

**ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 8238-BYH74B  
Issue Date: January 31, 2022

CalClean, Inc.  
1790 N. Case Street  
Orange, California  
USA 92865

Site Location: Mobile

*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:*

- one (1) mobile remediation system for the treatment of contaminated groundwater and soil vapour with a maximum treatment capacity of 340 cubic metres per hour, discharging to the air through a stack equipped with one (1) catalytic oxidizer, having a maximum volumetric flow rate of 1.5 cubic metres per second, an exit diameter of 0.457 metre, and extending 4.0 metres above grade; and
- one (1) diesel-fired generator set having a maximum rating 40 kilowatts;

all in accordance with the Environmental Compliance Approval Application submitted by CalClean, Inc., dated July 4, 2019 and signed by Noel Shenoi; the supporting information including the Emission Summary and Dispersion Modelling report prepared by GHD Limited, dated June 29, 2019 and signed by Gavin Moore; the Acoustic Assessment Report prepared by GHD Limited, dated July 4, 2019 and signed by Mike Masschaele; an email dated November 11, 2020 from Gavin Moore of GHD Limited and an email dated December 6, 2021 from Erik Martinez of GHD Limited.

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

1. "Acoustic Assessment Report" means the report, prepared in accordance with Publication NPC-233 submitted in support of the application, that documents all sources of noise emissions and Noise Control Measures present at the Facility. "Acoustic Assessment Report" also means the Acoustic Assessment Report prepared by GHD Limited, dated July 4, 2019 and signed by Mike Masschaele;
2. "Approval" means this Environmental Compliance Approval, including the application and

supporting documentation listed above;

3. "Class 1 Area" means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum";
4. "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 Area and Class 3 Area:
  - a. sound levels characteristic of Class 1 Area during daytime (07:00 to 19:00 or to 23:00 hours); and
  - b. low evening and night background sound level defined by natural environment and infrequent human activity starting as early as 19:00 hours (19:00 or 23:00 to 07:00 hours);
5. "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as:
  - a. a small community;
  - b. agricultural area;
  - c. a rural recreational area such as a cottage or a resort area; or
  - d. a wilderness area;
6. "Company" means CalClean, Inc., which is responsible for the operation of the Process and includes any successors and assigns;
7. "Continuous Temperature Monitoring System" means the continuous monitoring process, monitoring equipment, and data collection parameters for monitoring the operating temperature of the catalytic oxidizer;
8. "District Manager" means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically being operated;
9. "Effluent Concentrations" means the concentration of the contaminants emitted from the catalytic oxidizer exhaust as stated in the ESDM Report;
10. "EPA" means the Environmental Protection Act, R.S.O. 1990, c. E.19;
11. "Equipment" means the equipment associated with the Process as described in this Approval;

12. "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 Gavin Moore of GHD Limited., and dated June 29, 2019 submitted in support of the application, and includes any changes to the report made up to the date of issuance of this Approval and all supplemental supporting information;
13. "Facility" means the entire operation located on the property where the Equipment is located;
14. "Ministry" means the Ministry of the Government of Ontario responsible for the EPA and includes all officials, employees or other persons acting on its behalf;
15. "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, described in the Company's application, this Approval and in the supporting documentation referred to herein, to the extent approved by this Approval;
16. "O. Reg. 419/05" means Ontario Regulation 419/05, Air Pollution – Local Air Quality, as amended;
17. "Operating Procedures and Maintenance Manual" means the written operating procedures and maintenance manual developed for the Company as described in Condition 3;
18. "Point of Reception" means a point of reception as defined in Publication NPC-300;
19. "Procedure Document" means Ministry guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated February 2017, as amended;
20. "Process" means the remediation processes described in the Company's application, this Approval, and in the supporting documentation submitted with the application, to the extent approved by this Approval;
21. "Publication NPC-233" means the Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995;
22. "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;
23. "Remedial Work Plan" means a plan, developed for the Site, prepared as a single document as described in Condition 2;
24. "Schedule" means the schedules attached to, and forming part of, this Approval, namely:
  - Schedule "A" - Continuous Temperature Monitoring System;

- Schedule "B" - Minimum Required Separation Distances; and
  - Schedule "C" - Form 1: Soil/Groundwater Remediation Process Notice of Intended Location.
25. "Sensitive Receptor" means any location where routine or normal activities occurring at reasonably expected times would experience adverse effect(s) from discharges from the Equipment/Process to the atmosphere, including one or a combination of:
- a. as private residences or public facilities where people sleep (eg: single and multi-unit dwellings, nursing homes, hospitals, trailer parks, camping grounds, etc.);
  - b. institutional facilities (eg: schools, churches, community centres, day care centres, recreational centres, etc.);
  - c. outdoor public recreational areas (eg: trailer parks, play grounds, picnic areas, etc.); and
  - d. other outdoor public areas where there are continuous human activities (eg: commercial plazas and office buildings).
26. "Site" means any property or properties described in a completed Schedule "C" at which the Process is operated;
27. "SPCP" means the written Spill Prevention and Contingency Plan developed for the Company as described in Condition 4; and
28. "Target Compounds" means the contaminants in the groundwater and soil vapour as described in the Company's application, this Approval, and in the supporting documentation submitted with the application, to the extent approved by this Approval, that the Process is designed to treat as part of the Remedial Work Plan.

*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. PERFORMANCE REQUIREMENTS**

1. The Company shall, for each Site, design and operate the Process with the intent to reduce the concentrations of the Target Compounds;
2. The Company shall, for each Site, before commencement of operation of the Process, prepare the following;

- i. Remedial Work Plan; and
  - ii. an Operating Procedures and Maintenance Manual.
3. The Company shall, for each Site, ensure that the Effluent Concentrations does not exceed the effluent contaminant concentration thresholds established in the ESDM Report;
4. The Company shall, for each Site, ensure that the catalytic oxidizer maintains a removal efficiency greater than or equal to 90% for the Target Compounds;
5. The Company shall, for each Site, ensure a minimum separation distance of 10 metres is maintained between the Facility and the nearest Sensitive Receptor;
6. The Company shall restrict the use of the generator set to Sites which have no access to the electrical grid.

## **2. REMEDIAL WORK PLAN**

1. The Company shall, before commencement of operation of the Process at the Site, prepare a Remedial Work Plan designed with specific application for the Site that specifies, as a minimum:
  - a. the remedial objectives established for the Site;
  - b. an overview of the work to be undertaken by the Company;
  - c. a description of the Site;
  - d. land uses at the Site and in the immediate surrounding vicinity;
  - e. locations of on-Site and off-Site Sensitive Receptors;
  - f. a Site plan overview of the extent of contamination at the Site; and
  - g. alternative remedial measures to be undertaken in the event that the Process is not successful to meet the Remedial Work Plan objectives.

## **3. OPERATION AND MAINTENANCE**

1. The Company shall, before commencement of operation of the Process at the Site, prepare and implement a Site specific Operating Procedures and Maintenance Manual for the Equipment and Process that specifies, as a minimum:
  - a. major components of the Equipment to be used in the Process;

- b. procedures to inspect and test the Equipment, including the frequency of inspections and scheduled maintenance for the Equipment;
  - c. procedures to calibrate the temperature monitoring and recording equipment for the catalytic oxidizer as specified in Schedule "A";
  - d. procedures to measure and maintain the Effluent Concentrations;
  - e. procedures to measure and maintain the destruction efficiency of the Target Compounds by the catalytic oxidizer;
  - f. procedures to prevent and/or minimize, monitor and record odour from the Facility, including measures to address odour complaints resulting from the operation of the Process and Equipment;
  - g. procedures to prevent and/or minimize noise and fugitive dust emissions;
  - h. the SPCP procedures to prevent spills relating to the Process and Equipment;
  - i. contingency measures to address upset conditions;
  - j. procedures to record and respond to environmental complaints; and
  - k. steps to be carried out for the discontinuation of the Process.
2. The Company shall, before commencement of operation of the catalytic oxidizer, install and maintain a Continuous Temperature Monitoring System to comply with the requirements outlined in Schedule "A".
  3. The Company shall not direct any soil vapour to the catalytic oxidizer until the temperature of the catalyst bed of the oxidizer has reached a minimum temperature of 600 degrees Celsius.

#### **4. SPILL PREVENTION AND CONTINGENCY PLAN**

1. The Company shall prepare, and implement a written spill prevention and contingency plan that is applicable to the Process at the Site. The SPCP shall include appropriate measures to mitigate spills that may result from the Process, including different spill sizes, types of contaminants, and receiving environments (including land, natural waterways, and municipal sewers). The SPCP shall include as a minimum the following information commensurate with the risk of spills at the Site:
  - a. containment procedures;
  - b. treatment, neutralization and/or clean up procedures;

- c. disposal procedures that are in accordance with the EPA, and/or municipal by-laws and other legislation as applicable;
  - d. securement of necessary equipment;
  - e. notification procedures; and
  - f. details of the training procedures.
2. The Company shall ensure that employees and agents of the Company have been trained on the SPCP prior to commencement of the Process at the Site.
  3. The Company shall review and update the SPCP as needed.

## **5. NOISE**

1. The Company shall, for each Site,
  - a. ensure, at all times, that the noise emissions from the Facility comply with the limits set in Ministry Publication NPC-300;
  - b. ensure the minimum separation distance as specified in Schedule "B" is maintained between the Facility and the nearest Point of Reception.

## **6. NOTIFICATION REQUIREMENTS**

1. The Company shall notify the District Manager at least ten (10) calendar days, or at such other time as may be agreed to in writing by the District Manager, before commencement of operation of the Process at any Site by submitting a completed Form 1, set out in Schedule "C" of this Approval, with attachments, to the District Manager.
2. The Company shall notify the District Manager, in writing, forthwith if the Process is not carried out in accordance with the Performance Requirements outlined in Condition 1.
3. The Company shall notify the District Manager, in writing, forthwith within two (2) business days of each complaint that the Company receives resulting from the operation of the Process at the Site. The notification shall include the information described in paragraph (d) of Condition 7.

## **7. RECORD KEEPING REQUIREMENTS**

1. The Company shall, for each Site, retain for a minimum of five (5) years from the date of their creation, all reports, records, and information as described in this Approval, related to or resulting from the operation of the Process at the Site including:

- a. the Remedial Work Plan;
- b. records about the inspection, maintenance, and repair of the major components of the Equipment related to the Process;
- c. all testing and sampling results related to the Effluent Concentrations and the Equipment; and
- d. records about complaints, including:
  - i. a description of the time and date of the complaint and of the incident to which the complaint relates;
  - ii. the nature of the complaint and the address of the complainant, if known;
  - iii. weather conditions at the time of the incident to which the complaint relates;
  - iv. a description of the measures taken to determine the possible causes of the complaint and the steps taken to investigate and deal with the cause of the incident to which the complaint relates and the steps taken and/or to be taken to prevent a similar occurrence in the future; and
  - v. a written response to the complainant, if known.



## **SCHEDULE "A"**

### **Continuous Temperature Monitoring System**

#### **LOCATION:**

The continuous temperature monitors shall be located at a location where the measurements are representative of the actual operating temperatures required for the catalytic oxidizer to achieve the removal efficiency specified in Condition 1 (4).

#### **PERFORMANCE:**

The continuous temperature monitor shall meet the following minimum performance specifications for the following parameters:

	<b>PARAMETERS</b>	<b>SPECIFICATION</b>
1.	Type:	shielded "K" type thermocouple, or equivalent
2.	Accuracy:	± 5 degrees Celsius

#### **DATA RECORDER:**

The data recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 1 minute or better.

#### **RELIABILITY:**

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

## SCHEDULE "B"

### Minimum Separation Distance(s) to the Nearest Point of Reception

<b>Location of Point of Reception</b>	<b>Time of Equipment Operation</b>	<b>Minimum Separation Distance</b>
Class 1 and Class 2 Areas (Urban) with generator operation	between 7:00 am and 11:00 pm	35 metres
Class 1 and Class 2 Areas (Urban) with generator operation	between 11:00 pm and 7:00 am	59 metres
Class 3 Areas (Rural) with generator operation	between 7:00 am and 7:00 pm	59 metres
Class 3 Areas (Rural) with generator operation	between 7:00 pm and 7:00 am	99 metres
Class 1 and Class 2 Areas (Urban) with no generator operation	between 7:00 am and 11:00 pm	2 metres
Class 1 and Class 2 Areas (Urban) with no generator operation	between 11:00 pm and 7:00 am	5 metres
Class 3 Areas (Rural) with no generator operation	between 7:00 am and 7:00 pm	5 metres
Class 3 Areas (Rural) with no generator operation	between 7:00 pm and 7:00 am	10 metres

## **SCHEDULE "C"**

### **Form 1**

#### **SOIL/GROUNDWATER REMEDIATION PROCESS NOTICE OF INTENDED LOCATION**

1. Owner and/or Operator:
  - a. Company name:
  - b. Environmental Compliance Approval (Air) number:
  - c. Contact person:
  - d. Telephone number:
2. Proposed Location:
  - a. Municipality:
  - b. Street address or Lot and Concession number:
3. Land use in the immediate vicinity:
4. Operating schedule:
  - a. Date of commencement:
  - b. Estimated duration:
  - c. Hours of operation:

Please attach the following:

- a. A plan showing the area(s) within the Site where the Process will be operated;
- b. An overview of the Process to be used at the Site, including a description of the technology (or technologies) and delivery method(s) to be used; and
- c. An overview of the Site specific Remedial Work Plan and the Operating Procedures and Maintenance Manual that have been drafted and will be finalized before commencement of operation of the Process at the Site and will be implemented at the Site as required by this Approval.

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

1. Condition No. 1 is included to outline the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Process.
2. Condition No. 2 is included to require the Company to gather accurate information and prepare a work plan prior to carrying out the Process at the Site and so that compliance with the EPA and this Approval can be verified.
3. Condition No. 3 is included to emphasize that the Equipment and Process must be operated according to a procedure that will result in compliance with the EPA, the regulations, and this Approval.
4. Condition No. 4 is included to require the Company to prevent and mitigate spills thereby minimizing adverse environmental impacts.
5. Condition No. 5 is included to provide the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Facility / Equipment and to emphasize that the Facility / Equipment must be maintained and operated according to a procedure that will result in compliance with the EPA, the regulations and this Approval.
6. Condition No. 6 is included to require the Company to notify the Ministry so that the environmental impact and subsequent compliance with the EPA, the regulations, and this Approval can be verified.
7. Condition No. 7 is included to require the Company to retain records and provide information to the Ministry so that the environmental impact and subsequent compliance with the EPA, the regulations, and 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](http://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 31st day of January, 2022



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Bijal Shah, P.Eng.

Director

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

BR/

c: District Manager, MECP Kingston - District  
Gavin Moore, GHD Limited