



MECKLENBURG COUNTY
Land Use and Environmental Services Agency
- AIR QUALITY -

April 20, 2016

Mr. Charlie Stroman, HSE & Security Manager
Emerald Charlotte Chemicals, LLC
8309 Wilkinson Boulevard
Charlotte, NC 28214

RE: Air Quality Permit to Construct/Operate No. 14-02V-595

Dear Mr. Stroman:

In accordance with our address change notification dated February 16, 2016, Mecklenburg County Air Quality (MCAQ) forwards herewith Permit to Construct/Operate (Permit) No. 14-02V-595 for the construction/operation of air pollution emission sources or abatement equipment. This permit has been amended to reflect MCAQ's new address at 2145 Suttle Avenue, Charlotte, NC 28208.

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 December 3, 2019. 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 nine 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 December 3, 2018.
- **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. Part 1 Condition Nos. A-19 and A-33 now reflect MCAQ's new address.
- **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 E-2 to comply with the air toxics requirement.
- 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.

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,


Donna Cavaliere
Sr. Air Quality Specialist

DSC:isp

Enclosures (2)
Permit No. 14-02V-595
Appendix A



AIR QUALITY TITLE V PERMIT

Permit No.	Effective Date	Expiration Date	Modification Date(s)	Replaces Permit No(s)
14-02V-595	December 3, 2014	December 3, 2019	April 20, 2016	14-01V-595

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: Emerald Performance Materials, LLC

Site Name (if different): Emerald Carolina Chemical, LLC

Permitted Facility Location: 8309 Wilkinson Blvd.

City, State, Zip: Charlotte, NC 28214

Facility Mailing Address: 8309 Wilkinson Blvd.

City, State, Zip: Charlotte, NC 28214

Primary SIC Code: 2821, 2869

Renewal Application Due: December 3, 2018

Jasen Rayfield 4-20-2016

Program Manager, Air Quality Program

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PART 1

Facility Conditions and Limitations

PART 1

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 under **MCAPCO Regulation 1.5231 - “Air Quality Fees”**.

A-8. Inspection and Entry

In accordance with **MCAPCO Regulation 1.5508 - “Permit Content” Paragraph (I)**, 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 under the conditions of the permit;
- b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- c. inspect, at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. sample or monitor substances or parameters, at reasonable times and using reasonable safety practices, 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 under **MCAPCO Article 2.0000** or Title I of the federal Clean Air Act;
2. the changes do not cause the allowable emissions under the permit to be exceeded;
3. the Permittee notifies the Director and EPA with written notification 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, or
2. the change is not covered under any applicable requirement.

c. Emissions Trading:

To the extent that emissions trading is allowed under **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,
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. violations of conditions contained in the permit have occurred;
- 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 his authorized representative to enter the premises where a source of emissions is located, have access to records required to be kept under 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 under **40 CFR Part 70.7 Paragraph (f) or (g)**.

A-13. Permit Renewal and Expiration

In accordance with **MCAPCO Regulation 1.5513 - “Permit Renewal and Expiration”**, permit expiration terminates the facility’s right to operate unless a complete renewal application has been submitted at least nine 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 by the next business day; malfunctions, emergencies, and other upset conditions 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”**.

In accordance with **MCAPCO Regulation 2.0535**, the Director shall be notified by 9:00 am of the Department’s next business day after the permittee becomes aware of malfunctions, emergencies and upset conditions that result in excess emissions lasting longer than four (4) hours.

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 under **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 reasonable 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, North Carolina 28208

A-20. Information Submittal

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

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 (e)**, 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/Variations/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; Variations; Judicial Review”**.

A-31. Duty to Comply with Other Regulations

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

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, or 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 method(s) 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 at the following addresses:

Director	and	Environmental Protection Agency
Mecklenburg County Air Quality		Attn: APTMD Air & EPCRA Enforcement Branch
2145 Suttle Avenue		Atlanta Federal Center
Charlotte, NC 28208		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, the statement 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 under **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 of permit issuance;
 - 3. the applicable requirements under Title IV; or
 - 4. the ability of MCAQ (or EPA under 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.

A-37. Consent Decree Requirements

If Emerald recommissions the Glyoxal Unit Emerald shall, from all platforms including high platforms, monitor monthly for indications of any leak of formaldehyde from the Glyoxal Unit’s formaldehyde concentrator using Method 21 for each piece of Equipment and using AVO Monitoring otherwise. When using AVO Monitoring, Emerald shall pay particular attention to any audio, visual, olfactory or other evidence of a potential leak regardless of whether such leak appears to emanate from a piece of Equipment or from elsewhere on the formaldehyde concentrator. Each monthly monitoring event shall be recorded in a manner consistent with Emerald’s routine Leak Detection and Repair (LDAR) monitoring of Equipment on the Glyoxal Unit.

▶ Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by 40 C.F.R. Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

▶ AVO Monitoring means monitoring for evidence of a potential leak to atmosphere using an audible, visual, olfactory, or any other detection method.

A-38. Consent Decree Requirements

If Emerald recommissions the Glyoxal Unit, Emerald shall repair any leak of formaldehyde detected from the Glyoxal Unit’s formaldehyde concentrator as follows:

▶ For any repair of a formaldehyde leak detected from the Glyoxal Unit’s formaldehyde concentrator that requires a process unit shutdown, Emerald shall put down the process unit in the most immediate and safest manner possible to expedite the repair, not to exceed 15 Days after the date of leak detection. Due to the potential impact of formaldehyde exposure to human health and the environment, Emerald shall not place any piece of Equipment that is leaking formaldehyde on the delay of repair list.

- ▶ Due to the potential impact of formaldehyde exposure to human health and the environment, for any repair of a formaldehyde leak detected from the Glyoxal Unit's formaldehyde concentrator that does not require a process unit shutdown, Emerald shall repair such leak immediately and shall not place any piece of Equipment that is leaking formaldehyde on the delay of repair list.
- ▶ Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by 40 C.F.R. Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).
- ▶ Day shall mean a calendar day unless expressly stated to be a business day. In computing any period of time in this Condition and Limitation, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

A-39. Consent Decree Requirements

At least 120 Days prior to any recommissioning of the Glyoxal Unit, Emerald will submit to EPA for review and comment by EPA, after consultation with LUESA, a Process Hazard Analysis (PHA) evaluating the hazards and risks present in the Glyoxal Unit based on the regulated HAP substances utilized or produced and the unit's processes and procedures. This includes, but is not limited to, the location, identification and characterization of potential sources of significant leaks and potential sources posing an explosive risk. The PHA shall also include a probability analysis for the likelihood of individual accidents; methods and safeguards to be used or needed to minimize and/or control the hazards or prevent equipment malfunction or human error; and steps needed or used to detect or monitor releases. It also shall, through risk analysis, identify any Equipment that is unsafe to monitor or would be unsafe to repair. If Emerald determines that the cause of the unsafe-to-monitor or unsafe-to-repair situation constitutes a potential violation of its general duty under Section 112(r) of the Clean Air Act, 42 U.S.C. §7412(r), then Emerald must remedy the situation or include in the PHA a schedule and plan for remedying the situation. In its submittal to EPA, Emerald shall also describe how the recommendations in the PHA are being addressed and, if applicable, a schedule for implementing the recommendations.

- ▶ Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by 40 C.F.R. Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).
- ▶ Day shall mean a calendar day unless expressly stated to be a business day. In computing any period of time in this Condition and Limitation, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

A-40. Consent Decree Requirements

If Emerald seeks to recommission the Glyoxal Unit and to treat one or more pieces of Equipment in the Glyoxal Unit as being "in heavy liquid service," Emerald shall submit a request, at least 120 Days prior to any recommissioning of the Glyoxal Unit, to EPA and LUESA for approval by EPA, after consultation with LUESA, for the glyoxal solution that will be used in the Glyoxal Unit to be classified as "in heavy liquid service." At a minimum, Emerald's request shall: (a) include the results of a test of a representative sample of the glyoxal solution; (b) demonstrate that the glyoxal solution will not be "in light liquid service" under the standard set forth in 40 C.F.R. §60.485(e)(1), as referenced in 40 C.F.R. §63.161; and (c) for purposes of the test, use a direct measurement of

vapor pressure. Such request is not subject to Section V.E. (“Review and Comment on Deliverables”) of Civil Action No. 3:12-cv-00554 Consent Decree filed in US District Court for the Western District of North Carolina, Charlotte Division on October 25, 2012. If and to the extent that Emerald seeks to restart the Glyoxal Unit prior to a final determination of whether the glyoxal solution is “in light liquid service” or “in heavy liquid service,” Emerald shall deem all Equipment in the Glyoxal Unit as being “in light liquid service” and shall comply with all LDAR provisions applicable to Equipment that is “in light liquid service.”

▶ Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by 40 C.F.R. Part 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

▶ Day shall mean a calendar day unless expressly stated to be a business day. In computing any period of time in this Condition and Limitation, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

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

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

This 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

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.

C. FEDERAL ONLY REQUIREMENTS

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

- THERE ARE NO FEDERAL ONLY REQUIREMENTS FOR THIS PERMIT -

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 & Federal Requirements	Local Only Requirements	Federal Only Requirements
ES-1	One (1) 42 million Btu/hr Murray Ironworks MCS3-45 boiler, Serial #10271, fired with natural gas or #2 fuel oil	I = 1971	N/A	None	D-1, D-2, D-6, D-10, D-15	E-1, E-2	
ES-2	Batch process for production of resins, reactants, and/or accelerators including: - single reactors (100-14, 100-6, 100-1, and 200-1) - blend tank RS-Tk-100-050 - other related equipment	I = 1971 M = 2000 M = 2001	CD-6	One packed bed counter-current scrubber system for control of formaldehyde emissions from the blend tank (ID No. 100-050) I=2000	D-3, D-6, D-10, D-11, D-12, D-15	E-1, E-2	
ES-2a	Batch process for production of Amino Resins including reactors (100-6 and 100-14) and condensate receiver (100-7) and vacuum jet (100-9)	I = 1971	CD-8	A two-stage counter-current packed scrubber system for formaldehyde and methanol control from amino resins produced in reactors 100-6 and 100-14 (I=2003)	D-3, D-4, D-6, D-10, D-11, D-14, D-15	E-1, E-2	
ES-3	A batch operation for the production of water repellents having: - reactor (200-15) - melt tank (150-6) - premix tank (150-16) - homogenizer (150-2) - storage tank (150-030) 20,000 gal - storage tank (250-031) 20,000 gal - other related equipment	I = 1971 M = 2000	N/A	None	D-3, D-6, D-10, D-15	E-1, E-2	

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 & Federal Requirements	Local Only Requirements	Federal Only Requirements
ES-8a	Bulk storage tanks :						
	ID Capacity (gal)						
	200-01 1,500						
	200-08 2,500						
	200-25A/B/C/D 20,000						
	200-52/54 6,000						
	300-12/13/15 20,000						
	300-22/23/24 20,000						
	300-25 30,000						
	300-29 18,000						
	300-34 10,000						
	300-38 18,000						
	300-40A/B 9,000						
	300-42/43 18,000						
	300-44/45 20,000						
	300-61 30,000						
	300-62 31,000						
	300-63 12,000						
	300-64/65 31,000	I = 1963,					
	300-66 12,000	1983,1998,					
	300-71 30,000	1999, 2000	N/A		None	D-3, D-6, D-10, D-15	E-1, E-2
	300-76/78 20,000						
	300-80/81/82/83 15,000	M= 1998, 2001					
	300-89 20,000						
	300-93 30,000						
	300-97/98 20,000						
	300-99/100 30,000						
	diesel 20,000						
	diesel 15,000						
	200-60 10,000						
300-5 5,000							
300-7 10,000							
300-8/10/17 12,000							
300-30 20,000							
300-36 8,000							
300-39/41 18,000							
300-74 10,000							

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 & Federal Requirements	Local Only Requirements	Federal Only Requirements																
ES-8c	Storage Tanks: <table border="1"> <thead> <tr> <th>ID</th> <th>Capacity (gal)</th> </tr> </thead> <tbody> <tr> <td>100-1A</td> <td>20,000</td> </tr> <tr> <td>100-1B</td> <td>20,000</td> </tr> <tr> <td>100-1C</td> <td>30,000</td> </tr> <tr> <td>300-21</td> <td>20,000</td> </tr> <tr> <td>300-94</td> <td>30,000</td> </tr> <tr> <td>300-95</td> <td>30,000</td> </tr> <tr> <td>300-96</td> <td>20,000</td> </tr> </tbody> </table>	ID	Capacity (gal)	100-1A	20,000	100-1B	20,000	100-1C	30,000	300-21	20,000	300-94	30,000	300-95	30,000	300-96	20,000	I=1973 I=1979	N/A	None	D-3, D-6, D-10, D-15	E-1, E-2	
ID	Capacity (gal)																						
100-1A	20,000																						
100-1B	20,000																						
100-1C	30,000																						
300-21	20,000																						
300-94	30,000																						
300-95	30,000																						
300-96	20,000																						
ES-8d	Bulk Storage Tanks with control: <table border="1"> <thead> <tr> <th>ID</th> <th>Capacity (gal)</th> </tr> </thead> <tbody> <tr> <td>300-45A</td> <td>20,000</td> </tr> <tr> <td>300-50</td> <td>17,000</td> </tr> </tbody> </table>	ID	Capacity (gal)	300-45A	20,000	300-50	17,000	I-1988 I=1999	CD-3 CD-5	CD-3 A counter-current packed scrubber for formaldehyde control (No emission credit) CD-5 Vapor Recovery	D-3, D-6, D-10, D-13, D-15	E-1, E-2											
ID	Capacity (gal)																						
300-45A	20,000																						
300-50	17,000																						
ES-9	Product transfer operations - transfer of products from storage tanks to drum, totes, or tanker trucks.	I = 1971	N/A	None	D-3, D-6, D-7, D-10, D-15	E-1, E-2																	
ES-10b	Equipment Leaks associated with valves, pumps, and flanges	I = 1971 M = 1994 M = 1998 M=2000 M=2001	N/A	None	D-3, D-6, D-10, D-15	E-1, E-2																	
ES-10c	Equipment Leaks associated with valves, pumps, and flanges subject to Amino/Phenolic MACT	I = 1971 M = 1994 M = 1998 M=2000 M=2001	N/A	None	D-3, D-4, D-6, D-10, D-15	E-1, E-2																	
ES-11	A batch process for production of sulfanated products including: - reactors (250-2, 250-5) - wash tanks (250-3, 250-4) - process vessels (610-11, 610-12) - other related equipment	I = 1996	N/A	None	D-3, D-6, D-9, D-10, D-15																		

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 & Federal Requirements	Local Only Requirements	Federal Only Requirements
ES-12	A batch process for production of esterification products and/or foam control products including: - reactor 200-1 - other related equipment	I = 1971 M = 2009	N/A	None	D-3, D-6, D-9, D-10, D-15		
ES-13	A batch process for production of waxes including: - reactor (200-15) - other related equipment	I = 1971 M = 1996	N/A	None	D-3, D-6, D-9, D-10, D-15		
ES-14	A batch process for production of blends including: - mix tanks (250-6, 150-17, and 125-6 or equivalent) - other related equipment	I = 1971 M=2000, 2001	N/A	None	D-3, D-6, D-9, D-10, D-15	E-1, E-2	
ES-15	Chemical sewer connections and physical equipment at Wastewater Treatment System	I=1971	N/A	None	D-3, D-6, D-10, D-15	E-1, E-2	
ES-16a	One 250-hp engine used to pump firewater in the event of an emergency	I = 1971	N/A	None	D-2, D-5, D-6, D-10, D-11, D-15	E-1, E-2	
ES-16b	One 305-hp engine used to pump firewater in the event of an emergency	I = 2012	N/A	None	D-2, D-5, D-6, D-8, D-10, D-11, D-15	E-1, E-2	
ES-17	A batch process for production of Foam Control Products including: <u>Foam Blast Line 316</u> Mix Tank T-316 Wash Tanks 250-3, 250-4, 200-24b <u>Foam Blast Line 307 / 320</u> Mix Tank T-307 Mix Tank T-309 Mix Tank / Wash Tank T-313 Mix Tank T-320	Mix Tanks: I = 2009 Wash Tanks 250-3, 250-4, 200-24b: I = 1996, M = 2009	N/A	None	D-3, D-6, D-10, D-15	E-1, E-2	

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 & Federal Requirements	Local Only Requirements	Federal Only Requirements
ES-18	Silicone Fluid Reactive (SFR) and Vinyl Silicone production line including: - 8,000-gallon Silicone Oil Tank (300-1) - 3,000-gallon SFR Reactor (200-10) - 3,000-gallon Vinyl Silicone Reactor (200-11) - 2,650-gallon Receiver (200-12) - 1,000-gallon Vacuum Receiver (200-13) - Thin Film Evaporator with electric hot oil heater (200-14) - Sparkler Filter - 60-gallon Mix Tank - Condenser - Transfer Pumps - Heat Exchanger on Tower Water - Two Bag Filters for product polishing	I=2011	N/A	None	D-3, D-6, D-10, D-15		

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 & Federal Requirements	Local Only Requirements	Federal Only Requirements
Insignificant Activities	<ul style="list-style-type: none"> • One (1) 1100 gallon diesel storage tank • One (1) space heater • R&D lab and QA/QC laboratory • One (1) development lab • Five (5) inorganic storage tanks • Urea Transfer System (closed loop) including one Urea Silo with bin vent filter and Weigh Scale with baghouse • One (1) Colloid Mill for emulsions (no emissions) • Insignificant Activities (Part of ES-17 Foam Line 316) including: (1 - 2009) <ul style="list-style-type: none"> - Homogenizer 308 (1190 gal/hr) - Colloid Mill - Heat Exchanger - In-line mixer (20 Hp) • Insignificant Activities (Part of ES-17 Foam Line 307 / 320) including: (1 = 2009) <ul style="list-style-type: none"> - Homogenizer 307 (800 gal/hr) - In-line mixer (10 Hp) • Insignificant Activities (Part of ES-12 Foam Control) including: (1 = 2009) <ul style="list-style-type: none"> - Homogenizer M6 - 3 MMBtu/hr Hot Oil Heater - natural gas fired • Chiller (100 ton) charged with R410-A (96 lb charge) to be used with Foam Control Process (1 = 2009) • Mobile filtration unit • 2 vacuum pumps for use with reactors 100-1, 100-6, 200-1, 200-10, and 200-11 (associated with ES-2 and ES-2a) 			D-10, D-15			

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 Requirements	Federal 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

D. 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.

- D-1. The facility shall be operated in accordance with **MCAPCO Regulation 2.0503 - “Particulates from Fuel Burning Indirect Heat Exchangers”**, such that the maximum particulate emission rate resulting from the combustion of a fuel shall not exceed the allowable emission rate of 0.6 lb/million Btu input.
- D-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.
- D-3. The facility shall be operated in accordance with **MCAPCO 2.0958 - “Work Practices For Sources of Volatile Organic Compounds”**. The owner or operator of emission sources subject to this regulation shall:
- A. store all material, including waste material, containing volatile organic compounds in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - B. clean up spills as soon as possible following proper safety procedures,
 - C. store wipe rags in closed containers,
 - D. not clean sponges, fabric, wood, paper products, and other absorbent materials,
 - E. drain solvents used to clean supply lines and other coating equipment into closable containers and close containers immediately after each use,
 - F. clean mixing, blending, and manufacturing vats and containers by adding cleaning solvent, closing the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be poured into a closed container.
- When cleaning parts, the owner or operator of any facility subject to this Regulation shall:
- A. flush parts in the freeboard area,
 - B. take precautions to reduce the pooling of solvent on and in the parts,
 - C. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - D. not fill cleaning machines above the fill line,
 - E. not agitate solvent to the point of causing splashing.
- Sources on which a control device was installed to comply with **MCAPCO Regulation 2.0518 - “Miscellaneous Volatile Organic Compound Emissions”** Paragraph (d) (now repealed) shall continue to maintain and operate the control device providing at least 85% control efficiency, unless the Director determines that the removal of the control device shall not cause or contribute to a violation of the ozone ambient standard.
- D-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 63.16, Subpart A - “General Provisions”**, and **40 CFR 63.1400 to 40 CFR 63.1419 Subpart OOO - “National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins ”**, which includes the following pertinent sections:

- A. **63.1400 - “Applicability and designation of affected sources”**
- B. **63.1401 - “Compliance schedule”**
- C. **63.1402 - “Definitions”**
- D. **63.1403 - “Emission standards”**
- E. **63.1404 - “Storage vessel provisions”**
- F. **63.1405 - “Continuous process vent provisions”**
- G. **63.1406 - “Reactor batch process vent provisions”**

Portions of this section require that:

- (a) *Emission standards: Owners or operators of reactor batch process vents located at new or existing affected sources shall comply with paragraph (a)(1) or (2) of this section, as appropriate. As an alternative to complying with paragraph (a) of this section, an owner or operator may comply with paragraph (b) of this section.*
 - (1) *The owner or operator of a reactor batch process vent located at a new affected source shall control organic HAP emissions by complying with either paragraph (a)(1)(i), (ii), or (iii) of this section.*
 - (i) *Vent all emissions of organic HAP to a flare.*
 - (ii) *Reduce organic HAP emissions for the batch cycle by 95 weight percent using a control device or control technology.*
 - (iii) *Reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0045 kilogram of organic HAP per megagram of product or less for solvent-based resin production, or to 0.0004 kilogram of organic HAP per megagram of product or less for non-solvent-based resin production.*
 - (2) *The owner or operator of a reactor batch process vent located at an existing affected source shall control organic HAP emissions by complying with either paragraph (a)(2)(i), (ii), or (iii) of this section.*
 - (i) *Vent all emissions of organic HAP to a flare.*
 - (ii) *Reduce organic HAP emissions for the batch cycle by 83 weight percent using a control device or control technology.*
 - (iii) *Reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 kilogram of organic HAP per megagram of product or less for solvent-based resin production, or to 0.0057 kilogram of organic HAP per megagram of product or less for non-solvent-based resin production.*
- (b) *Alternative standard: Vent all organic HAP emissions from a reactor batch process vent to a combustion control device achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration of 50 ppmv or less. Any reactor batch process vents that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraph (a)(1)(ii), or paragraph (a)(2)(ii) of this section.*
- (c) *Use of boiler or process heater: If a boiler or process heater is used to comply with the requirements of paragraph (a)(1)(i) or (ii), or paragraph (a)(2)(i) or (ii) of this section, the reactor batch process vent shall be introduced into the flame zone of such a device.*

- H. **63.1407 - “Non-reactor batch process vent provisions”**

Portions of this section require that:

- (a) *Emission standards:*
 - The owner or operator of a non-reactor batch process vent located at a new affected source shall:*
 - (i) *Vent all emissions of organic HAP to a flare; or*

(ii) *For the collection of non-reactor batch process vents within the affected source, reduce organic HAP emissions for the batch cycle by 76 weight percent using a control device or control technology.*

The owner or operator of a non-reactor batch process vent located at an existing affected source shall:

(i) *Vent all emissions of organic HAP to a flare; or*

(ii) *For the collection of non-reactor batch process vents within the affected source, reduce organic HAP emissions for the batch cycle by 62 weight percent using a control device or control technology.*

(b) *Alternative standard. Comply with either paragraph (b)(1) or (2) of this section.*

(1) *Control device outlet concentration. Vent all organic HAP emissions from a non-reactor batch process vent to a combustion control device achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration of 50 ppmv or less. Any reactor batch process vents that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraph (a)(2) or (3) of this section.*

(2) *Mass emission limit. Include the emissions from all non-reactor batch process vents in the compliance demonstration required for reactor batch process vents complying with the mass emission limits specified in §63.1406(a)(1)(iii) and (a)(2)(iii), as appropriate. This compliance option may only be used when the owner or operator has elected to comply with the mass emission limit for reactor batch process vents.*

(c) *Use of boiler or process heater. If a boiler or process heater is used to comply with paragraph (a)(2)(ii) or (a)(3)(ii) of this section, the reactor batch process vent shall be introduced into the flame zone of such a device.*

(d) *Determining uncontrolled organic HAP emissions. Owners or operators shall determine uncontrolled organic HAP emissions from the collection of non-reactor batch process vents within the affected source based on engineering assessment as described in §63.1414(d)(6).*

I. **63.1408 - “Aggregate batch vent stream provisions”**

J. **63.1409 - “Heat exchange system provisions”**

K. **63.1410 - “Equipment leak provisions”**

Portions of this section require that:

The owner or operator of each affected source shall comply with the requirements of 40 CFR part 63, subpart UU (national emission standards for equipment leaks (control level 2)) for all equipment, as defined under §63.1402, that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more.

L. **63.1411 - “[Reserved]”**

M. **63.1412 - “Continuous process vent applicability assessment procedures and methods”**

N. **63.1413 - “Compliance demonstration procedures”**

Portions of this section require that:

For each emission point, the owner or operator shall meet three stages of compliance, with exceptions specified in this subpart. First, the owner or operator shall conduct a performance test or design evaluation to demonstrate the performance of the control device or control technology being used. Second, the owner or operator shall meet the requirements for demonstrating initial compliance (e.g., a demonstration that the required percent reduction is achieved). Third, the owner or operator shall meet the requirements for demonstrating continuous compliance through some form of monitoring (e.g., continuous monitoring of operating parameters).

O. **63.1414 - “Test methods and emission estimation equations”**

P. **63.1415 - “Monitoring Requirements”**

Portions of this section require that:

Each owner or operator of an emission point located at an affected source that uses a control device to comply with the requirements of this subpart and has one or more parameter monitoring level requirement specified under this subpart, shall install the monitoring equipment specified in paragraph (b) of this section in order to demonstrate continued compliance with the provisions of this subpart. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

Q. 63.1416 - "Recordkeeping Requirements"

Portions of this section require that:

The owner or operator of an affected source shall develop a startup, shutdown, and malfunction plan as specified in §63.6(e)(3) and shall keep the plan on-site. Records shall be kept as specified in paragraphs (b)(1) and (2) of this section. Records are not required for emission points that do not require control under this subpart.

(1) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with this subpart during which excess emissions (as defined in §63.1400(k)(4)) occur.

(2) For each start-up, shutdown, or malfunction during which excess emissions (as defined in §63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan.

These records may take the form of a "checklist" or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

R. 63.1417 - "Reporting Requirements"

Portions of this section require that:

For existing and new affected sources, each owner or operator shall submit Periodic Reports as specified in paragraph (f)(1) of this section. In addition, for equipment leaks subject to §63.1410, the owner or operator shall submit the information specified in 40 CFR part 63, subpart UU, and for heat exchange systems subject to §63.1409, the owner or operator shall submit the information specified in §63.1409. Section 63.1415 shall govern the use of monitoring data to determine compliance for emissions points required to apply controls by the provisions of this subpart.

Except as specified in paragraph (f)(12) of this section, a report containing the information in paragraph (f)(2) of this section or containing the information in paragraphs (f)(3) through (11) of this section, as appropriate, shall be submitted semiannually no later than 60 days after the end of each 180 day period."

For the purposes of this subpart, the semiannual start-up, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under paragraph (f) of this section instead of being submitted on the schedule specified in §63.10(d)(5)(i). Said reports shall include the information specified in §63.1416(b)(1) and (2) and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy."

Other reports shall be submitted as specified in paragraphs (h)(1) through (7) of this section.

S. 63.1418 - "[Reserved]"

T. 63.1419 - "Implementation and enforcement"

- D-5. 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?”**

D-6. The facility shall be operated in accordance with **MCAPCO Regulation 2.2100 - “Risk Management Program”**. The requirements are stated in **40 CFR 68.1 to 68.220 “Chemical Accident Prevention Provisions”** which includes the following subparts:

- A. **Subpart A – “General”**
Portions of this subpart require an owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process to comply with the requirements of this part three years after the date on which a regulated substance is first listed under §68.130 or the date on which a regulated substance is first present above a threshold quantity in a process, whichever is later.
- B. **Subpart B – “Hazard Assessment”**
Portions of this subpart require that an owner or operator shall prepare worst-case release and alternative release scenario analyses, complete the 5 year accident history and conduct an offsite consequence analysis as described in the applicable sections of §68.20 through 68.42. The offsite consequence analysis shall be reviewed and updated at least every five years, or as process changes necessitate, in accordance with §68.36.
- C. **Subpart C – “Program 2 Prevention Program”**
Portions of this subpart require that sources subject to the Program 2 Prevention Program comply with safety information, hazard review, operating procedures, training, maintenance, compliance audits, and incident investigation requirements in accordance with §68.48 through §68.60.
- D. **Subpart D – “Program 3 Prevention Program”**
Portions of this subpart require that sources subject to the Program 3 Prevention Program comply with process safety information, process hazards analysis, operating procedures, training, mechanical integrity, management of change, pre-startup review, compliance audits, incident investigation, employee participation, hot work permit, and contractors requirements in accordance with §68.65 through §68.87.
- E. **Subpart E – “Emergency Response”**
Portions of this subpart require that affected sources develop and implement an emergency response program for the purpose of protecting public health and the environment, in accordance with §68.90 through §68.95.
- F. **Subpart F – “Regulated Substances for Accidental Release Prevention”**
Portions of this subpart designate regulated substances for a Risk Management Plan (RMP), threshold quantities and determination, and establish petition requirements to add or delete substances.

G. Subpart G – “Risk Management Plan”

Portions of this subpart require:

- (1) *An owner or operator submit to EPA a single RMP that includes the information required by §68.155 through §68.185 for all covered processes.*
- (2) *The RMP shall be reviewed and updated at least once every five years in accordance with §68.190.*
- (3) *Emergency contact information shall be updated within one month of any change in accordance with §68.195.*
- (4) *New accident history information shall be updated for any accidental release meeting the five-year accident history reporting criteria within six months of the release in accordance with §68.195.*

H. Subpart H – “Other Requirements”

This subpart covers record retention, information availability to the public, permit requirements, and audits.

D-7. The facility shall be operated in accordance with **MCAPCO Regulation 2.0948 - “VOC Emissions from Transfer Operations”**. The owner or operator shall not load in any one day more than 20,000 gallons of any volatile organic compound with a vapor pressure of 1.5 pounds per square inch or greater under actual conditions into any truck-tank, trailer, or railroad tank car from any loading facility unless the loading uses submerged loading through boom loaders that extend down into the compartment being loaded or by other methods demonstrated to the Director to be at least as efficient.

D-8. 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 60.4200 to 60.4219, Subpart III - “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines”** (“CI ICE”) which includes the following pertinent sections:

A. **60.4200 - “Am I subject to this subpart?”**

B. **60.4204 - “What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI ICE?”**

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. **60.4205 - “What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI ICE?”**

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 emergency engine/generator.

D. **60.4206 - “How long must I meet the emission standards if I am an owner or operator of a stationary CI 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.

E. **60.4207 - “What fuel requirements must I meet if I am an owner or operator of a stationary CI ICE subject to this subpart?”**

Portions of this Section require that the owner or operator of an affected source must, beginning October 1, 2007, use diesel fuel that meets the requirements of 40 CFR 80.510(a), which in turn requires the fuel sulfur content be less than 500 ppm. Beginning October 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, which in turn requires the fuel sulfur content be less than 15ppm.

F. **60.4208 - “What is the deadline for importing or installing stationary CI ICE produced in the previous model year?”**

Portions of this Section establish the deadline by which a previous model year CI ICE may be installed for each year for which an emission standard is established in this subpart.

- G. **60.4209 - “What are the monitoring requirements if I am an owner or operator of a stationary CI ICE?”**
Refer to 60.4209 and Emission Source Condition and Limitation No D-11 of this permit for all monitoring requirements.
- H. **60.4211 - “What are my compliance requirements if I am an owner or operator of a stationary CI ICE?”**
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.
- I. **60.4212/60.4213 - “What test methods and other procedures must I use if I am and owner or operator of a stationary CI ICE with a displacement of less than 30 liters per cylinder (60.4212)/greater than or equal to 30 liters per cylinder (60.4214)?”**
Refer to 60.4212/4213 for all testing requirements.
- J. **60.4214 - “What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI ICE?”**
Refer to 60.4214 and Emission Source Condition and Limitation Nos. D-11 and D-15 of this permit for all reporting and recordkeeping requirements.

- D-9. The maximum emissions of VOC from the batch sulfonation process (ES-11), batch esterification/foam control process (ES-12), batch wax process (ES-13) and batch chemical blending process (ES-14) shall be less than 40 tons per year as determined by any consecutive 12-month period. This limit is assumed by the facility in order to preclude applicability of **MCAPCO Regulation 2.0530 – “Prevention of Significant Deterioration”**.

Emissions for the above-referenced pollutant(s) shall be determined using one or more of the following methods as applicable:

- 1. Emission rates and control efficiencies obtained through MCAQ-approved emission source testing;
- 2. Material (mass) balance based on product usage;
- 3. Emission factors or rates found in the latest edition of the “Compilation of Air Pollutant Emission Factors”, EPA document AP-42;
- 4. Other emission factors or rates as approved by MCAQ.

- D-10. The maximum facility-wide emissions of any individual HAP shall be less than 10 tons per year and total HAP shall be less than 25 tons per year as determined by any consecutive 12-month period. This limit is assumed by the facility in order to preclude applicability of **MCAPCO Regulation 2.1111 – “Maximum Achievable Control Technology”**, including requirements stated in **40 CFR 63 Subpart FFFF** for Miscellaneous Organic Chemical Manufacturing and any subsequent major source Maximum Achievable Control Technology regulations to which the facility may be subject.

Emissions for the above-referenced pollutant(s) shall be determined using one or more of the following methods as applicable:

- 1. Emission rates and control efficiencies obtained through MCAQ-approved emission source testing;
- 2. Material (mass) balance based on product usage;
- 3. Emission factors or rates found in the latest edition of the “Compilation of Air Pollutant Emission Factors”, EPA document AP-42;
- 4. Other emission factors or rates as approved by MCAQ.

D-11. 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/or control devices as listed below:

EMISSIONS SOURCE or CONTROL DEVICE	OPERATING PARAMETER	PARAMETER RANGE	MINIMUM MONITORING FREQUENCY (Once per...)
CD-6 - Packed bed counter-current scrubber system (ES-2) <i>[monitoring requirements for this scrubber are only required when processing/blending formaldehyde containing materials]</i>	Pump Discharge Pressure	> 25 psig	Continuous
	Oxidation Reduction Potential (ORP) in millivolts of the scrubber solution	< -30 mV	Continuous
CD-8 - A two-stage counter-current packed scrubber system for formaldehyde and methanol control from amino resins production (ES-2a) Refer to 40 CFR 63.8, 63.10, 63.1415, 64.1416 and Emission Source Condition and Limitation D-4 of this permit for specific monitoring and recordkeeping requirements related to 40 CFR 63 emission sources	Pressure drop across 1 st Stage	2.5 - 4.0 in. water	Continuous
	Recirculation liquid ORP - 1 st Stage	< -30 mV	Continuous
	Pump Discharge Pressure – 1 st Stage	25 to 35 psig	Continuous
	Water flow rate - 2 nd Stage	5-7 gal/min	Continuous
	Exit Temperature – 2 nd Stage	< 80 °F	Continuous
Emergency Generators	Number of hours each emergency generator operated		Month

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 (5 years for MACT/GACT required recordkeeping), unless otherwise specified by the permit. The records shall be available for inspection by MCAQ personnel upon request.

- D-12. The blending tank 100-050 (in ES-2) shall be operated concurrently with the associated control device (CD-6) specified in this Permit to Construct/Operate except when:
- ▶ subject to the provisions of **MCAPCO Regulation 2.0535 - “Excess Emissions Reporting and Malfunctions”**; or
 - ▶ blending materials or products that do not contain formaldehyde.
- The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution.
- D-13. The storage tanks (ES-8d) shall be operated concurrently with the associated control device (CD-5) specified in this Permit to Construct/Operate except when:
- ▶ subject to the provisions of **MCAPCO Regulation 2.0535 - “Excess Emissions Reporting and Malfunctions”**; or
- The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution.
- D-14. The Amino Resins production reactors 100-6 and 100-14 (in ES-2a) shall be operated concurrently with the associated control device (CD-8) specified in this Permit to Construct/Operate except when:
- ▶ subject to the malfunction provisions contained in the **General Provisions of National Emission Standards for Hazardous Air Pollutants, Subpart A (40 CFR part 63.1 - 63.15)**; or,

► as specified in **40 CFR 63 Subpart OOO**.

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

D-15. 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 2.0903 - “Recordkeeping: Reporting: Monitoring”** and **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 DATES
40 CFR 63 Subpart OOO emission sources	Refer to 40 CFR 63.9 and 63.1417 and Emission Source Condition and Limitation No. D-4 of this permit for specific notification requirements.	Refer to 40 CFR 63.9 and 63.1417

(2) REPORTS TO MCAQ

POLLUTANT/ PARAMETER	REPORTING REQUIREMENT	EMISSION PERIOD (For previous)	SUBMITTAL DATES (Postmarked by)
PM PM10 PM2.5 SO ₂ NO _x CO VOC HAPs Methanol	A report of facility-wide emissions (in tons) emanating from each emission source listed on this permit to include, at a minimum, the following information: 1. All supporting documentation, including emission calculations. (Calculations for previously submitted periods do not need to be re-submitted) 2. Hours of operation of each source 3. Production/throughput for each source 4. Natural gas and #2 fuel oil usage 5. Batch process total VOC emissions (ES-11, ES-12, ES-13 & ES-14)	12 Months <i>(Records shall be kept for monthly emissions in rolling 12 month periods.)</i>	April 30, July 30, October 30, January 30
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. D-11. The report should include a discussion of monitoring excursions.	6 months	February 28 August 30
Emergency Generators	Number of hours operated and amount of fuel used for each emergency generator for the calendar year	April 30 of the following year	

40 CFR 63 Subpart OOO emission sources	Refer to 40 CFR 63.10, 63.1417 and Emission Source Condition and Limitation No. D-4 of this permit for specific reporting requirements	Refer to 40 CFR 63.10 and 63.1417 . Requirements include: <ul style="list-style-type: none"> • Semiannual Compliance Reports due February 28th and August 30th of each calendar year.
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(3) COMPLIANCE CERTIFICATION TO BOTH EPA AND MCAQ

PARAMETER	REPORTING REQUIREMENT	EMISSION PERIOD (For previous)	SUBMITTAL DATE (Postmarked by)
Certification by Responsible Official	Identify each term and condition of the Permit and the facility's compliance status for each as described in Emission Source Condition and Limitation Nos. A-33 .	Calendar year	April 30 of the following year

E. 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.

- E-1. Permit No. 14-01V-595 shall be void upon issuance of this Permit.
- E-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:
 - Acrolein
 - Arsenic
 - Formaldehyde

To comply with these requirements, the facility shall be operated in accordance with the following limitations:

Emission Source	Acrolein Emissions lb/hr	Arsenic Emissions lb/yr	Formaldehyde Emissions lb/hr
ES-1	0	1.68	1.44E-02
ES-2	9.36E-03	0	0.11
ES-2a	5.47E-02	0	0.39
ES-3	0	0	0.23
ES-8a	5.08E-04	0	0.01
ES-8c	2.16E-05	0	1.20E-03

Emission Source	Acrolein Emissions lb/hr	Arsenic Emissions lb/yr	Formaldehyde Emissions lb/hr
ES-8d	0	0	4.43E-03
ES-9	1.64E-02	0	0.42
ES-10b	7.55E-07	0	2.03E-03
ES-10c	8.59E-07	0	0.15
ES-14	7.72E-03	0	0.11
ES-15	0.17	0	0.10
ES-16	1.18E-04	0	1.50E-03
ES-17	0	0	3.97E-04
Total	0.26	1.68	1.54

The facility shall maintain a record of the above-specified parameters for a period not less than two (2) years. The records shall be made available to MCAQ personnel upon request.

Parameters of the air dispersion modeling demonstration for Arsenic:

Emission Source	Arsenic Emissions lb/yr	Stack Height m (ft)	Stack Diameter m (ft)	Exit Temp K (°F)	Exit Velocity mps (fpm)	Stack orientation
ES-1	1.68	15.24 (50.00)	0.91 (3.00)	477.59 (400.00)	3.05 (600.40)	Vertical no raincap

Parameters of the air dispersion modeling demonstration for Acrolein:

Emission Source	Emission Rate g/sec (lb/hr)	Stack Height m (ft)	Stack Diameter m (ft)	Stack Orientation
ES-2 (EP-05_1) (EP-8)	1.18E0-3 (9.36E-03)	14.33 (47.00)	0.61 (2.00)	Vertical no raincap
		27.40 (89.99)	0.11 (0.36)	Vertical no raincap
ES-2a	6.89E-03 (5.47E-02)	19.81 (64.99)	0.25 (0.82)	Vertical no raincap
ES-8a	6.40E-05 (5.08E-04)	3.20 (10.50)	0.08 (0.26)	Vertical yes raincap
ES-8c (ES8C_1,3,4,5)(ES8C_2,6,7)	2.72E-06 (2.16E-05)	7.47 (24.51)	0.08 (0.26)	Vertical yes raincap
		11.13 (36.52)	0.02 (0.26)	Vertical yes raincap
		4.57 (16.99)	0.15 (0.49)	Vertical no raincap
ES-9	2.07E-03 (1.64E-02)	Area Source 313 m ²		
ES-10b	9.51E-08 (7.55E-07)	Area Source 20,235 m ²		
ES-10c	1.08E-07 (8.59E-07)	Area Source 1,959 m ²		
ES-14	9.72E-04 (7.72E-03)	17.68 (58.00)	0.66 (2.17)	Vertical no raincap
ES-15	0.02 (0.17)	Area Source 11,514 m ²		
ES-16	1.48E-05 (1.18E-04)	3.05 (10.00)	0.15 (0.49)	Vertical yes raincap

Parameters of the air dispersion modeling demonstration for Formaldehyde:

Emission Source	Emission Rate g/sec (lb/hr)	Stack Height m (ft)	Stack Diameter m (ft)	Stack Orientation
ES-1	1.81E-03 (0.01)	15.24 (49.99)	0.91 (2.99)	Vertical no raincap
ES-2 (EP-05_1) (EP-8)	1.38E-02 (0.11)	14.33 (47.01)	0.61 (2.00)	Vertical no raincap
		27.43 (89.99)	0.11 (0.36)	Vertical no raincap
ES-2a	0.05 (0.40)	19.81 (64.99)	0.25 (0.82)	Vertical no raincap
ES-3	0.03 (0.23)	20.73 (68.01)	0.66 (2.17)	Vertical no raincap
ES-8a	1.06E-03 (8.42E-03)	3.20 (10.50)	0.08 (0.26)	Vertical yes raincap
ES-8c (ES8C_1,3,4,5) (ES8C_2,6,7)	1.51E-04 (1.20E-03)	7.47 (24.51)	0.08 (0.26)	Vertical yes raincap
		11.13 (36.52)	0.02 (0.26)	Vertical yes raincap
ES-8d (ES8D_1) (EP18)	5.58E-04 (4.43E-03)	6.25 (20.51)	0.08 (0.26)	Vertical yes raincap
		4.57 (16.99)	0.15 (0.49)	Vertical no raincap
ES-9	0.053 (0.42)	Area Source 313 m ²		
ES-10b	2.56E-04 (2.03E-03)	Area Source 20,235 m ²		
ES-10c	0.019 (0.15)	Area Source 1,959 m ²		
ES-14	0.014 (0.11)	17.68 (58.00)	0.66 (2.17)	Vertical no raincap
ES-15	0.013 (0.10)	Area Source 11,514 m ²		
ES-16	1.89E-04 (1.50E-03)	3.05 (10.01)	0.15 (0.49)	Vertical yes raincap
ES-17	5.01E-05 (3.97E-04)	Area Source 297 m ²		

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

- E-3. 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 **2.0903 - “Recordkeeping: Reporting: Monitoring”** and **MCAPCO Regulation 1.5508 - “Permit Content”**, such that the following specific reports and/or notifications shall be submitted to MCAQ by the specified dates:

POLLUTANT/ PARAMETER	REPORTING REQUIREMENT	EMISSION PERIOD (For previous)	SUBMITTAL DATES (Postmarked by)
Acrolein Arsenic Formaldehyde	A report of facility-wide emissions (in tons) emanating from each emission source listed on this permit to include, at a minimum, all supporting documentation, including emission calculations. (Calculations for previously submitted periods do not need to be re-submitted)	12 Months	April 30, July 30, October 30, January 30

F. FEDERAL ONLY REQUIREMENTS

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

- THERE ARE NO FEDERAL ONLY REQUIREMENTS FOR THIS PERMIT -



APPENDIX A: TOXIC AIR POLLUTANT REVIEW

Facility Name: Emerald Carolina Chemical, LLC
Facility Address: 8309 Wilkinson Blvd., Charlotte, NC
Date Issued: April 20, 2016

As a result of a process modification or SIC call, the above-referenced 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.	Toxic Permit Emission Rate (TPER) as listed in MCAPCO Regulation 1.5711 - "Emission Rates Requiring a Permit"				Is TAP also a Hazardous Air Pollutant (HAP)?	Compliance Demonstration Method	
		lb/year	lb/day	lb/hour	lb/hour		Actual emission rate below TPER?	Air Dispersion Modeling Conducted?
acetaldehyde	75-05-0				6.8	Y	Y	N
acetic acid	64-19-7				0.96	N	Y	N
acrolein	107-02-8				0.02	Y	N	Y
ammonia	7664-41-7				0.68	N	Y	N
arsenic & inorganic arsenic compounds	N/A	0.016				Y	N	Y
benzene	71-43-2	8.1				Y	Y	N
beryllium & compounds	N/A	0.28				Y	Y	N
1,3-butadiene	106-99-0	11				Y	Y	N
cadmium	7440-43-9	0.37				Y	Y	N
p-dichlorobenzene	106-46-7				16.8	Y	Y	N
1,4-dioxane	123-91-1		12			Y	Y	N
ethylene oxide	75-21-8	1.8				Y	Y	N
formaldehyde	50-00-0				0.04	Y	N	Y
n-hexane	110-54-3		23			Y	Y	N
hydrogen chloride	7647-01-0				0.18	Y	Y	N

manganese & compounds	N/A		0.63			Y	Y	N
nickel, soluble compounds, as nickel	N/A		0.013			N	Y	N
sulfuric acid	7664-93-9		0.25	0.025		N	Y	N
toluene	108-88-3		98		14.4	Y	Y	N
xylene	1330-20-7		57		16.4	Y	Y	N

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
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
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