STATE OF MISSISSIPPI
AIR POLLUTION CONTROL PERMIT

TO CONSTRUCT AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Nissan North America Inc, Canton Manufacturing Facility
300 Nissan Drive
Canton, Mississippi
Madison County

"Fluidized Bed Concentrator with Thermal Oxidizer"

has been granted permission to construct air emissions equipment to comply with the emission limitations, monitoring requirements and other conditions set forth herein. This permit is issued in accordance with 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.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

AUTHORIZED SIGNATURE
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: MAY 2 2 2018

Permit No.: 1720-00073

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. Any activities not identified in the application are not authorized by this permit. (Ref.: Miss. Code Ann. 49-17-29 1.b)

3. 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 operating without a valid permit pursuant to State Law. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(5).)

4. It is the responsibility of the applicant/permittee to obtain all other approvals, permits, clearances, easements, agreements, etc., which may be required including, but not limited to, all required local government zoning approvals or permits. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D(6).)

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 the 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 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).)

8. The permit does not convey any property rights of any sort, or any exclusive privilege. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(c).)

9. 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).)

10. Design and Construction Requirements: The stationary source shall be designed and constructed so as to operate without causing a violation of an Applicable Rules and Regulations, without interfering with the attainment and maintenance of State and National Ambient Air Quality Standards, and such that the emission of air toxics does not result in an ambient concentration sufficient to adversely affect human health and well-being or unreasonably and adversely affect plant or animal life beyond the stationary source boundaries. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.A.)

11. Solids Removal: The necessary facilities shall be constructed so that solids removed in the course of control of air emissions may 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)

12. Diversion and Bypass of Air Pollution Controls: The air pollution control facilities shall be constructed such that diversion from or bypass of collection and control facilities is not needed 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.)

13. Fugitive Dust Emissions from Construction Activities: The construction of the stationary source shall be performed in such a manner so as to reduce fugitive dust emissions from construction activities to a minimum. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.A(4).)

14. Right of Entry: The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board and/or their representatives upon 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 emissions. (Ref.: Miss. Code Ann. 49-17-21)

15. Permit Modification or Revocation: After notice and opportunity for a hearing, the Permit Board may modify the permit or revoke it in whole or in part for good cause shown including, but not limited to:

    a) Persistent violation of any of the 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.)

16. Public Record and Confidential Information: 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)

17. Permit Transfer: This permit shall not be transferred except upon approval of the Permit Board. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.16.B)

18. Severability: The provisions of this permit are severable. If any provision of the permit, or the application of any provision of the 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).)

19. Permit Expiration: The permit to construct will expire if construction does not begin within eighteen (18) months from the date of issuance or if construction is suspended for eighteen (18) months or more. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(1).)

20. Certification of Construction: A new stationary source issued a Permit to Construct cannot begin operation until certification of construction by the permittee. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(3).)

21. Beginning Operation: Except as prohibited in Section 1, Condition 24 of this permit, after certification of construction by the permittee, the Permit to Construct shall be deemed to satisfy the requirement for a permit to operate until the date the application for issuance or modification of the Title V Permit or the application for issuance or modification of the State Permit to Operate, whichever is applicable, is due. This provision is not applicable to a source excluded from the requirement for a permit to operate as provided by 11 Miss. Admin. Code Pt. 2, R. 2.13.G. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(4).)

22. Application for a Permit to Operate: Except as otherwise specified in Section 1, Condition 24 of this permit, the application for issuance or modification of the State Permit to Operate or the Title V Permit, whichever is applicable, is due twelve (12) months after beginning operation or such earlier date or time as specified in the Permit to Construct. The Permit Board may specify an earlier date or time for submittal of the application. Beginning operation will be assumed to occur upon certification of construction, unless the permittee specifies differently in writing. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(5).)

23. Operating Under a Permit to Construct: Except as otherwise specified in Section 1, Condition 24 of this permit, upon submittal of a timely and complete application for issuance or modification of a State Permit to Operate or a Title V Permit, whichever is applicable, the applicant may continue to operate under the terms and conditions of the Permit to Construct and in compliance with the submitted application until the Permit Board issues, modifies, or denies the Permit to Operate. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(6).)

24. Application Requirements for a Permit to Operate for Moderate Modifications: For moderate modifications that require contemporaneous enforceable emissions reductions from more than one emission point in order to "net" out of PSD/NSR, the applicable Title V Permit to Operate or State Permit to Operate must be modified prior to beginning operation of the modified facilities. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(7).)

25. General Duty: All air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

26. Deviation Reporting: 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(10).)

27. 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).)

B. GENERAL NOTIFICATION REQUIREMENTS

1. Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(2).)

2. The permittee must notify DEQ in writing when construction does not begin within eighteen (18) months of issuance or if construction is suspended for eighteen (18) months or more. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(3).)

3. Upon the completion of construction or installation of an approved stationary source or modification, and prior to commencing operation, the applicant shall notify the Permit Board that construction or installation was performed in accordance with the approved plans and specifications on file with the Permit Board. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(1) and (3).)

4. The Permit Board shall be promptly notified in writing of any change in construction from the previously approved plans and specifications or permit. If the Permit Board determines the changes are substantial, it may require the submission of a new application to construct with "as built" plans and specifications. Notwithstanding any provision herein to the contrary, the acceptance of an "as built" application shall not constitute a waiver of the right to seek compliance penalties pursuant to State Law. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(2).)

SECTION 2
EMISSION POINT DESCRIPTION

The permittee is authorized to construct and operate, upon certification of construction, air emissions equipment, as described in the following table.

Emission Point	Description
AA-013	System 1 Paint Plant – Topcoat Line #1 and Purge Operation
AA-013a	System 1 Paint Plant – Topcoat Line #1 The Topcoat Line oven exhaust is routed through a two-burner Regenerative Thermal Oxidizer (RTO) which exhausts through a single stack (AA-021). The Clearcoat automatic zone exhaust is routed through a Fluidized Bed Concentrator with Thermal Oxidizer (FBC with TO) which exhausts through a single stack (AA-022). Particulate Matter is controlled with a wet scrubber water wash downdraft system.
AA-013b	System 1 Paint Plant – Purge Operation The Clearcoat purge exhaust is routed through a Fluidized Bed Concentrator with Thermal Oxidizer (FBC with TO) which exhausts through a single stack (AA-022). A purge collection system is used to collect spent clearcoat purge solvent.
AA-021	A two-burner Regenerative Thermal Oxidizer (RTO) which exhausts through a single stack. The RTO controls VOC emissions from the System 1 and System 3 E-coat ovens (AA-005 and AD-005), System 1 and System 3 Primer ovens (AA-010 and AD-010), the System 1 and System 3 Topcoat ovens (AA-013 and AD-013). In the event that the FBC with TO (AA-022) malfunctions, the RTO will also control VOC emissions from the System 1 and System 3 Clearcoat Automatic Zones and Purge Operations (AA-013 and AD-013). The fuel is natural gas and the burner heat rating for each burner is 8.90 MMBTU/Hr.
AA-022	A Fluidized Bed Concentrator with Thermal Oxidizer (FBC with TO) controlling VOC emissions from the System 1 and System 3 Clearcoat Automatic Zones and Purge Operations (AA-013 and AD-013). The FBC consists of an activated carbon bead adsorber and desorber. Exhaust from the desorber is routed through the TO. The TO and adsorber exhaust through a single stack. The fuel is natural gas and the burner heat rating is 3.1 MMBTU/Hr.
AD-013	System 3 Paint Plant – Primer/Topcoat Line and Purge Operation
AD-013a	System 3 Paint Plant – Primer/Topcoat Line The Topcoat Line oven is routed through a two-burner Regenerative Thermal Oxidizer (RTO) which exhausts through a single stack (AA-021). The Clearcoat Automatic Zone exhaust is routed through a Fluidized Bed Concentrator with Thermal Oxidizer (FBC with TO) which exhausts through a single stack (AA-022). Particulate matter is controlled with a wet scrubber water wash downdraft system.
AD-013b	System 3 Paint Plant – Purge Operation The Purge Operation exhaust is routed through a Fluidized Bed Concentrator with Thermal Oxidizer (FBC with TO) which exhausts through a single stack (AA-022). A purge collection system is used to collect spent purge solvent from the Primer/Topcoat zones.

SECTION 3
EMISSION LIMITATIONS AND STANDARDS

Emission Point	Applicable Requirement	Condition Number	Pollutant/ Parameter	Limitation/Standard
AA-013 AD-013	PSD Construction Permit issued April 2, 2001, May 14, 2003, December 1, 2005 and June 26, 2009 (addition of AD-000), November 26, 2012 (AB-007), and modified January 14, 2015 (AA-013, AA-024 and AB-024), (XX, XX, 2018) PTC, and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10).	3.1	VOCs/HAPs	BACT for VOC and MACT for HAPs have been determined to be the use of waterborne basecoat and solventborne clearcoat with the clearcoat booth (automatic) exhaust routed through an FBC with TO with a minimum destruction efficiency of 95% and the topcoat oven exhaust routed through an RTO with a minimum destruction efficiency of 95%.
AA-022	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.2	VOCs	95% Control Efficiency
		3.3	Combustion Temperature of TO	Minimum 1400°F
		3.4	Apparent Density	The carbon beads in the adsorber shall be considered 100% saturated at the apparent density of 0.85 g/cc.
		3.5	Desorber Inlet Temperature	Minimum 8°C (15°F) below the temperature established in the initial performance test.

3.1 For Emission Points AA-013 and AD-013, the permittee shall utilize waterborne basecoats and solventborne clearcoats with the clearcoat booth (automatic) exhaust routed through a Fluidized Bed Concentrator (FBC) with Thermal Oxidizer (TO) with a minimum destruction efficiency of 95% and the topcoat oven exhaust routed through a Regenerative Thermal Oxidizer (RTO) with a minimum destruction efficiency of 95% (BACT for VOCs and Case-by-Case MACT for HAPs).

(Ref.: PSD Construction Permit issued April 2, 2001, May 14, 2003, December 1, 2005 and June 26, 2009 (addition of AD-000), November 26, 2012 (AB-007), and modified January 14, 2015 (AA-013, AA-024 and AB-024), (XX, XX, 2018) PTC, and 11 Miss. Admin. Code Pt. 2, R.2.2.B(10).)

3.2 For Emission Point AA-022, the permittee shall operate the FBC with TO system at a minimum 95% VOC control efficiency. Compliance with this limit shall be demonstrated through the performance testing requirements in Conditions 5.1 and 5.2 of this Permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.3 For Emission Point AA-022, the permittee shall operate the Thermal Oxidizer (TO) at a minimum combustion temperature of 1400°F. Compliance with this limit shall be demonstrated through the monitoring requirements in Condition 5.5 of this Permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.4 For Emission Point AA-022, the permittee shall consider the carbon beads in the adsorber 100% saturated at an apparent density of 0.85 g/cc. Compliance with this standard shall be demonstrated through the monitoring requirements in Condition 5.8 of this Permit. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.5 For Emission Point AA-022, the permittee shall operate the desorber at a minimum inlet temperature of 8°C (15°F) below the temperature established in the initial performance test, in accordance with Condition 5.7 of this Permit.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

SECTION 4
WORK PRACTICES

Emission Point	Applicable Requirement	Condition Number	Pollutant/ Parameter	Work Practice
AA-022	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	4.1	Saturation	Change out carbon beads in the adsorber between 90% and 100% saturation
		4.2	Operating Requirements	Operate the FBC with TO system at any time the System 1 and System 3 Clearcoat Automatic Zones (AA-013a and AD-013a) and Purge Operations (AA-013b and AD-013b) are operating

4.1 For Emission Point AA-022, the permittee shall change out the carbon beads in the adsorber when the carbon beads are between 90% and 100% saturation. The carbon beads shall be considered 90% saturated at an apparent density of 0.765 g/cc and 100% saturated at an apparent density of 0.85 g/cc.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

4.2 For Emission Point AA-022, the permittee shall operate the FBC with TO system at any time that the System 1 and System 3 Clearcoat Automatic Zones and Purge Operations (AA-013 and AD-013) are operating. In the event that the FBC with TO system malfunctions, the permittee shall:

(a) Route the System 1 and System 3 Clearcoat Automatic Zones (AA-013a and AD-013a) and Purge Operations (AA-013b and AD-013b) exhaust to the Regenerative Thermal Oxidizer (RTO) (AA-021); or

(b) Shut down the System 1 and System 3 Clearcoat Automatic Zones (AA-013a and AD-013a) and Purge Operations (AA-013b and AD-013b); or

(c) Shut down the System 3 Paint Operations (AD-013) and route the System 1 Clearcoat Automatic Zone (AA-013a) and Purge Operation (AA-013b) to the RTO (AA-021).

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

SECTION 5
MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number	Pollutant/ Parameter	Monitoring/Recordkeeping Requirement
AA-022	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11). and 11 Miss. Admin. Code Pt. 2, R. 2.6.B(7).	5.1 5.2 5.3 5.4	VOCs	Performance testing to demonstrate control efficiency
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.5	Temperature	Continuous recording of combustion temperature of the Thermal Oxidizer
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.6 5.7	Temperature	Continuous recording of desorber inlet temperature and establish operating limits
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.8	Apparent Density	Weekly testing of the carbon beads in the adsorber and monthly percent saturation recordkeeping
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.9	Vent Stream Flow	Monitor and record vent stream flow to the FBC with TO, and record diversion to the RTO

5.1 For Emission Point AA-022, the permittee shall conduct an initial performance test within 180 days of start-up to demonstrate compliance with the minimum 95% VOC control efficiency required in Condition 3.2 of this Permit and establish the desorber inlet temperature operating limit in accordance with Condition 5.7 of this Permit.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

5.2 For Emission Point AA-022, the permittee shall conduct periodic performance testing to demonstrate compliance with the minimum 95% VOC control efficiency required in Condition 3.2 of this Permit. This periodic testing shall be conducted prior to change-out of the activated carbon beads, while the beads are between 90% and 100% saturation, but no less than biennially. The carbon beads shall be considered 90% saturated at an apparent density of 0.765 g/cc and shall be considered 100% saturated at an apparent density of 0.85 g/cc.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

5.3 For Emission Point AA-022, the permittee shall conduct each performance test required in Conditions 5.1 and 5.2 of this Permit according to the following requirements:

(a) The permittee shall conduct the performance testing under representative operation conditions for the coating operation. Operations during periods of startup, shutdown, or malfunction, and during periods of nonoperation do not constitute representative conditions. The permittee shall record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

(b) The permittee shall conduct the performance testing when the FBC with TO System is operating at a representative flow rate, and adsorber inlet concentration. The permittee shall record information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.6.B(7).)

5.4 For Emission Point AA-022, the permittee shall use the following procedures and test methods to determine the VOC control efficiency as part of the performance testing required in Conditions 5.1 and 5.2 of this Permit:

(a) The permittee shall conduct three test runs and each test run shall last at least 1 hour.

(b) The permittee shall use the test methods specified in paragraphs (b)(1) through (5) of this section.

(1) Use Method 1 or 1A of appendix A to 40 CFR Part 60, as appropriate, to select sampling sites and velocity traverse points.

(2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR Part 60, as appropriate, to measure gas volumetric flow rate.

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR Part 60, as appropriate, for gas analysis to determine dry molecular weight. The ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]" (incorporated by reference, see 40 CFR 63.14), may be used as an alternative to Method 3B.

(4) Use Method 4 of appendix A to 40 CFR Part 60 to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture shall be performed, as applicable, during each test run.

(c) The permittee shall measure total gaseous organic mass emissions as carbon at the inlet of the adsorber and at the combined outlet of the adsorber and thermal

oxidizer simultaneously, using Method 25A of Appendix A to 40 CFR Part 60. The permittee shall use the same method for both the inlet and outlet measurements.

(d) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet of the adsorber and the combined outlet of the adsorber and thermal oxidizer, using Equation 1 of this section:

$M_f = Q_{sd}C_c(12)(0.0416)(10^{-6})$ [Equation 1]

Where:
M_f = Total gaseous organic emissions mass flow rate, kg per hour (kg/h).
Q_{sd} = Volumetric flow rate of gases entering or exiting the FBC with TO, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters per hour (dscm/h).
C_c = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25A, ppmv, dry basis.
0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m^3)(@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(e) For each test run, determine the FBC with TO organic emissions control efficiency using Equation 2 of this section:

$CE = ((M_{fi} - M_{fo})/M_{fi}) \text{ X } 100$ [Equation 2]

Where:
CE = Organic emissions control efficiency of the FBC with TO, percent (%).
M_{fi} = Total gasous organic emissions mass flow rate at the inlet to the FBC with TO, using Equation 1 of this section, kg/h.
M_{fo} = Total gaseous organic emissions mass flow rate at the outlet of the FBC with TO, using Equation 1 of this section, kg/h.

(f) Determine the emission control efficiency of the FBC with TO as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

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

5.5 For Emission Point AA-022, the permittee shall install, calibrate, maintain, and operate a temperature measurement device to continuously record the combustion temperature of the Thermal Oxidizer to demonstrate compliance with the minimum temperature required in Condition 3.3 of this Permit. This device shall have an accuracy of ±1 percent of the temperature being monitored in degrees Fahrenheit, and shall collect data at least once every fifteen (15) minutes. The permittee shall also record all periods in excess of 3

hours during which the average temperature in the thermal oxidizer remains more than 28°C (50°F) below 1400°F.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

5.6 For Emission Point AA-022, the permittee shall install, calibrate, maintain and operate a temperature measurement device to continuously record the desorber inlet temperature. This device shall have an accuracy of ±1 percent of the temperature being monitored in degrees Fahrenheit, and shall collect data at least once every fifteen (15) minutes. The permittee shall also record all periods in excess of 3 hours during which the average desorber inlet temperature remains more than 8°C (15°F) below the temperature established in accordance with Condition 5.7 of this Permit.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

5.7 For Emission Point AA-022, the permittee shall establish the desorber inlet temperature operating limit during the initial performance test required in Condition 5.1 of this Permit, according to paragraphs (a) through (b) of this section:

(a) During the performance test, the permittee shall monitor and record the desorption gas inlet temperature at least once every 15 minutes during each of the three runs of the performance test.

(b) Use all valid data collected during the performance test to calculate and record the average desorption gas inlet temperature. The minimum operating limit for the concentrator is 8°C (15°F) below the average desorption gas inlet temperature maintained during the performance test for that concentrator. The permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C (10°F) below the lower of that set point during the performance test for the FBC with TO and the average desorption gas inlet temperature maintained during the performance test for the FBC with TO.

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

5.8 For Emission Point AA-022, the permittee shall conduct weekly apparent density testing of the carbon beads in the adsorber and determine the percent saturation of the carbon beads on a monthly basis. Testing shall be conducted according to manufacturer's specifications. The weekly apparent density test results and monthly percent saturation records shall be maintained on-site at the facility. These records shall be kept in log form and made available for review upon request during any inspection visit by DEQ personnel.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

5.9 For Emission Point AA-022, the permittee shall install flow indicator(s) that provide a record of vent stream flow to the FBC with TO at least once every hour. A flow indicator means any device which indicates vent stream flow; including, but not limited to, a pressure differential monitoring device or a valve placement indicator. The flow

indicator(s) shall be installed in the vent streams at a point closest to the inlet of the adsorber and before the System 1 and System 3 vent streams combine. The permittee shall maintain records of all periods when the permittee is operating according to the scenarios in Condition 4.2 of this Permit, or has no flow rate.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

SECTION 6
REPORTING REQUIREMENTS

Emission Points	Applicable Requirement	Condition Number(s)	Reporting Requirement
AA-022	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.1	Semiannual Monitoring Reports
	11 Miss. Admin. Code Pt. 2, R. 2.6.B(5).	6.2	Notification of Performance Test
	11 Miss. Admin. Code Pt. 2, R. 2.6.B(6).	6.3	Performance Test Reports

6.1 For Emission Point AA-022, the permittee shall submit semi-annual monitoring reports no later than 30 days from the semi-annual periods ending June 30 and December 31. The reports shall contain the following:

(a) Mass VOC emissions at the inlet to the adsorber and the combined outlet of the adsorber and thermal oxidizer, used for determining the control efficiency of the Fluidized Bed Concentrator with Thermal Oxidizer (FBC with TO), in accordance with Condition 5.4 of this Permit.

(b) Deviations from the Thermal Oxidizer minimum combustion temperature in Condition 3.3 of this Permit. A deviation shall be any period in excess of 3 hours during which the average temperature in the thermal oxidizer remains more than 28°C (50°F) below 1400°F.

(c) Deviations from the desorber inlet temperature operating limit established in accordance with Condition 5.7 of this Permit. A deviation shall be any period in excess of 3 hours during which the average desorber inlet temperature remains more than 8°C (15°F) below the established operating limit.

(d) Weekly apparent density testing results of the carbon beads in the adsorber, as required by Condition 5.8 of this Permit.

(e) Monthly percent saturation for the carbon beads in the adsorber, as required by Condition 5.8 of this Permit.

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

6.2 For Emission Point AA-022, the permittee shall submit a notification 30 days prior to the performance testing required in Conditions 5.1 and 5.2 of this Permit. This notification

shall include a description of the testing procedures and methods and the scheduled date of testing.
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.6.B(5).)

6.3 For Emission Point AA-022, the permittee shall submit reports of the performance test results required in Conditions 5.1 and 5.2 of this Permit no later than 60 days after completing the performance tests. These reports shall include the following:

(a) detailed description of testing procedures and methods;

(b) sample calculations;

(c) results;

(d) comparison of results to all applicable emission limitations in this Permit; and

(e) apparent density of the carbon beads in the adsorber at the time of testing.

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