

**STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
TITLE V PERMIT**

TO OPERATE AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Axiall, LLC
715 Highway 25 South
Aberdeen, Mississippi
Monroe 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 Title V of the Federal Clean Air Act (42 U.S.C.A. § 7401 - 7671) and the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

Permit Issued: March 26, 2010

Modified: JAN 31 2013 (name change)

Effective Date: As specified herein.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD



AUTHORIZED SIGNATURE

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Expires: February 28, 2015

Permit No.: 1840-00014

TABLE OF CONTENTS

SECTION 1. GENERAL CONDITIONS.....	3
SECTION 2. EMISSION POINTS & POLLUTION CONTROL DEVICES.....	12
SECTION 3. EMISSION LIMITATIONS & STANDARDS	15
SECTION 4. COMPLIANCE SCHEDULE	26
SECTION 5. MONITORING, RECORDKEEPING & REPORTING REQUIREMENTS	26
SECTION 6. ALTERNATIVE OPERATING SCENARIOS.....	36
SECTION 7. TITLE VI REQUIREMENTS.....	37

APPENDIX A LIST OF ABBREVIATIONS USED IN THIS PERMIT

APPENDIX B 40 CFR 82 - PROTECTION OF STRATOSPHERIC OZONE

APPENDIX C 40 CFR 61, SUBPART F – NATIONAL EMISSION STANDARDS FOR VINYL CHLORIDE

APPENDIX D 40 CFR 61, SUBPART V – NATIONAL EMISSION STANDARDS FOR EQUIPMENT LEAKS (FUGITIVE EMISSION SOURCES)

APPENDIX E 40 CFR 63, SUBPART J – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR POLYVINYL CHLORIDE AND COPOLYMERS PRODUCTION

APPENDIX F 40 CFR 63, SUBPART FFFF – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING

APPENDIX G 40 CFR 61, SUBPART A – GENERAL PROVISIONS

APPENDIX H 40 CFR 63, SUBPART A – GENERAL PROVISIONS

APPENDIX I 40 CFR 63, SUBPART ZZZZ – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

APPENDIX J CONSENT DECREE, CIVIL ACTION NO. 1: 07-CV-3113 ENTERED FEBRUARY 27, 2008, BY THE PLAINTIFFS – UNITED STATES OF AMERICA, MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY, AND DEFENDANT – GEORGIA GULF CHEMICALS AND VINYL, LLC.

SECTION 1. GENERAL CONDITIONS

- 1.1 The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Federal Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (Ref.: APC-S-6, Section III.A.6.a.)
- 1.2 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. (Ref.: APC-S-6, Section III.A.6.b.)
- 1.3 This permit and/or any part thereof may be modified, revoked, reopened, and reissued, or terminated for cause. 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.: APC-S-6, Section III.A.6.c.)
- 1.4 This permit does not convey any property rights of any sort, or any exclusive privilege. (Ref.: APC-S-6, Section III.A.6.d.)
- 1.5 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 Permittee or, for information to be confidential, the Permittee shall furnish such records to DEQ along with a claim of confidentiality. The Permittee may furnish such records directly to the Administrator along with a claim of confidentiality. (Ref.: APC-S-6, Section III.A.6.e.)
- 1.6 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.: APC-S-6, Section III.A.5.)
- 1.7 The Permittee shall pay to the DEQ an annual permit fee. The amount of fee shall be determined each year based on the provisions of regulated pollutants for fee purposes and the fee schedule specified in the Commission on Environmental Quality's order which shall be issued in accordance with the procedure outlined in Regulation APC-S-6.
 - (a) For purposes of fee assessment and collection, the Permittee shall elect for actual or allowable emissions to be used in determining the annual quantity of emissions unless the Commission determines by order that the method chosen by the applicant for calculating actual emissions fails to reasonably represent actual emissions. Actual emissions shall be calculated using emission monitoring data or direct emissions measurements for the pollutant(s); mass balance calculations such as the amounts of the pollutant(s) entering and leaving process equipment and where mass balance calculations can be supported by direct measurement of process parameters, such

direct measurement data shall be supplied; published emission factors such as those relating release quantities to throughput or equipment type (e.g., air emission factors); or other approaches such as engineering calculations (e.g., estimating volatilization using published mathematical formulas) or best engineering judgements where such judgements are derived from process and/or emission data which supports the estimates of maximum actual emission. (Ref.: APC-S-6, Section VI.A.2.)

- (b) If the Commission determines that there is not sufficient information available on a facility's emissions, the determination of the fee shall be based upon the permitted allowable emissions until such time as an adequate determination of actual emissions is made. Such determination may be made anytime within one year of the submittal of actual emissions data by the Permittee. (Ref.: APC-S-6, Section VI.A.2.) If at any time within the year the Commission determines that the information submitted by the Permittee on actual emissions is insufficient or incorrect, the Permittee will be notified of the deficiencies and the adjusted fee schedule. Past due fees from the adjusted fee schedule will be paid on the next scheduled quarterly payment time. (Ref.: APC-S-6, Section VI.D.2.)
- (c) The fee shall be due September 1 of each year. By July 1 of each year the Permittee shall submit an inventory of emissions for the previous year on which the fee is to be assessed. The Permittee may elect a quarterly payment method of four (4) equal payments; notification of the election of quarterly payments must be made to the DEQ by the first payment date of September 1. The Permittee shall be liable for penalty as prescribed by State Law for failure to pay the fee or quarterly portion thereof by the date due. (Ref.: APC-S-6, Section VI.D.)
- (d) If in disagreement with the calculation or applicability of the Title V permit fee, the Permittee may petition the Commission in writing for a hearing in accordance with State Law. Any disputed portion of the fee for which a hearing has been requested will not incur any penalty or interest from and after the receipt by the Commission of the hearing petition. (Ref.: APC-S-6, Section VI.C.)

- 1.8 No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (Ref.: APC-S-6, Section III.A.8.)
- 1.9 Any document required by this permit to be submitted to the DEQ shall contain a certification by a responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (Ref.: APC-S-6, Section II.E.)
- 1.10 The Permittee shall allow the DEQ, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to perform the following:
 - (a) enter upon the Permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
 - (b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - (c) inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - (d) as authorized by the Federal Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. (Ref.: APC-S-6, Section III.C.2.)
- 1.11 Except as otherwise specified or limited herein, the Permittee shall have necessary sampling ports and ease of accessibility for any new air pollution control equipment, obtained after May 8, 1970, and vented to the atmosphere. (Ref.: APC-S-1, Section 3.9(a))
- 1.12 Except as otherwise specified or limited herein, the Permittee shall provide the necessary sampling ports and ease of accessibility when deemed necessary by the Permit Board for air pollution control equipment that was in existence prior to May 8, 1970. (Ref.: APC-S-1, Section 3.9(b))
- 1.13 Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance where such applicable requirements are included and are specifically identified in the permit or where the permit contains a determination, or summary thereof, by the Permit Board that requirements specifically identified previously are not applicable to the source. (Ref.: APC-S-6, Section III.F.1.)
- 1.14 Nothing in this permit shall alter or affect the following:
 - (a) the provisions of Section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section;

- (b) the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - (c) the applicable requirements of the acid rain program, consistent with Section 408(a) of the Federal Act.
 - (d) the ability of EPA to obtain information from a source pursuant to Section 114 of the Federal Act. (Ref.: APC-S-6, Section III.F.2.)
- 1.15 The Permittee shall comply with the requirement to register a Risk Management Plan if Permittee's facility is required pursuant to Section 112(r) of the Act to register such a plan. (Ref.: APC-S-6, Section III.H.)
- 1.16 Expiration of this permit terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted. A timely application is one which is submitted at least six (6) months prior to expiration of the Title V permit. If the Permittee submits a timely and complete application, the failure to have a Title V permit is not a violation of regulations until the Permit Board takes final action on the permit application. This protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by the DEQ any additional information identified as being needed to process the application. (Ref.: APC-S-6, Section IV.C.2., Section IV.B., and Section II.A.1.c.)
- 1.17 The Permittee is authorized to make changes within their facility without requiring a permit revision (ref: Section 502(b)(10) of the Act) if:
- (a) the changes are not modifications under any provision of Title I of the Act;
 - (b) the changes do not exceed the emissions allowable under this permit;
 - (c) the Permittee provides the Administrator and the Department with written notification in advance of the proposed changes (at least seven (7) days, or such other time frame as provided in other regulations for emergencies) and the notification includes:
 - (1) a brief description of the change(s),
 - (2) the date on which the change will occur,
 - (3) any change in emissions, and
 - (4) any permit term or condition that is no longer applicable as a result of the change;
 - (d) the permit shield shall not apply to any Section 502(b)(10) change. (Ref.: APC-S-6, Section IV.F.)

- 1.18 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 APC-S-3, "Regulations for the Prevention of Air Pollution Emergency Episodes" for the level of emergency declared. (Ref.: APC-S-3)
- 1.19 Except as otherwise provided herein, a modification of the facility may require a Permit to Construct in accordance with the provisions of Regulations APC-S-2, "Permit Regulations for the Construction and/or Operation of Air Emissions Equipment", and may require modification of this permit in accordance with Regulations APC-S-6, "Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act". Modification is defined as "[a]ny 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 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 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 Subpart I or 40 CFR 51.166; or
 - (f) any change in ownership of the stationary source."

- 1.20 Any change in ownership or operational control must be approved by the Permit Board. (Ref.: APC-S-6, Section IV.D.4.)
- 1.21 This permit is a Federally approved operating permit under Title V of the Federal Clean Air Act as amended in 1990. All terms and conditions, including any designed to limit the source's potential to emit, are enforceable by the Administrator and citizens under the Federal Act as well as the Commission. (Ref.: APC-S-6, Section III.B.1)
- 1.22 Except as otherwise specified or limited herein, the open burning of residential, commercial, institutional, or industrial solid waste, is prohibited. This prohibition does not apply to infrequent burning of agricultural wastes in the field, silvicultural wastes for forest management purposes, land-clearing debris, debris from emergency clean-up operations, and ordnance. Open burning of land-clearing debris must not use starter or auxiliary fuels which cause excessive smoke (rubber tires, plastics, etc.); must not be performed if prohibited by local ordinances; must not cause a traffic hazard; must not take place where there is a High Fire Danger Alert declared by the Mississippi Forestry Commission or Emergency Air Pollution Episode Alert imposed by the Executive Director and must meet the following buffer zones.
- (a) Open burning without a forced-draft air system must not occur within 500 yards of an occupied dwelling.
 - (b) Open burning utilizing a forced-draft air system on all fires to improve the combustion rate and reduce smoke may be done within 500 yards of but not within 50 yards of an occupied dwelling.
 - (c) Burning must not occur within 500 yards of commercial airport property, private air fields, or marked off-runway aircraft approach corridors unless written approval to conduct burning is secured from the proper airport authority, owner or operator. (Ref.: APC-S-1, Section 3.7)
- 1.23 Except as otherwise specified herein, the Permittee shall be subject to the following provision with respect to emergencies.
- (a) Except as otherwise specified herein, an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
 - (b) An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in (c) following are met.

- (c) The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs, or other relevant evidence that include information as follows:
 - (1) an emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - (2) the permitted facility was at the time being properly operated;
 - (3) during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
 - (4) the Permittee submitted notice of the emergency to the DEQ within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- (d) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (e) This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein. (Ref.: APC-S-6, Section III.G.)

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

- (a) Upsets (as defined by APC-S-1, Section 2.34)
 - (1) The occurrence of an upset constitutes an affirmative defense to an enforcement action brought for noncompliance with emission standards or other requirements of Applicable Rules and Regulations or any applicable permit if the Permittee demonstrates through properly signed contemporaneous operating logs, or other relevant evidence that include information as follows:
 - (i) an upset occurred and that the Permittee can identify the cause(s) of the upset;
 - (ii) the source was at the time being properly operated;
 - (iii) during the upset the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements of Applicable Rules and Regulations or any applicable permit;

- (iv) the Permittee submitted notice of the upset to the DEQ within 5 working days of the time the upset began; and
 - (v) the notice of the upset shall contain a description of the upset, any steps taken to mitigate emissions, and corrective actions taken.
- (2) In any enforcement proceeding, the Permittee 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.
- (b) Startups and Shutdowns (as defined by APC-S-1, Sections 2.31 & 2.26)
- (1) Startups and shutdowns are part of normal source operation. Emissions limitations applicable to normal operation apply during startups and shutdowns except as follows:
- (i) when sudden, unavoidable breakdowns occur during a startup or shutdown, the event may be classified as an upset subject to the requirements above;
 - (ii) when a startup or shutdown is infrequent, the duration of excess emissions is brief in each event, and the design of the source is such that the period of excess emissions cannot be avoided without causing damage to equipment or persons; or
 - (iii) when the emissions standards applicable during a startup or shutdown are defined by other requirements of Applicable Rules and Regulations or any applicable permit.
- (2) In any enforcement proceeding, the Permittee seeking to establish the applicability of any exception during a startup or shutdown has the burden of proof.
- (3) In the event this startup and shutdown provision conflicts with another applicable requirement, the more stringent requirement shall apply.
- (c) Maintenance.
- (1) Maintenance should be performed during planned shutdown or repair of process equipment such that excess emissions are avoided. Unavoidable maintenance that results in brief periods of excess emissions and that is necessary to prevent or minimize emergency conditions or equipment malfunctions constitutes an affirmative defense to an enforcement action brought for noncompliance with

emission standards, or other regulatory requirements if the Permittee can demonstrate the following:

- (i) the Permittee can identify the need for the maintenance;
 - (ii) the source was at the time being properly operated;
 - (iii) during the maintenance the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements of Applicable Rules and Regulations or any applicable permit;
 - (iv) the Permittee submitted notice of the maintenance to the DEQ within 5 working days of the time the maintenance began or such other times as allowed by DEQ; and
 - (v) the notice shall contain a description of the maintenance, any steps taken to mitigate emissions, and corrective actions taken.
- (2) In any enforcement proceeding, the Permittee seeking to establish the applicability of this section has the burden of proof.
- (3) In the event this maintenance provision conflicts with another applicable requirement, the more stringent requirement shall apply. (Ref.: APC-S-1, Section 10)

1.25 The Permittee shall comply with all applicable standards for demolition and renovation activities pursuant to the requirements of 40 CFR Part 61, Subpart M, as adopted by reference in Regulation APC-S-1, Section 8. The Permittee shall not be required to obtain a modification of this permit in order to perform the referenced activities.

SECTION 2. EMISSION POINTS & POLLUTION CONTROL DEVICES

Emission Point	Description
AA-001a	39.9 MMBtu/hr natural gas-fired Springfield boiler (constructed prior to June 9, 1989).
AA-001b	39.9 MMBtu/hr natural gas-fired Springfield boiler (constructed prior to June 9, 1989).
AA-002	Eight (8) natural gas-fired PVC dryers: 1) PVC Dryer #4 with baghouse, 2) PVC Dryer #5 with baghouse, 3) PVC Dryer #6 with baghouse, 4) PVC Dryer #7 with baghouse, 5) PVC Dryer #8 with baghouse, 6) Fluidized Bed PVC Dryer with scrubber, 7) Cyclone PVC Dryer #1 with scrubber, and 8) Cyclone PVC Dryer #2 with scrubber. (All baghouses are considered inherent process equipment as defined in 40 CFR 64.1.)
AA-003	PVC storage and handling process equipped with thirty-nine (39) baghouses. (All baghouses are considered inherent process equipment as defined in 40 CFR 64.1.)
AA-006	All emissions from the Plasticizer Production Area (including fugitive, process vent, and tank emissions).
AA-007a	Vinyl chloride monomer (VCM) incinerator controlling emissions from the vinyl chloride reaction and storage processes (all AI Emission Points).
AA-007b	Vinyl chloride monomer (VCM) incinerator controlling emissions from the vinyl chloride reaction and storage processes (all AI Emission Points).
AA-008	Compound Mixing Area, which handles a variety of raw materials and contains equipment such as mixers, agitators, extruders, and pelletizers. The area is equipped with cyclones and baghouses, which are inherent process equipment as defined in 40 CFR 64.1.
AA-010	Emergency Equipment including Fire Pumps #1 - #4 (255 hp), Fire Pump #4-A (440 hp), and Fire Pumps #5 and #6 (235 hp).
AA-011	No. 7 Cooling Tower Pump Emergency Generator (979 hp), a spark ignition 4 stroke lean burn RICE.
AA-012	Emergency Air Compressor Generator (603 hp), a compression ignition RICE.
AA-013	Vinyl Control Room Emergency Generator (556 hp), a compression ignition RICE.
AB-003	59.8 MMBtu/hr natural gas-fired Cleaver Brooks Boiler #3 (constructed prior to June 9, 1989).
AB-004	96.1 MMBtu/hr natural gas-fired Nebraska Boiler #4 (subject to NSPS Subpart Dc).
AD-001	Blending silo for off-grade resins equipped with a baghouse, which is considered inherent process equipment as defined in 40 CFR 64.1.
AD-002	Two PVC extruders, equipped with a condensation-type VOC control device
AE-002	Cooling Towers
AE-003	Wastewater Treatment Unit
Polyvinyl Chloride Production Area (all regulated exhaust gas stream emissions vented to VCM incinerators, AA-007a and AA-007b)	

Emission Point	Description
AI-001	Railcar Unloading Station
AI-002	PVC Reactor D-300
AI-003	PVC Reactor D-400
AI-004	PVC Reactor D-500
AI-005	PVC Reactor D-600
AI-006	PVC Reactor D-700
AI-007	PVC Reactor 741
AI-008	PVC Reactor 742
AI-009	PVC Reactor 743
AI-010	PVC Reactor 744
AI-011	PVC Reactor 745
AI-012	Evacuation Jet – Old Module
AI-013	Evacuation Jet – New Module
AI-014	Slurry Dump System – Old Module
AI-015	Slurry Dump System – New Module
AI-016	Slurry Dump Systems – Reactor 745
AI-017	Slurry Dump Systems – Reactor D-700
AI-018	Slurry Blend Tank 550
AI-019	Slurry Blend Tank 551
AI-020	Slurry Blend Tank 552
AI-021	Slurry Blend Tank 553
AI-022	Slurry Blend Tank 646
AI-023	Slurry Blend Tank 647
AI-024	Slurry Blend Tank 648
AI-025	Slurry Blend Tank 649
AI-026	Slurry Blend Tank 650

Emission Point	Description
AI-027	Slurry Blend Tank 651
AI-028	Slurry Blend Tank 652
AI-029	Slurry Blend Tank 653
AI-030	Slurry Blend Tank 654
AI-031	Slurry Blend Tank 655
AI-032	Slurry Blend Tank 407
AI-033	Slurry Blend Tank 501
AI-034	Slurry Blend Tank 502
AI-035	Slurry Blend Tank 747
AI-036	Normal Kill Solution Mix Tank
AI-037	Normal Kill Solution Charge Tank
AI-038	Suspending Agent Tank, D-103
AI-039	Slurry Blend Tank (Low Mol)
AI-040	PVC Reactor 746
AI-041	PVC Reactor 747
AI-044	New Module High Mole (NMHM) Slurry Dump Tank
AI-045	Old Module High Mole (OMHM) Slurry Dump Tank
AI-046	New Module Low Mole (NMLM) Slurry Dump Tank
AI-048	New Module High Mole (NMHM) Stripper Feed Tank
AI-049	New Module Low Mole (NMLM) Stripper Feed Tank
AI-050	Old Module High Mole (OMHM) Stripper Feed Tank
AI-052	New Module Low Mole (NMLM) Slurry Stripper
AI-053	Old Module High Mole (OMHM) Slurry Stripper
AI-054	New Module High Mole (NMHM) Slurry Stripper

SECTION 3. EMISSION LIMITATIONS & STANDARDS

A. Facility-Wide Emission Limitations & Standards

3.A.1 Except as otherwise specified or limited herein, 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) & (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. (Ref.: APC-S-1, Section 3.1)

3.A.2 Except as otherwise specified or limited herein, 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, equivalent to that provided in Paragraph 3.A.1. This shall not apply to vision obscuration caused by uncombined water droplets. (Ref.: APC-S-1, Section 3.2)

B. Emission Point Specific Emission Limitations & Standards

Emission Point(s)	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limit/Standard
AA-001a, AA-001b, AA-007a, AA-007b, AB-003, AB-004	APC-S-1, Section 3.4(a)(2)	3.B.1	PM	$E=0.8808 * I^{-0.1667}$
AA-001a, AA-001b, AA-002, AA-007a, AA-007b, AA-010, AB-003, AB-004	APC-S-1, Section 4.1(a)	3.B.2	SO ₂	4.8 lb/MMBtu

Emission Point(s)	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limit/Standard
AA-002	Permit to Construct issued May 23, 1995, and Title V Operating Permit issued January 28, 1998, and January 7, 2005.	3.B.3 3.B.15	PM/PM ₁₀ NO _x CO	25.5 lb/hr and 111.69 tpy* 13.6 lb/hr and 59.57 tpy* 20.4 lb/hr and 89.3 tpy* * Total allowable emissions for all eight (8) dryers.
AA-003	Permit to Construct issued May 23, 1995, and Title V Operating permit issued January 28, 1998.	3.B.3	PM/PM ₁₀	9.7 lb/hr and 42.49 tpy
AA-006	Permit to Construct issued May 23, 1995, and Title V Operating permit issued January 28, 1998.	3.B.3	VOC	9.13 lb/hr and 39.99 tpy
AA-006	40 CFR 63, Subpart FFFF (§63.2480)	3.B.13	HAP (Phthalic anhydride)	Leak Detection and Repair (LDAR) requirements in 40 CFR 63, Subpart UU
AA-001a, AA-001b, AA-002, AA-007a, AA-007b, AB-003, AB-004	Title V Operating Permit issued January 28, 1998 and March 26, 2010.	3.B.4	Fuel Restriction	Natural gas only
AA-007a, AA-007b	40 CFR 61, Subpart F (§61.64(a)(1), (b), (c), and (d)) 40 CFR 63, Subpart J	3.B.10 3.B.11	HAP (Vinyl Chloride)	10 ppm (3-hour average)
AA-008	Construction permits issued June 14, 1994, and May 23, 1995. (Formerly AA-004 and AC-001 through AC-008) Title V Operating Permit issued January 28, 1998	3.B.3 and 3.B.5	PM PM ₁₀	6.25 lb/hr and 27.46 tpy 4.31 lb/hr and 18.41 tpy
AA-010	Permit to Construct issued October 21, 1997	3.B.6	Operational Limit	≤ 500 hours/yr
AB-003	Permit to Construct issued May 23, 1995, and Title V Operating permit issued January 28, 1998.	3.B.3	NO _x CO	9.7 lb/hr and 68.5 tpy* 6.2 lb/hr and 43.5 tpy* * tpy limit for combined emissions from

Emission Point(s)	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limit/Standard
				AB-003 and AB-004
AB-004	Permit to Construct issued May 23, 1995, and Title V Operating permit issued January 28, 1998.	3.B.3	NO _x CO	16.3 lb/hr and 68.5 tpy* 9.9 lb/hr and 43.5 tpy* * tpy limit for combined emissions from AB-003 and AB-004
AB-003, AB-004	Permit to Construct issued May 23, 1995	3.B.7	Heat Input	< 843,800 MMBtu/yr* * limit for combined heat input from AB-003 and AB-004
AB-004	40 CFR 60, Subpart Dc	3.B.8	Fuel	No applicable emission limitations. See recordkeeping and reporting requirements.
Facility-wide	APC-S-1, Section 3.6(a)	3.B.9	PM	$E = 4.1 * p^{0.67}$
AI Emission Points	40 CFR 61, Subpart F (§61.64) and 40 CFR 63, Subpart J (§63.214 and §63.215)	3.B.10 3.B.11	HAP (Vinyl chloride)	10 ppm (3-hour average) for exhaust gas from reactors, strippers, containers, and monomer recovery system 0.04 lb VC/ton PVC product for reactor opening losses (equivalent to 20 ppm by weight) 400 ppm for VC sources following the stripper 0.00042 lb VC/lb PVC product for reactors used as strippers (equivalent to 420 ppm by weight)
AA-002, AA-003, AA-007a, AA-007b, AE-002, AE-003 and AI Emission Points	Permit to Construct issued May 23, 1995	3.B.12	Total vinyl chloride Production limit	0.000198 lb VC/dry solid lb of PVC resin, not to exceed 138.6 tpy <1.4 billion lb PVC/year
AA-010	APC-S-1, Section 3.4(a)(1)	3.B.14	PM	0.6 lbs/MMBtu
AA-011, AA-012, AA-013	40 CFR 63, Subpart ZZZZ (§63.6585 and §63.6590(b)(3))	3.B.16	HAP	MACT applicability only. No applicable requirements for these emission points.

Emission Point(s)	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limit/Standard
Facility-Wide	Permit to Construct issued May 20, 2009, and Concent Decree, Civil Action No. 1: 07-CV-3113 entered February 27, 2008.	3.B.17	Consent Decree Requirements	Specific requirements including standard operating plans, procedures, and variances as required by a Consent decree.

3.B.1 For Emission Points AA-001a, AA-001b, AA-007a, AA-007b, AB-003, and AB-004, the Permittee shall not cause or allow emissions of particulate matter in excess of the emission rate determined by the following relationship:

$$E = 0.8808 * I^{0.1667}$$

where *E* is the emission rate in pounds per million BTU per hour heat input and *I* is the heat input in millions of BTU per hour. (Ref.: APC-S-1, Section 3.4(a)(2))

3.B.2 For Emission Points AA-001a, AA-001b, AA-002, AA-007a, AA-007b, AA-010, AB-003, and AB-004, the Permittee shall not cause or allow emissions of sulfur oxides in excess of 4.8 pounds per million BTU heat input. (Ref.: APC-S-1, Section 4.1(a))

3.B.3 For Emission Points AA-002, AA-003, AA-006, AA-007a, AA-007b, AA-008, AB-003, AB-004, and all AI Emission Points, the Permittee shall comply with those limits set forth in the Permit to Construct issued May 23, 1995, and incorporated by reference in Table 3.B – Emission Point Specific Emission Limitations and Standards, of the Title V Operating Permit issued January 28, 1998 . (Ref.: Permit to Construct issued May 23, 1995, and Title V Operating Permit issued January 28, 1998)

3.B.4 For Emission Points AA-001a, AA-001b, AA-002, AA-007a, AA-007b, AB-003, and AB-004, the Permittee shall only burn natural gas in the fuel burning equipment. (Ref.: Title V Operating Permit issued January 28, 1998, and March 26, 2010)

3.B.5 For Emission Points AA-008, the Permittee shall comply with those limits set forth in the Permit to Construct, issued June 14, 1994, and incorporated by reference in Table 3.B – Emission Point Specific Emission Limitations and Standards, of the Title V Operating Permit issued January 28, 1998 . (Ref.: Permit to Construct issued June 14, 1994, and Title V Operating Permit issued January 28, 1998)

3.B.6 For Emission Point AA-010, the Permittee shall not operate the emergency equipment in excess of 500 hours per calendar year. (Ref.: Permit to Construct issued October 21, 1997)

3.B.7 The Permittee shall limit the total combined heat input into Emission Points AB-003 and AB-004, collectively, to no more than 843,800 MMBtu in any consecutive 365-day period. (Ref.: Permit to Construct issued May 23, 1995)

3.B.8 For Emission Point AB-004, the Permittee is subject to and shall comply with the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units. (Ref.: 40 CFR 60, Subparts A and Dc)

3.B.9 Except as otherwise specified, the Permittee shall not cause, permit, or allow the emission of particulate matter in total quantities in any one hour from any manufacturing process, which includes any associated stacks, vents, outlets, or combination thereof, to exceed the amount determined by the following relationship:

$$E = 4.1 * p^{0.67}$$

Where E is the emission rate in pounds per hour and p is the process weight input rate in tons per hour. (Ref.: APC-S-1, Section 3.6(a))

3.B.10 For Emission Points AA-007a and AA-007b, and all AI Emission Points, the Permittee is subject to and shall comply with the General Provisions and the National Emission Standard for Vinyl Chloride, 40 CFR Part 61, Subparts A and F, respectively. Since related conditions in this permit may not define certain terms or specify requirements in detail, these regulations are attached in the appendices to this permit, and all applicable requirements under these Subparts are hereby incorporated. (Ref.: 40 CFR 61, Subparts A and F)

Specifically, the Permittee shall comply with the following emission limitations:

Emission Standards for Polyvinyl Chloride Plants (§61.64)

- (1) The concentration of vinyl chloride in each exhaust gas stream from each reactor; stripper; mixing, weighing and holding container preceding the stripper; and monomer recovery system shall not exceed 10 ppm (3-hour average), except for reactor opening loss or emergency relief valve discharge. (§61.64(a)(1), (b), (c), and (d))
- (2) The reactor opening loss from each reactor is not to exceed 0.02 g vinyl chloride per kg (0.04 lb/ton) of polyvinyl chloride product. (This is equivalent to 20 ppm by weight.) (§61.64(a)(2))
- (3) For vinyl chloride sources following the stripper, the weighted average residual vinyl chloride concentration in all grades of PVC resin processed through the stripping operation on each calendar day, measured immediately after the stripping operation is completed, may not exceed 400 ppm. (§61.64(e)(1)(ii))
- (4) For any reactor used as a stripper, the weighted average emissions of vinyl chloride for each calendar day from reactor opening loss and all sources following the reactor used as a stripper may not exceed 0.42 g/kg (0.00042 lb/lb) of polyvinyl

chloride product, with the product determined on a dry solids basis. (This is equivalent to 420 ppm by weight.) (§61.64(f)(1)(ii))

Emission Standards for Fugitive Emission Sources (§61.65)

- (5) The Permittee shall comply with the requirements for minimization and detection of vinyl chloride emissions from fugitive sources as set forth in §61.65(b)(1)-(9). The Permittee shall comply with 40 CFR 61, Subpart V, when referenced.

3.B.11 For Emission Points AA-007a and AA-007b, and all AI Emission Points, the Permittee is subject to and shall comply with the National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production, 40 CFR 63, Subpart J. Since related conditions in this permit may not define certain terms or specify requirements in detail, the regulations are attached in the appendix to this permit, and all applicable requirements under this Subpart are hereby incorporated. (Ref.: 40 CFR 63, Subpart J)

Specifically, the Permittee shall comply with the following requirements:

- (1) Standards and Compliance Requirements (§63.214)

The Permittee shall meet all the requirements in 40 CFR 61, Subpart F, as they pertain to processes that manufacture polymerized vinyl chloride. These requirements include the emission standards and compliance, testing, monitoring, notification, recordkeeping, and reporting requirements. The Permittee shall comply with 40 CFR 61, Subpart V, when referenced in 40 CFR 61, Subpart F.

- (2) Applicable General Provisions (§63.215)

The Permittee shall comply with the general provisions expressed in 40 CFR 61, Subpart A. In addition, the Permittee shall comply with specific general provisions of 40 CFR 63, Subpart A, as described in §63.215(b).

3.B.12 For Emission Points AA-002, AA-003, AA-007a, AA-007b, AE-002, and AE-003, and all AI Emission Points, the Permittee shall not cause or allow the total emissions of vinyl chloride to exceed 0.000198 pounds per pound of dry solid PVC resin, or 138.6 tons per year. This is based on a maximum production of 1.4 billion pounds of PVC per year. Emissions of vinyl chloride include, but are not limited to, residual monomer content after stripping, reactor opening losses, and any fugitive emissions. (Ref.: Permit to Construct issued May 23, 1995)

3.B.13 For Emission Point AA-006, the Permittee is subject to and shall comply with all applicable requirement of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Organic Chemical Manufacturing, 40 CFR 63, Subpart FFFF and the General Provisions, 40 CFR 63, Subpart A, as specified in Table 12 of Subpart FFFF. Since related conditions in this permit may not define certain terms or specify requirements in

detail, a copy of the Miscellaneous Organic Chemical Manufacturing NESHAP and the General Provisions are included in Appendices F and H, respectively. (Ref.: 40 CFR 63, Subparts A and FFFF)

For Emission Point AA-006, the Permittee is subject to and shall comply with the equipment leaks requirements of §63.2480 for equipment in organic HAP service. The Permittee shall comply with the requirements of 40 CFR 63, Subpart UU to satisfy the requirements of §63.2480. (Ref.: 40 CFR 63, Subpart FFFF - Table 6)

- 3.B.14 For Emission Points AA-010, the Permittee shall not cause or permit emissions of particulate matter in excess of 0.6 pounds per million Btu per hour heat input. (Ref.: APC-S-1, Section 3.4(a)(1))
- 3.B.15 For Emission Point AA-002, the Permittee shall not cause or permit the total emissions of carbon monoxide from all eight dryers to exceed 20.4 lb/hr and 89.3 tons/year. (Ref.: Title V Operating Permit issued January 7, 2005)
- 3.B.16 For Emission Points AA-011, AA-012, and AA-013, the Permittee is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR Part 63, Subpart ZZZZ. These units satisfy the definition of a stationary RICE that is either an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE or an existing compression ignition (CI) stationary RICE and, therefore, are not required to meet the requirements of this standard or the General Provisions, 40 CFR Part 63, Subpart A. (Ref.: §63.6585 and §63.6590(b)(3))
- 3.B.17 The Permittee is subject to and shall comply with the requirements listed under paragraph 37 of a Consent Decree, Civil Action No. 1:07-CV-3113 entered February 27, 2008, by the Plaintiffs – United States of America and Mississippi Commission on Environmental Quality, and the Defendant – Georgia Gulf Chemicals and Vinyls, LLC. In accordance with the Consent Decree, the requirements were initially incorporated into the construction permit issued May 20, 2009, and subsequently by reference that construction permit into this Title V operating permit. Since related conditions in this permit may not define certain terms or specify requirements in detail, the consent decree is attached in the appendix to this permit, and all applicable requirements under this consent decree are hereby incorporated.

Specifically, the Permittee shall comply with the following requirements:

- (1) The Permittee shall comply with the variance granted by the U.S. EPA on September 11, 2000, providing for the use of alternative procedures to conduct EPA Method 107 performance testing as required by 40 CFR 61.70, including by determining a new mean percent total solids value at least annually.

- (2) The Permittee shall use EPA Method 107 to sample each batch from the batch water stripper effluent in compliance with 40 CFR 61.65(b)(9)(i) and 61.67(g)(2), unless and until a request for a variance from such regulation has been approved by EPA. In the event that the Permittee receives a new variance from EPA, such variance shall be incorporated by reference into a non-Title V permit and then incorporated into the Title V Permit. The Permittee shall submit an appropriate application to DEQ to incorporate the variance into a non-Title V permit within 90 days after issuance of such variance.

- (3) The Permittee shall implement a Backup Plan that sets forth procedures that the Permittee will follow during periods when the Above-Ground PVC Solids Removal Unit and/or Air Strippers #1 or #2 are not operating as designed or not operating at all. The Backup Plan shall be implemented upon start-up and operation of the VOC Air Stripper #1, which shall be no later than 185 days after approval of the Work Plan for the VOC Air Stripper #1 in addition to ten (10) days for start-up of the VOC Air Stripper #1. The Backup Plan shall also set forth the steps the Permittee shall take to ensure that Hazardous Waste, as defined in 40 CFR Part 261, Subparts C and D, is not entering Pond 3 and that the wastewater discharged to Pond 3 meets the applicable universal treatment standards set forth in 40 CFR 268.48. The Backup Plan, as approved by EPA, shall be maintained at the permitted facility and made available upon request by DEQ staff.

- (4) The Permittee shall maintain and implement a Leak Detection Elimination Plan (LDEP) meeting the requirements of 40 CFR 61.65(b)(8). The LDEP shall be maintained at the permitted facility and made available upon request by DEQ staff.

- (5) The Permittee shall implement Standard Operating Procedures (SOPs) addressing the following:
 - a. Weekly Pump Records
 - b. Expiration Date for Calibration Gases
 - c. Twenty-four Hour Residual Vinyl Chloride Monomer (RVCM) Calculation

These SOPs shall be maintained at the permitted facility and made available upon request by DEQ staff.

(Ref.: Permit to Construct issued May 20, 2009, and Consent Decree, Civil Action No. 1:
07-CV-3113 entered February 27, 2008)

Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limit/Standard
APC-S-1, Section 3.4(a)(1)	3.C.1 & 1.19	PM	0.6 lbs/MMBTU or as otherwise limited by facility modification restrictions
APC-S-1, Section 4.1(a) 1840-00014otv	3.C.2 & 1.19	SO ₂	4.8 lbs/MMBTU or as otherwise limited by facility modification restrictions

C. Insignificant and Trivial Activity Emission Limitations & Standards

- 3.C.1 The maximum permissible emission of ash and/or particulate matter from fossil fuel burning installations of less than 10 million BTU per hour heat input shall not exceed 0.6 pounds per million BTU per hour heat input. (Ref.: APC-S-1, Section 3.4(a)(1))
- 3.C.2 The maximum discharge of sulfur oxides from any fuel burning installation in which the fuel is burned primarily to produce heat or power by indirect heat transfer shall not exceed 4.8 pounds (measured as sulfur dioxide) per million BTU heat input. (Ref.: APC-S-1, Section 4.1(a))

D. Work Practice Standards

Emission Point(s)	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limit/Standard
AA-007a, AA-007b, AI-Emission Points	40 CFR 61.65(b)	3.D.1	Vinyl Chloride (Fugitives/Equipment Leaks)	Applicability of work practice standards in 40 CFR 61, Subpart V for equipment leaks
AA-007a, AA-007b, AI-Emission Points	40 CFR 61.65(c)	3.D.2	Vinyl Chloride (Fugitives/Equipment Leaks)	Requires a Standard Operating Procedure for incorporating requirements of fugitive emission sources

- 3.D.1 The Permittee is subject to and shall comply with the requirements for minimization and detection of vinyl chloride emissions from fugitive sources as set forth in §61.65(b)(1)-(9), including the work practice standards for equipment leaks in 40 CFR 61, Subpart V, when referenced. (Ref.: 40 CFR 61.65(b))
- 3.D.2 The Permittee shall develop and implement a written standard operating procedure incorporating the requirements of §61.65(b)(1), (b)(2), (b)(5), (b)(6), (b)(7) and (b)(8). The standard operating procedure shall be maintained at the facility and made available upon request by DEQ personnel. (Ref.: 40 CFR 61.65(c))

SECTION 4. COMPLIANCE SCHEDULE

- 4.1 Unless otherwise specified herein, the Permittee shall be in compliance with all requirements contained herein upon issuance of this permit.
- 4.2 Except as otherwise specified herein, the Permittee shall submit to the Permit Board and to the Administrator of EPA Region IV a certification of compliance with permit terms and conditions, including emission limitations, standards, or work practices, by January 31 for the preceding calendar year. Each compliance certification shall include the following:
- (a) the identification of each term or condition of the permit that is the basis of the certification;
 - (b) the compliance status;
 - (c) whether compliance was continuous or intermittent;
 - (d) the method(s) used for determining the compliance status of the source, currently and over the applicable reporting period;
 - (e) such other facts as may be specified as pertinent in specific conditions elsewhere in this permit. (Ref.: APC-S-6, Section III.C.5.a.,c.,&d.)

SECTION 5. MONITORING, RECORDKEEPING & REPORTING
REQUIREMENTS

A. General Monitoring, Recordkeeping and Reporting Requirements

- 5.A.1 The Permittee shall install, maintain, and operate equipment and/or institute procedures as necessary to perform the monitoring and recordkeeping specified below. (Ref.: APC-S-6, Section III.A.3)
- 5.A.2 In addition to the recordkeeping specified below, the Permittee shall include with all records of required monitoring information the following:
- (a) the date, place as defined in the permit, and time of sampling or measurements;
 - (b) the date(s) analyses were performed;
 - (c) the company or entity that performed the analyses;
 - (d) the analytical techniques or methods used;
 - (e) the results of such analyses; and
 - (f) the operating conditions existing at the time of sampling or measurement. (Ref.: APC-S-6, Section III.A.3.b.(1)(a)-(f))

- 5.A.3 Except as otherwise specified herein, the Permittee shall retain records of all required monitoring data and support information 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 for continuous monitoring instrumentation, and copies of all reports required by the permit. (Ref.: APC-S-6, Section III.A.3.b.(2))
- 5.A.4 Except as otherwise specified herein, the Permittee shall submit reports of any required monitoring by July 31 and January 31 for the preceding six-month period. All instances of deviations from permit requirements must be clearly identified in such reports and all required reports must be certified by a responsible official consistent with APC-S-6, Section II.E. (Ref.: APC-S-6, Section III.A.3.c.(1))
- 5.A.5 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) days of the time the deviation began. (Ref.: APC-S-6, Section III.A.3.c.(2))
- 5.A.6 Except as otherwise specified herein, the Permittee shall perform emissions sampling and analysis in accordance with EPA Test Methods and with any continuous emission monitoring requirements, if applicable. All test methods shall be those versions or their equivalents approved by the DEQ and the EPA. (Ref.: APC-S-6, Section III.A.3.a.(1))
- 5.A.7 The Permittee shall maintain records of any alterations, additions, or changes in equipment or operation. (Ref.: APC-S-6, Section III.A.3.b)

B. Specific Monitoring and Recordkeeping Requirements

Emission Point(s)	Pollutant/Parameter Monitored	Monitoring/Recordkeeping Requirement	Condition Number	Applicable Requirement
AA-007a, AA-007b, and AI Emission Points	Vinyl Chloride	Continuous monitoring of vinyl chloride emissions.	5.B.1	40 CFR 61.68(a)-(f) and 40 CFR 61.71(a)(3)
AA-002, AA-003, AA-007a, AA-007b, AE-002, AE-003 and AI Emission Points	PVC Production and Vinyl Chloride Emissions	Record daily and consecutive 365-day total PVC production and vinyl chloride emissions.	5.B.2	APC-S-6, Section III.A.3.a(2)

Emission Point(s)	Pollutant/Parameter Monitored	Monitoring/Recordkeeping Requirement	Condition Number	Applicable Requirement
AB-003, AB-004	Fuel and Heat Input	Monitor and record daily the amount of natural gas used and the daily and consecutive 365-day total heat input.	5.B.3	APC-S-6, Section III.A.3.a(2) and 40 CFR 60.48c(g)
Facility-wide (except for AB-003 and AB-004)	Fuel	Monitor and record the amount of natural gas combusted.	5.B.4	APC-S-6, Section III.A.3.a(2)
AI Emission Points	Vinyl Chloride and Reactor Conditions	Maintain records of leaks and maintain a daily operating record for each PVC reactor	5.B.5	40 CFR 61.71(a)(1), (2), and (4)
AA-002, AA-003, AA-007a, AA-007b, AA-008, AD-001, AD-002	Control Equipment	Perform monthly maintenance on control equipment	5.B.6	APC-S-6, Section III.A.3.c
AB-003, AB-004	NO _x and CO	Stack test in accordance with EPA Reference Methods 7 and 10	5.B.7 & 5.B.8	APC-S-6, Section III.A.3.a(2)
AA-006	Phthalic anhydride	Monitoring and recordkeeping specified in 40 CFR 63, Subpart UU	5.B.9	40 CFR 63.2480
AA-010	Hours of operation	Record the date and hours emergency equipment operated each year.	5.B.10	APC-S-6, Section III.A.3.a(2)
AA-002	PM/PM ₁₀	Stack test in accordance with EPA Reference Methods 1-5	5.B.11	APC-S-6, Section III.A.3.a(2)
AA-003	PM/PM ₁₀	Weekly visible emissions observations.	5.B.12	APC-S-6, Section III.A.3.a(2)
AA-008	PM/PM ₁₀	Weekly visible emissions observations.	5.B.13	APC-S-6, Section III.A.3.a(2)
AA-006	VOC	Calculate and record the maximum VOC emission rate in lb/hr for each month and VOC emissions in tons/yr for each consecutive 12-month period	5.B.14	APC-S-6, Section III.A.3.a(2)
AI Emission Points	Vinyl chloride	Records of vinyl chloride calculations from stripping operations	5.B.15	40 CFR 61.70(c)(2)(vi)
AA-002	NO _x and CO	Stack test in accordance with EPA Reference Methods 7 and 10	5.B.16	APC-S-6, Section III.A.3.a(2)
AA-006	Phthalic anhydride	Comply with applicable recordkeeping	5.B.17	40 CFR 63.2525

Emission Point(s)	Pollutant/Parameter Monitored	Monitoring/Recordkeeping Requirement	Condition Number	Applicable Requirement
		requirements of 40 CFR 63.2525		

- 5.B.1 For Emission Points AA-007a and AA-007b, and all AI Emission Points, the Permittee shall monitor vinyl chloride emissions on a continuous basis for those sources subject to §61.64(a)(1), (b), (c), and (d) and §61.65(b)(1)(ii), (b)(5), (b)(6)(ii), and (b)(9)(ii). The vinyl chloride monitoring system(s) shall meet the requirements of §61.68(b). A weekly span check shall be conducted for each vinyl chloride monitoring system using a concentration of vinyl chloride equal to 10 ppm. (Ref.: 40 CFR 61.68(a)-(c))

When exhaust gas(es) subject to the continuous monitoring above is emitted to the atmosphere without passing through the control system and required vinyl chloride monitoring system, the vinyl chloride content of the emission shall be calculated in units of ppm by best practical engineering judgment based on the discharge duration and known vinyl chloride concentrations in the affected equipment, as determined in accordance with §61.67(h). (Ref.: 40 CFR 61.68(d))

For each 3-hour period, the vinyl chloride content of the emissions shall be averaged, and for any emissions in excess of 10 ppm, the Permittee shall record 1) the identity of the source(s); 2) the date, time and duration of the excess emission; 3) the cause of the excess emission; 4) the approximate total vinyl chloride loss during the excess emission; and 5) the method used for determining the vinyl chloride loss. (Ref.: 40 CFR 61.68(e) and (f))

The Permittee shall maintain records of the monitoring required above in accordance with Condition 5.A.3, which satisfies the recordkeeping requirements of 40 CFR 61.71(a)(3).

- 5.B.2 The Permittee shall record the total pounds of polyvinyl chloride (PVC) produced each calendar day and the consecutive 365-day total pounds of PVC produced. The Permittee shall also calculate and record the total pounds of vinyl chloride emissions from those units regulated under 40 CFR Part 61, Subpart F each calendar day, as well as the total facility-wide vinyl chloride emissions in tons per year for each consecutive 12-month period. (Ref.: APC-S-6, Section III.A.3.a(2))
- 5.B.3 For Emission Points AB-003 and AB-004, the Permittee shall monitor and record the amount of natural gas combusted and the combined heat input to AB-003 and AB-004 for each day and shall calculate and record the total natural gas usage and combined heat input for each consecutive 365-day period. (Ref.: APC-S-6, Section III.A.3.a(2) and 40 CFR 60.48c(g))
- 5.B.4 For all fuel-burning units, except Emission Points AB-003 and AB-004, the Permittee shall monitor and maintain monthly records on the total amount of natural gas combusted by all units combined. (Ref.: APC-S-6, Section III.A.3.a(2))
- 5.B.5 For all AI Emissions Points, the Permittee shall maintain a record of the following information, in accordance with Condition 5.A.3 (Ref.: 40 CFR 61.71(a)(1), (2), and (4)):

- 1) Leaks detected by the vinyl chloride monitoring system, as required by §61.65(b)(8), including the concentrations of vinyl chloride measured, analyzed, and recorded by the vinyl chloride detector, the location of each measurement, and the date and approximate time of each measurement.
- 2) Leaks detected during routine monitoring with the portable hydrocarbon detector and the action taken to repair the leaks, as required by §61.65(b)(8), including a brief statement explaining the location and cause of each leak detected with the portable hydrocarbon detector, the date and time of the leak, and any action taken to eliminate the leak.
- 3) A daily operating record for each polyvinyl chloride reactor, including pressures and temperatures.

5.B.6 For Emission Points AA-002, AA-003, AA-007a, AA-007b, AA-008, AD-001, and AD-002, the Permittee shall perform regular maintenance each month or more often if necessary to maintain proper operation of the pollution control equipment, including any baghouses and cyclones considered inherent process equipment. Records of this maintenance shall be kept in log form and made available for review upon request. The Permittee shall also maintain on hand at all times sufficient equipment as is necessary to repair and/or replace the pollution control equipment.

In the event of pollution control equipment failure, the Permittee shall adhere to Condition 1.23 and 1.24 and Condition 5.A.5. Where these conditions are not applicable, the Permittee shall cease operations of any emission units venting to the control equipment until such time as repairs are made and the proper efficiency of the control equipment is restored. (Ref.: APC-S-6, Section III.A.3.c)

5.B.7 For Emission Points AB-003, the Permittee shall demonstrate compliance with the NO_x and CO emission limitations by performing biennial stack testing in accordance with EPA Reference Methods 7 and 10, respectively. For purposes of demonstrating compliance, the Permittee shall operate the sources at their maximum rated capacities. The Permittee shall submit a stack test report by August 31 of each even-numbered year (e.g. 2010, 2012, etc.).

The Permittee shall submit a test protocol at least thirty (30) days prior to the scheduled test date to ensure that all test methods and procedures are acceptable to DEQ. If the initial test protocol is acceptable, subsequent test protocols may be waived if these protocols contain no significant changes. Also, the DEQ must be notified at least ten (10) days prior to the scheduled test date so that an observer may be scheduled to witness the test(s). (Ref.: APC-S-6, Section III.A.3.a(2))

5.B.8 For Emission Point AB-004, the Permittee shall demonstrate compliance with the NO_x and CO emission limitations by performing at least one stack test during the life of the permit term in accordance with EPA Reference Methods 7 and 10, respectively. For

purposes of demonstrating compliance, the Permittee shall operate the source at its maximum rated capacity. A stack test report containing the results of the test shall be submitted no later than August 31st of the year the source is tested.

The Permittee shall submit a test protocol at least thirty (30) days prior to the scheduled test date to ensure that all test methods and procedures are acceptable to DEQ. If the initial test protocol is acceptable, subsequent test protocols may be waived if these protocols contain no significant changes. Also, the DEQ must be notified at least ten (10) days prior to the scheduled test date so that an observer may be scheduled to witness the test(s). (Ref.: APC-S-6, Section III.A.3.a(2))

- 5.B.9 For Emission Point AA-006, the Permittee shall comply with the monitoring and recordkeeping requirements specified in 40 CFR 63, Subpart UU. (Ref.: 40 CFR 63.2480)
- 5.B.10 For Emission Point AA-010, the Permittee shall record the date(s) and number of hours the emergency equipment operated each calendar year. (Ref.: APC-S-6, Section III.A.3.a(2))
- 5.B.11 For Emission Point AA-002, the Permittee shall demonstrate compliance with the PM/PM₁₀ emission limitations by performing at least one stack test during the life of the permit term in accordance with EPA Reference Methods 1-5. For purposes of demonstrating compliance, the Permittee shall operate the source at its maximum rated capacity. A stack test report containing the results of the test shall be submitted no later than August 31st of the year the source is tested.

The Permittee shall submit a test protocol at least thirty (30) days prior to the scheduled test date to ensure that all test methods and procedures are acceptable to DEQ. If the initial test protocol is acceptable, subsequent test protocols may be waived if these protocols contain no significant changes. Also, the DEQ must be notified at least ten (10) days prior to the scheduled test date so that an observer may be scheduled to witness the test(s). (Ref.: APC-S-6, Section III.A.3.a(2))

- 5.B.12 For Emission Point AA-003, the Permittee shall demonstrate compliance with the PM/PM₁₀ emission limitations by performing a weekly visible emissions observation for each emission source. The Permittee shall perform these observations during material processing, handling, and/or transferring operations and during daylight hours. The Permittee shall maintain a log for each emission source of whether any air emissions were visible. If air emissions were visible, the Permittee shall record the cause of the visible emissions and any corrective action taken. Upon detecting visible emissions, the Permittee shall immediately inspect the control device and take appropriate corrective action. (Ref.: APC-S-6, Section III.A.3.a(2))
- 5.B.13 For Emission Points AA-008, the Permittee shall demonstrate compliance with the PM/PM₁₀ emission limitations by performing a weekly visible emissions observation for

each emission source. The Permittee shall perform these observations during material processing, handling, and/or transferring operations and during daylight hours. The Permittee shall maintain a log for each emission source of whether any air emissions were visible. If air emissions were visible, the Permittee shall record the cause of the visible emissions and any corrective action taken. Upon detecting visible emissions, the Permittee shall immediately inspect the control device and take appropriate corrective action. (Ref.: APC-S-6, Section III.A.3.a(2))

5.B.14 For Emission Point AA-006, the Permittee shall calculate and record the maximum VOC emission rate in lb/hr for each month. The Permittee shall also calculate and record the VOC emissions in ton/year for each consecutive 12-month period. These emissions, including the calculations, shall be submitted with each semiannual report required by Condition 5.A.4. (Ref.: APC-S-6, Section III.A.3.a(2))

5.B.15 For all AI Emission Points, the Permittee shall maintain records of the following information for a minimum of five years and shall make these records available upon request by DEQ personnel. (Ref.: 40 CFR 61.70(c)(2)(vi) and APC-S-6, Section III.A.3.b(2))

- 1) Vinyl chloride content of all samples required by §61.70(c)(2)(i), identified by the resin type and grade and the time and date it represents.
- 2) The corresponding quantity of polyvinyl chloride resin processed by the stripper(s), identified by the resin type and grade and the time and date it represents.

5.B.16 For Emission Point AA-002, the Permittee shall demonstrate compliance with the NO_x and CO emission limitations by performing stack testing in accordance with EPA Reference Methods 7 and 10, respectively. For purposes of demonstrating compliance, the Permittee shall operate the sources at their maximum rated capacities. The Permittee shall test at least one dryer each year so that all dryers have been tested at least once during the life of this permit. A stack test report shall be submitted no later than August 31 of each year for those sources tested.

The Permittee shall submit a test protocol at least thirty (30) days prior to the scheduled test date to ensure that all test methods and procedures are acceptable to DEQ. If the initial test protocol is acceptable, subsequent test protocols may be waived if these protocols contain no significant changes. Also, the DEQ must be notified at least ten (10) days prior to the scheduled test date so that an observer may be scheduled to witness the test(s). (Ref.: APC-S-6, Section III.A.3.a(2))

5.B.17 For Emission Points AA-006, the Permittee shall comply with the recordkeeping requirements specified in §63.2525, as applicable. (Ref.: 40 CFR 63.2525)

C. Specific Reporting Requirements

Emission Point(s)	Pollutant/Parameter Monitored	Reporting Requirement	Condition Number	Applicable Requirement
AA-007a, AA-007b, and AI Emission Points	Vinyl chloride	Quarterly reports of excess emissions and vinyl chloride emissions not monitored continuously.	5.C.1	40 CFR 61.70(a)(1) and (c)
AA-006	Phthalic anhydride	Semiannual compliance reports	5.C.2	40 CFR 63.2520(b) and (e) and 63.2480

5.C.1 For Emission Points AA-007a and AA-007b, and all AI Emission Points, the Permittee shall submit quarterly reports by March 15, June 15, September 15, and December 15 of each year containing the following information (Ref.: 40 CFR 61.70(a)(1) and (c)):

- 1) A record of the vinyl chloride content of emissions for each 3-hour period during which the average emissions exceeded the emission limitations in §61.64(a)(1), (b), (c), and/or (d); or during which average emissions are in excess of emission limits specified for any control system to which reactor emissions are required to be ducted in §61.64(a)(2) or to which fugitive emissions are required to be ducted in §61.65(b)(1)(i), (b)(5), (b)(6)(ii), or (b)(9)(ii).
- 2) The number of 3-hour periods for which average emissions were determined.
- 3) The vinyl chloride content, as determined by Method 107, of one representative sample of polyvinyl chloride resin taken from each batch of each grade of resin immediately following the completion of the stripping operation. The sample should be identified by resin type and grade and the date and time the batch is completed.
- 4) A record of any 24-hour average resin vinyl chloride concentration in excess of the limits prescribed by §61.64(e).
- 5) A record of any emissions from each reactor opening in excess of the emission limitations prescribed in §61.64(a)(2), and the number of reactor openings during the reporting period.
- 6) A record of the vinyl chloride emissions from reactor opening loss and all sources following the reactor used as a stripper, including a record of any

24-hour average combined reactor opening loss and emissions from all sources following the reactor used as a stripper in excess of the limits prescribed in §61.64(f).

7) A statement that no excess emissions were detected, if applicable.

5.C.2 For Emission Points AA-006, the Permittee shall submit semiannual compliance reports for the previous six-month periods ending June 30 and December 31 by August 31 and February 28, respectively. The compliance report shall include the information specified in §63.2520(e)(1), (2), (3), and (10). The compliance report shall also include the information specified in §63.1039 for equipment leaks (i.e. Subpart UU or an approved alternative). (Ref.: 40 CFR 63.2520(b) and (e) and 63.2480)

SECTION 6. ALTERNATIVE OPERATING SCENARIOS

- 6.1 For Emission Point AA-006, the Permittee may demonstrate compliance with the requirements for equipment leaks expressed in Condition 3.B.13 and Condition 5.B.9 of the permit by complying with the requirements of 40 CFR 63, Subpart H, or 40 CFR 65, Subpart F, as authorized in *Table 6 to Subpart FFFF of 40 CFR Part 63 – Requirements for Equipment Leaks* for equipment in organic HAP service at an existing source. The Permittee may elect to utilize the applicable provisions of paragraphs (b) through (d) of §63.2480, as an alternative means to demonstrate compliance for equipment leaks.

These activities may be conducted without going through the permit modification procedures as described in Condition 1.19 of the permit herein. The Permittee shall maintain records at the facility of the alternative scenario under which it is operating, including the dates when the alternative scenario begins and ends. Any terms and conditions in the alternative scenario, including but not limited to monitoring, recordkeeping and reporting requirements, shall apply. (Ref.: 40 CFR 63.2480 and APC-S-6, Section III.A.9)

SECTION 7. TITLE VI REQUIREMENTS

The following are applicable or potentially applicable requirements originating from Title VI of the Clean Air Act. The full text of the referenced regulations is contained in Appendix B to this permit.

- 7.1 If the Permittee stores or transports class I or class II substances, the Permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
- (a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if being introduced into interstate commerce pursuant to §82.106.
 - (b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - (c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
 - (d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 7.2 If the Permittee performs any of the activities described below, the Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - (b) Equipment used during the maintenance, service, repair, or disposal of appliance must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
 - (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - (d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with the recordkeeping requirements pursuant to §82.166. (“MVAC - like appliance” is defined at §82.152.)
 - (e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.

(f) 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 §82.166.

7.3 If the Permittee manufactures, transforms, imports, or exports a class I or class II substance, the Permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

7.4 If the Permittee performs a service on motor (fleet) vehicles and if this service involves an ozone-depleting substance (refrigerant) in the motor vehicle air conditioner (MVAC), the Permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include air-tight sealed refrigeration systems used for refrigerated cargo, or air conditioning systems on passenger buses using HCFC-22 refrigerant.

7.5 The Permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program.

APPENDIX A

List of Abbreviations Used In this Permit

APC-S-1	Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants
APC-S-2	Permit Regulations for the Construction and/or Operation of Air Emissions Equipment
APC-S-3	Regulations for the Prevention of Air Pollution Emergency Episodes
APC-S-4	Ambient Air Quality Standards
APC-S-5	Regulations for the Prevention of Significant Deterioration of Air Quality
APC-S-6	Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act
APC-S-7	Acid Rain Program Permit Regulations for Purposes of Title IV of the Federal Clean Air Act
BACT	Best Available Control Technology
CEM	Continuous Emission Monitor
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COM	Continuous Opacity Monitor
COMS	Continuous Opacity Monitoring System
DEQ	Mississippi Department of Environmental Quality
EPA	United States Environmental Protection Agency
gr/dscf	Grains Per Dry Standard Cubic Foot
HP	Horsepower
HAP	Hazardous Air Pollutant
lbs/hr	Pounds per Hour
M or K	Thousand
MACT	Maximum Achievable Control Technology
MM	Million
MMBTUH	Million British Thermal Units per Hour
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards For Hazardous Air Pollutants, 40 CFR 61 or National Emission Standards For Hazardous Air Pollutants for Source Categories, 40 CFR 63
NMVOG	Non-Methane Volatile Organic Compounds
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards, 40 CFR 60
O&M	Operation and Maintenance
PM	Particulate Matter
PM ₁₀	Particulate Matter less than 10 Φm in diameter
ppm	Parts per Million
PSD	Prevention of Significant Deterioration, 40 CFR 52
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
TPY	Tons per Year
TRS	Total Reduced Sulfur
VEE	Visible Emissions Evaluation
VHAP	Volatile Hazardous Air Pollutant
VOC	Volatile Organic Compound

APPENDIX B

40 CFR 82

PROTECTION OF STRATOSPHERIC OZONE

APPENDIX C

40 CFR 61, SUBPART F

National Emission Standards for Vinyl Chloride

APPENDIX D

40 CFR 61, SUBPART V

**National Emission Standards for Equipment Leaks
(Fugitive Emission Sources)**

APPENDIX E

40 CFR 63, SUBPART J

National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production

APPENDIX F

40 CFR 63, SUBPART FFFF

**National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic
Chemical Manufacturing**

APPENDIX G

40 CFR 61, SUBPART A

General Provisions

APPENDIX H

40 CFR 63, SUBPART A

General Provisions

APPENDIX I

40 CFR 63, SUBPART ZZZZ

**National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating
Internal Combustion Engines (RICE)**

APPENDIX J

Consent Decree, Civil Action No. 1:07-CV-3113

entered February 27, 2008, by

**United States of America,
Mississippi Commission on Environmental Quality**

Plaintiffs,

v.

Georgia Gulf Chemicals and Vinyls, LLC.

Defendant.