Regulatory Affairs, Laidlaw Environmental Services Ltd.

#### Landfill 1997 Landfill Expansion Documents

14. Application for Approval of a Waste Disposal Site, dated May 8, 1996.

#### Landfill - Approval of D/O Report (2004)

15. Report entitled "Design and Operations Report, Lambton Facility Landfill, Corunna, Ontario", Clean Harbors Canada Inc., dated June 2003.

#### Landfill LDR Pretreatment Documents (2007)

16. Letter dated December 22, 2006 to Richard Saunders (MOE) from Christopher Small (Clean Harbors) regarding the modified drawings, project description and design of the Processing Facility including the following information:
  - a. Drawings:
    - i 'Inorganic Waste Pre-treatment Plot Plan', drawing no. 050-ADA-662, rev. A, dated December 21, 2006;
    - ii 'Inorganic Waste Pre-treatment Equipment Layout Plan', drawing no. 050-ADA-6632, rev. B, dated December 21, 2006;
    - iii '1-144" Dia. X 354"S/S Silo M-10, Tricil Waste Plant, Corunna, Ontario', drawing no. T-D4470, rev. 1, dated March 21, 1986;
    - iv '1-144" Dia. X 354"S/S Silo M-11, Tricil Waste Plant, Corunna, Ontario', drawing no. T-D4470.1, rev.1, dated March 21, 1986;
    - v 'Tricil Sarnia Limited, Landfill Pre-treatment System, Silo Details', sheet no. M-24, dated



- November 11, 1985;
  - vi. 'Inorganic Waste Pre-treatment Mixing Tank, Plan, Sections & Details', drawing no. 050-NDD-663, rev.A, dated December 21, 2006.
  - b. Report entitled "Lambton Incineration Facility, Inorganic Waste Pretreatment Facility, Alternate LPS location" and subtitled "Project Description and Design Basis, Rev.2 December 19, 2006".
17. Letter dated March 15, 2007 to Richard Saunders (MOE) from Christopher Small (Clean Harbors) regarding additional information related to the Design and Operation Report and the following information:
- a. Drawings:
    - i 'Inorganic Waste Pre-treatment Plot Plan', drawing no. 050-ADA-662, rev. A, dated December 21, 2006;
    - ii 'Inorganic Waste Pre-treatment Equipment Layout Plan', drawing no. 050-ADA-6632, rev. B, dated December 21, 2006;
    - iii. '1-144" Dia. X 354"S/S Silo M-10, Tricil Waste Plant, Corunna, Ontario', drawing no. T-D4470, rev. 1, dated March 21, 1986;
    - iv. '1-144" Dia. X 354"S/S Silo M-11, Tricil Waste Plant, Corunna, Ontario', drawing no. T-D4470.1, rev.1, dated March 21, 1986;
    - v. 'Tricil Sarnia Limited, Landfill Pre-treatment System, Silo Details', sheet no. M-24, dated November 11, 1985;
    - vi. 'Inorganic Waste Pre-treatment Equipment Layout Sections, drawing no. 050-NDD-664, rev.B, dated December 12, 2006;
    - vii. Inorganic Waste Pre-treatment Mixing Tank, Plan & Sections', drawing no. 050-NDD-663, rev.B, dated December 21, 2006.
  - b. Report entitled "Lambton Incineration Facility, Inorganic Waste Pretreatment Facility, Alternate LPS location" and subtitled "Project Description and Design Basis, Rev.3, February 20, 2007".

Landfill - LDR and TDU Documents (2010)

- 18. Application for a Provisional Certificate of Approval for a Waste Disposal Site, dated July 20, 2009. This application is for amending the current approval to meet LDR requirements.
- 19. The supporting documentation to the above Application titled, "Landfill Design and Operations Report, Revised - Section 4", dated March 29, 2010.

Landfill - Capacity Recovery Application (2013)

- 20. Environmental Compliance Approval Application, dated March 8, 2013 and its supporting letters, reports and drawings.

Landfill - 2015 Expansion Documents

21. Application for an Environmental Compliance Approval, dated 2014/04/16, signed by Mike Parker, Vice President, Canadian Environmental Compliance, Clean Harbors Canada Inc.
22. Report entitled "Revised Design and Operations Report - Lambton Landfill Expansion, Clean Harbors Canada Inc.", including volumes 1 and 2, and Appendixes A-O, by Tetra Tech, dated October 8, 2015.
23. Report entitled "Fugitive Dust, Odour & Noise Best Management Plan, prepared for Ontario MOECC Environmental Compliance Approval 8687-9MVRJ9 Condition 2", dated September 30, 2015.
24. Drawing 2, "Expansion Base Contours", rev C, 2015.10.15, prepared by Tetra Tech.
25. Drawing G-07, "Perimeter Leachate Collection Details", Rev D, October 15, 2015, prepared by Tetra Tech.
26. Drawing 22, "Pre-1986 Landfill Area Construction Cross Section", Rev A, 2015.10.15, prepared by Tetra Tech.

#### Landfill - Subcell 3 Remediation Documents

27. The Report titled "Design and Operations Report, Lambton Facility Landfill, Corunna, Ontario", Clean Harbors Canada, Inc., dated June 2003.

#### Landfill - 2019 Amendments

28. Document entitled "Landfill Design Amendments, Supporting Documentation to Variance to ECA A031806", prepared by GHD on behalf of Clean Harbors Canada Inc., dated March 9, 2018.
29. Letter from James Yardley, GHD to I. Parrott, MECP, dated August 14, 2018: RE: Response to Technical Comments, Lambton Landfill Design Amendments.
30. Document entitled "Addendum - Landfill Design Amendments, Supporting Documentation to Variance to ECA A031806, MOECC Reference 5049-AWVJJS" prepared by GHD on behalf of Clean Harbors Canada and dated July 13 2018.

#### Landfill - Frac Tanks (2020)

31. Document entitled "Temporary Storage Containers for L Class Non-Hazardous Liquid & Sludge Waste, Supporting Documentation to Amendment Application to ECA A031806".

#### Landfill - Interim Storage Documents (2021)

32. Application to amend Environmental Compliance Approval A031806, submitted by Clean Harbors Canada Inc., dated August 20, 2021 and signed by Mike Parker, Vice President, Canadian Environmental Compliance and including the document entitled "Report providing further detail on the proposed administrative amendment".

#### Landfill - Interim Storage - Amendment for cover (2022)

33. Application to amend Environmental Compliance Approval A031806 for the installation of interim cover and a leachate collection system the temporary waste storage area, dated March 30, 2022 and signed by Mike Parker, VP, Compliance, Clean Harbors Canada, Inc.
34. Letter from James Yardley, P.Eng. GHD to Ian Parrott, MECP, dated June 7, 2022 re: Response to MECP comments, including details of geotextile drainage layer for Cell 20-1.

#### HHWD Documents (2020)

35. The Application for a Approval for a Waste Disposal site (Transfer) dated July 9, 1992.
36. Letter dated August 7, 1992 from Mr. Dean Edwardson to Mr. E. Butler with attached information.
37. Letter dated April 21, 2011 signed by Michael Parker, Director of Compliance, Clean Harbors Canada, Inc. to the Director, Ministry of the Environment re: Re-evaluation of Financial Assurance - Clean Harbors' Lambton HHW Facility.
38. Emails dated December 5, 2011, March 1, 2012, March 12, 2012 and March 13, 2012 from Jelena Crnokrak, Environmental Economist, Ministry of the Environment to Michael Parker, Clean Harbors Canada, Inc. regarding submission of Design and Operations Report.
39. Emails dated February 28, 2012, March 8, 2012, and March 13, 2012, including attachments from Michael Parker, Clean Harbors Canada, Inc. to Jelena Crnokrak, Ministry of the Environment regarding D&O Report, and waste quantities received on site.
40. E-mail dated February 28, 2012 from Michael Parker, Director of Compliance, Clean Harbors Canada, Inc. to Jelena Crnokrak, Environmental Economist, Ministry of the Environment including Operating Manual, Household Hazardous Waste Depot.

#### Leachate Pretreatment (2022)

41. Application for an amendment to an Environmental Compliance Approval, dated October 29, 2021 and signed by Michael Parker, VP Canadian Environmental Compliance, Clean Harbors Canada Inc. and including the document entitled "On-Site Leachate Treatment and Disposal System, Clean Harbors Lambton Facility" prepared by GHD and dated October 12, 2021.
42. Letter from Jim Yardley and Brian Dermody, GHD to Ian Parrott, MECP, dated June 24, 2022 re: Response to MECP Comments related to On-site Leachate Treatment and Disposal - Waste ECA Application (MECP Ref No. 9709-C89QA7)

## Schedule "B" - Groundwater Monitoring

Table B.1 - Perimeter Groundwater Monitoring

Hydrostatic Unit	Location	Well ID	Parameters for Analysis and Frequency		Sampling Methodology
Active Aquitard	Off-Property	TW55-09S, TW56-11S, TW57-11S, TW58-11S, TW59-13S	General Indicators	Semi-Annually	Continuous Volume
	Northern Berm	TW39-99I, TW39-99S, TW46-99I, TW46-99S, TW61-13I, TW61-13S	Major Ions	Semi-Annually	
	Downgradient of Northern Berm	OW32-90S, OW35-90S, TW21-94-II, TW22-94, TW32-94-IV, TW40-99S, TW53-03S	Minor Ions	Semi-Annually	
	Boundary Property	TW30-94, TW41-99S, TW42-99S, TW43-99S, TW45-99S, TW48-16S, TW62-13S	Metals	Annually	
	Internal to Property	TW63-13S	VOC's	Biennially (sampled odd years)	
Interface Aquifer	Off-Property	TW55-09D, TW56-11D, TW57-11D, TW59-13D	General Indicators	Semi-Annually	Low Flow Purging
	Internal to Property	TW39-99D, TW46-99D, TW54-09D, TW61-13D	Major Ions	Semi-Annually	
	Boundary Property (Compliance)	OW32-90D, OW35-05D, TW22-99D, TW30-99D, TW32-94-II, TW40-99D, TW41-99D, TW43-99D, TW45-99D, TW47-00D, TW48-00D, TW49-00D, TW53-03D, TW60-13D	Minor Ions	Semi-Annually	
			Metals	Annually	
Shale Aquitard	On and Off-Site	TW32-84-I, TW42-99D	General Indicators	Biennially (sampled odd years)	Continuous Volume
			Major Ions		
			Minor Ions		
			Metals		
			VOC's		

General Indicators: pH, Conductivity, Total Dissolved Solids (TDS)

Major Ions: Alkalinity, Chloride, Sulfate, Calcium, Magnesium, Potassium, Sodium

Minor Ions: Ammonia (active aquitard only), Nitrite, Nitrate, Bromide, Cyanide, Fluoride

Metals: Arsenic, Barium, Boron, Cadmium, Chromium, Iron, Lead, Nickel, Mercury, Zinc

Table B.2 - Subcell 3 Remedial Performance Monitoring

Unit	Well Network	Water Level Measurements		Groundwater Sampling	
		Methodology	Frequency	Methodology	Frequency
Hydraulic Control Layer	2 extraction wells (EW1a-01 and EW2a-01)	Transducers	Quarterly Download	Collected from Pump Discharge Line	Semi-annual
	4 monitoring wells (EW1B-13, EW1c-13, EW2b-13, EW2c-13)			Continuous Volume	
Nearby Interface Aquifer	2 monitoring wells (PW1-N, PW2-S[R11])				

### Schedule "C" - Biomonitoring

Samples must be taken annually at locations S1, S2, S3, S4, E1, E2, E5, E6, E7, N2, N4, N5, W2, W4 as shown on Figure 1, Item 21 (Appendix L) of Schedule "A" analyzed for parameters in accordance with Table C.1.

PCB's, Organochlorine pesticides and pentachlorophenol are to be sampled and analyzed every three years.

**Table C.1**

Parameter Group	Chemical Parameter	Environmental Media			
		Soil	Ditch Sediment	Natural Grass	Agricultural Crop
Nonmetals	Chloride, Fluoride, Phosphorus, Sulphur	X	X	X	X
Metalloids	Arsenic, Boron, Silicon	X	X	X	X
Metals	Aluminum, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel Potassium, Silver, Sodium, Strontium, Thallium, Titanium, Vanadium, Zinc, Zirconium	X	X	X	X
Organochlorine pesticides	Aldrin, a-HCH, b-HCH, g-HCH(lindane), d-HCH, a-Chlordane, g-Chlordane, p,p'-DDD, p,p'-DDE, p,p'-DDT, Dieldrin, a-Endosulfan, b-Endosulfan, Endosulfan Sulphate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Expoxide, Methoxychlor, Mirex, Toxaphene	X	X	X	X
Polychlorinated biphenyls	PCB (total)	X	X	X	X
Aromatic hydrocarbons	Pentachlorophenol				X
Furans & Dioxins	Total Tetrachlorodibenzo furans, Total Pentachlorodibenzo furans, Total Hexachlorodibenzo furans, Total Heptachlorodibenzo furans, Octachlorodibenzo furan, Total Tetrachlorodibenzo-p-dioxins, Total Pentachlorodibenzo-p-dioxins, Total Hexachlorodibenzo-p-dioxins. Octachlorodibenzo-p-dioxin	X		X	X

## **Schedule "D" - Leachate Collection System and Perimeter Trench Monitoring**

### Leachate Collection System

#### **Daily**

- Check for status alerts on the process control screen.
- Check the process control screen to ensure leachate levels within all of the leachate sumps are operating between the 196 and 197 m AMSL.
- Check the status of all the sump and vault pumps are in the Automatic mode.

#### **Weekly**

- At least once per week check to confirm that the water level within the stormwater pond is higher than 197 m AMSL and confirm that the intake lines are below the surface of the water.

#### **Monthly**

- Download and review all leachate level data from the process control PC.

#### **Annually**

- Calibrate the levels sensors within the leachate sumps.
- Check level sensors in the leachate vault.
- Review the last 12 months of leachate data to confirm the drainage media within the Leachate Collection System is operating properly and is not clogged

### Perimeter Trench Monitoring

As the landfill is developed, the groundwater monitoring program must be developed to confirm the effectiveness of the the perimeter trench in maintaining inward hydraulic gradients. This monitoring program must be developed in accordance with Item 22 (Appendix H, Section 4) of Schedule "A and the results included in the Annual report..

**Schedule "E" - Leachate Pretreatment System Monitoring**

<b>Source</b>	<b>Frequency</b>	<b>Parameters</b>
Influent	Biweekly	Total Suspended Solids, Volatile Suspended Solids (VSS), Total Organic Carbon, oil and grease, phenols, Volatile Organic Chemicals (VOC), Semivolatile Organic Chemicals (SVOC's), Schedule 4 Metals (Arsenic, Barium, Boron, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Uranium)
Effluent	Daily	Total Suspended Solids, Volatile Suspended Solids (VSS)
	Weekly	Total Organic Carbon, oil and grease, phenols, Volatile Organic Chemicals (VOC), Semivolatile Organic Chemicals (SVOC's), Schedule 4 Metals (Arsenic, Barium, Boron, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Uranium)

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

1. The reason for including definitions to simplify the wording of the subsequent conditions and define the specific meaning of terms as used in this Approval.
2. The reason for Condition 1 is to clarify the legal rights and responsibilities of the Owner.
3. The reason for Condition 2 is to impose condition that apply to all operations at the Site and to require the development and regular updating of a comprehensive Design and Operations Report.
4. The reason for Condition 3 is to impose conditions that apply to the design, operation and closure of the landfilling operations at the Site.
5. The reason for Condition 4 is to impose requirements for the ongoing monitoring of the landfill site which is necessary to demonstrate compliance with regulatory limits, to confirm that the design is performing as expected and that the Site is not negatively impacting the environment or the health and safety of people.
6. The reason for Condition 5 is to approve the pretreatment of waste prior to being placed in the landfill.
7. The reason for Condition 6 is to approve the operation of a thermal desportion unit and to ensure that it is operating as designed and is not negatively impacting the environment or the health and safety



of people.

8. The reason for Condition 7 is to approve the pretreatment for leachate and to specify the sources of water to be used as quench in the incinerator.
9. The reason for Condition 8 is to approve the use of the incinerator and the associated tank farm and impose terms and conditions necessary to ensure wastes are properly managed.
10. The reason for Condition 9 is to approve the use of a transfer station and to ensure that wastes are properly managed.
11. The reason for Condition 10 is to approve the use of a transfer station for household hazardous wastes and to ensure that wastes are properly managed.
12. The reason for Condition 11 is to ensure sufficient funds are available to provide for the clean-up of the Site in the event the Owner is unwilling or unable to clean up the Site
13. The reason for Condition 12 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.
14. The reason for Condition 13 is to ensure that there is a regular forum for the Owner and the local community to share information regarding the operation of the Site.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). A031813 issued on January 27, 1986**

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me and the Ontario Land Tribunal within 15 days after receipt of this notice, require a hearing by the Tribunal. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("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 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](http://www.olt.gov.on.ca)**

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

DATED AT TORONTO this 7th day of November, 2023



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

IP/  
c: District Manager, MECP Sarnia  
N/A