Air Quality Construction Permit

Permit Number: 24-A-309

Plant Number: 96-06-004

Company: Walnut Creek RNG, LLC

Contact Person:
Christopher Anglin
Dir. of Safety & Environmental Permitting

(734) 915-2384
c.anglin@novillarng.com

435 Joe Hall Drive
Ypsilanti, MI 48197

Responsible Party:
Rodney Taylor
VP – Operations

(405) 320-0969
r.taylor@novillarng.com

Permitted Equipment

Emission Point ID: EP01

Table 1 – Emission Unit(s) and Control Equipment:

EU ID	Description	Maximum Rated Capacity	Control Equipment Description and ID
EU01	Membrane Separation Facility (Biogas Upgrade)	420 scfm (biogas)	Thermal Oxidizer (CE01)

Equipment Location: 3251 275th Street
Ridgeway, IA 52165

Issuance of this permit shall not relieve the owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan (SIP), and any other requirements of local, state, and federal law.

Table 2 – Project Issuance Information

Project Number	Project Description	Stack Testing	Issuance Date
24-214	Original Permit	No	09/10/2024

Christopher A. Rolling

Under the Direction of the Director of the
Department of Natural Resources

[smc]

PERMIT CONDITIONS

1. Emission Limits

The owner or operator is required to report all emissions as required by law, regardless of whether a specific emission limit has been established in this permit. The following emission limits shall not be exceeded:

Table 3 – Emission Limits for EP01

Pollutant	lb/hr[1]	tons/yr[2]	Other Limits	Reference/Basis
Particulate Matter (PM) – State	NA	NA	0.1 gr/dscf[1]	567 IAC 23. 3(2)"a"
PM_{10}	0.10[3]	NA	NA	Limit PTE
Opacity	NA	NA	40%[4, 5]	567 IAC 23.3(2)"d"
Sulfur Dioxide (SO_2)	NA	NA	See Footnote 6	567 IAC 23.3(3)"e"
Sulfur Dioxide (SO_2)	54.02[7]	NA	NA	NAAQS
Hydrogen Sulfide (H_2S)	NA	NA	13,000 ppm_v[8]	Limit PTE of SO_2

[1] The emission limit is expressed as the average of three runs.
[2] The emission limit is based on a 12-month rolling total.
[3] Emission rate established in Project 24-214 to limit hourly emissions increases for the project below the significant emission rate for air dispersion modeling.
[4] The emission limit is based on a six minute average.
[5] An exceedance of the indicator opacity of "No Visible Emissions" will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).
[6] The facility has installed control equipment for air pollution abatement purposes and has demonstrated that the ambient air quality standards are not exceeded based on the maximum hourly emission rate.
[7] Emission rate used in facility-wide dispersion modeling as part of Project 24-214 to demonstrate no predicted exceedances of the National Ambient Air Quality Standards (NAAQS).
[8] The hydrogen sulfide content of the biogas burned shall not exceed 13,000 ppm_v (parts per million by volume). See Permit Condition 5 for additional information.

2. Compliance Demonstration(s)

If an initial stack test is specified in the "Compliance Demonstrations" table, the owner or the owner's authorized agent shall demonstrate compliance with the emission limitations contained in Condition 1 (Emission Limits) within the applicable time period specified below:

- Within 60 days after achieving the maximum production rate but not later than 180 days after the initial startup date of the proposed equipment for the addition of new equipment or the physical modification of existing equipment or control equipment.
- Within 90 days of the issuance of this permit if there is no physical modification to any emission units or control equipment.

If any additional stack testing beyond an initial test (i.e. quarterly, semi-annual, annual, etc.) is required in the "Compliance Demonstrations" table, the owner or the owner's authorized agent shall demonstrate compliance with the emission limitations contained in Condition 1 (Emission Limits) as specified in the "Compliance Demonstrations" table. See Conditions 12.A.(4) and 12.B.(5) for notification and reporting requirements.

If stack testing is required, the owner or the owner's authorized agent shall use the test method and run time listed in the "Compliance Demonstrations" table unless another testing methodology is approved by the Department before testing.

Table 4 - Compliance Demonstrations

Pollutant	Compliance Methodology	Frequency	Test Run Time	Test Method
PM – State	None	NA	1 hour	40 CFR 60, Appendix A, Method 5 40 CFR 51, Appendix M Method 202
PM_{10}	None	NA	1 hour	40 CFR 51, Appendix M Method 202
Opacity	None	NA	1 hour	40 CFR 60, Appendix A, Method 9
SO_2	None	NA	1 hour	40 CFR 60, Appendix A, Method 6C
H_2S	Gas Sampling	See Condition 5	1 hour	Approved DNR method

Each emissions compliance test must be approved by the Department. Unless otherwise specified by the Department, each compliance test for an air pollutant, excluding opacity, shall consist of three separate runs. The arithmetic mean of three acceptable test runs shall apply for compliance, unless otherwise indicated by the Department.
Opacity compliance tests shall consist of a minimum of three, 1-hour runs of observations. Opacity shall be determined as the average of any 24 consecutive, 15-second observations from the data set. The opacity observation duration and averaging time requirements apply unless otherwise specified by federal rule, specified in this permit, or granted prior written approval by the Department.

In accordance with 567 IAC 21.10(7)"a":

(1) At the Department's request, a pretest meeting shall be held not later than 15 days before the owner or operator conducts the compliance demonstration. A testing protocol shall be submitted to the Department for review no later than 15 days before the owner or operator conducts the compliance demonstration. Representatives from the Department shall attend this meeting, along with the owner and the testing firm, if any. It shall be the responsibility of the owner to coordinate and schedule the pretest meeting.
(2) A representative of the Department shall be permitted to witness the tests. In order to allow a Department representative the opportunity to observe a stack test, each test must begin on a weekday, between the hours of 6 am to 6 pm. Alternative stack test times may be granted through written Department approval prior to testing.
(3) The Department shall reserve the right to impose additional, different, or more detailed testing requirements.

The owner shall be responsible for the installation and maintenance of test ports.

The unit(s) being sampled shall be operated in a normal manner (i.e. not under startup or shutdown conditions) at

(a) its maximum continuous production or operating rating as rated by the equipment manufacturer, which is listed on either the first page or Condition 3, Emission Point Characteristics, of this permit, or
(b) a permitted rating listed elsewhere in this permit that is less than the maximum continuous production or operating rating as rated by the equipment manufacturer.

If the compliance test is conducted at less than (a) or (b) above then the owner or operator shall either retest the unit(s) under the conditions of (a) or (b) above or the Department may require additional information or action to determine the unit(s) compliance status with applicable emission limits. This information or action includes, but is not limited to, a permit amendment, additional testing, continuous monitoring, and operating data.

3. Emission Point Characteristics

This emission point shall conform to the specifications listed in the table below.

Table 5 – Emission Point Parameters

Parameter	Value
Stack Height (feet from the ground)	69
Discharge Style	Vertical, Unobstructed
Stack Outlet Dimensions (inches)	18
Exhaust Temperature (°F)	1000
Exhaust Flowrate (scfm)	2280

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point characteristics above are different than the values stated, the owner or operator shall submit a request either by electronic mail or written correspondence to the Department within 30 days of the discovery to determine if a permit amendment is required, or submit a permit application requesting to amend the permit.

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4. Federal Standards

A. New Source Performance Standards (NSPS):
This emission unit is not subject to any NSPS subparts at this time as there are no applicable subparts for its source category.

NOTE: The absence of the inclusion of any NSPS requirements as part of this permit does not relieve the owner or operator from any obligation to comply with all applicable NSPS conditions.

B. National Emission Standards for Hazardous Air Pollutants (NESHAP):
This emission unit is not subject to any NESHAP subparts at this time as there are no applicable subparts for its source category.

NOTE: The absence of the inclusion of any NESHAP requirements as part of this permit does not relieve the owner or operator from any obligation to comply with all applicable NESHAP conditions.

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5. Operating Requirements with Associated Monitoring and Recordkeeping

Unless specified by any federal regulation, all records as required by this permit shall be available on-site for a minimum of two years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The operating requirements and associated recordkeeping for this permit shall be:

A. The tail gas thermal oxidizer (TO) shall maintain a minimum operating temperature greater than or equal to 1200 degrees Fahrenheit.
   (1) The owner or operator shall properly operate and maintain equipment to continuously monitor the temperature of the tail gas thermal oxidizer, TO. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per a written facility-specific operation and maintenance plan.

(2) The owner or operator shall keep hourly records of the operating temperature of the thermal oxidizer, and record all instances during which the operating temperature of the oxidizer is less than 1200 degrees Fahrenheit (1200°F).
(3) This requirement shall not apply on the days the TO, or the equipment the TO controls, are not in operation.

B. The Hydrogen Sulfide (H_2S) content of the gas burned in this thermal oxidizer (TO) shall not exceed 1.30 percent by volume (13,000 ppm_v). This limit applies at all times, including periods of startup, shutdown, and malfunctions.
(1) During the first six months of operation the owner or operator shall collect a minimum of four biogas samples for H_2S analysis. The samples shall be collected a minimum of one month apart. Each sample shall be tested for H_2S content. The results of these tests shall be reported to the Air Quality Bureau, at the address in Condition 12.D.

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6. Continuous Monitoring Systems (CMS)

No continuous monitoring systems are required at this time.

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7. Department Review

This permit is issued under the authority of 567 Iowa Administrative Code (IAC) 22.3. The proposed equipment covered by this permit has been evaluated for conformance with the emission limits in this permit; Iowa Code Chapter 455B; Division II; 567 IAC Chapters 21 – 33; and 40 Code of Federal Regulations (CFR) Parts 51, 52, 60, 61, and 63 and has the potential to comply. Unless stated elsewhere in this permit, any control equipment covered by this permit shall operate at all times when the emission unit(s) covered by this permit are in operation.

This permit is issued based on information submitted by the applicant. Any misinformation, false statements or misrepresentations by the applicant or by the applicant's representative(s) shall cause this permit to be void.

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. The Department assumes no liability, directly or indirectly, for any loss due to damage to persons or property caused by, resulting from, or arising out of the design, installation, maintenance or operation of the proposed equipment.

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8. Owner and Operator Responsibility

This permit is for the construction and operation of specific emission unit(s), control equipment, and emission point as described in this permit and in the application for this permit. The permit holder, owner, and operator of the facility shall assure that the installation of the equipment listed in this permit conforms to the design in the application (i.e. type, maximum rated capacity, etc.). No person shall construct, install, reconstruct or alter this emission unit(s), control equipment, or emission point without the required amended permit.

Any owner or operator of the specified emission unit(s), control equipment, or emission point, including any person who becomes an owner or operator subsequent to the date on which this permit is issued, is responsible for assuring that the installation, operation, and maintenance of the equipment listed in this permit is in compliance with the provisions of this permit and all other applicable requirements and that adequate operation and maintenance is provided to ensure that no condition of air pollution is created.

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9. Transferability

Unless the equipment is portable, this permit is not transferable from one location to another or from one piece of equipment to another. See Condition 12.A.(2) for notification requirements for relocating portable equipment [567 IAC 22.3(3)"f"].

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10. Construction

A. General Requirements:
It is the owner's responsibility to ensure that construction conforms to the final plans and specifications as submitted.

In permit amendments, all provisions of the original permit remain in full force and effect unless they are specifically changed by the permit amendment. If a proposed project is not timely completed, the owner or operator shall seek a permit amendment in order to revert back to the most recent previous version of the permit. The previous, unchanged permit provisions are included in the amendment for your convenience only and are unappealable.

This permit or amendment shall become void if any one of the following conditions occurs:
(1) The construction or implementation of the proposed project, as it affects the emission point permitted herein, is not initiated within 18 months after the permit issuance date; or
(2) The construction or implementation of the proposed project, as it affects the emission point permitted herein, is not completed within 36 months after the permit issuance date; or
(3) The construction or implementation of the proposed project, as it affects the emission point permitted herein, is not completed within a time period specified elsewhere in this permit.

B. Changes to Plans and Specifications:
The owner or operator shall amend this permit or amendment prior to startup of the equipment if:
(1) Any changes are made to the final plans and specifications submitted for the proposed project; or
(2) This permit becomes void.
Changes to the final plans and specifications shall include changes to plans and specifications for permitted equipment and control equipment and the specified operation thereof.

C. Amended Permits:
The owner or operator may continue to act under the provisions of the previous permit for the affected emission unit(s) and emission point, together with any previous amendment to the permit, until one of the following conditions occurs:
(1) The proposed project authorized by this amendment is completed as it affects the emission unit(s) and emission point permitted herein; or
(2) This current amendment becomes void.

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11. Excess Emissions

An incident of excess emissions other than as listed in 567 IAC 21.7(1) is a violation and may be subject to criminal penalties according to Iowa Code 455B.146A. If excess emissions are occurring, either the control equipment causing the excess shall be repaired in an expeditious manner, or the process generating the emissions shall be shut down within a reasonable period of time, as specified in 567 IAC 21.7.

An incident of excess emissions shall be orally reported by telephone, electronic mail or in person to the appropriate field office within eight hours of, or at the start of, the first working day following the onset of the incident [See Permit Condition 12.B.(1)]. A written report of an incident of excess emissions shall be submitted as a follow-up to all required initial reports within seven days of the onset of the upset condition [See Permit Condition 12.B.(2)].

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12. Notification, Reporting, and Recordkeeping

A. The owner or operator shall furnish the Department the following written notifications:
   (1) In accordance with 567 IAC 22.3(3)"b", dates of intended startup, start of construction, and actual equipment startup. All notifications required by 567 IAC 22.3(3)"b" shall be submitted in writing within 30 days following the applicable date and include the information required by 567 IAC 22.3(3)"b".
   (2) In accordance with 567 IAC 22.3(3)"f", when portable equipment for which a permit has been issued is to be transferred from one location to another, the Department shall be notified:
      a. At least 14 days before equipment relocation if the equipment will be located in a nonattainment area for the National Ambient Air Quality Standards (NAAQS) or a maintenance area for the NAAQS.
      b. At least 7 days before equipment relocation.
   (3) In accordance with 567 IAC 22.3(8), a new owner shall notify the Department of the transfer of equipment ownership within 30 days of the occurrence. The notification shall include the following information:
      - The date of ownership change; the name, address, and telephone number of the responsible official, the contact person, and the owner of the equipment both before and after the ownership change; and the construction permit number(s) of the equipment changing ownership.
   (4) Unless specified, in accordance with a federal regulation, the owner or the owner's authorized agent shall notify the Department in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor [567 IAC 21.10(7)]. The notification shall include:
      - The time; the place; the name of the person who will conduct the tests; and other information as required by the Department.

      If the owner or operator does not provide timely notice to the Department, the Department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with the applicable rules or permit conditions. Upon written request, the Department may allow a notification period of less than 30 days.

B. The owner or operator shall furnish the Department with the following reports:
   (1) In accordance with 567 IAC 21.7(2), an incident of excess emissions as defined in 567 IAC 21.1 shall be reported within eight hours or at the start of the first working day following the onset of the incident. The report may be made by electronic mail, in person or by telephone.
   (2) In accordance with 567 IAC 21.7(3), a written report of an incident of excess emissions as defined in 567 IAC 21.1 shall be submitted as a follow-up to all required initial reports to the Department within seven days of the onset of the upset condition.
   (3) Operation of this emission unit(s) or control equipment outside of those operating parameters specified in Permit Condition 5 in accordance to the schedule set forth in 567 IAC 21.7.
   (4) In accordance with 567 IAC 21.10(6), the owner or operator of any facility required to install a continuous monitoring system or systems shall provide quarterly reports to the Director, no later than 30 calendar days following the end of the calendar quarter, on forms provided by the Director.
   (5) In accordance with 567 IAC 21.10(7), a written compliance demonstration report for each compliance testing event, whether successful or not, postmarked no later than six weeks after the completion of the test period unless other regulations provide for other notification requirements. In that case, the more stringent reporting requirement shall be met.

C. All data, records, reports, documentation, construction plans, and calculations required under this permit shall be available at the plant during normal business hours for inspection and copying by federal, state, or local air pollution regulatory agencies and their authorized representatives, for a minimum of two (2) years from the date of recording unless otherwise required by another applicable law (i.e. NSPS, NESHAP, etc.).

D. Information regarding this permit should be sent to the attention of the following individuals based on the type of information being submitted: change in ownership (Air Quality Bureau Records Center), permit correspondence (Construction Permit Supervisor), stack testing correspondence (Stack Test Coordinator), and reports and notifications (Compliance Unit Supervisor and DNR Field Office). The addresses are:

Air Quality Bureau
Iowa Department of Natural Resources
6200 Park Ave, Ste. 200
Des Moines, IA 50321
Telephone: (515) 725-8200
Fax: (515) 725-8201

DNR Field Office 1
1101 Commercial Ct, Suite 10
Manchester, Iowa 52057
Telephone: (563) 927-2640
Fax: (563) 927-2075

13. Appeal Rights

All conditions within an original permit may be appealed, subject to the appeal rights set forth in 561 IAC Chapter 7. Amended conditions within a permit amendment may be appealed, subject to the appeal rights set forth in 561 IAC Chapter 7. In permit amendments, all provisions of the original permit remain in full force and effect unless they are specifically changed by the permit amendment. The previous, unchanged permit provisions are included in the amendment for your convenience only and are unappealable.

14. Permit History

Table 6 – Permit History

Permit No.	Project No.	Description	Date	Stack Testing

END OF PERMIT