

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 0657-BZMJHR
Issue Date: March 18, 2022

Tweed Inc.
1 Hershey Drive
Smiths Falls, Ontario
K7A 0A8

Site Location: 1 Hershey Drive
Smiths Falls Separated Town, County of Lanark, Ontario
K7A 0A8

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:

Description Section

A cannabis growing and processing facility, consisting of the following processes and support units:

- cannabis growing, trimming, milling, grinding and drying;
- thermal treatment of waste through the Micro Auto Gasification System (MAGS);
- cannabis processing via oil extraction using ethanol (cold ethanol distillation or short path distillation);
- pill processing, encapsulation and oil packing;
- manufacturing of cannabis containing edibles;
- electronics manufacturing (vapes, e-cigarettes); and
- assembly, packaging and distribution;

including the Equipment and any other ancillary and support processes and activities, operating at a Facility Production Limit of up to **17,500 kilograms of dried, grown and cultivated cannabis per year**, discharging to

the air as described in the Original ESDM Report.

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

1. "ACB list" means the document entitled "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants", as amended from time to time and published by the Ministry and available on a Government website;
2. "Acceptable Point of Impingement Concentration" means a concentration accepted by the Ministry as not likely to cause an adverse effect for a Compound of Concern that,
 - a. is not identified in the ACB list, or
 - b. is identified in the ACB list as belonging to the category "Benchmark 2" and has a concentration at a Point of Impingement that exceeds the concentration set out for the contaminant in that document.

With respect to the Original ESDM Report, the Acceptable Point of Impingement Concentration for a Compound of Concern mentioned above is the concentration set out in the Original ESDM Report;

3. "Acoustic Assessment Report" means the report, prepared in accordance with Publication NPC-233 and Appendix A of the Basic Comprehensive User Guide, by Aidan Maher, P.Eng. / Pinchin Ltd. and dated October 22, 2019 submitted in support of the application, that documents all sources of noise emissions and Noise Control Measures present at the Facility, as updated in accordance with Condition 5 of this Approval;
4. "Acoustic Assessment Summary Table" means a table prepared in accordance with the Basic Comprehensive User Guide summarising the results of the Acoustic Assessment Report, as updated in accordance with Condition 5 of this Approval;
5. "Acoustic Audit" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Facility, assessed to determine compliance with the Performance Limits for the Facility regarding noise emissions, completed in accordance with the procedures set in Publication NPC-103 and reported in accordance with Publication NPC-233;
6. "Acoustic Audit Report" means a report presenting the results of an Acoustic Audit, prepared in accordance with Publication NPC-233;
7. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is familiar with Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise

emissions from a Facility;

8. "Approval" means this entire Environmental Compliance Approval and any Schedules to it;
9. "Basic Comprehensive User Guide" means the Ministry document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated March 2011, as amended;
10. "CEM System" means the continuous emission monitoring system as described in this Approval and in the supporting documentation referred to herein;
11. "Company" means **Tweed Inc.** that is responsible for the construction or operation of the Facility and includes any successors and assigns in accordance with section 19 of the EPA;
12. "Compound of Concern" means a contaminant described in paragraph 4 subsection 26 (1) of O. Reg. 419/05, namely, a contaminant that is discharged from the Facility in an amount that is not negligible;
13. "Date of Commissioning" means the first day on which the Company begins to operate the Micro Auto Gasification System (MAGS) unit at the Facility;
14. "Description Section" means the section on page one of this Approval describing the Company's operations and the Equipment located at the Facility and specifying the Facility Production Limit for the Facility;
15. "Director" means a person appointed for the purpose of section 20.3 of the EPA by the Minister pursuant to section 5 of the EPA;
16. "District Manager" means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically located;
17. "Emission Summary Table" means a table described in paragraph 14 of subsection 26 (1) of O. Reg. 419/05;
18. "Environmental Assessment Act" means the *Environmental Assessment Act*, R.S.O. 1990, c.E.18;
19. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19;
20. "Equipment" means equipment or processes described in the ESDM Report, this Approval and in the Schedules referred to herein and any other equipment or processes;
21. "Equipment with Specific Operational Limits" means any Equipment related to the thermal oxidation of waste or waste derived fuels, fume incinerators or any other Equipment that is specifically referenced in any published Ministry document that outlines specific operational guidance that must be considered by the Director in issuing an Approval. In this Approval, it means the the Micro Auto

Gasification System (MAGS) unit;

22. "ESDM Report" means the most current Emission Summary and Dispersion Modelling Report that describes the Facility. The ESDM Report is based on the Original ESDM Report and is updated after the issuance of this Approval in accordance with section 26 of O. Reg. 419/05 and the Procedure Document;
23. "Facility" means the entire operation located on the property where the Equipment is located;
24. "Facility Production Limit" means the production limit placed by the Director on the main product(s) or raw materials used by the Facility;
25. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report or the design/implementation of Noise Control Measures for the Facility and/or Equipment. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment or the design/implementation of Noise Control Measures for the Facility and/or Equipment;
26. "Log" means a document that contains a record of each change that is required to be made to the ESDM Report and Acoustic Assessment Report, including the date on which the change occurred. For example, a record would have to be made of a more accurate emission rate for a source of contaminant, more accurate meteorological data, a more accurate value of a parameter that is related to a source of contaminant, a change to a Point of Impingement and all changes to information associated with a Modification to the Facility that satisfies Condition 2;
27. "Manager" means the Manager, Technology Standards Section, Technical Assessment and Standards Development Branch, or any other person who represents and carries out the duties of the Manager, Technology Standards Section, Technical Assessment and Standards Development Branch, as those duties relate to the conditions of this Approval;
28. "Minister" means the Minister of the Environment, Conservation and Parks or such other member of the Executive Council as may be assigned the administration of the EPA under the Executive Council Act;
29. "Ministry" means the ministry of the Minister;
30. "Modification" means any construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing, or alteration of a process or rate of production at the Facility that may discharge or alter the rate or manner of discharge of a Compound of Concern to the air or discharge or alter noise or vibration emissions from the Facility;
31. "Noise Control Measures" means measures to reduce the noise emissions from the Facility and/or Equipment including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers. It also means the noise control measures outlined in the Acoustic Assessment

Report;

32. "O. Reg. 419/05" means Ontario Regulation 419/05: Air Pollution – Local Air Quality;
33. "Original ESDM Report" means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of O. Reg. 419/05 and the Procedure Document by Timothy Reyes, Pinchin Ltd. and dated October 2019, submitted in support of the application, and includes any changes to the report made up to the date of issuance of this Approval;
34. "Point of Impingement" has the same meaning as in section 2 of O. Reg. 419/05;
35. "Point of Reception" means Point of Reception as defined by Publication NPC-300";
36. "Pre-Test Plan" means a plan for the Source Testing including the information required in Section 5 of the Source Testing Code;
37. "Procedure Document" means Ministry guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated March 2018, as amended;
38. "Processes with Significant Environmental Aspects" means the Equipment which, during regular operation, would discharge one or more contaminants into the air in an amount which is not considered as negligible in accordance with section 26 (1) 4 of O. Reg. 419/05 and the Procedure Document;
39. "Publication NPC-103" means the Ministry Publication NPC-103 of the Model Municipal Noise Control By-Law, Final Report, August 1978, published by the Ministry, as amended;
40. "Publication NPC-207" means the Ministry draft technical publication "Impulse Vibration in Residential Buildings", November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, published by the Ministry, August 1978, as amended;
41. "Publication NPC-233" means the Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995, as amended;
42. "Publication NPC-300" means the Ministry Publication NPC-300, "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", August 2013, as amended;
43. "Report EPS 1/PG/7" means the report titled "Protocols and Performance Specifications for Continuous Monitoring of Gaseous Emissions from Thermal Power Generation" dated December 2005 and published by Environment Canada, as amended;
44. "Schedules" means the following schedules attached to this Approval and forming part of this Approval namely:

- Schedule A - Supporting Documentation
 - Schedule B - Maximum Limits;
 - Schedule C - Temperature monitoring;
 - Schedule D - Oxygen monitoring;
 - Schedule E - Carbon Monoxide monitoring;
 - Schedule F - Dioxins, Furans and Dioxin-like PCBs (Polychlorinated Biphenyls);
 - Schedule G - Targeted Sources and Test Contaminants for Source Testing; and
 - Schedule H - Source Testing Procedures;
45. "Source Testing" means site-specific sampling and testing to measure emissions resulting from operating the Targeted Sources under operating conditions that will derive an emission rate that, for the relevant averaging period of the contaminant, is at least as high as the maximum emission rate that the source of contaminant is reasonably capable of, or a rate approved by the Manager within the approved operating range of the Targeted Sources which satisfies paragraph 1 of subsection 11(1) of O. Reg. 419/05;
46. "Source Testing Code" means the Ontario Source Testing Code, dated June 2010, prepared by the Ministry, as amended;
47. "Targeted Sources" means the sources listed in Schedule K;
48. "Test Contaminants" means the contaminants listed in Schedule K;
49. "Toxicologist" means a qualified professional currently active in the field of risk assessment and toxicology that has a combination of formal university education, training and experience necessary to assess contaminants; and
50. "Written Summary Form" means the electronic questionnaire form, available on the Ministry website, and supporting documentation, that documents the activities undertaken at the Facility in the previous calendar year.

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

TERMS AND CONDITIONS

1. GENERAL

1. Except as otherwise provided by this Approval, the Facility shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this Approval and in accordance with the following Schedules attached hereto:
 - Schedule A - Supporting Documentation;
 - Schedule B - Maximum Limits;

- Schedule C - Temperature monitoring;
- Schedule D - Oxygen monitoring;
- Schedule E - Carbon Monoxide monitoring;
- Schedule F - Dioxins, Furans and Dioxin-like PCBs (Polychlorinated Biphenyls);
- Schedule G - Targeted Sources and Test Contaminants for Source Testing; and
- Schedule H - Source Testing Procedures;

2. LIMITED OPERATIONAL FLEXIBILITY

1. Pursuant to section 20.6 (1) of the EPA and subject to Conditions 2.2 and 2.3 of this Approval, future construction, alterations, extensions or replacements are approved in this Approval if the future construction, alterations, extensions or replacements are Modifications to the Facility that:
 - a. are within the scope of the operations of the Facility as described in the Description Section of this Approval;
 - b. do not result in an increase of the Facility Production Limit above the level specified in the Description Section of this Approval; and
 - c. result in compliance with the performance limits as specified in Condition 4.
2. Condition 2.1 does not apply to,
 - a. the addition of any new Equipment with Specific Operational Limits or to the Modification of any existing Equipment with Specific Operational Limits at the Facility; and
 - b. Modifications to the Facility that would be subject to the Environmental Assessment Act.
3. Condition 2.1 of this Approval shall expire ten (10) years from the date of this Approval, unless this Approval is revoked prior to the expiry date. The Company may apply for renewal of Condition 2.1 of this Approval by including an ESDM Report and an Acoustic Assessment Report that describes the Facility as of the date of the renewal application.

3. REQUIREMENT TO REQUEST AN ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION

1. Prior to making a Modification to the Facility that satisfies Condition 2.1.a. and 2.1.b., the Company shall prepare a proposed update to the ESDM Report to reflect the proposed Modification.
2. The Company shall request approval of an Acceptable Point of Impingement Concentration for a Compound of Concern if the Compound of Concern is not identified in the ACB list as belonging to the category “Benchmark 1” and a proposed update to an ESDM Report indicates that one of the following changes with respect to the concentration of the Compound of Concern

may occur:

- a. The Compound of Concern was not a Compound of Concern in the previous version of the ESDM Report and
 - i. the concentration of the Compound of Concern exceeds the concentration set out for the contaminant in the ACB list; or
 - ii. the Compound of Concern is not identified in the ACB list; or
- b. The concentration of the Compound of Concern in the updated ESDM Report exceeds the higher of,
 - i. the most recent Acceptable Point of Impingement Concentration, and
 - ii. the concentration set out for the contaminant in the ACB list, if the contaminant is identified in that document.
3. The request required by Condition 3.2 shall propose a concentration for the Compound of Concern and shall contain an assessment, performed by a Toxicologist, of the likelihood of the proposed concentration causing an adverse effect at Points of Impingement.
4. If the request required by Condition 3.2 is a result of a proposed Modification described in Condition 3.1, the Company shall submit the request, in writing, to the Director at least 30 days prior to commencing to make the Modification. The Director shall provide written confirmation of receipt of this request to the Company.
5. If a request is required to be made under Condition 3.2 in respect of a proposed Modification described in Condition 3.1, the Company shall not make the Modification mentioned in Condition 3.1 unless the request is approved in writing by the Director.
6. If the Director notifies the Company in writing that the Director does not approve the request, the Company shall,
 - a. revise and resubmit the request; or
 - b. notify the Director that it will not be making the Modification.
7. The re-submission mentioned in Condition 3.6 shall be deemed a new submission under Condition 3.2.
8. If the Director approves the request, the Company shall update the ESDM Report to reflect the Modification.

9. Condition 3 does not apply if Condition 2.1 has expired.

4. PERFORMANCE LIMITS

1. Subject to Condition 4.2, the Company shall not discharge or cause or permit the discharge of a Compound of Concern into the air if,
 - a. the Compound of Concern is identified in the ACB list as belonging to the category "Benchmark 1" and the discharge results in the concentration at a Point of Impingement exceeding the Benchmark 1 concentration; or
 - b. the Compound of Concern is not identified in the ACB list as belonging to the category "Benchmark 1" and the discharge results in the concentration at a Point of Impingement exceeding the higher of,
 - i. if an Acceptable Point of Impingement Concentration exists, the most recent Acceptable Point of Impingement Concentration, and
 - ii. the concentration set out for the contaminant in the ACB list, if the contaminant is identified in that document.
2. Condition 4.1 does not apply if the benchmark set out in the ACB list has a 10-minute averaging period and no ambient monitor indicates an exceedance at a Point of Impingement where human activities regularly occur at a time when those activities regularly occur.
3. The Company shall:
 - a. implement by not later than twelve (12) months from the date of this Approval, the Noise Control Measures as outlined in the Acoustic Assessment Report;
 - b. ensure, subsequent to the implementation of the Noise Control Measures that the noise emissions from the Facility comply with the limits set in Ministry Publication NPC-300; and
 - c. ensure that the Noise Control Measures are properly maintained and continue to provide the acoustical performance outlined in the Acoustic Assessment Report.
4. The Company shall, at all times, ensure that the vibration emissions from the Facility comply with the limits set out in Ministry Publication NPC-207.
5. The Company shall operate any Equipment with Specific Operational Limits approved by this Approval in accordance with the Original ESDM Report and Conditions in this Approval.

- a. The concentrations of contaminants listed in Schedule B of this Approval in the undiluted gases emitted from the Micro Auto Gasification System (MAGS) unit shall not be greater than their respective emission limits specified in Schedule B of this Approval as per the verification methods listed in Schedule B of this Approval. The toxic equivalent concentration of dioxins and furans shall be calculated using the toxicity equivalence factors recommended by the International Scheme as set out in Schedule F of this Approval.
- b. The processing of the waste stream in the Micro Auto Gasification System (MAGS) unit shall be limited to the ratio described in the ESDM Report. This waste stream shall not include any plastic waste that contains chlorinated and/or fluorinated compounds.

5. DOCUMENTATION REQUIREMENTS

1. The Company shall maintain an up-to-date Log.
2. No later than June 30 in each year, the Company shall update the Acoustic Assessment Report and shall update the ESDM Report in accordance with section 26 of O. Reg. 419/05 so that the information in the reports is accurate as of December 31 in the previous year.
3. The Company shall make the Emission Summary Table (see section 27 of O. Reg. 419/05) and Acoustic Assessment Summary Table available for examination by any person, without charge, by posting it on the Internet or by making it available during regular business hours at the Facility.
4. The Company shall, within three (3) months after the expiry of Condition 2.1 of this Approval, update the ESDM Report and the Acoustic Assessment Report such that the information in the reports is accurate as of the date that Condition 2.1 of this Approval expired.
5. Conditions 5.1 and 5.2 do not apply if Condition 2.1 has expired.

6. REPORTING REQUIREMENTS

1. Subject to Condition 6.2, the Company shall provide the Director no later than August 31 of each year, a Written Summary Form to be submitted through the Ministry's website that shall include the following:
 - a. a declaration of whether the Facility was in compliance with section 9 of the EPA, O. Reg. 419/05 and the conditions of this Approval;
 - b. a summary of each Modification satisfying Condition 2.1.a. and 2.1.b. that took place in the previous calendar year that resulted in a change in the previously calculated concentration at a Point of Impingement for any Compound of Concern or resulted in a change in the sound levels reported in the Acoustic Assessment Summary Table at any Point of Reception.

2. Condition 6.1 does not apply if Condition 2.1 has expired.

7. OPERATION AND MAINTENANCE

1. The Company shall prepare and implement, not later than three (3) months from the date of this Approval, operating procedures and maintenance programs for all Processes with Significant Environmental Aspects, which shall specify as a minimum:
 - a. frequency of inspections and scheduled preventative maintenance;
 - b. procedures to prevent upset conditions;
 - c. procedures to minimize all fugitive emissions;
 - d. procedures to prevent and/or minimize odorous emissions;
 - e. procedures to prevent and/or minimize noise emissions; and
 - f. procedures for record keeping activities relating to the operation and maintenance programs.
2. The Company shall ensure that all Processes with Significant Environmental Aspects are operated and maintained in accordance with this Approval, the operating procedures and maintenance programs.

8. COMPLAINTS RECORDING AND REPORTING

1. If at any time, the Company receives an environmental complaint from the public regarding the operation of the Equipment approved by this Approval, the Company shall take the following steps:
 - a. Record and number each complaint, either electronically or in a log book. The record shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and, if known, the address of the complainant.
 - b. Notify the District Manager of the complaint within two (2) business days after the complaint is received, or in a manner acceptable to the District Manager.
 - c. Initiate appropriate steps to determine all possible causes of the complaint, and take the necessary actions to appropriately deal with the cause of the subject matter of the complaint.
 - d. Complete and retain on-site a report written within five (5) business days of the complaint date. The report shall list the actions taken to appropriately deal with the cause of the complaint and set out steps to be taken to avoid the recurrence of similar incidents.

9. RECORD KEEPING REQUIREMENTS

1. Any information requested by any employee in or agent of the Ministry concerning the Facility and its operation under this Approval, including, but not limited to, any records required to be kept by this Approval, shall be provided to the employee in or agent of the Ministry, upon request, in a timely manner.
2. Unless otherwise specified in this Approval, the Company shall retain, for a minimum of five (5) years from the date of their creation all reports, records and information described in this Approval, including,
 - a. a copy of the Original ESDM Report and each updated version;
 - b. a copy of each version of the Acoustic Assessment Report;
 - c. supporting information used in the emission rate calculations performed in the ESDM Reports and Acoustic Assessment Reports;
 - d. the records in the Log;
 - e. copies of each Written Summary Form provided to the Ministry under Condition 6.1 of this Approval;
 - f. records of maintenance, repair and inspection of Equipment related to all Processes with Significant Environmental Aspects; and
 - g. all records related to environmental complaints made by the public as required by Condition 8 of this Approval
 - h. all records required by Conditions 10 and 11 of this Approval.

10. SOURCE TESTING

1. The Company shall perform Source Testing in accordance with the procedures in Schedule H to determine the rates of emissions of the Test Contaminants from the Targeted Sources listed in Schedule G [with the exception of Dioxins, Furans and Dioxin-like PCBs (Polychlorinated Biphenyls)], within six (6) months from the Date of Commissioning or a date agreed upon in consultation with the District Manager.
 - a. Source Testing for Particulate Matter and Hydrogen Chloride shall be repeated every (4) from the date of the first Source Test.
2. In the event that the results of the Source Testing required by Condition 10.1 indicate that the concentrations of both Particulate Matter and Hydrogen Chloride exceed their respective maximum limits described in Schedule B, the Company shall perform Source Testing for

Dioxins, Furans and Dioxin-like PCBs (Polychlorinated Biphenyls) within six (6) months of item 4 under Schedule H being completed.

11. MONITORING

1. The Company shall monitor the emissions and operation of the Facility as follows:
 - a. The Company shall install and maintain operational an CEM System before commencement of operation of the MAGS unit to continuously monitor and record the temperature and concentrations of oxygen and carbon monoxide in the undiluted flue gases leaving the MAGS unit stack. The locations and specifications of the CEM sample probes, calibration ports and temperature instruments shall be in accordance with the requirements of Report EPS 1/PG/7 and as outlined in Schedule C to Schedule E of this Approval or as specified by the Manager.
 - b. The Company shall continuously monitor and record the following process parameters calculated as a one-hour average:
 - a. pressure in all chambers of the MAGS unit;
 - b. temperature in all chambers of the MAGS unit; and
 - c. concentration of oxygen in the exhaust of the MAGS unit.

12. REVOCATION OF PREVIOUS APPROVALS

1. This Approval replaces and revokes all Certificates of Approval (Air) issued under section 9 EPA and Environmental Compliance Approvals issued under Part II.1 EPA to the Facility in regards to the activities mentioned in subsection 9(1) of the EPA and dated prior to the date of this Approval.

13. ACOUSTIC AUDIT

1. The Company shall carry out Acoustic Audit measurements on the actual noise emissions due to the operation of the Facility. The Company:
 - a. shall carry out Acoustic Audit measurements in accordance with the procedures in Publication NPC-103;
 - b. shall submit an Acoustic Audit Report on the results of the Acoustic Audit, prepared by an Independent Acoustical Consultant, in accordance with the requirements of Publication NPC-233, to the District Manager and the Director not later than eighteen (18) months from the date of this Approval.
2. The Director:
 - a. may not accept the results of the Acoustic Audit if the requirements of Publication NPC-233

were not followed;

- b. may require the Company to repeat the Acoustic Audit if the results of the Acoustic Audit are found unacceptable to the Director.

SCHEDULE A

Supporting Documentation

1. Environmental Compliance Approval Application, dated November 19, 2019, signed by Harold Neumann, Facility Manager and submitted by the Company;
2. Emission Summary and Dispersion Modelling Report, prepared by Timothy Reyes, Pinchin Ltd. and dated October 2019;
3. Acoustic Assessment Report, prepared by Pinchin Ltd., dated October 22, 2019 and signed by Aidan Maher, P.Eng.; and
4. All additional information in support of the application provided by the Company and Timothy Reyes, Pinchin Ltd.

SCHEDULE B

Maximum Limits

Contaminant	Maximum Limit	Calculation / Verification Methods
Nitrogen oxides	105 ppm _{dv} (198 mg/Rm ³)	Calculated as the arithmetic average of 3 stack tests conducted in accordance with standard methods
Sulphur dioxide	21 ppm _{dv} (56 mg/Rm ³)	Calculated as the arithmetic average of 3 stack tests conducted in accordance with standard methods
Hydrogen chloride	10 ppm _{dv} (17 mg/Rm ³)	Calculated as the arithmetic average of 3 stack tests conducted in accordance with standard methods
Carbon monoxide	30 ppm _{dv} (35 mg/Rm ³)	Calculated as the rolling arithmetic average of four (4) hours of data from a continuous emission monitoring system that provides data at least once every fifteen (15) minutes
Organic matter	50 ppm _{wv}	Calculated as the arithmetic average of 3 stack tests conducted in accordance with standard methods
Particulate matter	14 mg/Rm ³	Calculated as the arithmetic average of 3 stack tests conducted in accordance with standard methods
Dioxins, Furans and Dioxin-like PCBs (Polychlorinated Biphenyls)	80 pg (TEQ)/Rm ³	Calculated as the arithmetic average of 3 stack tests conducted in accordance with standard methods, and expressed as toxicity equivalent to 2,3,7,8 tetrachlorodibenzo-p-dioxin (calculated in accordance with Schedule F of this Approval)

Notes:

1. R means reference conditions defined as: temperature of 25 degrees Celsius, a reference pressure of 101.3 kilopascals, oxygen content of 11% and dry conditions (water content nil).
2. ppm_{dv} means parts per million by volume on a dry basis. ppm_{dv} has been set at standard conditions and reflecting 11% oxygen environment.
3. ppm_{wv} means parts per million by volume on a wet basis.

SCHEDULE C

PARAMETER: Temperature

LOCATION:

The sample point for the continuous temperature monitoring and recording system shall be installed in accordance with the requirements of *Report EPS 1/PG/7* at a location where the measurements are representative of the minimum temperature of the undiluted gases leaving the flare stack.

PERFORMANCE:

The Continuous Temperature Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETER	SPECIFICATION
Type:	shielded "K" type thermocouple or equivalent
Accuracy:	± 1.5 percent of the minimum gas temperature
Response Time (95%):	60 sec. (max)
Operating Range (Full Scale):	1.5 times approval limit
Standard Tolerance:	± 2.2 °C or $\pm 0.75\%$
Resolution:	0.1 °C
Calibration:	Per manufacturer's recommendations

RECORDER:

The recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 5 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

SCHEDULE D

PARAMETER: Oxygen

INSTALLATION:

The Continuous Oxygen Monitor shall be installed in accordance with the requirements of *Report EPS I/PG/7* at an accessible location where the measurements are representative of the actual concentration of oxygen in the undiluted gases leaving the flare stack and shall meet the following installation specifications.

PARAMETER	SPECIFICATION
Range (percentage):	0 - 20 or 0 - 25
Calibration Gas Ports:	close to the sample point

PERFORMANCE:

The Continuous Oxygen Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETER	SPECIFICATION
Span Value (percentage):	40% - 75% of Full Scale
Relative Accuracy:	\leq the greater of 10 percent of the mean value of the Reference method test data or 0.5% average absolute difference
Calibration Error:	0.25 percent O ₂
System Bias:	\leq the greater of 5 percent of the FS value or 0.5% average absolute difference
Procedure for Zero and Span Calibration Check:	All system components checked
Zero Calibration Drift (24-hour):	\leq 0.5 percent O ₂
Span Calibration Drift (24-hour):	\leq 0.5 percent O ₂
Response Time (90 percent response to a step change):	\leq 200 seconds
Operational Test Period:	\geq 168 hours without corrective maintenance

CALIBRATION:

Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of *Report EPS I/PG/7*.

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

SCHEDULE E

PARAMETER: Carbon Monoxide

INSTALLATION:

The Continuous Carbon Monoxide Monitor shall be installed in accordance with the requirements of *Report EPS I/PG/7* at an accessible location where the measurements are representative of the actual concentration of carbon monoxide in the undiluted gases leaving the flare stack and shall meet the following installation specifications.

PARAMETER	SPECIFICATION
Range (ppm):	0 to 100 (Low) and 0 to 2,000 (High)
Calibration Gas Ports:	close to the sample point

PERFORMANCE:

The Continuous Carbon Monoxide Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETER	SPECIFICATION
Span Value (ppm):	40% - 75% of Full Scale
Relative Accuracy:	\leq the greater of 10 percent of the mean value of the reference method test data or 8 ppm average absolute difference
Calibration Error:	\leq 2 percent of actual concentration
System Bias:	\leq the greater of 5 percent of FS value or 5 ppm average absolute difference
Procedure for Zero and Span Calibration Check:	All system components checked
Zero Calibration Drift (24-hour):	\leq 2.5 percent of FS or 2.5 ppm average absolute difference
Span Calibration Drift (24-hour):	\leq 2.5 percent of FS or 2.5 ppm average absolute difference
Response Time (90 percent response to a step change):	\leq 200 seconds
Operational Test Period:	\geq 168 hours without corrective maintenance

CALIBRATION:

Daily calibration drift checks on the monitor low range shall be performed and recorded in accordance with the requirements of *Report EPS I/PG/7*. The monitor high range shall be calibrated once per week in accordance with the drift limits specified above.

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

SCHEDULE F

Dioxins, Furans and Dioxin-like PCBs (Polychlorinated Biphenyls)

Toxicity equivalency factors (TEFs) are applied to 29 isomers of dioxins, furans and dioxin-like PCBs to convert them into 2,3,7,8-CDD (tetrachlorodibenzo-p-dioxin) toxicity equivalents. The conversion involves multiplying the concentration of each isomer by the appropriate TEF to yield the TEQ for this isomer. Summing the individual TEQ values for each of the isomers provides the total toxicity equivalent level for the sample mixture. A table listing the 29 isomers and their TEFs can be found in the ACB list.

No.	Dioxins, Furans, and Dioxin-like PCBs	CASRN	WHO ₂₀₀₅ Toxic Equivalency Factors [TEFs]
1	2,3,7,8-Tetrachlorodibenzo-p-dioxin [2,3,7,8-TCDD]	1746-01-6	1
2	1,2,3,7,8-Pentachlorodibenzo-p-dioxin [1,2,3,7,8-PeCDD]	40321-76-4	1
3	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [1,2,3,4,7,8-HxCDD]	39227-28-6	0.1
4	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [1,2,3,6,7,8-HxCDD]	57653-85-7	0.1
5	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [1,2,3,7,8,9-HxCDD]	19408-74-3	0.1
6	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin [1,2,3,4,6,7,8-HpCDD]	35822-46-9	0.01
7	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin [1,2,3,4,6,7,8,9-OCDD]	3268-87-9	0.0003
8	2,3,7,8-Tetrachlorodibenzofuran [2,3,7,8-TCDF]	51207-31-9	0.1
9	1,2,3,7,8-Pentachlorodibenzofuran [1,2,3,7,8-PeCDF]	57117-41-6	0.03
10	2,3,4,7,8-Pentachlorodibenzofuran [2,3,4,7,8-PeCDF]	57117-31-4	0.3
11	1,2,3,4,7,8-Hexachlorodibenzofuran [1,2,3,4,7,8-HxCDF]	70648-26-9	0.1
12	1,2,3,6,7,8-Hexachlorodibenzofuran [1,2,3,6,7,8-HxCDF]	57117-44-9	0.1
13	1,2,3,7,8,9-Hexachlorodibenzofuran [1,2,3,7,8,9-HxCDF]	72918-21-9	0.1
14	2,3,4,6,7,8-Hexachlorodibenzofuran [2,3,4,6,7,8-HxCDF]	60851-34-5	0.1

15	1,2,3,4,6,7,8-Heptachlorodibenzofuran [1,2,3,4,6,7,8-HpCDF]	67562-39-4	0.01
16	1,2,3,4,7,8,9-Heptachlorodibenzofuran [1,2,3,4,7,8,9-HpCDF]	55673-89-7	0.01
17	1,2,3,4,6,7,8,9-Octachlorodibenzofuran [1,2,3,4,6,7,8,9-OCDF]	39001-02-0	0.0003
18	3,3',4,4'-Tetrachlorobiphenyl [3,3',4,4'-tetraCB (PCB 77)]	32598-13-3	0.0001
19	3,4,4',5- Tetrachlorobiphenyl [3,4,4',5-tetraCB (PCB 81)]	70362-50-4	0.0003
20	3,3',4,4',5- Pentachlorobiphenyl (PCB 126) [3,3',4,4',5-pentaCB (PCB 126)]	57465-28-8	0.1
21	3,3',4,4',5,5'- Hexachlorobiphenyl [3,3',4,4',5,5'-hexaCB (PCB 169)]	32774-16-6	0.03
22	2,3,3',4,4'- Pentachlorobiphenyl [2,3,3',4,4'-pentaCB (PCB 105)]	32598-14-4	0.0003
23	2,3,4,4',5- Pentachlorobiphenyl [2,3,4,4',5-pentaCB (PCB 114)]	74472-37-0	0.0003
24	2,3',4,4',5- Pentachlorobiphenyl [2,3',4,4',5-pentaCB (PCB 118)]	31508-00-6	0.0003
25	2',3,4,4',5- Pentachlorobiphenyl [2',3,4,4',5-pentaCB (PCB 123)]	65510-44-3	0.0003
26	2,3,3',4,4',5- Hexachlorobiphenyl [2,3,3',4,4',5-hexaCB (PCB 156)]	38380-08-4	0.0003
27	2,,3,3',4,4',5'- Hexachlorobiphenyl [2,3,3',4,4',5'-hexaCB (PCB 157)]	69782-90-7	0.0003
28	2,3',4,4',5,5'- Hexachlorobiphenyl [2,3',4,4',5,5'-hexaCB (PCB 167)]	52663-72-6	0.0003
29	2,3,3',4,4',5,5'- Heptachlorobiphenyl [2,3,3',4,4',5,5'-heptaCB (PCB 189)]	39635-31-9	0.0003

NOTE: *Sum of toxicity equivalents of individual isomers.

The TEF scheme is intended to be used with isomer specific analytical results. In cases where results are reported by cogener group only, staff at Ministry's Standards Development Brnch shall be contacted for appropriate procedures to convert non-isomer specific data to TEQs.

SCHEDULE G

Targeted Source	Test Contaminants	Retesting Schedule
<p>Micro Auto Gasification System (MAGS)</p>	<ul style="list-style-type: none"> ● Oxides of nitrogen expressed as Nitrogen Dioxide ● Sulphur dioxide ● Hydrogen chloride ● Sodium hydroxide ● Carbon monoxide ● Organic matter ● Particulate matter ● Dioxins, Furans and Dioxin-like PCBs (Polychlorinated Biphenyls) - to be tested only if required in accordance with condition 10.2 of this Approval <p style="text-align: center;">POLYCYCLIC ORGANIC MATTER</p> <ul style="list-style-type: none"> ● Benzo(a)pyrene ● Naphthalene <p style="text-align: center;">VOLATILE ORGANIC MATTER</p> <ul style="list-style-type: none"> ● Acetaldehyde ● Acetone ● Acrolein ● Benzene ● Bromodichloromethane ● Bromoform ● Bromomethane ● Butadiene, 1,3 - ● Butanone, 2 - ● Carbon tetrachloride ● Chloroform ● Cumene ● Dibromochloromethane ● Dichlorodifluoromethane ● Dichloroethane, 1,2 - ● Dichloroethene, trans - 1,2 - ● Dichloroethene, 1,1 - ● Dichloropropane, 1,2 - ● Ethylbenzene ● Ethylene dibromide ● Formaldehyde ● Mesitylene ● Methylene chloride ● Styrene ● Tetrachloroethene ● Toluene ● Trichloroethane, 1,1,1 - ● Trichloroethene 	<p>Particulate Matter and Hydrogen Chloride shall be retested every four (4) years from the date of the first Source Test.</p>

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| <ul style="list-style-type: none">● Trichloroethylene, 1,1,2 -● Trichlorofluoromethane● Trichlorotrifluoroethane● Vinyl chloride● Xylenes, m-, p- and o- | |
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SCHEDULE H

Source Testing Procedures

1. The Company shall submit, not later than three (3) months prior to the Source Testing, to the Manager a Pre-Test Plan for the Source Testing required under this Approval. The Company shall finalize the Pre-Test Plan in consultation with the Manager.
2. The Company shall not commence the Source Testing required under this Approval until the Manager has approved the Pre-Test Plan.
3. The Company shall notify the Manager, the District Manager and the Director in writing of the location, date and time of any impending Source Testing required by this Approval, at least fifteen (15) days prior to the Source Testing.
4. The Company shall submit a report (electronic format) on the Source Testing to the Manager, the District Manager and the Director not later than three (3) months after completing the Source Testing. The report shall be in the format described in the Source Testing Code, and shall also include, but not be limited to:
 1. an executive summary;
 2. an identification of the applicable North American Industry Classification System code (NAICS) for the Facility;
 3. records of operating conditions at the time of Source Testing, including but not limited to the following:
 - a. production data and equipment operating rate as a percentage of maximum capacity;
 - b. Facility/process information related to the operation of the Targeted Sources;
 - c. description of the emission sources controlled by the Targeted Sources at the time of testing; and
 - d. operational description of the general building ventilation at the time of testing, if applicable;
 4. results of Source Testing, including the emission rate, emission concentration, and relevant emission factor of the Test Contaminants from the Targeted Sources;
 5. a tabular comparison of calculated emission rates and emission factors based on Source Testing results for the Test Contaminants to relevant estimates described in the ESDM Report, and,
5. The Director may not accept the results of the Source Testing if:
 1. the Source Testing Code or the requirement of the Manager were not followed;

2. the Company did not notify the Manager, the District Manager and Director of the Source Testing; or
 3. the Company failed to provide a complete report on the Source Testing.
6. If the Director does not accept the result of the Source Testing, the Director may require re-testing. If re-testing is required, the Pre-Test Plan strategies need to be revised and submitted to the Manager for approval. The actions taken to minimize the possibility of the Source Testing results not being accepted by the Director must be noted in the revision.
 7. The Company shall update their ESDM Report in accordance with Section 26 of O. Reg. 419/05 and the Procedure Document with the results from the Source Testing, not later than three (3) months after the submission of the Source Testing report and make these records available for review by staff of the Ministry upon request.

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

1. GENERAL

Condition No. 1 is included to require the Approval holder to build, operate and maintain the Facility in accordance with the Supporting Documentation in Schedule A considered by the Director in issuing this Approval.

2. LIMITED OPERATIONAL FLEXIBILITY, REQUIREMENT TO REQUEST AN ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION AND PERFORMANCE LIMITS

Conditions No. 2, 3 and 4 are included to limit and define the Modifications permitted by this Approval, and to set out the circumstances in which the Company shall request approval of an Acceptable Point of Impingement Concentration prior to making Modifications. The holder of the Approval is approved for operational flexibility for the Facility that is consistent with the description of the operations included with the application up to the Facility Production Limit. In return for the operational flexibility, the Approval places performance based limits that cannot be exceeded under the terms of this Approval. Approval holders will still have to obtain other relevant approvals required to operate the Facility, including requirements under other environmental legislation such as the Environmental Assessment Act.

3. DOCUMENTATION REQUIREMENTS

Condition No. 5 is included to require the Company to maintain ongoing documentation that demonstrates compliance with the performance limits as specified in Condition 4 of this Approval and allows the Ministry to monitor on-going compliance with these performance limits. The Company is required to have an up to date ESDM Report and Acoustic Assessment Report that describe the Facility at all times and make the Emission Summary Table and Acoustic Assessment Summary Table from these reports available to the public on an ongoing basis in order to maintain public communication with regard to the emissions from the Facility.

4. REPORTING REQUIREMENTS

Condition No. 6 is included to require the Company to provide a yearly Written Summary Form to the Ministry, to assist the Ministry with the review of the site's compliance with the EPA, the regulations and this Approval.

5. OPERATION AND MAINTENANCE

Condition No. 7 is included to require the Company to properly operate and maintain the Processes with Significant Environmental Aspects to minimize the impact to the environment from these processes.

6. COMPLAINTS RECORDING AND REPORTING PROCEDURE

Condition No. 8 is included to require the Company to respond to any environmental complaints regarding the operation of the Equipment, according to a procedure that includes methods for preventing recurrence of similar incidents and a requirement to prepare and retain a written report.

7. RECORD KEEPING REQUIREMENTS

Condition No. 9 is included to require the Company to retain all documentation related to this Approval and provide access to employees in or agents of the Ministry, upon request, so that the Ministry can determine if a more detailed review of compliance with the performance limits as specified in Condition 4 of this Approval is necessary.

8. SOURCE TESTING

Condition No. 10 is included to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the EPA, the regulations and this Approval can be verified.

9. MONITORING

Condition No. 11 is included to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the EPA, the regulations and this Approval can be verified.

10. REVOCATION OF PREVIOUS APPROVALS

Condition No. 12 is included to identify that this Approval replaces all Section 9 Certificate(s) of Approval and Part II.1 Approvals in regards to the activities mentioned in subsection 9(1) of the EPA and dated prior to the date of this Approval.

11. ACOUSTIC AUDIT

Condition No. 13 is included to require the Company to gather accurate information and submit an Acoustic Audit Report in accordance with procedures set in the Ministry's noise guidelines, so that the environmental impact and subsequent compliance with this Approval can be verified.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, 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 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.

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:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

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 Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at <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 18th day of March, 2022



Nancy E Orpana, P.Eng.

Director

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

NB/

c: District Manager, MECP Ottawa
Timothy Reyes, Pinchin Ltd.