

**STATE OF MISSISSIPPI  
AND FEDERALLY ENFORCEABLE  
AIR POLLUTION CONTROL  
PERMIT**

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

**THIS CERTIFIES THAT**

Discovery Company LLC, Hattiesburg Engine Plant No. 1  
182 John Merl Tatum Industrial Drive  
Hattiesburg, Forrest County, Mississippi

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

**MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD**

*Becky Simonson*

**AUTHORIZED SIGNATURE**

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Issued: August 3, 2020**

**Permit No.: 0800-00092**

**Effective Date: As specified herein.**

**Expires: July 31, 2025**

**Modified: June 18, 2024 (Admin. Mod. – Name Change)**

## SECTION 1

### A. GENERAL CONDITIONS

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

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

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

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

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

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

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

11. This permit does not authorize a modification as defined in Mississippi Administrative Code, Title 11, Part 2, Chapter 2 – “Permit Regulations for the Construction and/or Operation of Air Emission Equipment”. A modification may require a Permit to Construct and a modification of this permit.

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

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

**B. GENERAL OPERATIONAL CONDITIONS**

- 1. Should the Executive Director of the Mississippi Department of Environmental Quality declare an Air Pollution Emergency Episode, the permittee will be required to operate in accordance with the permittee’s previously approved Emissions Reduction Schedule or, in the absence of an approved schedule, with the appropriate requirements specified in Mississippi Administrative Code, Title 11, Part 2, Chapter 3 – “Regulations for the Prevention of Air Pollution Emergency Episodes” – for the level of emergency declared.

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

- 2. Any diversion from or bypass of collection and control facilities is prohibited, except as provided for in Mississippi Administrative Code, Title 11, Part 2, Chapter 1, Rule 1.10 – “Provisions for Upsets, Startups, and Shutdowns”.

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

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

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

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

- (a) Upsets

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

will consider establishing source specific emission limitations or work practice standards for start-ups and shutdowns. Source specific emission limitations or work practice standards established for start-ups and shutdowns are subject to the requirements prescribed in 11 Miss. Admin. Code Pt. 2, R. 1.10.B(2)(a) through (e).

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

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

5. *Compliance Testing*: Regarding compliance testing:

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

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

**C. PERMIT RENEWAL / MODIFICATION / TRANSFER / TERMINATION**

1. For renewal of this permit, the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Environmental Quality Permit Board.

If the applicant submits a timely and complete application pursuant to this paragraph and the Permit Board, through no fault of the applicant, fails to act on the application on or before the expiration date of the existing permit, the applicant shall continue to operate the stationary source under the terms and conditions of the expired permit, which shall remain in effect until final action on the application is taken by the Permit Board. Permit expiration terminates the source's ability to operate unless a timely and complete renewal application has been submitted.

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

2. The permittee shall furnish to the MDEQ within a reasonable time any information the MDEQ 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 MDEQ 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 MDEQ along with a claim of confidentiality. The permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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

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

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

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

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

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

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

**SECTION 2**  
**EMISSION POINT DESCRIPTION**

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

<b>Emission Point</b>	<b>Facility ID</b>	<b>Description</b>
AA-001	EPN-61-1 EPN-61-2	Stand-By Generators – Two (2) 2,935 HP (2,910 kW) Diesel-Fired, Non-Emergency Generator Engines [each equipped with oxidation catalysts to reduce CO emissions and manufactured in 1998; max. heat input (each): 18.6 MMBTU / hour]
AA-004	—	Industrial Part Washer Systems [four (4) units equipped with natural gas-fired burners and nine (9) units equipped with electric-powered burners]
AA-005	—	Two (2) Wastewater Evaporators [water is removed from metal working fluids, part washer detergents, and rust prevent solutions to create a concentrated solution (for disposal as used oil); each equipped with a 0.75 MMBTU / /hour natural gas-fired burner]

**SECTION 3**  
**EMISSION LIMITATIONS AND STANDARDS**

Emission Point(s)	Applicable Requirement	Condition Number	Pollutant / Parameter	Limitation / Standard
AA-001	11 Miss. Admin. Code Pt. 2, R 2.2.B(10). <b>(Title V Avoidance Limit)</b>	3.1	NO <sub>x</sub> Operating Hours	3,000 Hours / Year (For Both Engines Combined; Rolling 12-Month Total)
	11 Miss Admin. Code Pt. 2, R. 1.3.D(1)(b).	3.2	PM	$E = 0.8808 \cdot (I^{-0.1667})$
	40 CFR Part 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines 40 CFR 63.6585(a) and (c), 63.6590(a)(1)(iii), 63.6665, and Table 8; Subpart ZZZZ	3.3	HAPs	General Applicability
	40 CFR 63.6604(a); Subpart ZZZZ	3.4	Fuel Requirement	15 ppm Sulfur Content (Max.); and 40 Cetane Index (Min.) or 35% Aromatic Content (Max. – by volume)
	40 CFR 63.6603(a) and Table 2d (Item 3); Subpart ZZZZ	3.5	CO	23 ppmvd at 15% O <sub>2</sub> ; or Reduce CO by 70% or More
AA-004 AA-005	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.6	PM	0.6 lbs. / MMBTU per Hour

3.1 For Emission Point AA-001, the permittee shall limit the total combined hours of operation for both engines to no more than 3,000 hours per year based on a rolling 12-month total.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). – Title V Source Avoidance Limit)

3.2 For Emission Point AA-001, the maximum permissible emission of ash and/or particulate matter (PM) from fossil fuel burning installations equal to or greater than 10 million BTU (MMBTU) per hour heat input but less than 10,000 MMBTU per hour heat input shall not exceed an emission rate as determined by the relationship:

$$E = 0.8808 \cdot (I^{-0.1667})$$

Where “E” is the emission rate in pounds per MMBTU per hour heat input and “I” is the heat input in MMBTU per hour.

(Ref.: 11 Miss Admin. Code Pt. 2, R. 1.3.D(1)(b).)

- 3.3 For Emission Point AA-001, the permittee is subject to and shall comply with applicable requirements found in 40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) and 40 CFR Part 63, Subpart A – General Provisions (as specified in Table 8 of Subpart ZZZZ).

For the purpose of this permit, each engine is a non-emergency, non-black start compression-ignition (CI) stationary RICE with a rated capacity greater than 500 HP and located at an area source of hazardous air pollutants (HAPs).

(Ref.: 40 CFR 63.6585(a) and (c), 63.6590(a)(1)(iii), 63.6665, and Table 8; Subpart ZZZZ)

- 3.4 For Emission Point AA-001, the permittee shall only combust diesel fuel within each engine that meet the following requirements (on a per-gallon basis):
- (a) A maximum sulfur content of fifteen (15) ppm; and
  - (b) A minimum cetane index of forty (40) or a maximum aromatic content of thirty-five (35) volume percent.

(40 CFR 63.6604(a); Subpart ZZZZ)

- 3.5 For Emission Point AA-001, except during periods of start-up, the permittee shall comply with one (1) of the following carbon monoxide (CO) emissions standards at all times:
- (a) Limit the emission of CO to no more than 23 parts per million by volume, dry (ppmvd); or
  - (b) Reduce the emission of CO by at least seventy (70) percent.

(Ref.: 40 CFR 63.6603(a), 63.6605(a), and Table 2d (Item 3); Subpart ZZZZ)

- 3.6 For Emission Points AA-004 and AA-005, the maximum permissible emission of ash and/or particulate matter (PM) from fossil fuel burning installations of less than 10 MMBTU per hour heat input shall not exceed 0.6 pounds per MMBTU per hour heat input.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).)

## SECTION 4 WORK PRACTICE STANDARDS

Emission Point(s)	Applicable Requirement	Condition Number	Pollutant / Parameter	Work Practice
AA-001	40 CFR 63.6603(a), 63.6605(a), and Table 2b (Item 2); Subpart ZZZZ	4.1	Pressure Drop  Inlet Temperature	Oxidation Catalyst Operating Limitations
	40 CFR 63.6605; Subpart ZZZZ	4.2	HAPs	General Duty Clause
	40 CFR 63.6625(g); Subpart ZZZZ	4.3		Follow the Manufacturer’s Maintenance Requirements for a Closed Crankcase Ventilation System
	40 CFR 63.6625(h); Subpart ZZZZ	4.4		Minimize Idling Time During Periods of Start-Up

4.1 For Emission Point AA-001, except during periods of start-up, the permittee must comply with the following operating limitations:

- (a) Maintain the catalyst so that the pressure drop across the catalyst does not change by more than two (2) inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
- (b) Maintain the temperature of the engine exhaust so that the catalyst inlet temperature is greater than / equal to 450°F and less than / equal to 1350°F.

(Ref.: 40 CFR 63.6603(a), 63.6605(a), and Table 2b (Item 2); Subpart ZZZZ)

4.2 For Emission Point AA-001, the permittee shall operate and maintain the engines (including associated air pollution control equipment and monitoring equipment) in a manner consistent with safety and good air pollution control practices for minimizing emissions at all times. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by Subpart ZZZZ have been achieved.

The determination of whether such operation and maintenance procedures are being used will be based on information available to the MDEQ, which may include (but is not limited to) monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(Ref.: 40 CFR 63.6605(b); Subpart ZZZZ)

4.3 For Emission Point AA-001, the permittee shall follow the manufacturer’s specified maintenance requirements for operating and maintaining the closed crankcase ventilation

systems and replacing the crankcase filters, or can request the MDEQ to approve different maintenance requirements that are as protective as the manufacturer requirements.

(Ref.: 40 CFR 63.6625(g); Subpart ZZZZ)

- 4.4 For Emission Point AA-001, the permittee shall minimize each engine's time spent at idle during start-up and minimize the engine's start-up time to a period needed for appropriate and safe loading of the engine, not to exceed thirty (30) minutes, after which time the applicable emission standard specified in Condition 3.5 apply.

(Ref.: 40 CFR 63.6625(h); Subpart ZZZZ)

## SECTION 5 MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point(s)	Applicable Requirement	Condition Number	Pollutant / Parameter	Monitoring / Recordkeeping Requirement
Facility-Wide	11 Miss. Admin. Code Pt. 2, R. 2.9.	5.1	Recordkeeping	Maintain Records For A Minimum of Five (5) Years.
AA-001	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.2	NO <sub>x</sub> Operating Hours	Monitor and Maintain Hours of Operation For the Engines (Monthly and Rolling 12-Month Total)
	40 CFR 63.6615, 63.6620(a), Table 3, and Table 4; Subpart ZZZZ	5.3	CO	Conduct Routine Performance Testing
	40 CFR 63.6620(a), (b), (d), (e), (i), and Table 4.1 and 4.3; Subpart ZZZZ	5.4		Performance Testing Requirements
	40 CFR 63.6625(b) and Table 5; Subpart ZZZZ	5.5	Catalyst Inlet Temperature	Install, Operate, and Maintain a CPMS
	40 CFR 63.6635; Subpart ZZZZ	5.6	CO Catalyst Inlet Temperature Pressure Drop	Monitoring and Data Collection Requirements
	40 CFR 63.6640(a), 63.6655(d), and Table 6; Subpart ZZZZ	5.7		Demonstration of Continuous Compliance
	40 CFR 63.6655(a), (b), (d), (e)(3), and 63.6660; Subpart ZZZZ	5.8		Recordkeeping Requirements

5.1 The permittee shall retain all required records, monitoring data, supporting information and reports for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records, all original strip-chart recordings or other data for continuous monitoring instrumentation, and copies of all reports required by this permit. Copies of such records shall be submitted to the MDEQ as required by Applicable Rules and Regulations of this permit upon request.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.9.)

5.2 For Emission Point AA-001, the permittee shall demonstrate compliance with the limitation specified in Condition 3.1 by monitoring and recording the hours of operation for both engines both on a monthly and rolling 12-month rolling total basis.

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

5.3 For Emission Point AA-001, the permittee shall demonstrate compliance with one (1) of the CO emission standards specified in Condition 3.7 by conducting routine performance

testing on each engine every 8,760 hours of operation or once every three (3) years (whichever comes first) in accordance with Condition 5.4

(Ref.: 40 CFR 63.6615, 63.6620(a), Table 3, and Table 4; Subpart ZZZZ)

5.4 For Emission Point AA-001, the permittee shall conduct the performance testing required by Condition 5.3 in accordance with the following specifications:

(a) For an engine complying with Condition 3.5(b):

- (1) Select the sampling port location and number / location of traverse points at the inlet and outlet of the control device. For CO and O<sub>2</sub> measurements, ducts less than / equal to six (6) inches in diameter may be sampled at a single point located at the duct centroid and ducts greater than six (6) and less than / equal to twelve (12) inches in diameter may be sampled at three (3) traverse points located at 16.7%, 50.0%, and 83.3% of the measurement line (i.e. the “3-point long line”).

If the duct is greater than twelve (12) inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 in EPA Test Method 1 (found in 1 Appendix A-1 of 40 CFR Part 60), the duct may be sampled at the “3-point long line”; otherwise, conduct the stratification testing and select sampling points in accordance with Section 8.1.2 in EPA Test Method 7E (found in Appendix A-4 of 40 CFR Part 60).

- (2) Measure the O<sub>2</sub> concentration at the inlet and outlet of the control device using either EPA Test Method 3, 3A, or 3B (found in Appendix A-2 of 40 CFR Part 60), or ASTM Method D6522-00 (Reapproved 2005 – heated probe not necessary). Measurements to determine O<sub>2</sub> shall be made at the same time as the measurements for the CO concentration.
- (3) Measure the CO concentration at the inlet and the outlet of the control device using ASTM D6522-00 (Reapproved 2005 – heated probe not necessary) or EPA Test Method 10 (found in Appendix A-4 of 40 CFR Part 60). The CO concentration must be at fifteen (15) percent O<sub>2</sub> on a dry basis.

(b) For an engine complying with Condition 3.5(a):

- (1) Select the sampling port location and number / location of traverse points at the exhaust of the engine. For CO, O<sub>2</sub>, and moisture measurements, ducts less than / equal to six (6) inches in diameter may be sampled at a single point located at the duct centroid and ducts greater than six (6) and less than / equal to twelve (12) inches in diameter may be sampled at three (3) traverse points located at 16.7%, 50.0%, and 83.3% of the measurement line (i.e. the “3-point long line”).

If the duct is greater than twelve (12) inches in diameter and the sampling port location meets the two and half-diameter criterion in Section 11.1.1 of EPA Test Method 1 (found in Appendix A of 40 CFR Part 60), the duct may be

sampled at the “3-point long line”; otherwise, conduct the stratification testing and select sampling points in accordance with Section 8.1.2 of Method 7E (found in Appendix A of 40 CFR Part 60). If using a control device, the sampling site must be located at the outlet of the control device.

- (2) Determine the O<sub>2</sub> concentration of the engine exhaust at the sampling port location using either EPA Test Method 3, 3A, or 3B (found in Appendix A-2 of 40 CFR Part 60), or ASTM Method D6522-00 (Reapproved 2005 – heated probe not necessary). Measurements to determine O<sub>2</sub> concentration shall be made at the same time and location as the measurements for CO concentration.
  - (3) Measure moisture content of the engine exhaust at the sampling port location using either EPA Test Method 4 (found in Appendix A-3 of 40 CFR Part 60), EPA Test Method 320 (found in Appendix A of 40 CFR Part 63), or ASTM D 6348-03. Measurements to determine moisture content shall be made at the same time and location as the measurements for the CO concentration.
  - (4) Measure CO at the exhaust of the engine using EPA Test Method 10 (found in Appendix A-4 of 40 CFR Part 60), ASTM Method D6522-00 (2005), EPA Test Method 320 (found in Appendix A of 40 CFR Part 63), or ASTM D6348-03. The CO concentration must be at fifteen (15) percent O<sub>2</sub> on a dry basis. The results of this test consist of the average of the three (3) 1-hour or longer runs.
- (c) If the engine is non-operational, the permittee does not need to start up the engine solely to conduct the performance test. The permittee can conduct the performance test when the engine is started up again.
- (d) The permittee must conduct three (3) separate test runs for each performance test as specified in 40 CFR 63.7(e)(3), Subpart A. Each test run must last at least one (1) hour unless otherwise specified in this permit.
- (e) The permittee must use Equation 1 to determine compliance with the CO percent reduction requirement in Condition 3.5(b):

$$\frac{C_i - C_o}{C_i} \times 100 = R \text{ (Eq. 1)}$$

Where:

C<sub>i</sub> = the concentration of carbon monoxide (CO) at the control device inlet,

C<sub>o</sub> = the concentration of CO at the control device outlet, and

R = the percent reduction of CO emissions.

- (f) The permittee must normalize the CO concentrations at the inlet and outlet of the control device to a dry basis and to fifteen (15) percent oxygen or an equivalent percent carbon dioxide (CO<sub>2</sub>). If pollutant concentrations are to be corrected to

fifteen (15) percent oxygen and the CO<sub>2</sub> concentration is measured in lieu of oxygen concentration measurement, a CO<sub>2</sub> correction factor is needed. Calculate the CO<sub>2</sub> correction factor in accordance with the following requirements:

- (1) Calculate the fuel-specific F<sub>o</sub> value for the fuel burned during the test using values obtained from Section 5.2 of EPA Test Method 19 and Equation 2:

$$F_o = \frac{0.209F_d}{F_c} \text{ (Eq. 2)}$$

Where:

F<sub>o</sub> = the fuel factor based on the ratio of oxygen volume to the ultimate CO<sub>2</sub> volume produced by the fuel at zero percent excess air.

0.209 = the fraction of air that is oxygen, percent divided by 100.

F<sub>d</sub> = the ratio of the volume of dry effluent gas to the gross calorific value of the fuel from EPA Test Method 19, dscm per Joules (or dscf per MMBTU).

F<sub>c</sub> = the ratio of the volume of CO<sub>2</sub> produced to the gross calorific value of the fuel from EPA Test Method 19, dscm per Joule (or dscf per MMBTU).

- (2) Calculate the CO<sub>2</sub> correction factor for correcting measurement data to 15% O<sub>2</sub> using Equation 3:

$$X_{CO_2} = \frac{5.9}{F_o} \text{ (Eq. 3)}$$

Where:

X<sub>CO<sub>2</sub></sub> = CO<sub>2</sub> correction factor, percent.

5.9 = 20.9% O<sub>2</sub> – 15% O<sub>2</sub>, the defined O<sub>2</sub> correction value, percent.

- (3) Calculate the CO gas concentrations adjusted to 15% O<sub>2</sub> using CO<sub>2</sub> using Equation 4:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \text{ (Eq. 4)}$$

Where:

C<sub>adj</sub> = the calculated concentration of CO adjusted to 15 percent O<sub>2</sub>.

C<sub>d</sub> = the measured concentration of CO, uncorrected.

X<sub>CO<sub>2</sub></sub> = the CO<sub>2</sub> correction factor, percent.

$\%CO_2$  = the measured  $CO_2$  concentration on a dry basis, percent.

(Ref.: 40 CFR 63.6620(a), (b), (d), (e), (i), and Table 4 (Items 1 and 3); Subpart ZZZZ)

5.5 For Emission Point AA-001, the permittee shall, for each engine, install, operate, and maintain a continuous parameter monitoring system (CPMS) to monitor the catalyst inlet temperature in accordance with the requirements in paragraphs (a) – (f):

(a) The permittee must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in and the following specifications and 40 CFR 63.8(d), Subpart A.

As specified in 40 CFR 63.8(f)(4) – Subpart A, the permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in the site-specific monitoring plan.

- (1) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
  - (2) Sampling interface (e.g. a thermocouple) location such that the monitoring system will provide representative measurements;
  - (3) Equipment performance evaluations, system accuracy audits, or other audit procedures;
  - (4) Ongoing operation and maintenance procedures in accordance with provisions in 40 CFR 63.8(c)(1)(ii) and (c)(3), Subpart A; and
  - (5) Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c), (e)(1), and (e)(2)(i), Subpart A.
- (b) The permittee must install, operate, and maintain a CPMS in continuous operation in accordance with the site-specific monitoring plan.
- (c) The CPMS must collect data at least once every fifteen (15) minutes as required by Condition 5.6)
- (d) For a CPMS measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 °C (or 5 °F) or one (1) percent of the measurement range (whichever is larger).
- (e) The permittee must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.
- (f) The permittee must conduct a performance evaluation of each CPMS in accordance

with the permittee's site-specific monitoring plan.

(Ref.: 40 CFR 63.6625(b) and Table 5; Subpart ZZZZ)

- 5.6 For Emission Point AA-001, the permittee shall demonstrate continuous compliance with the limitations specified in Conditions 3.5 and 4.1 by monitoring and collecting data in accordance with the following requirements:
- (a) Except for monitor malfunction, associated repairs, required performance evaluations, and required quality assurance or control activities, the permittee shall continuously monitor at all times that an engine is operating. A monitoring malfunction is any sudden, infrequent, not reasonable preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
  - (b) The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. However, the permittee shall use all the valid data collected during all other periods.

(Ref.: 40 CFR 63.6635; Subpart ZZZZ)

- 5.7 For Emission Point AA-001, the permittee shall demonstrate compliance with the emission limitations specified in Conditions 3.5 and 4.1 in accordance with paragraphs (a) through (e) of this permit condition:
- (a) Conduct performance tests either once every 8,760 hours of operation or once every three (3) years (whichever comes first) for CO to demonstrate that the required CO percent reduction is achieved or that CO emissions remain at or below the concentration limit (as required by Condition 5.3);
  - (b) Collect the catalyst inlet temperature in accordance with Condition 5.5;
  - (c) Reduce temperature data to 4-hour rolling averages;
  - (d) Maintain the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature (as required by Condition 4.1); and
  - (e) Measure the pressure drop across the catalyst once per month and demonstrate that the pressure drop across the catalyst is within the operating limitation established during the initial performance test.

(Ref.: 40 CFR 63.6640(a), 63.6655(d), and Table 6; Subpart ZZZZ)

- 5.8 For Emission Point AA-001, the permittee shall comply with the following recordkeeping requirements:

- (a) The permittee shall maintain records that contain the following information:
  - (1) A copy of each notification and report that the permittee submitted to comply with Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).
  - (2) Records on the occurrence and duration of each malfunction of operation (i.e. process equipment) or the air pollution control and monitoring equipment.
  - (3) Records on the performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii), Subpart A.
  - (4) Records on all required maintenance performed on the air pollution control and monitoring equipment.
  - (5) Records on the actions taken during periods of malfunction to minimize emissions in accordance with Condition 4.2, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
  - (6) Records required by Condition 5.7 to demonstrate compliance with the limitations in Conditions 3.5 and 4.1.
  - (7) Records on the maintenance conducted on an engine in order to demonstrate that the permittee operated and maintained the engine and after-treatment control device (if any) in accordance with the maintenance plan.
  
- (b) For each CPMS, the permittee shall maintain records that contain the following information:
  - (1) Records as described in 40 CFR 63.10(b)(2)(vi) – (xi), Subpart A;
  - (2) Previous (i.e. superseded) versions of the performance evaluation plan as required by 40 CFR 63.8(d)(3), Subpart A;
  - (3) Requests for alternatives to the relative accuracy test for CPMS as required in 40 CFR 63.8(f)(6)(i), Subpart A (if applicable).
  
- (c) All records shall be kept in accordance with 40 CFR 63.10(b)(1), Subpart A and the following requirements:
  - (1) Records must be kept in a form suitable and readily available for expeditious review.
  - (2) The permittee must keep each record for five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

- (3) The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(Ref.: 40 CFR 63.6655(a), (b), (d), (e)(3), and 63.6660; Subpart ZZZZ)

**SECTION 6  
REPORTING REQUIREMENTS**

<b>Emission Point</b>	<b>Applicable Requirement</b>	<b>Condition Number</b>	<b>Reporting Requirement</b>
Facility-Wide	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.1	Report Permit Deviations Within Five (5) Working Days
		6.2	Submit A Certified Semi-Annual Monitoring Report
		6.3	All Documents Submitted to the MDEQ Shall Be Certified by a Responsible Official
AA-001	40 CFR 63.6640(b) and (e); Subpart ZZZZ	6.4	Deviation Reporting Requirements
	40 CFR 63.6645(a)(2) and (g); Subpart ZZZZ	6.5	Notification Requirements
	40 CFR 63.6650(a), (b)(3) – (5), (c), (e), (f), and Table 7; Subpart ZZZZ	6.6	Submit A Semi-Annual Compliance Report
	40 CFR 63.6645(h)(2); Subpart ZZZZ 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.7	Submit the Performance Test Results

6.1 Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken. The report shall be made within five (5) working days of the time the deviation began.

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

6.2 Except as otherwise specified herein, the permittee shall submit a certified semi-annual monitoring report postmarked no later than January 31 and July 31 of each calendar year for the preceding six-month period. These reports shall address any required monitoring specified in Section 5 of this permit. All instances of deviations from permit requirements must be clearly identified in the report. Where no monitoring data is required to be reported and/or there are no deviations to report, the report shall contain the appropriate negative declaration. These reports shall be submitted in conjunction with the semi-annual compliance report required by Condition 6.6.

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

6.3 Any document required by this permit to be submitted to the MDEQ shall contain a certification signed by a responsible official stating that based on information and belief

formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

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

- 6.4 For Emission Point AA-001, the permittee shall report each instance in which the permittee did not meet each emission limitation or operation limitation in Conditions 3.5 and 4.1. These instances are deviations from the emission and operating limitations in Subpart ZZZZ. These deviations must be reported according to the requirements in 40 CFR 63.6650(d) and (e), Subpart ZZZZ. If the permittee changes the catalysts, the permittee must reestablish the values of the operating parameters measured during the initial performance test.

When the permittee reestablishes the values of the permittee's operating parameters, the permittee must also conduct a performance test to demonstrate that the permittee is meeting the required emissions limitation in Condition 3.4. The permittee must also report each instance in which the permittee did not meet the applicable requirements in Table 8 of Subpart ZZZZ (as specified in Condition 3.3).

(Ref.: 40 CFR 63.6640(b) and (e); Subpart ZZZZ)

- 6.5 For Emission Point AA-001, the permittee shall comply with the following notification requirements:
- (a) Submit all of the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) – (e), (g), and (h) that apply by the dates specified.
  - (b) For the performance testing required in Condition 5.3, submit a Notification of Intent to conduct a performance test at least sixty (60) days before the performance test is scheduled to begin as required by 40 CFR 63.7(b)(1), Subpart A.

(Ref.: 40 CFR 63.6645(a)(2) and (g); Subpart ZZZZ)

- 6.6 For Emission Point AA-001, the permittee shall submit a semi-annual compliance report in accordance with Condition 6.2 that contains the following information:
- (a) The company name and address.
  - (b) A statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
  - (c) The date of report and beginning and ending dates of the reporting period.
  - (d) If the permittee had a malfunction during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and which caused or may have cause any applicable emission limitation to be exceeded.

The report must also include a description of actions taken by the permittee during a malfunction of an engine to minimize emissions in accordance with Condition 4.2, including actions taken to correct a malfunction.

- (e) If there are no deviations from any emission or operating limitations that apply, a statement that there were no deviations from the emission or operating limitations during the reporting period.
- (f) If there were no periods during which the CPMS was out-of-control, as specified in 40 CFR 63.8(c)(7) – Subpart A, a statement that there were no periods during which the CPMS was out-of-control during the reporting period.
- (g) If the permittee had a deviation from any emission limitation or operating limitation during the reporting period, the information in 40 CFR 63.6650(d), Subpart ZZZZ. If there were periods during which the CPMS was out-of-control as specified in 40 CFR 63.8(c)(7), Subpart A and the information specified in 40 CFR 63.6650(e), Subpart ZZZZ.

(Ref.: 40 CFR 63.6650(a), (b)(3) – (5), (c), (e), (f), and Table 7; Subpart ZZZZ)

- 6.7 For Emission Point AA-001, the permittee shall submit a report for any conducted performance test (see Condition 5.3) no later than sixty (60) days after completing the testing event. The report shall, at a minimum, include the information specified in Section 1.B.5 of this permit.

(Ref.: 40 CFR 63.6645(h)(2); Subpart ZZZZ)

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