

STATE OF MISSISSIPPI AND FEDERALLY ENFORCEABLE AIR POLLUTION CONTROL PERMIT

**TO OPERATE AIR EMISSIONS EQUIPMENT AT A
SYNTHETIC MINOR SOURCE**

THIS CERTIFIES THAT

Polychemie Inc
Port Bienville Industrial Park
Road Drive
Pearlington, Mississippi
Hancock County

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with the Federal Clean Air Act and the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), the regulations and standards adopted and promulgated thereunder, and the State Implementation Plan for operating permits for synthetic minor sources.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

AUTHORIZED SIGNATURE
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: May 14, 2019

Permit No.: 1000-00042

Modified: October 11, 2019;

Effective Date: As specified herein.

Expires: April 30, 2024

Draft/Proposed March 11, 2020

Section 1.

A. GENERAL CONDITIONS

1. This permit is for air pollution control purposes only.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D.)
2. This permit is a Federally-approved permit to operate a synthetic minor source as described in 11 Miss. Admin. Code Pt. 2, R. 2.4.D.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.4.D.)
3. Any activities not identified in the application are not authorized by this permit.
(Ref.: Miss. Code Ann. 49-17-29 1.b)
4. The knowing submittal of a permit application with false information may serve as the basis for the Permit Board to void the permit issued pursuant thereto or subject the applicant to penalties for constructing or operating without a valid permit.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(5).)
5. The issuance of a permit does not release the permittee from liability for constructing or operating air emissions equipment in violation of any applicable statute, rule, or regulation of state or federal environmental authorities.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(7).)
6. It shall not be a defense for a permittee 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 unless halting or reducing activity would create an imminent and substantial endangerment threatening the public health and safety of the lives and property of the people of this state.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(a).)
7. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(c).)
8. The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board and/or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit, and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emission.

(Ref.: Miss. Code Ann. 49-17-21)

- 9. Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Environmental Quality Office of Pollution Control.

(Ref.: Miss. Code Ann. 49-17-39)

- 10. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is challenged or held invalid, the validity of the remaining permit provisions and/or portions thereof or their application to other persons or sets of circumstances, shall not be affected thereby.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D(7).)

- 11. This permit does not authorize a modification as defined in Regulation 11 Miss. Admin. Code Pt. 2, Ch.2., "Permit Regulations for the Construction and/or Operation of Air Emission Equipment." A modification may require a Permit to Construct and a modification of this permit. Modification is defined as "Any physical change in or change in the method of operation of a facility which increases the actual emissions or the potential uncontrolled emissions of any air pollutant subject to regulation under the Federal Act emitted into the atmosphere by that facility or which results in the emission of any air pollutant subject to regulation under the Federal Act into the atmosphere not previously emitted. A physical change or change in the method of operation shall not include:

- a. Routine maintenance, repair, and replacement;
- b. Use of an alternative fuel or raw material by reason of an order under Sections 2(a) and (b) of the Federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
- c. Use of an alternative fuel by reason of an order or rule under Section 125 of the Federal Act;
- d. Use of an alternative fuel or raw material by a stationary source which:

- (1) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51, Subpart I, or 40 CFR 51.166; or
 - (2) The source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51, Subpart I, or 40 CFR 51.166;
- e. An increase in the hours of operation or in the production rate unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51, Subpart I or 40 CFR 51.166; or
- f. Any change in ownership of the stationary source.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.C(15).)

B. GENERAL OPERATIONAL CONDITIONS

1. Should the Executive Director of the Mississippi Department of Environmental Quality declare an Air Pollution Emergency Episode, the permittee will be required to operate in accordance with the permittee's previously approved Emissions Reduction Schedule or, in the absence of an approved schedule, with the appropriate requirements specified in Regulation, 11 Miss. Admin. Code Pt. 2, "Regulations for the Prevention of Air Pollution Emergency Episodes" for the level of emergency declared.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.10.)

2. Any diversion from or bypass of collection and control facilities is prohibited, except as provided for in 11 Miss. Admin. Code Pt. 2, R. 1.10., "Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants."

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.10.)

3. Solids removed in the course of control of air emissions shall be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering State waters without the proper environmental permits.

(Ref.: Miss. Code Ann. 49-17-29 1.a(i and ii))

4. Except as otherwise specified herein, the permittee shall be subject to the following provisions with respect to upsets, startups, and shutdowns.

- a. Upsets

- (1) For an upset defined in 11 Miss. Admin. Code Pt. 2, R. 1.2., the Commission may pursue an enforcement action for noncompliance with an emission standard or other requirement of an applicable rule, regulation, or permit. In determining whether to pursue enforcement action, and/or the appropriate enforcement action to take, the Commission may consider whether the source has demonstrated through properly signed contemporaneous operating logs or other relevant evidence the following:
 - (i) An upset occurred and that the source can identify the cause(s) of the upset;
 - (ii) The source was at the time being properly operated;
 - (iii) During the upset the source took all reasonable steps to minimize levels of emissions that exceeded the emission standard or other requirement of an applicable rule, regulation, or permit;
 - (iv) That within 5 working days of the time the upset began, the source submitted a written report to the Department describing the upset, the steps taken to mitigate excess emissions or any other noncompliance, and the corrective actions taken and;
 - (v) That as soon as practicable but no later than 24 hours of becoming aware of an upset that caused an immediate adverse impact to human health or the environment beyond the source boundary or caused a general nuisance to the public, the source provided notification to the Department.
- (2) In any enforcement proceeding by the Commission, the source seeking to establish the occurrence of an upset has the burden of proof.
- (3) This provision is in addition to any upset provision contained in any applicable requirement.
- (4) These upset provisions apply only to enforcement actions by the Commission and are not intended to prohibit EPA or third party enforcement actions.

b. Startups and Shutdowns (as defined by 11 Miss. Admin. Code Pt. 2, R. 1.2.)

- (1) Startups and shutdowns are part of normal source operation. Emission limitations apply during startups and shutdowns unless source specific emission limitations or work practice standards for startups and shutdowns are defined by an applicable rule, regulation, or permit.
- (2) Where the source is unable to comply with existing emission limitations

established under the State Implementation Plan (SIP) and defined in this regulation, 11 Mississippi Administrative Code, Part 2, Chapter 1, the Department will consider establishing source specific emission limitations or work practice standards for startups and shutdowns. Source specific emission limitations or work practice standards established for startups and shutdowns are subject to the requirements prescribed in 11 Miss. Admin. Code Pt. 2, R. 1.10.B(2)(a) through (e).

- (3) Where an upset as defined in Rule 1.2 occurs during startup or shutdown, see the upset requirements above.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.10.)

5. Compliance Testing: Regarding compliance testing:

- a. The results of any emissions sampling and analysis shall be expressed both in units consistent with the standards set forth in any Applicable Rules and Regulations or this permit and in units of mass per time.
- b. Compliance testing will be performed at the expense of the permittee.
- c. Each emission sampling and analysis report shall include but not be limited to the following:
 - (1) Detailed description of testing procedures;
 - (2) Sample calculation(s);
 - (3) Results; and
 - (4) Comparison of results to all Applicable Rules and Regulations and to emission limitations in the permit.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.6.B(3), (4), and (6).)

C. PERMIT RENEWAL / MODIFICATION / TRANSFER / TERMINATION

1. For renewal of this permit, the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Environmental Quality Permit Board. If the applicant submits a timely and complete application pursuant to this paragraph and the Permit Board, through no fault of the applicant, fails to act on the application on or before the expiration date of the existing permit, the applicant shall continue to operate the stationary source under the terms and conditions of the expired permit, which shall remain in effect until final action on the application is taken by the Permit Board. Permit expiration terminates the

source's ability to operate unless a timely and complete renewal application has been submitted.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.8.)

2. The permittee shall furnish to the DEQ within a reasonable time any information the DEQ 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. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee shall furnish such records to the DEQ along with a claim of confidentiality. The permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(d).)

3. The permit and/or any part thereof may be modified, revoked, reopened, and reissued, or terminated for cause. Sufficient cause for a permit to be reopened shall exist when an air emissions stationary source becomes subject to Title V. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(b).)

4. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to:
 - a. Persistent violation of any terms or conditions of this permit.
 - b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - c. A change in federal, state, or local laws or regulations that require either a temporary or permanent reduction or elimination of previously authorized air emission.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.C.)

5. This permit may only be transferred upon approval of the Mississippi Environmental Quality Permit Board.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.16.B.)

SECTION 2 EMISSION POINT DESCRIPTION

The permittee is authorized to operate air emissions equipment, as described in the following table.

Emission Point	Description
AA-001	25.1 MMBtu/hr Natural Gas-Fired Boiler (B-100)
AA-002	13.4 MMBtu/hr Natural Gas-Fired Boiler (B-101) (Upon certification of construction)
AA-004	755 hp Diesel Fuel Fired Emergency Generator
AA-005	25.11 MMBtu/hr Natural Gas-Fired Boiler (B-103)
AA-050	DADMAC Production Lines (P-1A through P-1E) Includes the following equipment: <i>Monomer Reactors (R-801 through R-804, R-809), Slurry Tanks (V-801, V-802, V-809), Centrifuges (C-801 through C-803, C-810), Centrifuge Receivers (V-C801 through V-C803), Monomer Vessel (V-803), Organics Vessel (V-804), Liquid-Liquid Centrifuges (LS-803, LS-804), AOH/Water Vessel (V-805), Polymer Reactors (R-501, R-502, R-805 through R-808), Initiator Make-ups (V-R805 through V-R808), Polymer Blend Vessels (V-501, V-502, V-806 through V-808), and Gas Sampling Unit on Distillate Line</i>
AA-100	Polyamine Process Lines (P-2A, P-2B, P-2C, P-2D) (Line P-2D is proposed) Includes the following equipment: <i>Reactors (R-901 through R-904), Blend Vessels (V-901 through V-904)</i>
AA-401	Ethylendichloride (EDC)-Ammonia Polyamine Process Line Includes the following equipment: <i>Reactor (R-401), Receiver Vessel (V-401), Distillation Column (D-401), and Centrifuge (C-401)</i>
AA-530	SAS Monomer (LQ10-SAS) and MAS Polymer Production/Neutralization (LQ10-MAS), emissions routed to scrubbers (Emission Points AC-510 and AC-511)
AB-100	Thermal Oxidizer (TO-100), controlling emissions from the DADMAC Process Lines, the EDC-Ammonia process, and the Hazardous Waste Storage Tanks. Emissions from the thermal oxidizer are routed to the packed tower scrubber S-TO100 (Emission Point AC-100)
AC-100	Packed Tower Scrubber (S-TO100) controlling emissions from the Thermal Oxidizer (Emission Point AB-100)
AC-101	Venturi, Packed Tower Scrubber (SC-901) with mist eliminator, controlling emissions from the Polyamine Process (Emission Point AA-100)
AC-400	Venturi, Packed Tower Scrubber (SC-T6) with mist eliminator, controlling emissions from the Hydrochloric Acid Tank (T-6) (Emission Point AD-006)

Emission Point	Description
AC-510	Venturi, Packed Tower Scrubber (LQ10-SC1), with mist eliminator, controlling emissions from SAS production, SAS/MAS product tank CS1-SAS, Wash Water/SAS Shutdown tank CS1-EL, as needed, and SAS/MAS bulk and non-bulk loading operations, as needed
AC-511	Venturi, Packed Tower Scrubber (LQ10-SC2), with mist eliminator, controlling emissions from MAS production and, optionally, maleic anhydride tank CS1-AMA
AC-520	SAS/MAS Bulk/Non-Bulk Loading Operations, vents directly to scrubber (Emission Point AC-510), indirectly to Emission Point AC-510 via vapor balance with SAS process (Emission Point AA-530)/storage tank (Emission Point AD-602) or to atmosphere
AD-001	Allyl Chloride Tank (T-1): 35,000-gallon pressurized tank
AD-002	Allyl Chloride Tank (T-2): 35,000-gallon pressurized tank
AD-003	Dimethylamine Tank (T-3): 35,000-gallon pressurized tank
AD-004	Dimethylamine Tank (T-4): 37,628-gallon pressurized tank
AD-006	Hydrochloric Acid Tank (T-6): 6,000-gallon fixed roof tank venting to a scrubber (Emission Point AC-400)
AD-007	Miscellaneous Monomer/Polymer Storage Tank (T-7): 10,000-gallon fixed roof tank
AD-009	Miscellaneous Monomer/Polymer Storage Tank (T-9): 6,220-gallon fixed roof tank
AD-010	Miscellaneous Monomer/Polymer Storage Tank (T-10): 6,220-gallon fixed roof tank
AD-011	Epichlorohydrin Tank (T-11): 35,000-gallon fixed roof tank
AD-013	Ethylenediamine Tank (T-13): 8,000-gallon fixed roof tank
AD-014	Sodium Bisulfite Tank, 40% (T-14): 10,000-gallon fixed roof tank
AD-015	Recycle Water/Potassium Hydroxide Solution (45 percent) Tank (T-15): 6,000-gallon fixed roof tank
AD-018	Ethylene Dichloride (EDC) Tank (T-18): 35,000-gallon pressurized tank
AD-019	Aqueous Ammonia, 30% (T-19): 17,460-gallon pressurized tank
AD-020	Weak Ammonia Tank (T-20): 6,000-gallon fixed roof tank
AD-021	Polyamine Tank (T-21): 7,044-gallon fixed roof tank
AD-032	Dimethylamine Tank (T-32): 37,628-gallon pressurized tank (Upon certification of construction)
AD-036	Ethylenediamine Tank (T-36): 10,000-gallon fixed roof tank
AD-105	Glycol/Water Tank (T-105): 7,000-gallon fixed roof tank
AD-106	Recycle Water Tanks: 8 fixed roof tanks ranging from 1,000 gallons to 12,000 gallons Includes the following equipment: T-106 through T-112, and T-120

Emission Point	Description
AD-113	Wastewater Check Tank (T-113): 6,000-gallon fixed roof tank
AD-124	Diesel (for generator) Tank (T-124): 1,700-gallon fixed roof tank
AD-143	Recycled Polymer Tank (T-143): 5,500-gallon fixed roof tank
AD-200	Diesel Tank (T-200): 550-gallon fixed roof tank
AD-401	Miscellaneous Monomer/Polymer Tanks: Fixed roof tanks ranging from 12,000 gallons to 20,000 gallons Includes the following equipment: <i>T-401 through T-404,</i> <i>T-801 through T-811,</i> <i>T-812 through T-815 (proposed),</i> <i>T-901 through T-907,</i> <i>T-908 through T-909 (proposed)</i>
AD-601	Maleic Anhydride Tank (CS1-AMA): 7,925 gallon fixed roof tank venting to either scrubber (Emission Point AC-511) or atmosphere
AD-602	SAS Monomer /MAS Polymer Tank (CS1-SAS): 12,500 gallon fixed roof tank
AD-603	SAS Monomer/MAS Polymer Tank (CS1-MAS): 12,500 gallon fixed roof tank
AD-604	Ammonium Persulfate Solution/Sodium Persulfate Solution Tank (CP1-APS): 528 gallon fixed roof tank
AD-605	EDTA Tetrasodium Solution Tank (CP1-EDTA): 528 gallon fixed roof tank
AD-606	Wash Water/SAS Shutdown Tank (CS1-EL): 10,281 gallon fixed roof tank venting to either scrubber (Emission Point AC-510) or atmosphere
AD-607	Wash Waster/MAS Shutdown Tank (CS2-EL): 10,281 gallon fixed roof tank
AD-830	Hazardous Waste Tank (T-830): 2,100-gallon fixed roof tank with emissions routed to Thermal Oxidizer TO-100 (AB-100). The tank contains unreacted allyl chloride, salt, and reaction byproducts.
AD-831	Hazardous Waste Tank (T-831): 6,000-gallon fixed roof tank with emissions routed to Thermal Oxidizer TO-100 (AB-100). The tank contains unreacted allyl chloride, salt, and reaction byproducts. (Upon certification of construction)
Fugitives	Fugitives from Equipment Leaks

SECTION 3 EMISSION LIMITATIONS AND STANDARDS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
Facility-Wide		3.1		Construction requirement
	11 Miss Admin. Code Pt. 2, R. 1.3.A(1-3). and 11 Miss. Admin. Code Pt. 2, R. 1.3.B.	3.2	Opacity	<40%
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.3	Production Rate	Production is limited to the following: <i>DADMAC Monomer</i> - 447 MMlb/yr <i>Polyamine</i> - 300 MMlb/yr <i>EDC-Ammonia Polyamine</i> - 8.0 MMlb/yr <i>SAS</i> – 34.8 MMlb/yr <i>MAS</i> – 34.8 MMlb/yr
AA-001 AA-002 AA-005	40 CFR 60, Subpart Dc New Source Performance Standard (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units 40 CFR 60.40c(a), Subpart Dc	3.4	SO ₂	Applicability
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.5	Fuel Restriction	Shall only use natural gas as a fuel
AA-004	40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines 40 CFR 63.6585 and 40 CFR 63.6590(c), Subpart ZZZZ	3.6	HAP	Applicability - Shall comply with 40 CFR Part 60, Subpart IIII (NSPS for Stationary Compression Ignition Internal Combustion Engines)
	40 CFR 60, Subpart IIII New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines (CI ICE) 40 CFR 60.4200(a)(2)(i), Subpart IIII	3.7		Applicability
	40 CFR 60.4205(b) and 40 CFR 60.4211(c), Subpart IIII	3.8		Purchase requirement
	40 CFR 60.4207(b), Subpart IIII	3.9	Fuel Restriction	Shall only use nonroad diesel fuel.
	40 CFR 60.4209(a), Subpart IIII	3.10		Install a non-resettable hour meter

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
AA-050	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.11	HAP	Operational requirement
AA-100	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.12	HAP	Operational requirement
AA-401	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.13	HAP	Operational requirement
AA-530	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.14	SO ₂	Operational Requirement
AB-100	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.15	HAP	Shall maintain a minimum combustion chamber temperature of 1,500 °F.
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.16	HAP	Operational requirement
AC-100	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.17	HAP	Operational requirement
AC-101	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.18	HAP	Operational requirement
AC-511	11 Miss. Admin. Code Pt. 2, R. 1.4.B(1).	3.19	SO ₂	< 500 ppmv SO ₂
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.20	SO ₂	Operational requirement
AD-006	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.21	HAP	Operational requirement
AD-001 AD-002 AD-003 AD-004 AD-018 AD-019 AD-032	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.22	Pressure	> 204.9kPa (29.7 psia) (NSPS, Subpart Kb exemption requirement)
AD-001 AD-002 AD-003 AD-004 AD-011 AD-013 AD-032 AD-036	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.23	HAP	Shall be equipped with a dedicated vapor balance service.
AD-830 AD-831	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.24	HAP	Operational requirement

- 3.1 For any emission point that has not been constructed, the requirements pertaining to that emission point herein are not applicable until such time that completion of construction has been certified by the permittee. [Other]
- 3.2 The permittee shall not cause, permit, or allow the emission of smoke from a point source into the open air from any manufacturing, industrial, commercial or waste disposal process which exceeds forty (40) percent opacity subject to the exceptions provided in (a) and (b). (a) Startup operations may produce emissions which exceed 40% opacity for up to fifteen (15) minutes per startup in any one hour and not to exceed three (3) startups per stack in any twenty-four (24) hour period. (b) Emissions resulting from soot blowing operations shall be permitted provided such emissions do not exceed 60 percent opacity, and provided further that the aggregate duration of such emissions during any twenty-four (24) hour period does not exceed ten (10) minutes per billion BTU gross heating value of fuel in any one hour. The permittee shall not cause, allow, or permit the discharge into the ambient air from any point source or emissions, any air contaminant of such opacity as to obscure an observer's view to a degree in excess of 40% opacity. This shall not apply to vision obscuration caused by uncombined water droplets. (Ref.: 11 Miss Admin. Code Pt. 2, R. 1.3.A-B.)
- 3.3 The permittee shall be limited to the production rates listed below:

Products	Production Rate
DADMAC Monomer	447 MMlb/yr
Polyamine	300 MMlb/yr
EDC-Ammonia Polyamine	8.0 MMlb/yr
SAS	34.8 MMlb/yr
MAS	34.8 MMlb/yr

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

- 3.4 For Emission Points AA-001, AA-002, and AA-005, the permittee is subject to and shall comply with the applicable requirements of the New Source Performance Standards specified in 40 CFR Part 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) and in 40 CFR Part 60, Subpart A (General Provisions). (Ref.: 40 CFR 60.40c(a), Subpart Dc)
- 3.5 For Emission Points AA-001, AA-002, and AA-005, the permittee shall only use natural gas as fuel. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.6 For Emission Point AA-004, the permittee is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63, Subpart ZZZZ. Emission Point AA-004 meets the

definition of a new affected source at an area source under NESHAP Subpart ZZZZ and must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart IIII for compression ignition engines. No further requirements apply for such engines under NESHAP Subpart ZZZZ. (Ref.: 40 CFR 63.6585 and 40 CFR 63.6590(c), Subpart ZZZZ)

- 3.7 For Emission Point AA-004, the permittee is subject to and shall comply with the applicable requirements of the New Source Performance Standards (NSPS) for Stationary Emergency Compression Ignition Internal Combustion Engines (CI ICE) (40 CFR Part 60, Subpart IIII) and shall comply with the General Provisions (40 CFR Part 60, Subpart A) as required in Table 8 to NSPS Subpart IIII. (Ref.: 40 CFR 60.4200(a)(2)(i), Subpart IIII)
- 3.8 For Emission Point AA-004, the permittee shall comply with the emission standards for new nonroad compression ignition (CI) engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power. The permittee shall comply with these standards by purchasing an engine certified to the applicable emission standards for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications. (Ref.: 40 CFR 60.4205(b), 40 CFR 60.4211(c), Subpart IIII)
- 3.9 For Emission Point AA-004, the permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. (Ref.: 40 CFR 60.4207(b), Subpart IIII)
- 3.10 For Emission Point AA-004, the permittee shall install a non-resettable hour meter. (Ref.: 40 CFR 60.4209(a), Subpart IIII)
- 3.11 For Emission Point AA-050, the permittee shall vent all emissions from the reactors (R-801 through R-804 and R-809), except the initial nitrogen purge, to thermal oxidizer TO-100 (Emission Point AB-100). Also, emissions from the organics vessel (V-804) and the AOH/Water vessel (V-805) shall be vented to thermal oxidizer Emission Point AB-100. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.12 For Emission Point AA-100, the permittee shall vent all emissions from the reactors (R-901 through R-904), except the initial nitrogen purge, to scrubber SC-901 (Emission Point AC-101). (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.13 For Emission Point AA-401, the permittee shall vent all emissions from the reactor (R-401) and the distillation column (D-401), except the initial nitrogen purge, to thermal oxidizer TO-100 (Emission Point AB-100). (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

- 3.14 For Emission Point AA-530, the permittee shall vent all emissions from the equipment associated with MAS production to scrubber LQ10-SC2 (Emission Point AC-511). Emissions from maleic anhydride tank CS1-AMA will vent to LQ10-SC2 (Emission Point AC-511) or atmosphere. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.15 For Emission Point AB-100, the permittee shall maintain a minimum combustion chamber temperature of 1,500 degrees F at all times when emissions may be vented to the thermal oxidizers. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.16 For Emission Point AB-100, the permittee shall vent all emissions from thermal oxidizer TO-100 (Emission Point AB-100) to scrubber S-TO100 (Emission Point AC-100). (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.17 For Emission Point AC-100, the permittee shall maintain a minimum scrubber water flow rate of 10 gallons per minute (gpm) in the packed tower section. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.18 For Emission Point AC-101, the permittee shall maintain a minimum scrubber water flow rate of 3.0 gallons per minute (gpm) in the packed tower section. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.19 For Emission Point AC-511, except as otherwise provided herein, no person shall cause or permit the emission of gas containing sulfur oxides (measured as sulfur dioxide) in excess of 500 ppm (volume) from any process equipment constructed after January 25, 1972. The 500 ppm (volume) requirement shall apply for equipment constructed after January 25, 1972 unless otherwise provided by the Commission. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.4.B(1).)
- 3.20 For Emission Point AC-511, the permittee shall install a flow meter for continuously measuring the flow rate through the packed tower section of the scrubber when the MAS production is occurring. Upon installation, per manufacturer's recommendations, the permittee shall determine the minimum scrubbant flow rate required to determine compliance with the permit. The flow meter shall be maintained per the manufacturer's specifications. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.21 For Emission Point AD-006, the permittee shall vent all emissions from the tank to the scrubber, SC-T6 (Emission Point AC-400). (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.22 For Emission Points AD-001, AD-002, AD-003, AD-004, AD-018, AD-019 and AD-032, the permittee shall maintain the design pressure of these tanks above 204.9 kPa (29.7 psia) and shall not allow venting under normal operation. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

- 3.23 For Emission Points AD-001, AD-002, AD-003, AD-004, AD-011, AD-013, AD-032 and AD-036, the permittee shall equip these tanks with dedicated vapor balance service for tank loading operations. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.24 For Emission Points AD-830 and AD-831, the permittee shall vent all emissions from the tanks to thermal oxidizer TO-100 (AB-100). (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

SECTION 4 WORK PRACTICES

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Work Practice
Facility-Wide	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	4.1		Shall maintain at all times sufficient equipment necessary to repair or overhaul pollution control equipment. Operations shall cease until repairs are made.
AA-004	40 CFR 60.4206, 40 CFR 60.4211(a), Subpart IIII	4.2		Shall operate and maintain the engine according to the manufacturer's written instructions
	40 CFR 60.4211(f), Subpart IIII	4.3		Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year is prohibited.
AC-100 AC-101 AC-400 AC-511	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	4.4		Maintain and implement maintenance plan

- 4.1 The permittee shall maintain on hand at all times sufficient equipment as is necessary to repair and/or overhaul the pollution control equipment. In the event of a failure of the pollution control equipment, the permittee shall cease operation of any equipment venting to the control equipment until such time as repairs are made and the proper efficiency of the pollution control equipment is restored. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 4.2 For Emission Point AA-004, the permittee must operate and maintain the engine according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer over the entire life of the engine. In addition, the permittee may only change those settings that are permitted by the manufacturer. (Ref.: 40 CFR 60.4206, 40 CFR 60.4211(a), Subpart IIII)
- 4.3 For Emission Point AA-004, the facility must operate the emergency internal combustion engine (ICE) according to the requirements in (a)-(c) below. Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited.
- a) There is no time limit on the use of emergency stationary ICE in emergency situations.

- b) The engine may be operated for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed in (c) below counts as part of the 100 hours per calendar year. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine.
 - c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (Ref.: 40 CFR 60.4211(f), Subpart III)
- 4.4 For Emission Points AC-100, AC-101, AC-400, and AC-511 the permittee shall maintain and implement a written maintenance plan for the scrubbers, including a thorough inspection of the scrubbers to be conducted every calendar year. The plan shall include procedures for evaluating the scrubbant distribution through the tower section and the condition of any mist eliminators. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

SECTION 5 MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Monitoring/Recordkeeping Requirement
Facility-Wide	11 Miss. Admin. Code Pt. 2, R. 2.9.	5.1	Recordkeeping	Maintain records for a minimum of 5 years.
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.2	Recordkeeping	Maintain records of monthly production rate to be used in the total lb/yr (12 consecutive months).
AA-001 AA-002 AA-005	40 CFR 60.48c(g)(2) and 40 CFR 60.48c(i), Subpart Dc	5.3	Recordkeeping	Maintain records of the amount of fuel combusted during each calendar month
AA-004	40 CFR 60.4214(b), Subpart IIII	5.4	Monitoring	Shall keep records of engine operation
AB-100	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.5	Monitoring	Continuously monitor the temperature of the combustion chambers.
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.6	Recordkeeping	Log of temperatures and maintenance
AC-100 AC-101 AC-400 AC-511	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.7	Recordkeeping	Log of inspections
AC-100 AC-101 AC-511	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.8	Monitoring	Maintain flow meter
AC-100 AC-101	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.9	Recordkeeping	Continuously record the flow rate and report deviations
AC-511	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.10	Recordkeeping	Continuously record the flow rate during MAS production and report deviations

- 5.1 The permittee shall retain all required records, monitoring data, supporting information and reports for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-chart recordings or other data for continuous monitoring instrumentation, and copies of all reports required by this permit. Copies of such records shall be submitted to MDEQ as required by Applicable Rules and Regulations or this permit upon request. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.9.)
- 5.2 The permittee shall maintain records of the monthly production rate of each polymer in lb/month and shall use these records to calculate the total in lbs/yr for each consecutive 12-month period. The permittee shall submit the total production rates calculated monthly

for each product in accordance with Condition 6.2. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

- 5.3 For Emission Points AA-001, AA-002, and AA-005, the owner or operator shall maintain records of the amount of natural gas combusted during each calendar month. These records shall be maintained for a period of two years following the date of each record. (Ref.: 40 CFR 60.48c(g)(2) and 40 CFR 60.48c(i), Subpart Dc)
- 5.4 For Emission Point AA-004, the permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. (Ref.: 40 CFR 60.4214(b), Subpart III)
- 5.5 For Emission Point AB-100, the permittee shall install and operate a measuring device for continuously monitoring the combustion chamber temperature when emissions may be vented to the thermal oxidizer. The measuring device shall be maintained per the manufacturer's specifications. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)
- 5.6 For Emission Point AB-100, the permittee shall record the combustion chamber temperature in degrees F at least once per calendar day. These records shall include the date and time that the temperature was recorded and shall be maintained in written or electronic log form. Should no emissions be vented to the thermal oxidizer during a calendar day, the permittee shall note such in the log. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)
- 5.7 For Emission Points AC-100, AC-101, AC-400, and AC-511, a log of each inspection required in Condition 4.4 shall be maintained onsite and shall indicate any problems noted (e.g. corrosion) and any maintenance actions taken (e.g., replacement of mist eliminator or scrubbant change). (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)
- 5.8 For Emission Points AC-100, AC-101, and AC-511, the permittee shall maintain each flow meter for continuously monitoring per the manufacturer's specifications. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)
- 5.9 For Emission Points AC-100 and AC-101, the permittee shall continuously record the water flow rate through the scrubber in gpm. These records shall include the date and time that the flow was recorded and shall be maintained in written or electronic log form. Should no emissions be vented through the scrubber, the permittee shall note such in the log. The facility shall report any deviations below the minimum flow rate in accordance with Condition 6.2. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)
- 5.10 For Emission Point AC-511, when emissions from MAS production are being routed to the scrubber, the permittee shall continuously record the scrubbant flow rate through the scrubber in gpm. These records shall include the date and time that the flow was

recorded and shall be maintained in written or electronic log form. Should no MAS production emissions be vented through the scrubber during a calendar day, the permittee shall note such in the log. The facility shall report any deviations below the minimum flow rate in accordance with Condition 6.2.(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

SECTION 6
REPORTING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Reporting Requirement
Facility-Wide	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.1	Report permit deviations within five (5) working days.
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.2	Submit certified annual monitoring report.
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.3	All documents submitted to MDEQ shall be certified by a Responsible Official.
	11 Miss. Admin. Code Pt. 2, R. 2.5.D(1).	6.4	Submit certification of construction prior to beginning operation of a new emission source.

- 6.1 Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken. Said report shall be made within five (5) working days of the time the deviation began. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)
- 6.2 Except as otherwise specified herein, the permittee shall submit a certified annual synthetic minor monitoring report postmarked no later than 31st of January for the preceding calendar year. This report shall address any required monitoring specified in the permit. All instances of deviations from permit requirements must be clearly identified in the report. Where no monitoring data is required to be reported and/or there are no deviations to report, the report shall contain the appropriate negative declaration. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)
- 6.3 Any document required by this permit to be submitted to the MDEQ shall contain a certification signed by a responsible official stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)
- 6.4 For each proposed new emission source, the permittee must provide certification of construction prior to beginning operation of the new emission source. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(1).)