

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 6819-CF8NQR
Issue Date: June 30, 2022

Integrated Gas Recovery Services Inc.
2800 Thorold Townline Rd
Thorold, Ontario
L2E 6S4

Site Location: 2800 Thorold Townline Road
Niagara Falls City, Regional Municipality of Niagara
L2E 6S4

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:

- four (4) internal combustion reciprocating engine electric generators, each having a maximum output rating of 1.06 Megawatts, each firing approximately 0.17 standard cubic metre per second of landfill gas, exhausting into the atmosphere through individual stacks with an exit diameter of 0.25 metre, extending 3.0 metres above the roof and 6.0 metres above grade;
- one (1) enclosed siloxane purge flare (New Siloxane Flare 2), having a maximum landfill gas inlet capacity of 0.07 standard cubic metre per second, exhausting into the atmosphere through a stack, having an exit diameter of 1.2 metres, extending 7.8 metres above grade;
- one (1) elevated candlestick flare (RNG Flare), having a maximum inlet capacity of 2.36 standard cubic metre per second of off-spec renewable natural gas (RNG) or waste gas, exhausting into the atmosphere through a stack, having an exit diameter of 0.406 metre, extending 15.13 metres above grade;
- landfill gas pre-treatment system, equipped with landfill gas compressors, dryers, chillers and a thermal oxidizer to treat waste stream from the system;
- one (1) thermal oxidizer equipped with natural gas fired main burner (having a maximum heat input of 6,330,000 kilojoules per hour) and auxiliary pilot burner, having a maximum total system heat release of 12,660,000 kilojoules per hour, operating at the minimum temperature of 787 degrees Celsius and minimum residence time of 0.5 second, discharging into the atmosphere through a

stack, having an exit diameter of 1.1 metre, extending 13.72 metres above grade;

all in accordance with the Application for Approval (Air & Noise) submitted by Integrated Gas Recovery Services Inc. dated September 28, 2021, and signed by Paul Bulla - Vice President Operations, the ESDM Report dated September 28, 2021 and prepared by Brad Bergeron (RWDI AIR Inc.); the Acoustic Assessment Report dated March 31, 2022, prepared by Brad Bergeron, Gillian Redman of RWDI AIR Inc.; and all other supporting information associated with the application.

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, by Brad Bergeron, Gillian Redman of RWDI AIR Inc. and dated March 31, 2022 submitted in support of the application, that documents all sources of noise emissions and Noise Control Measures present at the Facility;
2. "Approval" means this Environmental Compliance Approval, including the application and supporting documentation listed above;
3. "Company" means Integrated Gas Recovery Systems 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;
4. "District Manager" means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically located;
5. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19;
6. "Equipment" means the equipment and 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;
7. "Facility" means the entire operation located on the property where the Equipment is located;
8. "Manual" means a document or a set of documents that provide written instructions to staff of the Company;
9. "Memorandum of Understanding" means "Memorandum of Understanding between the Walker Environmental Group Inc., the Walker Aggregates Inc. Quarry and Hot Mix Asphalt Plant and the Integrated Gas Recovery Services Inc. Facility", dated June 20, 2018, and signed by Tim McVicar, Walker Environmental Group Inc., Frank Kielbowich, Walker Aggregates Inc. Quarry and Hot Mix Asphalt Plant, and Paul Bulla, Integrated Gas Recovery Services Inc. Facility, developed to jointly manage and achieve compliance with the sound level limits set in Ministry's Noise Guidelines, as per the Memorandum of Understanding;
10. "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;

11. "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, and in the supporting documentation referred to herein, including the Acoustic Assessment Report, to the extent approved by this Approval;
12. "Publication NPC-233" means the Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995 as amended;
13. "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; and
14. "Related Facilities" means the Walker Aggregates Inc. Quarry with the Hot Mix Asphalt Plant, and the Walker Environmental Group Inc. Landfill.

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. OPERATION AND MAINTENANCE

1. The Company shall ensure that the Equipment is properly operated and maintained at all times. The Company shall:
 - a. prepare, not later than three (3) months after the date of this Approval, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Equipment, including:
 - i. routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
 - ii. emergency procedures, including spill clean-up procedures;
 - iii. procedures for any record keeping activities relating to operation and maintenance of the Equipment;
 - iv. all appropriate measures to minimize noise, fugitive dust and odorous emissions from all potential sources; and
 - v. the frequency of inspection and calibration of the continuous temperature monitoring

system;

- b. implement the recommendations of the Manual.

2. RECORD RETENTION

1. The Company shall retain, for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the recording activities required by this Approval, and make these records available for review by staff of the Ministry upon request. The Company shall retain:
 - a. all records on the maintenance, repair and inspection of the Equipment;
 - b. all records produced by the continuous temperature monitoring system; and,
 - c. all records of any environmental complaints, including:
 - i. a description, time and date of each incident to which the complaint relates;
 - ii. wind direction at the time of the incident to which the complaint relates;
 - iii. a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future; and
 - iv. description of all upset conditions associated with the operation of the Equipment and remedial action taken.

3. NOTIFICATION OF COMPLAINTS

1. The Company shall notify the District Manager, in writing, of each environmental complaint within two (2) business days of the complaint. The notification shall include:
 - a. a description of the nature of the complaint; and
 - b. the time and date of the incident to which the complaint relates.

4. FLARES

1. The Company shall ensure that a minimum operating temperature of 875 degrees Celsius is maintained in the combustion chamber of the enclosed Siloxane flare, at a point representing a minimum of 0.75 second retention time, at all times when the landfill gas incineration is in progress.
2. The Company shall continuously monitor and record the temperature in the combustion chamber of the enclosed flare, when the flare is in operation. The continuous temperature monitoring and

recording system shall comply with the requirements listed in Schedule A.

3. The Company shall ensure that a flame is present at all times when off-spec RNG gases (or landfill gases during the thermal oxidizer by-pass scenario) are flowing to the elevated candlestick flare system.
4. The Company shall continuously monitor and record the temperature as close to the combustion zone of the elevated candlestick flare, when the flare is in operation. The continuous temperature monitoring and recording system shall comply with the requirements listed in Schedule A.

5. THERMAL OXIDIZER

1. The Company shall ensure that the oxidizer is operated to comply, at all times, with the following requirements:
 - a. The gaseous waste stream from pre-treatment system is not introduced into the oxidizer, until the temperature in the combustion chamber has reached a minimum of 787 degrees Celsius, as measured by a continuous monitoring device at the outlet of the combustion chamber;
 - b. A minimum operating temperature of 787 degrees Celsius is maintained in the oxidizer combustion chamber, at a point representing minimum 0.5 second residence time, at all times when the oxidizer is in operation and waste stream gases are directed to the oxidizer for destruction;
 - c. The Company shall continuously monitor and record the temperature in the combustion chamber of the oxidizer, when the oxidizer is in operation. The continuous temperature monitoring and recording system shall comply with the the requirements listed in Schedule A.

6. NOISE

1. The Company shall:
 - a. implement the Noise Control Measures as detailed and outlined in the Appendix J of the Acoustic Assessment Report; and the "Memorandum of Understanding";
 - b. ensure that at all times, subsequent to the implementation of the related Noise Control Measures, the combined noise emissions from the Facility and Related Facilities jointly comply with the limits set out in Ministry Publication NPC-300;
 - c. ensure at all times that, following installation of a new regenerative thermal oxidizer (RTO), it's sound power level does not exceed the maximum sound power level of 88 dBA, including 5 dBA tonal penalty if applicable;
 - d. ensure at all times that, following installation of a new siloxane flare that related noise sources

sound power levels do not exceed following maximum sound power levels:

- 101 dBA for the siloxane skid enclosure, including 5 dBA tonal penalty if applicable; and
 - 102 dBA for the siloxane purge flare blower, including 5 dBA tonal penalty tonal penalty if applicable.
- e. ensure that all Noise Control Measures are properly maintained and continue to provide the acoustical performance outlined in the Acoustic Assessment Report.

SCHEDULE A: Continuous Temperature Monitoring System Requirements

1. SILOXANE ENCLOSED FLARE

PARAMETER:

Temperature

LOCATION:

The sample point for the Continuous Temperature Monitor shall be located in the combustion chamber of the flare, at a point representing a minimum of 0.75 second retention time.

PERFORMANCE:

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

- a. Type: Shielded "K" type thermocouple, or equivalent
- b. Accuracy: ± 1.5 percent of the minimum gas temperature

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 minutes 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.

2. ELEVATED CANDLESTICK FLARE

PARAMETER:

Temperature

LOCATION:

The sample point for the Continuous Temperature Monitor shall be located as close to the combustion zone of the elevated candlestick flare as possible.

PERFORMANCE:

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

- a. Type: Shielded "K" type thermocouple, or equivalent
- b. Accuracy: ± 1.5 percent of the minimum gas temperature

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 2 minutes 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.

3. THERMAL OXIDIZER

PARAMETER:

Temperature

LOCATION:

The sample point for the Continuous Temperature Monitor shall be located in the combustion chamber of the Thermal Oxidizer, at a point representing a minimum of 0.5 second retention time.

PERFORMANCE:

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

- a. Type: Shielded "K" type thermocouple, or equivalent
- b. Accuracy: ± 1.5 percent of the minimum gas temperature

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 minutes 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.

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

- 1. Condition No. 1 is included to emphasize that the Equipment must be maintained and operated

according to a procedure that will result in compliance with the EPA, the Regulations and this Approval.

2. Condition No. 2 is included to require the Company to keep records and to provide information to staff of the Ministry so that compliance with the EPA, the Regulations and this Approval can be verified.
3. Condition No. 3 is included to require the Company to notify staff of the Ministry so as to assist the Ministry with the review of the site's compliance.
4. Conditions Nos. 4, 5 and 6 are included to provide the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Facility.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s).
7271-AYNHQS issued on September 28, 2018**

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me, the Ontario Land Tribunal and in accordance with Section 47 of the *Environmental Bill of Rights*, 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Notice") shall state:

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the *Environmental Protection Act*, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

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

* **Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca**

This instrument is subject to Section 38 of the *Environmental Bill of Rights, 1993*, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at <https://ero.ontario.ca/>, you can determine when the leave to appeal period ends.

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

DATED AT TORONTO this 30th day of June, 2022



Nancy E Orpana, P.Eng.

Director

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

AB/

c: District Manager, MECP Niagara
Brad Bergeron, RWDI Air Inc.