

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 1486-BNNSG8

Issue Date: April 23, 2020

Desrosiers Geothermal Corporation
1020 Matheson Boulevard East, No. 12
Mississauga, Ontario
L7A 4J9

Site Location: Vertical Closed Loop Geothermal Systems
Multiple Sites in Ontario

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

- the construction, alteration, extension or replacement of *Vertical Closed Loop Ground Source Heat Pumps* throughout Ontario;

all in accordance with the following:

1. application for Approval, dated January 10, 2020, signed by Dave Desrosiers, President, Desrosiers Geothermal Corporation; the *Work Plan*, prepared by Lusk Geo Inc., Hydrogeology Consulting Services and Azimuth Environmental Consulting Inc. dated April 3, 2020, and signed and stamped by Warren Lusk, P.Geo., Chris Helmer, P.Geo., and Mike Jones, M. Sc., P.Geo. respectively; and all other *Supporting Documents* associated with the application.

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

1. "*Approval*" means this entire *Approval* document including the application, *Supporting Documents*, and the *Work Plan*;
2. "*Casing*" means a pipe, tube or other material that is used to support the sides of a hole but does not include tubing or pipe used to hold heat transfer fluid;
3. "*Company*" means Desrosiers Geothermal Corporation that is the holder of the *Environmental Compliance Approval* and is responsible for the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump* at a *Site*, including any successors and assigns in accordance with section 19 of the *EPA*;

4. "*Conditioned Space*" describes a space that is heated or cooled in an existing dwelling, building or other structure or a proposed space that will be heated or cooled in a proposed dwelling, building or other structure and where the space is not or proposed space will not be more than 1,400 square-metres as as described in subsections 6.2.1.4 (3) and (4) of Ontario Regulation 332/12 as amended made under the Building Code Act, 1992. S.O. 1992, c. 23;
5. "*Contractor*" means a person that is not the *Company* that has been retained to perform one or more activities relating to the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump* at a *Site*;
6. "*Director*" means a person appointed by the Minister pursuant to section 5 of the *EPA*;
7. "*District Manager*" means the District Manager of the appropriate local district office of the *Ministry*, where the *Site* is geographically located;
8. "*EPA*" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;
9. "*Financial Assurance*" as defined in the *EPA*;
10. "*Hazardous Gas*" as defined in *O. Reg. 98/12*;
11. "*Installation Equipment*" means drilling machines and any other machinery or things used in the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump*;
12. "*Killing of a Hole*" means the process of placing a fluid (e.g., water or calcium chloride brine) in the entire hole or a *Weighted Material* in the entire hole that comprises of a subsurface formation that contains *Hazardous Gas* in the hole to stop the flow of the *Hazardous Gas*;
13. "*Ministry*" means Ontario Ministry of the Environment, Conservation and Parks;
14. "*Mitigation Completion Report*" means a report prepared by a *Professional* as specified in the *Work Plan*, that documents the details of any *Hazardous Gas* encountered and the measures and safeguards taken to permanently mitigate any potential hazard relating to *Hazardous Gas* at the *Site*;
15. "*Notification Contact List*" means the list of contacts documented in *Work Plan* and as a minimum includes the contacts prescribed in section 4(2) of *O. Reg. 98/12*;
16. "*O. Reg. 98/12*" means the Ontario Regulation 98/12 (Ground Source Heat Pumps) made under the *EPA*, as amended;
17. "*Owner*" means the person or persons that has control of the *Site*.

18. *"Preliminary Site Preparations"* means the document prepared by the *Company* and a *Professional* documenting the site-specific preparations made for each *Site* prior to the *Company* commencing any activities relating to the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump*. The *Preliminary Site Preparations* are documented as specified in the *Work Plan*;
19. *"Pressure Integrity Test"* means a procedure used to determine if the seal can withstand pressures as determined in the *Work Plan*;
20. *"Professional"* means a *Licensed Engineering Practitioner* or *Professional Geoscientist* as they are defined in *O. Reg. 98/12* who;
 - a. has demonstrated direct experience in identifying, mitigating and reporting on subsurface pressurized hazardous gas; and
 - b. if the person is a Licensed Engineering Practitioner, the person has declared and reported to Professional Engineers of Ontario that the person is engaged in the practice of engineering in Ontario.
21. *"Project Log"* means a document logging all completed, current and proposed projects involving the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump*;
22. *"Service Provider"* means an experienced;
 - a. oil and gas drilling contractor; or
 - b. a contractor who works at the construction of water, oil and gas wells; or
 - c. a licenced water well contractor with experience and knowledge in mixing and pumping *Weighted Material*.
23. *"Site"* means the property where the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump* takes place;
24. *"Standard Completion Report"* means a report prepared by the *Company* as specified in the *Work Plan*, which documents the details of the drilling and installation activities of the *Vertical Closed Loop Ground Source Heat Pump* at the *Site*;
25. *"Supporting Documents"* means any documentation or information provided to support the application for Approval;
26. *"Vertical Closed Loop Ground Source Heat Pump"* as defined in *O. Reg. 98/12*;

27. *"Weighted Material"* means Haliburton Hi-Dense No.3 (Iron Beads) or No. 4 (Iron Powder) or an equivalent manufactured hematite product mixed with cement used in the oil industry that is pumped into the hole and can withstand high pressures; and
28. *"Work Plan"* means the document prepared by a *Professional* in accordance with *O.Reg 98/12* and submitted as part of the application for an *Approval*.

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

TERMS AND CONDITIONS

Performance Requirements

1. The *Company* shall, at all times, ensure that the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump* is carried out in accordance with the *Work Plan*.
2. The *Company* shall, at all times, ensure that the measures set out in the *Work Plan*, are taken to prevent or reduce the likelihood of the migration of *Hazardous Gas*, whether through a hole or otherwise, during the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump*.
3. The *Company* shall, at all times, ensure that the *Work Plan*, *Preliminary Site Preparations*, and this *Approval* are at the *Site*, and available to all *Company* personnel or other persons including *Contractors* working at the *Site* during the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump*.
4. The *Company* shall, for each site, ensure the presence of a *Professional* to supervise those person(s) working on the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump*, who have not completed the training required under condition 5.
5. The *Company* shall:
 - (1) retain the services of a *Professional* to prepare and conduct a training program, for all person(s) employed or retained by the *Company*, on the operational procedures and requirements of this *Approval* and the *Work Plan*, including, but not limited to:
 - a) operation of drilling equipment;
 - b) logging and reporting;
 - c) safety including WHMIS, fall arrest, and evacuation procedures;
 - d) site planning;

- e) maintenance of equipment;
 - f) the *Pressure Integrity Test* process;
 - g) ground U-loop (heat exchanger) installation procedures;
 - h) plastic fusion;
 - i) known hazardous gases and flowing artesian groundwater in Ontario's subsurface;
 - j) hazardous gas monitoring;
 - k) hazardous gas action level triggers;
 - l) how to install the hazardous gas venting, dispersion and flaring equipment;
 - m) knowledge of the materials, equipment and methods used to kill the hole with water and calcium chloride with water;
 - n) how to kill a hole with water and calcium chloride and water;
 - o) how to contact the service providers who will prepare and install Haliburton Hi-Dense No.3 (Iron Beads) or No. 4 (Iron Powder) or an equivalent manufactured hematite product mixed with cement (i.e. *Weighted Material*); and
 - p) knowledge of decommissioning a geothermal hole; and how to contact the service provider who will decommission a geothermal hole that encounters hazardous gas or flowing artesian groundwater.
- (2) ensure all person(s) retained or employed by the *Company* to engage in the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump* shall complete the training set out in condition 5 (1). The *Company* shall retain a *Professional* to prepare a written document (certification) that identifies the person(s) who has been trained in accordance with the Training Program described in condition 5(1);
- (3) ensure a copy of the certification(s) described in condition 5(2) is included in the Preliminary Site Preparation; and
- (4) ensure a copy of the Training Program described in condition 5(1) is included in the Preliminary Site Preparation.
6. Notwithstanding conditions 4 and 5 the *Company* shall,
- (1) for each Site, retain a *Professional* to ensure that the drilling operations of the first hole as well as the filling of the first hole with the U-loop tubing and bentonite material of the Vertical Closed Loop Ground Source Heat Pump System are performed in accordance with the

requirements documented in this Approval and the Work Plan for the construction, alteration, extension, or replacement of a Vertical Closed Loop Ground Source Heat Pump;

- (2) despite condition 6(1), another person, who is a professional engineer, professional geoscientist or a registered member of the Ontario Association of Certified Engineering Technicians and Technologists, can observe the construction and filling of the first hole as long as:
 - i. the person is under the supervision of the *Professional* ; and
 - ii. the *Professional* certifies the first hole was constructed in accordance with this environmental compliance approval including the work plan.
7. The *Company* shall, for any projects commenced prior to the issuance of the *Approval*, retain a *Professional* to ensure that the drilling operation of the first hole as well as the filling of the first hole with the U-loop tubing and bentonite material after the issuance of this *Approval* is performed in accordance with the requirements documented in this *Approval* and the *Work Plan* for the construction, alteration, extension, or replacement of a *Vertical Closed Loop Ground Source Heat Pump*.
8. For the purposes of conditions 6 and 7, the *Company* shall ensure that:
 - (1) the *Professional* remains in supervision of the *Site* until the *Professional* is satisfied that the *Company* is operating in accordance with requirements documented in this *Approval* and the *Work Plan* for the construction, alteration, extension, or replacement of a *Vertical Closed Loop Ground Source Heat Pump* ;
 - (2) the *Professional* provides written confirmation that the *Professional* is satisfied that the *Company* is operating in accordance with requirements documented in this *Approval* and the *Work Plan* for the construction, alteration, extension, or replacement of a *Vertical Closed Loop Ground Source Heat Pump* ; and
 - (3) a copy of the written confirmation described in condition 8(2) is added to the *Preliminary Site Preparations*

Preliminary Site Preparations and On Site Activities

9. The *Company* shall, for any projects commenced prior to the issuance of the *Approval* or for any future *Sites*, prior to the commencement of any construction, alteration, extension, or replacement of a *Vertical Closed Loop Ground Source Heat Pump*, retain a *Professional* and shall ensure that the *Professional* performs all required site-specific preparations and document the preparations in the *Preliminary Site Preparations* in accordance with requirements documented in the *Work Plan* .
10. The *Site* specific information to be reviewed in Condition 9 of this *Approval* shall include, but is not limited to:

- (1) Well records from the Ministry of Environment, Conservation and Parks;
 - (2) Oil and gas well records available from the Ontario Oil, Gas & Salt Resources Library, Ministry of Natural Resources and Forestry;
 - (3) “The Subsurface Palaeozoic Stratigraphy of Southern Ontario”, T.R. Carter and D.K. Armstrong, published by Ontario Geological Survey (OGS), 2010, and as amended from time to time;
 - (4) Borehole records from previous drill sites;
 - (5) Site-specific test hole information, if available, such as engineering or hydrogeological reports; and
 - (6) Other Ontario Geological Survey reports or reports from secondary regulatory bodies as available.
11. The *Company* shall ensure that for each *Site*, prior to the commencement of any construction, alteration, extension, or replacement of a *Vertical Closed Loop Ground Source Heat Pump*, a *Professional*, in accordance with the *Approval*, is retained to identify in writing, the potential for encountering *Hazardous Gas* or flowing artesian conditions at the *Site* in accordance with requirements documented in addition to what is stated in the *Work Plan*.
12. The *Company* shall, at all times, ensure that any equipment, *Company* staff, and trained personnel required for the monitoring and detection of *Hazardous Gas* are at the *Site* during the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump*.
13. If the subsurface conditions encountered during the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump* are not consistent with the *Preliminary Site Preparations*, the *Company* shall ensure that drilling activities are immediately ceased, and the *Preliminary Site Preparations* are updated as necessary, in accordance with this *Approval* and in addition to what is stated in *Work Plan* prior to the resumption of drilling activities.
14. The *Company* shall ensure that any equipment, materials, *Company* staff, and trained personnel required in the *Work Plan*, to safely control and manage any *Hazardous Gas* that may be encountered are readily available at the *Site* during the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump*.
15. The *Company* shall ensure that a *Pressure Integrity Test* is performed in accordance with the requirements documented in the *Work Plan* on each hole that is drilled into bedrock and shall:
- (1) ensure that the *Pressure Integrity Test* is performed after the bottom of the *Casing* has been seated and sealed with bentonite into the competent bedrock in accordance with this *Approval* and in addition to what is stated in the *Work Plan*;

- (2) ensure that drilling below the *Casing* seal and drill bit is not performed until the *Pressure Integrity Test* successfully demonstrates there is a proper bentonite seal between the *Casing* and the bedrock as documented in the *Work Plan*; and
- (3) document the pressure gauge readings, test duration, water levels, and other findings of each *Pressure Integrity Test* in the *Mitigation Completion Report* or the *Standard Completion Report* as they apply.

Gas Mitigation Contingency Plan

16. If *Hazardous Gas* is encountered at the *Site* during the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump*, the *Company* shall comply with Section 4 of *O. Reg. 98/12*, and immediately ensure that:
 - (1) drilling activities are ceased;
 - (2) all measures and safeguards documented in the *Work Plan* and any other measures required to safely remove any potential hazard are implemented prior to the resumption of drilling activities;
 - (3) if hazardous gas reaches action level 2 levels as defined in the *Work Plan*, all contacts on the *Notification Contact List* are notified as documented in the *Work Plan, Preliminary Site Procedures* and subsection 4(2) of *O. Reg. 98/12*;
 - (4) if hazardous gas reaches action level 2 levels as defined in the *Work Plan*, a *Professional*, in accordance with this *Approval*, shall immediately respond to the *Site* to oversee operations; and
 - (5) if hazardous gas reaches action level 2 levels as defined in the *Work Plan*, all measures required for permanent gas mitigation as documented in the *Work Plan* are implemented.
17. If *Hazardous Gas* is encountered in volumes and/or pressures that, as documented in the *Work Plan*, are considered high pressure or will not stop flowing from the hole, the *Company* shall ensure that all measures required to kill and decommission the hole as described in the *Work Plan* are implemented.
18. When implementing the measures set out in Condition 17, the *Company* shall ensure that:
 - (1) the approximate elevation of the top of the *Hazardous Gas* zone that has entered the hole is recorded and documented in the *Mitigation Completion Report*, as applicable;
 - (2) a *Vertical Closed Loop Ground Source Heat Pump*, including heat transfer fluid tubing in the hole, is not installed;

- (3) water, or if necessary, calcium chloride brine as described in the *Work Plan* is applied under the supervision of a *Professional*, in accordance with this *Approval*, to temporarily cease the flow of *Hazardous Gas* from the hole;
- (4) *Hazardous Gas* is monitored, under the supervision of a *Professional*, in accordance with this *Approval*, using detection equipment and observations described in the *Work Plan* to determine if the water or calcium chloride brine has stopped all flow of *Hazardous Gas* from the hole;
- (5) if *Hazardous Gas* is detected during the monitoring as described in Condition 18(4), and the use of *Weighted Material* is determined as described in the *Work Plan*, the use of *Weighted Material* is applied under the supervision of a *Professional* and along with a retained *Service Provider*, in accordance with this *Approval*, to stop the flow of *Hazardous Gas* in the hole;
- (6) *Hazardous Gas* is monitored, under the supervision of a *Professional*, in accordance with this *Approval*, using detection equipment and observations described in the *Work Plan* to determine if the *Weighted Material* has stopped all flow of *Hazardous Gas* from the hole; and
- (8) the hole is decommissioned under the supervision of a *Professional*, in accordance with this *Approval*, as described in the *Work Plan*.

Mitigation Completion Report and Standard Completion Report

19. If *Hazardous Gas* is encountered at the *Site* during the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump*, the *Company* shall ensure that:
 - (1) a *Professional* retained by the *Company* prepares a *Mitigation Completion Report*, documenting the measures and safeguards that have been fully implemented to safely manage *Hazardous Gas*;
 - (2) the *Mitigation Completion Report* in Condition 19(1) be completed in accordance with the *Work Plan* and this *Approval*; and
 - (3) the *Mitigation Completion Report* in Condition 19(1) be provided to, as a minimum, the *District Manager and* the contacts identified in the *Work Plan*, *Preliminary Site Preparations* within five (5) business days from the day the *Hazardous Gas* was mitigated.
20. For each *Site*, after the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump*, the *Company* shall ensure:
 - (1) the *Company* or a *Professional* retained by the *Company* prepares a *Standard Completion Report*, which documents the details of the drilling and installation activities at the *Site*;

- (2) the *Standard Completion Report* in Condition 20(1) be completed in accordance with the *Work Plan* and this *Approval*; and
- (3) As a minimum, the *Standard Completion Report* be signed off by the *Professional* retained by the *Company* and provided to the *Owner* and the *District Manager* within fifteen (15) days, after the completion of the drilling and installation activities.

Project Log

21. The *Company* shall maintain an up to date *Project Log* of all ongoing, completed and proposed projects involving the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump*.
22. The *Project Log* shall contain, at a minimum, the following information for each *Site*:
 - (1) The location of the *Site*;
 - (2) The *Company* and a description of the work the *Company* has been retained to perform at the *Site*;
 - (3) The *Contractor(s)* and their role at the *Site*;
 - (4) The *Owner*;
 - (5) A description of the *Vertical Closed Loop Ground Source Heat Pump* project including, as a minimum, type of system, the number of boreholes, and the expected depth of each hole;
 - (6) A description of the *Installation Equipment* to be used at the *Site*;
 - (7) The start date of the project or the anticipated start date for proposed projects;
 - (8) The completion date of the project or the anticipated completion date for proposed projects; and
 - (9) Contact information, including telephone number and office location, for the *Contractor(s)* and *Owner*.
23. The *Company* shall submit a fully completed *Project Log* to the *Ministry* :
 - (1) at least three (3) days upon issuance of this *Approval*;
 - (2) on the first business day of each month thereafter, involving the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump*; or

- (3) at least three (3) days before the commencement of any proposed projects involving the construction, alteration, extension or replacement of a *Vertical Closed Loop Ground Source Heat Pump* that are scheduled to commence after the first day of the month, and that have not been previously recorded on the *Project Log*.

Record Keeping Requirements

24. The *Company* shall, for each *Site*, retain for a minimum of seven (7) years from the date of their creation, all reports, records and information described in this *Approval*, related to the construction, alteration, extension or replacement of the *Vertical Closed Loop Ground Source Heat Pump* and shall include, but not be limited to:

- (1) The *Work Plan*;
- (2) The *Project Log*;
- (3) The *Standard Completion Report*; and/or
- (4) The *Mitigation Completion Report* as applicable;
- (5) A copy of the *Professional's* written documents as described in Condition 5(2) of this *Approval*.

These records shall be made available, upon request, to *Ministry* personnel.

25. The *Company* shall, for each *Site*, provide the *Owner* with the following:

- (1) The *Preliminary Site Preparations*;
- (2) The *Standard Completion Report*; and/or
- (3) The *Mitigation Completion Report* as applicable.

Drilling Depth

26. The *Company* shall, for each *Site*, restrict the drilling of a *Vertical Closed Loop Ground Source Heat Pump* of each borehole to the following maximum drilling depth of not more than 201.2 metres (660 feet) or the maximum depth identified in the preliminary site preparations, whichever is less;

Drilling in Single Dwelling/Buildings and Financial Assurance

27. a) The *Company* shall, for each *Site*, not construct a *Vertical Closed Loop Ground Source Heat Pump* for a proposed or existing dwelling, building or other structure where the *Conditioned Space* is not more than 1,400 square-metres;

- b) Despite Condition 27. a), if the *Company* wishes to construct a *Vertical Closed Loop Ground Source Heat Pump* for a proposed or existing dwelling, building or other structure where the *Conditioned Space* is not more than 1,400 square-metres, then, by no later than six (6) months prior to the construction of the *Vertical Closed Loop Ground Source Heat Pump*, the *Company* shall:
- i. submit, to the satisfaction of the *Director*, a report which provides a *Financial Assurance* and its detailed evaluation for the decommissioning of a *Vertical Closed Loop Ground Source Heat Pump*,
 - ii. include in the evaluation, an assessment based on a worst case scenario of encountering both high pressure *Hazardous Gas* and flowing artesian groundwater conditions at the same time, at a designated drilling depth and at 22.6 kilopascals per metre (or 1 pound per square inch per foot) of drilling into the subsurface, as well as any associated contingency costs,
 - iii. include in the evaluation, the number of decommissioning systems anticipated to be undertaken for the duration of this *Approval*, and
 - iv. include in the report, sufficient funds for the initial response, health and safety, monitoring, mitigation and reporting of all conditions of vertical closed loop geothermal systems on the Site at any one time.

Expiry and Amendment of Approval

28. a) This *Approval* shall expire within three (3) years from the date of issuance of this *Approval*, unless the *Director* amends, suspends, or revokes this *Approval* before that time;
- b) If the *Company* seeks to amend the *Approval*, an application, including applicable fees, supporting documents and a revised *Work Plan* must be submitted to the *Ministry* no later than six (6) months prior to the expiry date in Condition 28 a);

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

1. Conditions 1 to 8 are included to ensure that the operating procedures documented in the *Work Plan* are followed and that all measures are taken to minimize or avoid any risk associated with *Hazardous Gas* that may be encountered at the *Site* during the drilling and installation activities.
2. Conditions 9 to 11 are included to ensure that the *Company* completes *Preliminary Site Preparations* for each individual *Site* prior to starting the work. This ensures that the *Company* can take any measures required for the conditions unique to each *Site*.
3. Conditions 12 to 14 are included to require the *Company* to have the proper equipment, materials and trained personnel at the *Site* to safely monitor and detect the presence of *Hazardous Gas*.

4. Condition 15 is included to require the *Company* to perform a *Pressure Test* on each hole to ensure that the seal at the bottom of the casing between the casing and bedrock is capable of containing the anticipated pressures to prevent the migration of *Hazardous Gas*.
5. Condition 16 is included to require the *Company* to take all required measures to safely manage the potential hazards related to encountering *Hazardous Gas* during the drilling and installation activities. This Condition also requires the *Company* to notify the appropriate persons to ensure that they are aware of the situation and, if required, to attend at the *Site* to safely manage the situation and to ensure public safety and protect the environment.
6. Conditions 17 and 18 are included to require the *Company* to ensure that, if *Hazardous Gas* is encountered at levels that cannot be safely managed, the hole is properly killed. If traditional methods of using water and calcium chloride brine cannot stop the flow of *Hazardous Gas* the *Company* is required to use a *Weighted Material* to stop the flow of *Hazardous Gas* from the hole. The *Company* is also required to permanently decommission the hole without installing a *Vertical Closed Loop Ground Source Heat Pump*.
7. Condition 19 to 20 are included to require the *Company* to properly document and report the conditions at the *Site* and to ensure that the *Hazardous Gas*, if encountered, is permanently mitigated safely.
8. Conditions 21 to 23 are included to require the *Company* to maintain an up to date *Project Log* of all projects that the *Company* has been or will be involved with. The Conditions also require the *Company* to submit this *Project Log* to the *Ministry* each month for record keeping.
9. Condition 24 is included to require the *Company* to retain records and, if requested, provide information to the *Ministry* so that the environmental impact and subsequent compliance with the *EPA*, the regulations and this *Approval* can be verified.
10. Condition 25 is included to require the *Company* to provide site-specific records to the *Owner* so that they are aware and have records of the activities and measures taken at the *Site*.
11. Condition 26 is included to ensure that a drilling depth for each borehole is abided to promote ongoing protection to public health and safety and protection to the environment.
12. Condition 27 is included to help ensure that drilling is not permitted in in Single Dwelling and Buildings unless sufficient funds are available to the *Ministry* to decommissioning a *Site* in the event that the *Company* is unable or unwilling to accept responsibility.
13. Condition 28 is included to ensure that the *Approval* is reviewed and updated on a regular basis by the *Company* , so that it meets current environmental regulations, ministry policies and industry best practices, to promote ongoing health & safety and protection of the environment.

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 23rd day of April, 2020



Aziz Ahmed, P.Eng.

Director

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

RU/

c: District Manager, MECP Halton-Peel
Chris Helmer, Hydrogeology Consulting Services