MECKLENBURG COUNTY
Land Use and Environmental Services Agency
- A I R Q U A L I T Y -

June 18, 2025

<Issued via Email>

John Hutson, Director Plant Operation NA
Anaergia Services, LLC
705 Palomar Airport Rd., Suite 200
Carlsbad, CA 92011
john.hutson@anaergia.com

RE: Air Quality Permit to Construct/Operate No. 25-01V-021
Charlotte Bioenergy Facility, 600 Johnson Road, Charlotte, NC

Dear Mr. Hutson:

In accordance with your application dated October 18, 2023, Mecklenburg County Air Quality (MCAQ) forwards herewith Permit to Construct/Operate (Permit) No. 25-01V-021 for the construction/operation of air pollution emission sources or abatement equipment.

Review the permit and attached enclosures carefully. Please note the following:

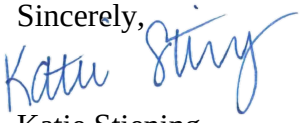
- **Facility Category**: The category for this facility is "Title V." This category is based on the information supplied to MCAQ and is used to determine appropriate annual and application processing fees.
- **Permit Expiration:** This Permit expires on June 18, 2030. In accordance with Mecklenburg County Air Pollution Control Ordinance Regulation 1.5513 - "Permit Renewal and Expiration," the expiration of a Title V permit terminates a facility's right to operate unless a complete renewal application has been submitted at least six months before the date of permit expiration. To ensure the next renewal application is timely and complete, the application shall be submitted one year prior to the permit expiration date, thus due to MCAQ on June 18, 2029.
- **Permit Conditions and Limitations:** Part 1 of this Permit contains Facility Conditions and Limitations, which are applicable to your facility. Part 2 of this Permit contains Emission Source Conditions and Limitations, which are applicable to emission sources as identified in the Emission Source Table.
- **Performance Testing Requirements:** This permit requires performance testing of the Combine Heat and Power (CHP) units within 3 years or 8,760 hours of operation in accordance with Condition and Limitation C-10. A performance test of CHP-1 is required within 60 days following startup of this engine.
- **Appendix A** contains information related to toxic air pollutants emissions at your facility. Please refer to Part 1, Condition and Limitation B-5 of this Permit and/or Part 2, Condition and Limitation D-2 to comply with the air toxics requirement.

- **Odor Management Plan Requirements:** This Permit requires compliance with the facility's most recent MCAQ-approved Odor Management Plan. Refer to Conditions D-3, D-4, D-5, and Attachment 3 for applicable requirements.
- This Permit is transferable to future owners and operators only through action of the Director of MCAQ and shall be subject to the conditions and limitations as specified therein.

If any new or revised parts, requirements, or limitations contained in this Permit are unacceptable to you, you have the right to a hearing before the Air Quality Commission upon written demand to the Director within thirty (30) days following receipt of this Permit. The hearing request must identify the specific issues to be contended as described in MCAPCO Regulation 1.5306 - "Hearings," Paragraph (b). Unless such demand is made, this Permit shall be final and binding.

If there are any questions regarding this matter, please do not hesitate to contact me at 704/336-5430.

Sincerely,



Katie Stiening
Air Quality Specialist III

ABM:smh

Enclosures (5)
Permit No. 25-01V-021
Appendix A
Attachment 1
Attachment 2
Attachment 3

AIR QUALITY TITLE V PERMIT

Permit No.	Effective Date	Expiration Date	Modification Date(s)	Replaces Permit No(s)
25-01V-021	June 18, 2025	June 18, 2030		19-02V-021

In accordance with the provisions of the Mecklenburg County Air Pollution Control Ordinance, and by the authority granted under the North Carolina General Statute (NCGS) Chapter 143, Article 21B, and until such time as this permit expires or is modified or revoked, the Permittee is hereby authorized to construct/operate emission sources and control devices as outlined in Parts 1 and 2 of this permit. The purpose of this permit is to assure compliance with the requirements of Title V of the Clean Air Act (CAA) and 40 CFR Part 70.

Permittee Name: Charlotte Bioenergy Facility, LLC

Site Name (if different): Charlotte Bioenergy Facility

Permitted Facility Location: 600 Johnson Road

City, State, Zip: Charlotte, NC 28206

Facility Mailing Address: 600 Johnson Road

City, State, Zip: Charlotte, NC 28206

Primary SIC Code: 4931

Renewal Application Due: June 18, 2029

Jason Rayfield 06/18/2025

Program Manager, Air Quality Program

PERMIT CONTENTS

PART 1 - FACILITY CONDITIONS AND LIMITATIONS

PART 1
Facility Conditions and Limitations

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Facility Conditions and Limitations

The entire facility is subject to the conditions and limitations contained in Part 1 (below). The facility shall comply with all applicable Air Quality rules and regulations whether or not these regulations are specifically identified in the permit.

A. LOCAL AND FEDERAL REQUIREMENTS

Mecklenburg County Air Quality (MCAQ) and the United States Environmental Protection Agency (EPA) have the authority to enforce the terms, conditions, and limitations contained in this section.

ADMINISTRATIVE PROVISIONS

A-1. Applicability

The facility shall be operated in accordance with the Mecklenburg County Air Pollution Control Ordinance (MCAPCO) **Regulations 1.5211 - "Applicability"** and **1.5502 - "Applicability**". An owner or operator shall have received a permit from the Department and shall comply with the conditions of such permit before constructing, modifying or operating any air pollution source or entering into a contract to construct or install any air cleaning device. This permit does not relieve the facility from the responsibility of acquiring any other permits that may be required.

A-2. Permit Application

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(16)**, the construction and operation of emission sources and control devices listed in this permit shall be in accordance with all plans, specifications, operating parameters, and other information submitted and which is the basis for the issuance of this permit. The facility shall comply with all applicable Air Quality rules and regulations whether or not these rules and regulations are included as part of the permit.

Applications shall be submitted in accordance with **MCAPCO Regulations 1.5212 - "Applications", 1.5505 - "Application Submittal Content",** and **1.5507 - "Applications"** and shall be accompanied by the appropriate fee as listed in **MCAPCO Regulation 1.5231 - "Air Quality Fees"**. The owner or operator of a new or modified facility may choose to obtain a construction and operation permit pursuant to **MCAPCO Regulation 1.5504 - "Option for Obtaining Construction and Operation Permit".**

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

A-3. General Duties and Powers of the Director

In accordance with **MCAPCO Regulation 1.5104 - "General Duties and Powers of the Director, with Approval of the Board",** the Director or his authorized representative may request performance testing of any emission source to ensure compliance.

A-4. Confidential Information

In accordance with **MCAPCO Regulation 1.5217 - "Confidential Information",** the Permittee may request that submitted information be treated as confidential. The Permittee must make this request at the time of submittal and include both confidential and public copies of the information for MCAQ files.

A-5. Retention of Permit

In accordance with **MCAPCO Regulation 1.5219 - "Retention of Permit at Permitted Facility",** a copy of this permit shall be retained at the facility.

A-6. Property Rights

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(8),** this permit does not convey property rights of any sort, or any exclusive privileges.

A-7. Annual Fee Payment

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(10)**, the Permittee shall pay fees required by **MCAPCO Regulation 1.5231 - "Air Quality Fees"**.

A-8. Inspection and Entry

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Paragraph (l)**, the Permittee shall allow authorized representatives of MCAQ and the EPA to:

a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept by the conditions of the permit;
b. have access to and copy any records that are required to be kept by the conditions of the permit;
c. inspect any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by the permit; and
d. sample or monitor substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

PERMIT CHANGES

A-9. Changes Not Requiring a Permit Modification

a. Section 502(b)(10) Changes:
Changes allowed under Section 502(b)(10) of the federal Clean Air Act are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements. In accordance with **MCAPCO Regulation 1.5523 - "Changes Not Requiring Permit Revisions**" Paragraph (a), the Permittee may make changes without having this permit revised if:
1. the changes are not a modification as defined pursuant to **MCAPCO Article 2.0000** or Title I of the federal Clean Air Act;
2. the changes do not cause the allowable emissions in the permit to be exceeded;
3. the Permittee notifies the Director and EPA (EPA Region 4, attn: Air and Radiation Division - Air Permits Section, 61 Forsyth Street SW, Atlanta, GA 30303 or through the electronic CEDRI system) in writing as described in **MCAPCO Regulation 1.5523- "Changes Not Requiring Permit Revisions"** Subparagraph (a)(2) at least seven days before the change is made; and,
4. the Permittee shall attach the notice to the relevant permit.

b. Off-Permit Changes:
In accordance with **MCAPCO Regulation 1.5523 - "Changes Not Requiring Permit Revisions"** Paragraph (b), the Permittee may make changes in his operation or emissions without revising the permit if:
1. the change affects only insignificant activities and the activities remain insignificant after the change,
2. the change is not covered by any applicable requirement, and,
3. the change would not render existing permit compliance terms and conditions irrelevant.

c. Emissions Trading:
To the extent that emissions trading is allowed pursuant to **MCAPCO Article 2.0000**, emissions trading shall be allowed without permit revisions provided that:
1. all applicable requirements are met,
2. the Permittee complies with all terms and conditions of the permit in making the emissions trade, and,
3. the Permittee notifies the Director and EPA with written notification as described in **MCAPCO Regulation 1.5523 - "Changes Not Requiring Permit Revisions"** Subparagraph (c)(3) at least seven days before making the emissions trade.

A-10. Permit Modifications and Administrative Amendments

a. Administrative Permit Amendments shall be made in accordance with **MCAPCO Regulation 1.5514 - "Administrative Permit Amendments".**

b. Transfer of Ownership or Operation:
Transfer of ownership or operations shall be made in accordance **with MCAPCO Regulation 1.5524 - "Ownership Change"** which states that applications for ownership change shall contain information as required in **MCAPCO Regulation 1.5505 - "Application Submittal Content" Paragraph (4)** and shall follow the procedures described in **MCAPCO Regulation 1.5212 - "Applications" Paragraph (e).**

c. Minor Permit Modifications shall be made in accordance with **MCAPCO Regulation 1.5515 - "Minor Permit Modifications".**

d. Significant Permit Modifications shall be made in accordance with **MCAPCO Regulation 1.5516 - "Significant Permit Modification"**.

A-11. Reopening for Cause

In accordance with **MCAPCO Regulation 1.5517 - "Reopening for Cause", Paragraph (a)**, a permit shall be reopened and revised under the following circumstances:

a. additional requirements become applicable to a facility with a remaining permit term of three or more years. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement, and no such reopening is required if the effective date of requirement is later than the expiration date of this permit;
b. MCAQ or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
c. MCAQ or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

A-12. Termination, Modification, Revocation of Permits

A permit may be terminated, revoked, or modified as outlined in **MCAPCO Regulations 1.5232 - "Issuance, Revocation, and Enforcement of Permits"**, **1.5231 - "Air Quality Fees"**, and/or **1.5519 - "Termination, Modification, Revocation of Permits".** In accordance with the above-referenced regulations, MCAQ may terminate, modify, or revoke and reissue a permit if:

a. the information contained in the application or presented in support thereof is determined to be incorrect;
b. the regulations or conditions under which the permit or permit renewal was granted have changed;
c. permit conditions have been violated;
d. construction of the permitted equipment does not commence within 18 months of permit issuance or, once construction has begun, it ceases prior to completion for a period of 18 consecutive months;
e. operation of a permitted facility or process ceases permitted activities for a period of 18 consecutive months;
f. the permit holder fails to pay fees required within 30 days after being billed;
g. the Permittee refuses to allow the Director or authorized representative to enter the premises where a source of emissions is located, have access to records required to be kept by the terms and conditions of the permit, inspect any source of emissions, control equipment, and monitoring equipment or methods required in the permit, or collect samples from any emission source; or,
h. the EPA requests that the permit be revoked pursuant to **40 CFR Part 70.7 (g) or 70.8(d).**

A-13. Permit Renewal and Expiration

In accordance with **MCAPCO Regulation 1.5513 - "Permit Renewal and Expiration"**, permit expiration shall terminate the facility's right to operate unless a complete renewal application has been submitted at least six months before the date of permit expiration. To ensure the application is timely and complete, the *renewal application shall be submitted one year prior to the permit expiration date*. The renewal application should include the complete application forms for all permitted equipment and any modifications. Permits being renewed are subject to the procedural requirements of **MCAPCO Section 1.5500 - "Title V Procedures",** including those for public participation and affected States and EPA review. Upon receipt of a timely and complete application for renewal, the Permittee may continue to operate under the conditions of this permit, subject to final action by MCAQ on the renewal application. If a complete renewal application is not received as required, the permit will expire at the end of its term.

NOTIFICATIONS AND REPORTS

A-14. Commencement of Operation

The facility shall be operated in accordance with **MCAPCO Regulation 1.5214 - "Commencement of Operation".** Upon completion of construction, alteration or installation pursuant to this permit, the permit holder shall notify the Director in writing of such completion and of the holder's intent to commence operation.

A-15. Malfunction and Excess Emissions Provisions:

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content"** Subparagraph (f)(2), the Permittee shall report malfunctions, emergencies, and other upset conditions promptly as prescribed in **MCAPCO Regulations 2.0524 - "New Source Performance Standards"**, **2.0535 - "Excess Emissions Reporting and Malfunctions" (except Paragraph (g)), 2.1110 - "National Emission Standards for Hazardous Air Pollutants", or 2.1111 - "Maximum Achievable Control Technology**".

The permittee shall report to the Director within two business days after becoming aware of any deviation not covered by **MCAPCO Regulations 2.0524 - "New Source Performance Standards", 2.0535 - "Excess Emissions Reporting and Malfunctions" (except Paragraph (g)), 2.1110 - "National Emission Standards for Hazardous Air Pollutants", or 2.1111 - "Maximum Achievable Control Technology**".

All reports of deviations and excess emissions shall be certified by a responsible official. After a malfunction or breakdown has been corrected, the Director may require the source to conduct a performance test to demonstrate compliance.

MCAPCO Regulation 2.0535 – "Excess Emissions Reporting and Malfunctions" Paragraph (g) is not a SIP enforceable provision and therefore the conditions and allowances allowed therein are considered as Local only requirements (see Facility Condition and Limitation No. B-8).

A-16. Monitoring Data Recordkeeping and Reporting

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Paragraph (f):**

a. The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. (Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit.)
b. The Permittee shall submit reports of any required monitoring as listed in Part 2 of this Permit to MCAQ at least every six months. The reports should include a summary of data and observations, identification of any deviations from normal operating parameters, and any corrective action taken to return the monitored emission source to normal operating conditions. Normal operating parameters shall be determined from information on file and any operating ranges listed in Part 2 of this permit.

A-17. Annual Emissions Reporting

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(14)**, the Permittee shall submit annual reports of actual and potential emissions as required pursuant to **MCAPCO Regulation 1.5111 - "General Recordkeeping, Reporting and Monitoring Requirements**" and as specified in the Permit.

A-18. Duty to Provide Information

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(9)**, the Permittee shall furnish to MCAQ, in a timely manner, any information that MCAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The Permittee shall furnish to MCAQ copies of records required to be kept by the permit when such copies are requested by the Director.

A-19. Submissions

In accordance with **MCAPCO Section 1.5500 - "Title V Procedures",** any document submitted shall be certified by a responsible corporate official as being true, accurate and complete. Reports, test data, monitoring data, notifications and requests for renewal shall be submitted to:

Director
Mecklenburg County Air Quality
2145 Suttle Avenue
Charlotte, NC 28208-5237

A-20. Information Submittal

In accordance with **MCAPCO Regulation 1.5111 – "General Recordkeeping, Reporting and Monitoring Requirements"**, the owner or operator shall submit all reports or information as may be required by MCAQ.

OPERATIONAL REQUIREMENTS/STANDARDS

A-21. Equipment and Control Device Operation

In accordance with **MCAPCO Regulation 1.5104 - "General Duties and Powers of the Director, with Approval of the Board"** and unless otherwise specified by this permit, no equipment may be operated without the concurrent operation of the permitted air emissions control devices.

A-22. National Emission Standards for Hazardous Air Pollutants

The facility shall be operated in accordance with **MCAPCO Regulation 2.1110 - "National Emission Standards for Hazardous Air Pollutants",** which refers to Title 40 of the Code of Federal Regulations Part 61.140 to 61.157, Subpart M, National Emission Standard for Asbestos, when conducting any renovation or demolition activities.

A-23. Visible Emissions

The facility shall be operated in accordance with **MCAPCO Regulation 1.5107 - "Control and Prohibition of Visible Emissions",** such that visible emissions shall not be more than 20% opacity for an aggregate of more than six (6) minutes in any one hour or more than twenty (20) minutes in any 24-hour period.

Facilities subject to a visible emission standard as specified by applicability to **MCAPCO Regulations 2.0524 - "New Source Performance Standards", or 2.1110 - "National Emission Standards for Hazardous Air Pollutants"**, shall comply with the more stringent standard, but, in no case shall the source's visible emissions exceed 20% opacity.

A-24. Dust and Related Material

The facility shall be operated in accordance with **MCAPCO Regulation 1.5108 - "Dust and Related Material"**, such that dust shall not be discharged into the atmosphere in such quantities that the ambient air quality standards are exceeded at the property line or in such quantities or of such toxic or corrosive nature that may be injurious to humans or animals or may cause damage to the property of others.

A-25. Fugitive Dust Emission Sources

As required by **MCAPCO Regulation 2.0540 - "Particulates from Fugitive Dust Emission Sources"**, the permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints.

a. If fugitive dust emissions cause or contribute to substantive complaints, the permittee shall:
    1. within 30 days upon receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a written report that includes the identification of the probable source(s) of the fugitive dust emissions causing complaints and what immediate measures can be made to abate the fugitive emissions;
    2. within 60 days of the initial report submitted under Subparagraph (1) of this Paragraph, submit to the Director a control plan as described in Paragraph (f) of this Regulation; and
    3. within 30 days after the Director approves the plan, be in compliance with the plan.

b. The Director may require that the permittee develop and submit a fugitive dust control plan as described in MCAPCO 2.0540(f) if:
    1. ambient air quality measurements or dispersion modeling as provided in Paragraph (e) of MCAPCO Regulation 2.1106 – "Determination of Ambient Air Concentrations" show violation or potential for a violation of an ambient air quality standard for particulates in MCAPCO Section 2.0400 - "Ambient Air Quality Standards"; or
    2. if MCAQ observes excessive fugitive dust emissions from the facility beyond the property boundaries for six minutes in any one hour using Reference Method 22 in 40 CFR 60, Appendix A.

A-26. Protection of Stratospheric Ozone

In accordance with **MCAPCO Regulation 1.5501 - "Purpose of Section and Requirement for a Permit" Paragraph (d),** the Permittee is subject to all the applicable requirements and standards for recycling and emissions reduction pursuant to:

a. **40 CFR Part 82, Subpart F - "Recycling and Emissions Reduction"** including the following:

1. persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant **40 CFR 82.156**;
2. equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to **40 CFR 82.158**;
3. persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to **40 CFR 82.161**;
4. persons disposing of small appliances, motor vehicle air conditioners (MVACs), and MVAC-like appliances (as defined in **40 CFR 82.152**) must comply with recordkeeping requirements pursuant to **40 CFR 82.166**;
5. persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to **40 CFR 82.156**; and
6. owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to **40 CFR 82.166**; and,

b. **40 CFR Part 82, Subpart B - "Servicing of Motor Vehicle Air Conditioners"**, if the facility maintains, services, repairs, or disposes of MVACs.

A-27. Chemical Accident Prevention Provisions

In accordance with **40 CFR Part 68.215 - "Permit Content and Air Permitting Authority or Designated Agency Requirements"**, any stationary source subject to the Chemical Accident Prevention Provisions of **40 CFR Part 68** shall comply with such provisions, including but not limited to the submittal of a Risk Management Plan (Subpart G) .

A-28. Insignificant Activities

The facility shall be operated in accordance with **MCAPCO Regulation 1.5508 - "Permit Content", Subparagraphs (i)(15) and (i)(16)** such that all insignificant activities as defined in **MCAPCO Regulation 1.5503 - "Definitions"** shall be included in the permit and shall comply with any applicable requirement in MCAPCO.

COMPLIANCE PROVISIONS

A-29. Duty to Comply with this Permit

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(3)**, noncompliance with any term, condition, or limitation of this permit is grounds for enforcement action; for permit termination, revocation and reissuance or modification; or for denial of a permit renewal application.

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(4),** a Permittee shall not claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit as a defense in an enforcement action.

A-30. Enforcement/Variances/Judicial Review

Violation of any applicable MCAPCO regulation or condition listed herein could result in administrative fines and/or legal action as prescribed in **MCAPCO Section 1.5300 - "Enforcement; Variances; Judicial Review".**

A-31. Duty to Comply with Other Regulations

In accordance with **MCAPCO Section 1.5100 – "General Provisions and Administration"**, this permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or local water quality or land quality control authority.

A-32. Determination of Compliance

In accordance with **MCAPCO Regulation 1.5104 - "General Duties and Powers of the Director, with Approval of the Board"**, this permit contains provisions which require a specific test method, monitoring, or recordkeeping to be used as a demonstration of compliance with permit limits, but are not intended as the only means of demonstration or certifying compliance with permit limits. Unless otherwise specified, the averaging times for all specified emission standards are tied to or based on the run time of the test method(s) used for determining compliance. Compliance with MCAPCO, including the specific conditions herein, shall be determined by source testing, surveillance, visual observations, data review, plant inspections, and any other credible evidence.

A-33. Compliance Certification

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Paragraph (n),** the Permittee shall submit to MCAQ and EPA by April 30 of each year, a compliance certification by a responsible official with all terms and conditions in the permit, including emissions limitations, standards, and work practices. The certification shall specify:

a. the identification of each term or condition of the permit that is the basis of the certification;
b. the compliance status as shown by monitoring data and other information reasonably available to the Permittee;
c. whether compliance was continuous or intermittent;
d. the methods used for determining the compliance status of the source, currently and over the reporting period; and,
e. such other facts as the permit may specify to determine the compliance status of the source.

The compliance certification shall identify each deviation and take it into account in the compliance certification. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the federal Clean Air Act.

All compliance certifications shall be submitted to MCAQ and the EPA either through the electronic CEDRI system found at https://cdx.epa.gov/ or by US Mail to the following addresses:

Director Mecklenburg County Air Quality 2145 Suttle Avenue Charlotte, NC 28208-5237	and	Environmental Protection Agency Attn: Enforcement and Compliance Assurance Division, Air Enforcement Branch Atlanta Federal Center 61 Forsyth Street, SW Atlanta, GA 30303-3104

In accordance with **MCAPCO Regulation 1.5520 - "Certification by Responsible Official",** a responsible official shall certify the truth, accuracy, and completeness of the compliance certification. The certification shall state that, based on information and belief formed after reasonable inquiry, statements and information in the document are true, accurate, and complete.

A-34. Permit Shield

In accordance with **MCAPCO Regulation 1.5512 - "Permit Shield and Application Shield",** and pursuant to the terms, conditions, and limitations of this permit, the facility shall be deemed in compliance with all applicable requirements as of the date of permit issuance except as follows:

a. This permit shield shall not apply to any change made at this facility that does not require a permit revision.
b. This permit shield shall not extend to minor permit modifications made pursuant to **MCAPCO Regulation 1.5515 - "Minor Permit Modifications"**.
c. Nothing in this permit shall alter or affect:
    1. the power of the Director, Mecklenburg County Air Quality under NCGS 143-215.112 or MCAPCO or EPA under Section 303 of the federal Clean Air Act;
    2. the liability of an owner or operator of a facility for any violation of applicable requirements prior to or at the time or permit issuance;
    3. the applicable requirements under Title IV; or
    4. the ability of MCAQ (or EPA pursuant to Section 114 of the federal Clean Air Act) to obtain information to determine compliance of the facility with its permit.

A-35. Severability Clause

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(2),** the provisions of this permit are severable. Upon any administrative or judicial challenge, or if any provision of this permit is held invalid, all permit requirements, except those being challenged, will remain valid and enforceable.

A-36. Enforcement Clause

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(3),** noncompliance with any condition of the permit is grounds for enforcement action. In addition, noncompliance with any condition may result in permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

In accordance with **MCAPCO Regulation 1.5508 - "Permit Content" Subparagraph (i)(4),** the Permittee may not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B. LOCAL ONLY REQUIREMENTS

Only Mecklenburg County Air Quality (MCAQ) has the authority to enforce the terms, conditions, and limitations contained in this section. The EPA does not have the authority to enforce the terms, conditions, and limitations contained in this section.

B-1. Incorrect Information and Facility Operation

In accordance with MCAPCO Regulation 1.5232 – "Issuance, Revocation, and Enforcement of Permits", this permit is subject to revocation or modification by MCAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

B-2. Violations Prior to Effective Permit Date

In accordance with MCAPCO Regulation 1.5101 – "Declaration of Policy", the issuance of this permit in no way absolves the Permittee of liability for any potential legal action and/or penalties which may be assessed for violations of local regulations which have occurred prior to the effective date of this permit.

B-3. Operation and Maintenance Reports

In accordance with MCAPCO Regulation 1.5111 – "General Recordkeeping, Reporting and Monitoring Requirements", reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Director, Mecklenburg County Air Quality at such intervals and in such form and detail as may be required by MCAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.

B-4. Violation of Terms or Conditions

A violation of any Locally enforceable term or condition of this permit shall subject the Permittee to enforcement pursuant to **MCAPCO Section 1.5300 - "Enforcement; Variances; Judicial Review",** including assessment of civil penalties.

B-5. Toxic Air Pollutants

In accordance with **MCAPCO Section 1.5700 - "Toxic Air Pollutant Procedures" and/or MCAPCO Regulation 2.1104 - "Toxic Air Pollutant Guidelines"**, the toxic air pollutants (TAP) emitted by existing processes have been reviewed for regulatory applicability by MCAQ. If applicable, Appendix A lists the relevant permits and associated TAPs.

In accordance with **MCAPCO Regulations 1.5111 - "General Recordkeeping, Reporting and Monitoring Requirements", 2.0605 – "General Recordkeeping and Reporting Requirements", and/or 2.0903 - "Recordkeeping: Reporting: Monitoring"**, the facility shall report any process additions, modifications or deletions which affect the emissions of any TAP listed in **MCAPCO Section 1.5700 - "Toxic Air Pollutant Procedures"** as prescribed by the following:

a. If the process modifications will result in a facility-wide TAP emission rate that exceeds the rate listed in **MCAPCO Regulation 1.5711 – "Emission Rates Requiring a Permit"** for any TAP, apply and receive an air toxics permit before the process modification occurs; or
b. If the process modifications will result in facility-wide TAP emission rates that are below the rates listed in **MCAPCO Regulation 1.5711 - "Emission Rates Requiring a Permit",** submit the new emission rates to MCAQ 15 days prior to the initial change; or

c. If the process modifications will not result in a net TAP emission increase, provide MCAQ with demonstration (15 days prior to the initial change) that the proposed modification will not result in a net TAP emission increase at the facility.

The facility is required to maintain documentation such that upon request by MCAQ, the facility can make a demonstration that facility-wide emissions of TAPs have or have not exceeded the rates listed in **MCAPCO Regulation 1.5711**.

B-6. Nuisance

The facility shall be operated in accordance with **MCAPCO Regulation 1.5109 - "Nuisance"**. The source shall not discharge any air contaminants or other material to cause injury, detriment, nuisance, annoyance, or endanger the comfort, repose, health or safety of the public or property.

B-7. Odorous Emissions

The facility shall be operated in accordance with **MCAPCO Regulation 1.5110 - "Control and Prohibition of Odorous Emissions"**. The owner or operator of a facility shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

If the Director determines that a source or facility is emitting an objectionable odor, the owner or operator shall be responsible for:

- providing the maximum feasible control determination according to the procedures in **MCAPCO Regulation 1.5113 - "Determination of Maximum Feasible Controls for Odorous Emissions"**, and
- implementing maximum feasible controls for the control of odorous emissions.

B-8. Start-up and Shut-down Excess Emissions Provisions

In accordance with **MCAPCO Regulation 2.0535 – "Excess Emissions Reporting and Malfunctions"** Paragraph (g), excess emissions during start-up and shut-down shall be considered a violation, if the owner or operator cannot demonstrate that the excess emissions are unavoidable. The Director shall determine if excess emissions are unavoidable considering the items listed in this Regulation. The owner or operator shall operate the source and control and monitoring equipment in a manner to minimize emissions during start-up and shut-down.

PART 2
Emission Source Conditions and Limitations

PART 2
Emission Source
Conditions and Limitations

In accordance with MCAPCO Section 1.5500 -"Title V Procedures", the facility shall comply with all applicable rules and regulations whether or not these rules and regulations are specifically identified in the permit. The emission sources and control devices listed in the following table are subject to the Emission Source Conditions and Limitations contained in Part 2 as referenced in the table.

Emission Source ID	Emission Source Description (type, manufacturer and capacity)	Installation (I) Modification (M) Dates	Control Device ID	Control Device Unit or Method (type, model, manufacturer, installation/modification)	Emission Source Conditions and Limitations	
					Local and Federal Requirements	Local Only Requirements
ES-1	Three (3) Combined Heat and Power units each with a Lean Burn, Spark Ignition, Internal Combustion Engine burning digester gas including: - CHP-1: One (1) 2,000 kW (2,682 BHP) engine. - CHP-2: One (1) 2,000 kW (2,682 BHP) engine. - CHP-3: One (1) 1,200 kW (1,609 BHP) engine.	I = 2014	None	None	C-2, C-4, C-5, C-6, C-7, C-8, C-10, C-11	D-1, D-3, D-4, D-5
	Two (2) safety torches to flare residual gas from the digesters during CHP maintenance.	I = 2014 M = 2017	None	None	C-2, C-11	D-1, D-3, D-4, D-5
ES-2	Two (2) Solid Fraction Digestate Belt Dryers	I = 2015	CD-DBD1 & CD-DBD2	Two (2) two-stage Spray Scrubbers for Ammonia, PM and VOC control	C-1, C-8, C-9, C-11	D-1, D-2, D-3. D-4, D-5
IA ES-3	One (1) 4.12 mmBtu/hr boiler burning biogas and natural gas.	I = 2018	None	None	C-3, C-8, C-10, C-11	D-1, D-3, D-4, D-5
IA	Biosqueezer with biofilter and wet scrubber for odor control	I = 2014	None	None	None	D-1, D-3, D-4, D-5
IA	Wastewater Treatment	I = 2014	None	None	None	D-1, D-3, D-4, D-5

Emission Source ID	Emission Source Description (type, manufacturer and capacity)	Installation (I) Modification (M) Dates	Control Device ID	Control Device Unit or Method (type, model, manufacturer, installation/modification)	Emission Source Conditions and Limitations	
					Local and Federal Requirements	Local Only Requirements
IA	Gas Refinement Processing to include: • Desulphurization wet scrubber • Ferrosorp H2S Removal • Ammonia Wet Scrubber • Activated Carbon System • Biogas Upgrade (BUG) Unit • Two (2) 8.53 MMBtu Natural Gas Burners • Six (6) gas analyzers	I = 2024	None	None	None	D-1, D-3, D-4, D-5
IA	Feedstock Reception Building Biofilter Facility wide odor sources					D-3, D-4, D-5

ALTERNATIVE OPERATING SCENARIOS

The following alternative operating scenarios (AOS) may be implemented by the facility without providing notification to MCAQ.

Emission Source ID	Emission Source Description	Alternative Operating Scenario No.	AOS Description	Emission Source Conditions and Limitations	
				Local and Federal Requirements	Local Only Requirements
None					

NOTE: If an alternative operating scenario includes construction or installation of new equipment (equipment not currently on-site), the new equipment will be subject to MCAPCO Regulation 1.5232- "Issuance, Revocation, and Enforcement of Permits" Subparagraph (a)(5) which states in part: if "construction of the permitted equipment does not commence within 18 months of permit issuance or once construction has begun, it ceases prior to completion for a period of 18 consecutive months", the permit may be revoked or modified.

EMISSION SOURCE CONDITIONS AND LIMITATIONS

C. LOCAL AND FEDERAL REQUIREMENTS

Mecklenburg County Air Quality ("MCAQ") and the United States Environmental Protection Agency ("EPA") have the authority to enforce the terms, conditions, and limitations contained in this section.

C-1. The facility shall be operated in accordance with **MCAPCO Regulation 2.0515 - "Particulates from Miscellaneous Industrial Processes"**, such that particulate emissions from any stack, vent or outlet shall not exceed the allowable emission rate. The allowable emission rate shall be determined using the appropriate formula below:

For process weight rates less than or equal to 30 tons/hour, the following formula shall be used: $\mathbf{E = 4.10 * P^{0.67}}$ For process weight rates greater than 30 tons/hr the following formula shall be used: $\mathbf{E = 55.0 * P^{0.11} - 40}$
Where: E = maximum allowable emission rate for particulate matter in lbs/hr P = process rate in tons/hr

C-2. The facility shall be operated in accordance with **MCAPCO Regulation 2.0516 - "Sulfur Dioxide Emissions from Combustion Sources"**, such that sulfur dioxide emissions from any vent, stack or chimney shall not exceed 2.3 pounds per million Btu input.

C-3. The facility shall be operated in accordance with **MCAPCO Regulation 2.1111 - "Maximum Achievable Control Technology"** and **40 CFR Part 63 - "National Emission Standards For Hazardous Air Pollutants For Source Categories".** The requirements are stated in **40 CFR 63.1 to 63.15 Subpart A - "General Provisions",** and **40 CFR 63.7480 to 63.7575** (including Tables) **Subpart DDDDD - "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters",** which includes the following pertinent sections:

A. **63.7480 – "What is the purpose of this subpart?"**
B. **63.7485 – "Am I subject to this subpart?"**
   This section states in part that you are subject to this subpart if you own or operate a an industrial, commercial, or institutional boiler or process heater that is located at a major source of HAP emissions.
C. **63.7490 – "What is the affected source of this subpart?"**
D. **63.7491 – "Are any boilers or process heaters not subject to this subpart?"**
E. **63.7495 – "When do I have to comply with this subpart?"**

The compliance date for existing boilers or process heaters was January 31, 2016. New boilers or process heaters (commenced construction after June 4, 2010) must demonstrate compliance by January 31, 2013, or upon startup, whichever is later.

F. **63.7499 – "What are the subcategories of boilers and process heaters?"**
G. **63.7500 – "What emission limitations, work practice standards, and operating limits must I meet?"**
Tables 1, 2, 3, 4, 12 and 13 outline emission limits, work practice standards, and operating limits.
H. **63.7501 – "How can I assert an affirmative defense if I exceed and emission limitation during a malfunction?"**
I. **63.7505 – "What are my general requirements for complying with this subpart?"**
J. **63.7510 – "What are my initial compliance requirements and by what date must I conduct them?"**
K. **63.7515 – "When must I conduct subsequent performance tests, fuel analyses, or tune-ups?"**
A tune-up is required at least once every 5 years for IA ES-3. If biogas is burned, fuel specification analyses shall also be required.
L. **63.7520 – "What stack tests and procedures must I use?"**
M. **63.7521 – "What fuel analyses, fuel specification, and procedures must I use?"**
N. **63.7522 – "Can I use emissions averaging to comply with this subpart?"**
O. **63.7525 – "What are my monitoring, installation, operation, and maintenance requirements?"**
P. **63.7530 – "How do I demonstrate initial compliance with the emissions limitations, fuel specifications, and work practice standards?"**
Q. **63.7533 – "Can I use emission credits earned from implementation of energy conservation measures to comply with this subpart?"**
R. **63.7535 – "How do I monitor and collect data to demonstrate continuous compliance?"**
S. **63.7540 – "How do I demonstrate continuous compliance with the emissions limitations, fuel specifications, and work practice standards?"**
T. **63.7541 – "How do I demonstrate continuous compliance under the emissions averaging provision?"**
U. **63.7545 – "What notifications must I submit and when?"**
V. **63.7550 – "What reports must I submit and when?"**
W. **63.7555 – "What records must I keep?"**
X. **63.7560 – "In what form and how long must I keep my records?"**
Y. **63.7565 – "What parts of the General Provisions apply to me?"**
Z. **63.7570 – "Who implements and enforces this subpart?"**
AA. **63.7575 – "What definitions apply to this subpart?"**

C-4. The facility shall be operated in accordance with **MCAPCO Regulation 2.1111 - "Maximum Achievable Control Technology"** and **40 CFR Part 63 - "National Emission Standards For Hazardous Air Pollutants For Source Categories."** The requirements are stated in **40 CFR 63.1 to 63.15 Subpart A - "General Provisions", and 40 CFR 63.6580 to 63.6675 Subpart ZZZZ - "National Emission Standards from Stationary Reciprocating Internal Combustion Engines" (RICE)**, including but not limited to:

A. **63.6580 – "What is the purpose of subpart ZZZZ?"**
B. **63.6585 - "Am I subject to this subpart?"**

This section states in part that you are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions.

C. **63.6590 – "What parts of my plant does this subpart cover?"**
*Portions of this section define existing, new, and reconstructed stationary RICE for the purpose of determining emission control requirements. An affected source that is a new or reconstructed stationary RICE located at an area source must meet the requirements of this subpart by meeting the requirements of **40 CFR 60 Subpart IIII**, for compression ignition engines, or **40 CFR 60 Subpart JJJJ**, for spark ignition engine.*

D. **63.6595 – "When do I have to comply with this subpart?"**
Portions of this section require that the owner or operator of a new or reconstructed source comply with the requirements of this subpart by January 18, 2008 if startup of the source is before that date, and on startup if startup of the source is after that date. An owner or operator of a source that is an existing non-emergency stationary RICE with a site rating of more than 500 brake HP located at a major source, an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source, or an existing stationary RICE located at an area source must comply with the requirements of this subpart no later than May 3, 2013.

E. **63.6600 – "What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?"**

F. **63.6601 – "What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?"**

G. **63.6602 – "What emission limitations must I meet if I own or operate an existing stationary CI RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?"**

H. **63.6603 – "What emission limitations and operating limitations must I meet if I own or operate an existing stationary CI RICE located at an area source of HAP emissions?"**

I. **63.6604 – "What fuel requirements must I meet if I own or operate an existing stationary CI RICE?"**

J. **63.6605 – "What are my general requirements for complying with this subpart?"**

K. **63.6610 – "By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?"**

L. **63.6611 – "By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?"**

M. **63.6612 – "By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?"**

N. **63.6615 – "When must I conduct subsequent performance tests?"**

O. **63.6620 – "What performance tests and other procedures must I use?"**

P. **63.6625 – "What are my monitoring, installation, operation, and maintenance requirements?"**

Q. **63.6630 – "How do I demonstrate initial compliance with the emission limitations and operating limitations?"**

R. **63.6635 – "How do I monitor and collect data to demonstrate continuous compliance?"**

S. **63.6640 – "How do I demonstrate continuous compliance with the emission limitations and operating limitations?"**
T. **63.6645 – "What notifications must I submit and when?"**
U. **63.6650 – "What reports must I submit and when?"**
V. **63.6655 – "What records must I keep?"**
W. **63.6660 – "In what form and how long must I keep my records?"**
X. **63.6665 – "What parts of the General Provisions apply to me?"**
Y. **63.6670 – "Who implements and enforces this subpart?"**
Z. **63.6675 – "What definitions apply to this subpart?"**

C-5. The 1,200 kW CHP-3 engine shall be operated in accordance with **MCAPCO Regulation 2.1409 - "Stationary Internal Combustion Engines,"** which includes the following:

The owner or operator shall not allow emission of NO_x from the stationary internal combustion engine to exceed the following limitation:

MAXIMUM ALLOWABLE NO_X EMISSION RATES FOR STATIONARY INTERNAL COMBUSTION ENGINES (GRAMS PER HORSEPOWER HOUR)

Engine Type	Fuel Type	Limitation
Lean-burn	Gaseous	2.5

Compliance shall be demonstrated based on MCAPCO Regulation 2.1409, Paragraph (f) which states in part:

(f) If a stationary internal combustion engine is permitted to operate more than 475 hours during the ozone season, compliance with the limitation established for a stationary internal combustion engine under Paragraph (b) of this Regulation shall be determined using annual source testing according to MCAPCO Regulation 2.1415 - "Test Methods and Procedures".

C-6. The two (2) 2,000 kW CHPs (CHP-1, CHP-2) shall be operated in accordance with **MCAPCO Regulation 2.1418 - "New Electric Generating Units, Boilers, Combustion Turbines, and I/C Engines"** and **MCAPCO Regulation 2.1423 – "Large Internal Combustion Engines,"** which includes the following:

A. The owner/operator shall not cause, allow, or permit nitrogen oxide (NOx) emissions to exceed the appropriate standard beginning May 1 and ending September 30 of each year:

Engine Type	NOx limitation in parts per million corrected to 15% parts per million by volume (ppmv) stack gas oxygen on a dry basis averaged over a rolling 30-day period, as may be adjusted based on engine efficiency
Lean-burn	125

Except during periods of start-up, shut-down, and malfunctions, not to exceed thirty-six (36) consecutive hours, or during regularly scheduled maintenance activities.

B. The facility shall monitor and record the following information for the subject internal combustion engines for each day the engines operate:

- Identification and location of the engine;
- Time and date of the record;
- Number of hours the engine operated, and the mode under which it operated, including start-ups, shut-downs, malfunctions, emergency power generation, peak shaving, and maintenance;
- Description and duration of any malfunctions and maintenance;
- Date and results of each emissions inspection;
- Results of all compliance tests; **and**,

The owner or operator of a stationary internal combustion engine subject to this Regulation shall maintain all records necessary to demonstrate compliance with the Regulation for two calendar years at the facility at which the engine is located. The records shall be made available to the Director upon request.

C-7. The facility shall be operated in accordance with **MCAPCO Regulation 2.0524 - "New Source Performance Standards"**. The requirements are stated in **40 CFR 60.1 to 60.19, Subpart A - "General Provisions"**, and **40 CFR 60.4230 to 60.4248, Subpart JJJJ - "Standards of Performance for Stationary Spark Ignition Internal Combustion Engines"** ("SI ICE") which includes the following pertinent sections:

A. **60.4230 - "Am I subject to this subpart?"**

B. **60.4233 - "What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?"**
Portions of this Section require that the owner or operator of an affected source comply with the emission standards specified in this subpart depending on model year and size of the non-emergency engine/generator.

C. **60.4234 - "How long must I meet the emission standards if I am an owner or operator of a stationary SI ICE?"**
Portions of this Section require that the owner or operator of an affected source must comply with the emission standards of this subpart over the entire life of the engine.

D. **60.4235 - "What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?"**

E. **60.4236 – "What is the deadline for importing or installing stationary SI ICE produced in the previous model years?"**
Portions of this Section establish the deadline by which a previous model year SI ICE may be installed for each year for which an emission standard in established in this subpart.

F. **60.4237 - "What are the monitoring requirements if I am an owner or operator of a stationary SI internal combustion engine?"**
Refer to 60.4237 and Specific Condition and Limitation No. C-8 of this permit for all monitoring requirements.

G. **60.4243 - "What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?"**
Portions of this section specify the compliance options for an owner or operator of an affected source depending on model year and size of the engine.

H. **60.4244 - "What test methods and other procedures must I use if I am and owner or operator of a stationary SI internal combustion engine?"**
Refer to 60.4244 and Specific Condition and Limitation No. C-10 of this permit for all testing requirements.

I. **60.4245 - "What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?"**
Refer to 60.4245 and Specific Condition and Limitation No(s). C-8 and C-11 of this permit for all reporting and recordkeeping requirements.

C-8. In accordance with **MCAPCO Regulations 1.5111 - "General Recordkeeping, Reporting and Monitoring Requirements"** and **2.0605 – "General Recordkeeping and Reporting Requirements",** the facility shall monitor and record the following operating parameters for the emission sources and control devices as listed below:

EMISSION SOURCE/ CONTROL DEVICE	OPERATING PARAMETER	PARAMETER RANGE	MINIMUM MONITORING FREQUENCY (Once per...)
Scrubbers CD-DBD1 and CD-DBD2	1. Static pressure drop across scrubber 2. Total liquid flow rate to scrubber 3. Recirculation liquid pH	See Attachment 2	Week
ES-1 Internal Combustion Engines (CHP-1, CHP-2) (**MCAPCO Regulation 2.1423**)	1. Identification and location of the engine; 2. Time and date of the record; 3. Number of hours the engine operated during each day, including start-ups, shut-downs, and malfunctions, and the type and duration of maintenance and repairs; 4. Date and results of each emissions inspection; 5. A summary of any emissions corrective maintenance taken; **and**, 6. Results of all compliance tests.		Day
40 CFR 63 Subpart ZZZZ emission sources	Refer to **40 CFR 63.8, 63.10, 63.6635,** and **Condition and Limitation C-4** of this permit for specific monitoring and recordkeeping requirements related to **40 CFR 63** emission sources		Refer to **40 CFR 63.10 and 63.6635**

EMISSION SOURCE/ CONTROL DEVICE	OPERATING PARAMETER	PARAMETER RANGE	MINIMUM MONITORING FREQUENCY (Once per...)
40 CFR 63 Subpart DDDDD emission sources	Refer to **40 CFR 63.8, 63.10, 63.7525, 63.7555,** and **Condition and Limitation C-3** of this permit for specific monitoring and recordkeeping requirements related to **40 CFR 63** emission sources		Refer to **40 CFR 63.10, 63.7525, and 63.7555**
40 CFR 60 Subpart JJJJ emission sources	Refer to **40 CFR 60.7, 60.13, 60.4237 and Condition and Limitation C-7** of this permit for specific monitoring and recordkeeping requirements related to **40 CFR 60** emission sources		Refer to **40 CFR 60.7 and 60.4237**

The facility shall maintain the above-specified operating records as well as any maintenance records for activity conducted on the equipment for a period of not less than 5 years, unless otherwise specified by the permit. The records shall be available for inspection by MCAQ personnel upon request.

C-9. The digestate belt dryers (ES-2) shall be operated concurrently with the associated control device(s) specified in this Permit to Construct/Operate except when:

- subject to the provisions of **MCAPCO Regulation 2.0535 - "Excess Emissions Reporting and Malfunctions"**; or,
- during such times as allowed by **MCAPCO Regulation 2.0515 – "Particulates from Miscellaneous Industrial Processes".**

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution.

C-10. The facility shall, at its own expense and using the most recent versions of the performance test methods contained in 40 CFR Part 60 (Appendix A) or Part 63 or as approved by the Administrator of the USEPA or MCAQ, demonstrate compliance with the appropriate regulatory requirement as follows:

EMISSION SOURCE/ CONTROL DEVICE DESCRIPTION AND ID	DEMONSTRATE COMPLIANCE WITH...	SCHEDULED TESTING FREQUENCY
Internal Combustion Engines (ES-1)	MCAPCO Regulations: • **2.1423 – "Large Internal Combustion Engines"**; and, • **2.1409 – "Stationary Internal Combustion Engines"** and determination of pollutant emission rates and normal operating parameters.	Upon written request by MCAQ, or as required by the regulation, or as requested by Permittee. Additional Tests: every 5 years in conjunction with the request for renewal applications for this Title V permit. The test shall be completed prior to submittal of the renewal application. Note: A performance test of CHP-1 is required within 60 days following startup of this engine.

EMISSION SOURCE/ CONTROL DEVICE DESCRIPTION AND ID	DEMONSTRATE COMPLIANCE WITH...	SCHEDULED TESTING FREQUENCY
40 CFR 60 Subpart JJJJ emission sources (ES-1)	**Refer to 40 CFR 60.8, 60.4244** and **Condition and Limitation C-7** of this permit for specific testing requirements related to **40 CFR 60** emission sources	Refer to **40 CFR 60.8** and **60.4244**
40 CFR 63 Subpart ZZZZ emission sources (ES-1)	**Refer to 40 CFR 63.7, 63.6620** and **Condition and Limitation C-4** of this permit for specific testing requirements related to **40 CFR 63** emission sources	Refer to **40 CFR 63.7** and **63.6620**
40 CFR 63 Subpart DDDDD emission sources (ES-3)	**Refer to 40 CFR 63.7, 63.7515, 63.7520,** and **Condition and Limitation C-3** of this permit for specific testing requirements related to **40 CFR 63** emission sources	Refer to **40 CFR 63.7, 63.7515** and **63.7520**

All performance tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing and shall be conducted in accordance with **MCAPCO Section 2.2600 – "Source Testing."** MCAQ shall be notified at least 30 days in advance of the proposed performance test so that it may have a representative present to observe the test at its option. The notification shall include a detailed description of the performance test procedures so that MCAQ may review and approve them. The final performance test results shall be submitted to MCAQ for review within 60 calendar days after completion of on-site testing. A record of all tests performed shall be kept for a period of 5 years and shall be made available for inspection by MCAQ personnel upon request. The performance test(s) specified in this condition do not preclude MCAQ from requesting performance testing for other emission sources or for other purposes as defined in **MCAPCO Regulation 1.5104 - "General Duties and Powers of the Director, With the Approval of the Board",** and referenced in Facility Condition and Limitation No. A-3 of this Permit.

C-11. The facility shall be operated in accordance with **MCAPCO Regulation 1.5111 - "General Recordkeeping: Reporting: Monitoring Requirements", 2.0605 – "General Recordkeeping and Reporting Requirements", 2.0903 - "Recordkeeping: Reporting: Monitoring"** and/or **MCAPCO Regulation 1.5508 - "Permit Content"**, such that the following specific reports and/or notifications shall be submitted to MCAQ by the specified dates:

(1) NOTIFICATIONS TO MCAQ

POLLUTANT/ PARAMETER	NOTIFICATION REQUIREMENT	SUBMITTAL DATE
Performance test notification report	Detailed description of the proposed test procedures to be used.	30 days prior to proposed test date
40 CFR 60 Subpart JJJJ emission sources	Refer to **40 CFR 60.7, 60.4245** and **Condition and Limitation No. C-7** of this permit for all specific notification requirements.	Refer to **40 CFR 60.7** and **60.4245.**
40 CFR 63 Subpart ZZZZ emission sources	**Refer to 40 CFR 63.9, 63.6645** and **Condition and Limitation No. C-4** of this permit for all specific notification requirements.	Refer to **40 CFR 63.9** and **63.6645.**

POLLUTANT/ PARAMETER	NOTIFICATION REQUIREMENT	SUBMITTAL DATE
40 CFR 63 Subpart DDDDD emission sources	**Refer to 40 CFR 63.9, 63.7545** and **Condition and Limitation No. C-3** of this permit for all specific notification requirements.	Refer to **40 CFR 63.9** and **63.7545.**
ES-1 (CHP-1) and ES-2 Commencement of Operation Notice	Submit a notification of the construction, alteration or installation completion date and intent to commence operation.	Upon completion of construction, alteration or installation

(2) REPORTS TO MCAQ

POLLUTANT/ PARAMETER	REPORTING REQUIREMENT	EMISSION PERIOD (For previous)	SUBMITTAL DATES (Postmarked by)
CO NO_x $PM/PM_{10}/PM_{2.5}$ SO_2 VOCs HAPs	A report of facility-wide emissions (in tons) emanating from the emission sources listed on this permit to include, at a minimum, the following information: 1. Emission calculations including all supporting documentation. *(Calculations for previously submitted periods do not need to be re-submitted)* 2. Amount of digester gas used by each CHP Engine. 3. Amount of digester gas and natural gas used by the 4.12 MMBtu/hr boiler 4. Amount of solids processed by belt dryers. 5. Hours of operation for each emission source.	Calendar Year	April 30 of following year
Title V Monitoring Reports (**MCAPCO 1.5508**)	Submit a report, certified by a responsible company official, of all required monitoring parameters as found in **Facility Condition and Limitation No. A-16** and **Emission Source Condition and Limitation No. C-8**. The report should include a discussion of monitoring excursions	6 months	April 30 October 30
NO_x (**MCAPCO Regulations 2.1409 and 2.1423**)	A report documenting each engine's total nitrogen oxide emissions beginning May 1 and ending September 30 of each year.	Ozone Season	October 31 of each year
Performance Test Report	Results of Performance Test Conducted The report shall include a signed statement by the responsible official indicating compliance or noncompliance with the applicable emission standards.	Not applicable	Within 60 days after test
40 CFR 60 Subpart JJJJ emission sources.	Refer to **40 CFR 60.7, 60.4245** and **Condition and Limitation No. C-7** of this permit for all specific reporting requirements	Refer to **40 CFR 60.7** and **60.4245**	

POLLUTANT/ PARAMETER	REPORTING REQUIREMENT	EMISSION PERIOD (For previous)	SUBMITTAL DATES (Postmarked by)
40 CFR 63 Subpart ZZZZ emission sources	**Refer to 40 CFR 63.10, 63.6650** and **Condition and Limitation No. C-4** of this permit for all specific reporting requirements	Refer to **40 CFR 63.10** and **63.6650** • Annual Report due January 31 of following year	
40 CFR 63 Subpart DDDDD emission sources	**Refer to 40 CFR 63.10, 63.7550** and **Condition and Limitation No. C-3** of this permit for all specific reporting requirements	Refer to **40 CFR 63.10 and 63.7550** • Semiannual Compliance Report (reporting compliance with fuel analyses) for the period January 1 – June 30 due July 30th of each calendar year. Reports for the period July 1 – December 31 due January 30th of each calendar year. • 5-year Compliance Report (for reporting tune-ups) are due January 31 of each calendar year. *This report is required to be submitted electronically in EPA's Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed at https://www.epa.gov/electronic-reporting-air-emissions/cedri	

(3) COMPLIANCE CERTIFICATION TO BOTH EPA AND MCAQ

REPORTING REQUIREMENT	EMISSION PERIOD (For previous)	SUBMITTAL DATE (Postmarked by)
Identify each term and condition of the Permit and the facility's compliance status for each as described in **Condition and Limitation No. A-33**.	Calendar year	April 30 of the following year

D. LOCAL ONLY REQUIREMENTS

Only Mecklenburg County Air Quality has the authority to enforce the terms, conditions and limitations contained in this section. The EPA does not have the authority to enforce the terms, conditions and limitations contained in this Section.

D-1. Permit No. 19-02V-021 shall be void upon issuance of this Permit.

D-2. In accordance with **MCAPCO Regulations 1.5711 - "Emission Rates Requiring a Permit"** and/or **2.1104 - "Toxic Air Pollutant Guidelines"**, the facility shall not emit any of the following toxic air pollutants in such quantities that may cause or contribute beyond the premises to any significant ambient air concentration that may adversely affect human health:

Ammonia

To comply with these requirements, the facility shall be operated in accordance with the following limitation(s):

Parameters of the air dispersion modeling demonstration:

Emission Source ID	Modeled Emission Rate		Stack Height		Stack Diameter		Stack Orientation
	g/s	lb/hr	m	ft	m	ft	
ES-2 / CD-DBD1	3.16	25.04	8.76	28.75	1.28	4.21	Vertical no rain cap
ES-2 / CD-DBD2	3.16	25.04	8.76	28.75	1.28	4.21	Vertical no rain cap
Total:	6.32	50.08					

Upon written request from MCAQ, the facility shall verify compliance with the above-specified modeling parameters and operating conditions.

D-3. In accordance with **MCAPCO Regulation 1.5110 - "Control and Prohibition of Odorous Emissions",** the facility shall comply with all provisions of its most recent Mecklenburg County Air Quality approved Odor Management Plan (OMP), included as Attachment 3. A copy of the OMP shall be maintained onsite and be available to MCAQ personnel upon request.

Recurrence of objectionable odors will result in the requirement to implement maximum feasible controls in accordance with MCAPCO Regulation 1.5113 – "Determination of Maximum Feasible Controls for Odorous Emissions."

D-4. In accordance with **MCAPCO Regulations 1.5111 - "General Recordkeeping, Reporting and Monitoring Requirements", 2.0605 – "General Recordkeeping and Reporting Requirements", and 1.5110 - "Control and Prohibition of Odorous Emissions",** the facility shall monitor and record the following operating parameters for the emission sources and control devices as listed below:

CONTROL DEVICE	OPERATING PARAMETER	PARAMETER RANGE	MINIMUM MONITORING FREQUENCY (Once per...)
Feedstock Reception Building	Pressure inside the building	< 0.0 inches H_2O	Daily
Biofilter	Pressure drop across the media	0.1 – 30.0 inches H_2O	Daily
Odor Inspection	Inspection conducted by operator, site manager, or senior operator using the form submitted in the Odor Management Plan, Attachment 3.		Daily

CONTROL DEVICE	OPERATING PARAMETER	PARAMETER RANGE	MINIMUM MONITORING FREQUENCY (Once per...)
Odor Inspection	Inspection conducted by operator, site manager, or senior operator using the form submitted in the Odor Management Plan, Attachment 3.		Monthly and/or when an odor compliant is received

The facility shall maintain the above-specified operating records as well as any maintenance records for activity conducted on the equipment for a period of not less than 2 years, unless otherwise specified by the permit. The records shall be available for inspection by MCAQ personnel upon request.

D-5. The facility shall be operated in accordance with **MCAPCO Regulation 1.5111 - "General Recordkeeping: Reporting: Monitoring Requirements", 2.0605 – "General Recordkeeping and Reporting Requirements",** and/or **MCAPCO Regulation 1.5110 - "Control and Prohibition of Odorous Emissions",** such that the following specific reports and/or notifications shall be submitted to MCAQ by the specified dates:

(1) NOTIFICATIONS TO MCAQ

POLLUTANT/ PARAMETER	NOTIFICATION REQUIREMENT	SUBMITTAL DATES
Odor Complaint	MCAQ shall be notified immediately after a compliant is received by Charlotte Bioenergy Facility.	
	Report detailing odor investigation findings and actions taken by the facility	Within 2 business days of complaint

(2) REPORTS TO MCAQ

POLLUTANT/ PARAMETER	REPORTING REQUIREMENT	EMISSION PERIOD (For previous)	SUBMITTAL DATES (Postmarked by)
Ammonia	Worst case hourly emission (lb/hr) from dryers ES-2 / CD-DBD1 & CD-DBD2	Calendar Year	April 30 of following year
Ammonia	Submit notification upon exceedance of toxics emission limitations specified in **Condition and Limitation No. D-2**.	Within 2 business days of the exceedance discovery	

APPENDIX A: TOXIC AIR POLLUTANT REVIEW

Facility Name: Charlotte Bioenergy Facility
Facility Address:600 Johnson Road, Charlotte, NC
Date Issued: June 18, 2025

The facility has been reviewed for toxic air pollutant emissions under MCAPCO Regulation 1.5700 - "Toxic Air Pollutant Procedures" and been found to emit the following substances:

Reviewed Toxic Air Pollutant (TAP)	CAS No.	Is TAP also a Hazardous Air Pollutant (HAP)?	Last Reviewed (Permit Number)	Compliance Demonstration	
				Are Actual Emissions Above TPER?*	Model or Avoidance Limit?
Ammonia	7664-41-7	N	19-0V1-021	Y	Model

*The toxic air pollutant permitting emission rates (TPER) for each TAP can be found in MCAPCO Regulation 1.5711 – "Emission Rates Requiring a Permit". The applicable TPER values depend on release point type and stack characteristics.

ATTACHMENT 1

COMMONLY USED ABBREVIATIONS AND ACRONYMS

BACT	Best Available Control Technology
Btu	British Thermal Unit
CAAA	Clean Air Act Amendments
CAM	Compliance Assurance Monitoring
CEDRI	Compliance and Emissions Data Reporting Interface
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EPA	Environmental Protection Agency
HAP	Hazardous Air Pollutant
HCFC	Halogenated ChloroFluoroCarbon
MACT	Maximum Achievable Control Technology
MCAPCO	Mecklenburg County Air Pollution Control Ordinance
MCAQ	Mecklenburg County Air Quality
million Btu	Million British Thermal Units
MVAC	Motor Vehicle Air Conditioner
MW	Megawatt
NCGS	North Carolina General Statute
NOx	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
PM	Particulate Matter
PM10	Particulate Matter less than 10 micrometers
PM2.5	Particulate Matter less than 2.5 micrometers
PSD	Prevention of Significant Deterioration
RACT	Reasonable Available Control Technology
RMP	Risk Management Plan
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
VOC	Volatile Organic Compound

ATTACHMENT 2: Operational Parameters

Facility Name: Charlotte Bioenergy, LLC
Facility Address: 600 Johnson Road, Charlotte, NC
Date Issued: June 18, 2025

The facility shall be operated in accordance with MCAPCO Regulation 1.5111 – "General Recordkeeping, Reporting, And Monitoring Requirements" and Condition and Limitation No. C-8 of this permit which requires the facility to maintain the following operating parameters:

Control Device	Operating Parameter	Parameter Value1[1]	Applicable Revision Date[2]
Scrubbers CD-DBD1 and CD-DBD2	1. Static pressure drop across scrubber 2. Total liquid flow rate to scrubber 3. Recirculation liquid pH	To be determined	

Notes:
1. Established upon facility startup, operation, and/or testing
2. The "Applicable Revision Date" reflects the date the operating parameter was established.

ATTACHMENT 3: Copy of Odor Management Plan

CHARLOTTE BIOENERGY FACILITY

subsidiary of

ODOR MANAGEMENT PLAN

Charlotte Bioenergy Facility, LLC
600 Johnson Road
Charlotte, NC 28206
(704) 817-9144

TABLE OF CONTENTS

I. PURPOSE

Charlotte Bioenergy Facility, LLC (CBF) has prepared this Odor Management Plan (OMP) to help prevent and minimize conditions that create odors from leaving the site. The following document outlines the OMP procedures by which CBF will operate the facility in such a way to control and eliminate any odors that are created. The provisions of this plan include the facility's response to odor complaints that will be carried out immediately whenever there is an objectionable odor observed beyond the property line.

Food Waste handling activities and decomposition at CBF can result in offensive odors. This OMP is to ensure proper actions are taken to identify the risk and sources of potential adverse odors and, ensure proper verification, monitoring, and neutralizing corrective actions are deployed to mitigate odors leaving the property, and identify weather conditions that may impact odor sources.

The OMP has been developed to provide a quick reference during circumstances that inhibit the facility's ability to mitigate nuisance odors and provide a basis for investigative and response training. This plan also serves as a reference for the local municipality.

II. SCOPE

This plan covers the response actions of employees working for CBF – Charlotte, Charlotte Bioenergy Facility, in accordance with Charlotte Bioenergy Facility's Air Quality Title V Permit No. 19-01V-021 and Solid Waste Permit: Anaerobic Digestion Facility Permit No. 6033-AD-COMPOST-2015.

III. PLAN REVIEW, AMENDMENT, AND COPY DISTRIBUTION

This plan will be reviewed and amended, if necessary, when any of the following occurs:

- Applicable regulations are revised;
- The plan proves insufficient by the Division/District
- The facility changes its design, construction, operation, maintenance or other circumstances in a way that materially increases the potential for odors, or changes the logistics for a response to an odor complaint at the facility;

A copy of this plan will be maintained at CBF facility and will be submitted to authorities who may be called upon to respond to an odor complaint or investigation.

IV. FACILITY DESCRIPTION

CBF operates an anaerobic digestion plant located at 600 Johnson Road, Charlotte, NC for the treatment of organic food waste, with the production of biogas for cogeneration of electrical and thermal energy. The designed plant is able to receive a matrix of food wastes hauled to the facility, stocked in a dedicated area, subjected to a depacking and contaminant separation process for separation of inert materials from the organic mixture,

and then send the organic mixture obtained by the contamination. The degradation of this organic biomass by microorganisms under anaerobic conditions leads to the production of biogas and digestate slurry. The biogas generated from the anaerobic digesters is treated for desulfurization and removal of moisture before being sent to the cogeneration systems.

The digestate slurry produced by the anaerobic digestion is sent to solid/liquid separation (horizontal decanters), and results in two different flows: a solid digestate and a liquid digestate. The liquid digestate is blended in an equalization tank with wastewaters generated from the biogas wet scrubbers and chillers. This blended and equalized wastewater is conveyed into the on-site wastewater pre-treatment system.

The wastewater pre-treatment plant consists of biological treatment with activated sludge, which allow the reduction of organic loads and nitrogen present in the incoming wastewater. The biological portion of the pretreatment plant consists of a pre-denitrification stage followed by oxidation/nitrification and then a post denitrification stage. The wastewater discharge from the biological portion of the treatment plant is sent to a dissolved air flotation (DAF) system for clarification and recovery of the activated sludge for recycle back to the biological portion of the treatment plant and/or to the solids/liquids separator for waste sludge processing as required. The clarified effluent wastewater from the DAF is then be discharged to the local wastewater treatment plant.

The solid digestate material is disposed of as a soil amendment through a third party.

V. ODOR RISK POTENTIAL OF CRITICAL OPERATIONS

This OMP internally reviews and assesses the possible sources of odor generation and outlines the best practice and mitigation measures that shall be employed where practical, to minimize fugitive odors emitted from site. The odor risks represented by all site processes and activities including feedstocks are out discussed in the following sections.

The facility's critical operations and their risk potential for odors are detailed below.

- Feedstock Characteristics: And various other organic waste streams. CBF accepts food waste and other organic waste feedstocks from food and related industries. The facility does not accept Municipal Solid Waste or Municipal Biosolids.

- Feedstock Delivery/Reception: The reception area is where the feedstock trucks containing solid organic food waste drive up to the facility to offload. The receiving bins which the trucks deliver the solid waste into are located inside the receiving building. The reception area is designed to be under negative pressure to avoid fugitive odors . An exhaust fan collects foul air that is routed to the wet scrubber tower that functions to humidify the odor prior to the biofilter. The wet scrubber has the flexibility to dose the air stream with odorants or oxidants before being ducted to the biofilter which is a root wood media.

Solid waste feedstock deliveries will be processed in the receiving building. Doors are to remain closed except during said deliveries or for maintenance events. When deliveries arrive, the doors will be opened manually to allow for vehicle entry.

- Liquid Offload Area: Adjacent to the receiving building. Liquid feedstock is unloaded from delivery trucks on the pad to the facility biopulper tanks with the pad being cleaned end of day with drains inspected between each load. When cleaning strainer, if onsite odor develops, operators cease activity and deploy odor control agents.
- Solid Offload Area: Into the receiving building hopper located inside the receiving building. This area is cleaned between each offload with a more thorough cleaning completed at the end of receiving day. Verification of selected incoming solid loads is performed through visual inspection of the received loads.
- Dry Van Offload Area: Loading dock and transferred into receiving hoppers located inside of the receiving building.

- Third Party Vehicles: Third Party vehicles bringing waste to the site, hauling rejected materials away from site, or hauling solids products away from site are potential sources of odor. Incoming vehicles will be subject to a screening procedure for control mechanisms before being loaded. Note that CBF requests that the transport trucks are to be closed upon arrival.

- Biofilter: The biofilter is an aboveground structure filled with media to grow bacteria that remove odorous constituents from the incoming saturated air stream as it passes through the filter media. The media in the biofilter is composed of wood roots, bark, and peat. Proper maintenance of the biofilter is key to remove odors from the air before being discharged to the atmosphere. Ordinary biofilter maintenance consists of moisture evaluation of the filter bed, visual inspection of formation of macroscopic preferential paths, pH evaluation of the filter bed, remixing of the filter bed, cleaning of spray nozzles, and filter bed replacement approximately every three years. Pressure gauges will be installed to better determine/identify channeling and compaction issues. An enclosed wet (water) scrubber tower precedes the biofilter to saturate the incoming air streams prior to entering the biofilter. The wet scrubber can be dosed with a deodorizing solution and/or hydrogen peroxide to further aid in odor reduction as needed.

- Bio-Pulper Tanks (2): Primarily contains a blend of liquid and solid food waste as well as treated wastewater for dilution. These tanks have high odor generation potential from the tank headspace, and this odorous air is continuously treated in conjunction with the reception building air in the scrubber and biofiltration system.

- Hot Digester Tank (3): The hot digesters are continuously mixed biological reactors. The anaerobic microbial cultures present in the digesters breakdown organic feedstock pumped from the Biopulper into biogas and residual digestate.

This process is inherently isolated from outdoor air and all biogas is directed to the gas train and energy utilization systems.

- Co-Generation Containers (3 total): Each contain an internal combustible engine which is fueled by biogas/biomethane from the cold digester. The engines produce no odor in practice.

- Digestate Dryer: The digestate dryer will be in operation to remove potential offensive ammonia odors from the digestate in preparation for transport offsite. The dryer will only be offline for corrective and preventative maintenance outages.

- WWTP: The wastewater treatment plant consists of an equalization tank, pre-denitrification tank, nitrification tank with recycle to the pre-denitrification tank, post denitrification, and dissolved air flotation (DAF). Of these tanks, the Equalization Tank contains the highest concentration wastewater and is used to dose wastewater into the downstream tanks. The pre-denitfication through nitrification and post-denitrification tanks are significantly diluted and this process is subject to aeration via the nitrification tank. As such these main process tanks, despite being open to atmosphere, offer little odor generation potential. The Equalization (EQ) tank is also open to atmosphere but does not currently commit to offensive odors experienced at the property line, nor within the site. If it is determined the EQ tank is a source of odor, CBF will work with MCAQ to determine appropriate mitigation measures.

VI. PROPOSED OPERATIONAL IMPROVEMENTS

Equipment/Area	Description of Proposed Operational Improvements
Receiving Building	Pressure detection system
3rd Party Vehicles	Contract with haulers to ensure tarping requirement
Hot Anaerobic Digesters	N/A- not an odor souce
Dryer	N/A- not an odor source; dryer running improves odor from digestate
EQ	N/A- not an odor source
Biofilter	Pressure gauge installation
WWTP	N/A- not currently an odor source. Site team will continue to monitor for odor generation.

A. ODOR HOTLINE

CBF proposes to establish an odor complaint hot line or answering machine, which will have the ability to receive calls twenty-four (24) hours a day in order to maintain

community engagement. Complaints received during normal operating hours will be investigated and responded to immediately. Complaints received during times when the facility is closed will be investigated and responded to within twenty-four (24) hours from when the complain is received. All complaints received by the facility and actions taken in response to the complaints will be reported to the Department within twenty-four (24) from when the complain was received. Odor complaint forms to document this information have been created (see Attachment 1) and will be maintained by the facility.

B. WEATHER METER

Weather conditions that could affect odor migration include high winds and elevated outdoor temperatures during summer months. As with most locations, wind direction at the site varies widely. Wind data from the Charlotte Douglas International Airport indicates that the average wind direction is from the north/northwest direction. Topography changes in the area of the site are not expected to significantly affect the migration of odors from the site. CBF proposes to install a weather station in order to monitor weather forecasts and conditions that could attribute to fugitive odor emissions. The facility weather station will provide historical data in order to properly monitor odor complaints while considering seasonal variations. The use of externally collected data provides an impartial source to inform disputes.

VII. ODOR MONITORING PLAN

A daily odor inspection form will be used on normal business days to evaluate and document existing odors at the facility. The inspection form will include date, time, site specific conditions, weather conditions, wind direction, and characteristics and intensity of odors.

VIII. ODOR COMPLAINT PROTOCOL

To facilitate the receipt of odor complaints, the facility contact information will be displayed at the front entrance to the site. The site phone includes a 24/7 messaging system upon which concerns and complaints may be relayed. Operations and plant manager will be notified upon receipt of complaints. Following receipt of an odor complaint, an attempt will be made to contact the person issuing the complaint. A log of the complaint will be recorded and include the location the odor was detected, the potential source of the odor, wind direction, time and date, and a characterization of the odor. As part of the complaint response, an onsite and offsite inspection by an operator will occur to verify the odor and other potential off-site sources. Once the odor is verified, facility staff will work to identify and mitigate the source of the odor. Depending on the source of the odor, various mitigation strategies can be deployed including:

- Increasing housekeeping;
- Closing roll-up doors;
- Employing scent misters and backpack misters;
- Removing/ covering/ processing odorous material;

- Inspecting/ repairing J- traps and valves; and
- Adjusting wastewater additives.

If third-party vehicles are the source of odor, the Site Manager will communicate mitigation measures with them to prevent odor complaints in the future. All odor inspection forms and complaint logs will be kept onsite.

IX. ODOR INSPECTION

The odor inspection form is to be used for a daily inspection by at least one operator, the site manager, senior operator, etc. See odor inspection form, Attachment 2. All onsite odors will be noted along with mitigation actions pursued. Work orders shall be made for any repairs or maintenance required. A more robust inspection will be conducted monthly and when CBF is in receipt of a complaint, Attachment 3.

X. RESPONSIBILITY

The Plant Manager will ensure that all plant personnel are properly trained to comprehend the full scope of this procedure, to observe the conditions described in this procedure, and to ensure actions are carried out as described. Appropriate documentation of site employees trained on the OMP will be maintained on site.

ATTACHMENT 1

Anaergia

CBF Odor Complaint Log

Date & Time	Description of Complaint	Wind Direction	Complainant Name & Contact Info	Person Receiving Complaint	Response to Complaint

ATTACHMENT 2

Anaergia

CBF Daily Odor Inspection Log

Date & Time	Initials	T-90	T-91	T-92	Entrance	Scale	Bio	Reception	Dryers	Centrifuge	WWTP	Pond

ATTACHMENT 3

CBF Monthly Odor Inspection

1. Record wind direction _____ Date _____

2. Walk perimeter and document any subjective odor _____

3. Walk with biogas meter and document biogas readings, pictures should be taken of any and all areas with readings above 1 ppm. Areas to be checked include
    1. HD91 Safety Relief Valve ___
    2. HD90 Safety Relief Valve___
    3. CD99 Safety Relief Valve___
    4. Scrubber building doors (external to building)___
    5. Screw press building doors (external to building)___
    6. Perimeter walk ____
    7. Offsite Review; North 'cul-de-sac' __, East road ___, Front of Site ___

4. Walk to top of the hot digesters, document subjective or_____
noise from reliefs_____ biogas meter readings_____

5. Document biogas pressure at 100.02 in Scada. _____,
if above 2100 (vent set at 2200), manually trigger flares to pull pressure down or notify site manager.

6. Check J-traps visually. Record if full or Empty.

H2S Scrubber	Trap #1 _____
	Trap #2_____
	Trap #3 _____
Flare Drain Trap	_____
Engine Chiller Area	_____

7. Document determination if CBF is the source of odor. Yes No

8. If not, document a drive offsite and subjectively identify potential sources in community.

_____

9. Trucks onsite (e.g. solid v. liquid; non-compactor v. compactor; name): _____

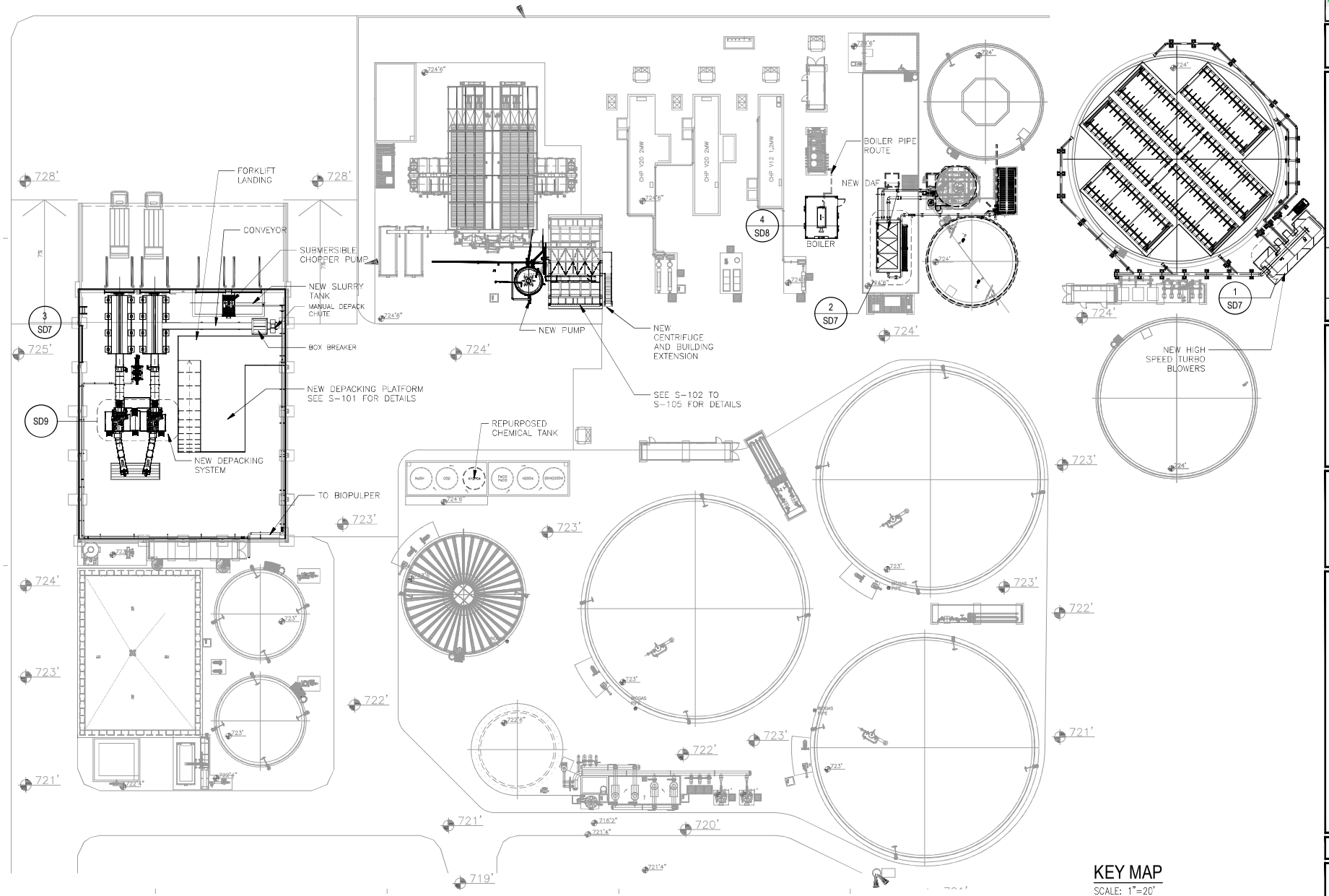
10. Description of facility activities: _____

11. Biofilter pressure gauge readings:_____

Initials : _____

Note: If possible to document with pictures, do so. Management's discretion to include or not.

ATTACHMENT 4



KEY MAP
SCALE: 1"=20'

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL GROUP
1 PARK PLAZA #1000
IRVINE, CA 92614
WWW.MONTROSE-ENV.COM

REV.	DATE	DESCRIPTION

DESIGNED BY: DS | DRAWN BY: EC | CHECKED BY: JW | APPROVED BY: BS

STATUS: ISSUED FOR CONSTRUCTION

PLOT DATE: 9/14/2018 5:26 PM

CLIENT: ORBIT ENERGY CHARLOTTE, LLC
14120 BALLANTYNE CORPORATE PLACE, SUITE 400
CHARLOTTE, NC 28277

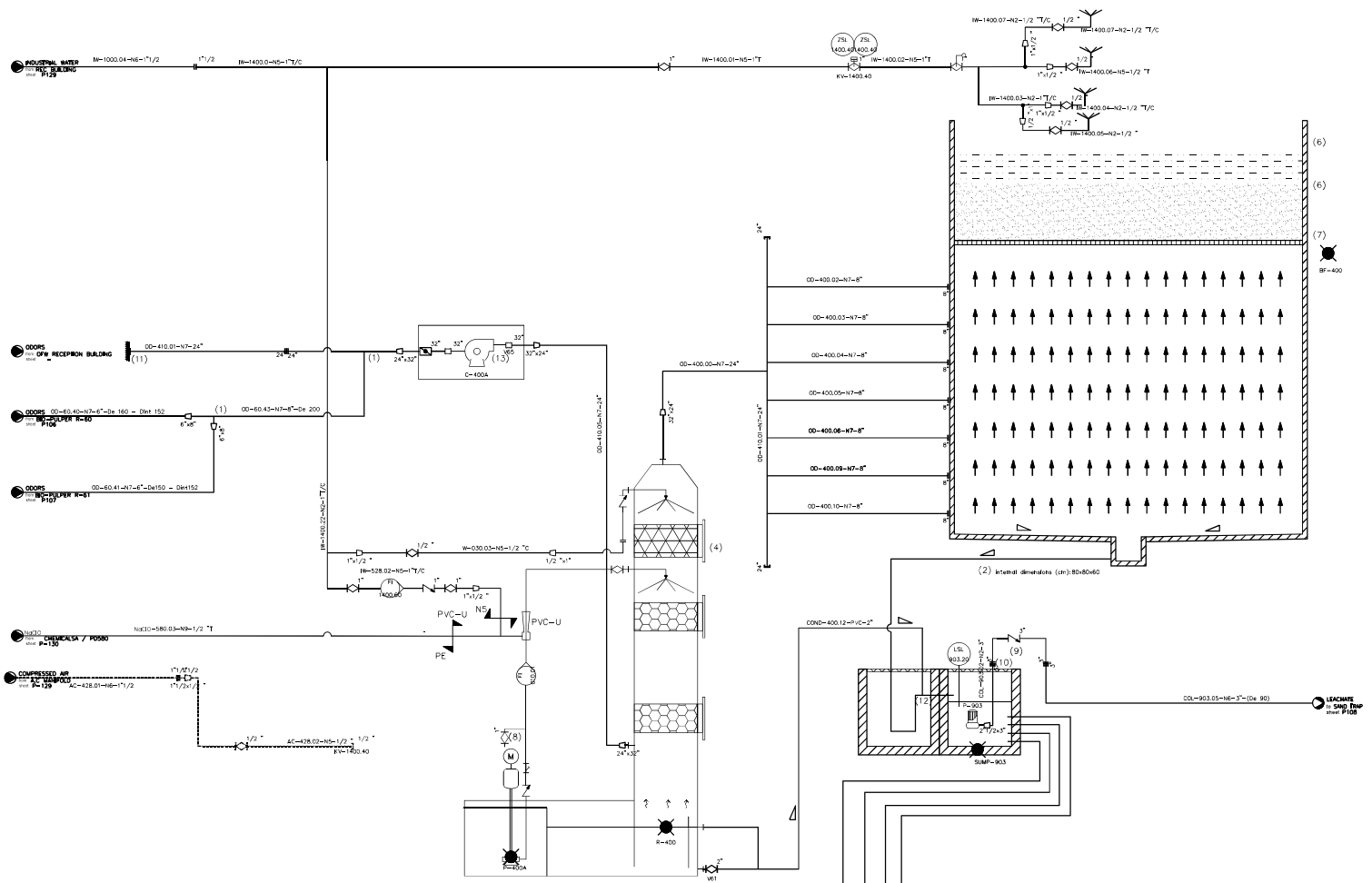
PROJECT LOCATION: BIOGAS DIGESTER FACILITY
600 JOHNSON ROAD
CHARLOTTE, NC

DESCRIPTION: KEY MAP

PROJECT NO.
029RC1-370240

SHEET:
C-101

ATTACHMENT 5



NOTES:

1: WHERE POSSIBLE: BUTT WELDING
2: INTAKE DIMENSIONS TO BE CONFIRMED
3: LEVEL INSTRUMENTATION
4: MANHOLE FOR DEMISTER MAINTENANCE AND INSERT FILLING MATERIAL (PALL RING)
5: –
6: FILLLING BED: 100 cm BARK – 50 cm WOODDEN ROOTS
7: PLASTIC MODULE SUPPORT STRUCTURE, UPPER CONCRETE IS POURED, BOTTOM THERE IS A PLENUM FOR AIR
8: SAMPLING POINT
9: BALL CHECK VALVE
10: PROVIDE FLANGED COUPLING
11: PROVIDE INTAKE GRID 1000 X 600 mm, IF NECESSARY LATER MOUNT 3 INTAKE LINE
12: FIX PIPE ON PIPE, IN ORDER TO AVOID ANY LOSS
13: AIR OUTLET 785x640 mm

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL GROUP
1 PARK PLAZA #1000
IRVINE, CA 92614
WWW.MONTROSE-ENV.COM

REV.	DATE	DESCRIPTION
3	2/19/2020	Updates

DESIGNED BY: DS
DRAWN BY: EC
CHECKED BY: JW
APPROVED BY: BS
PLOT DATE: 2/20/2020 1:22 PM
STATUS: ISSUED FOR CONSTRUCTION

CLIENT: ORBIT ENERGY CHARLOTTE, LLC
14120 BALLANTYNE CORPORATE PLACE, SUITE 400
CHARLOTTE, NC 28277

PROJECT LOCATION: BIOGAS DIGESTER FACILITY
600 JOHNSON ROAD
CHARLOTTE, NC 28206

DESCRIPTION: ODOR CONTROL

PROJECT NO. 029RCI-370240

SHEET: P-128

FILE: G:\SHARED DRIVES\BIOGAS DESIGN\01 CHARLOTTE\DESIGN\CURRENT P&ID\CAD FILES\DEC P&IDS\P-ID DWG\NC - P-128 - ODOR CONTROL.DWG