

**STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
PERMIT**

TO CONSTRUCT AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Tronox LLC, Hamilton Facility
40034 Tronox Road
Hamilton, Mississippi
Monroe County

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: JUL 10 2019

Permit No.: 1840-00035

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
406	Finishing Section Treatment Tank Scrubbing System controlling emissions from three (3) treatment tanks
507	Natural Gas-Fired Temporary Boiler
512	233 MMBTU/hr Natural Gas-Fired Boiler to replace Emission Points 502, 508, and 509 equipped with low-NOx burners and flue gas recirculation.
513	909 hp Diesel-Fired Emergency Generator.
514	909 hp Diesel-Fired Emergency Generator.
515	909 hp Diesel-Fired Emergency Generator.

**SECTION 3
EMISSION LIMITATIONS AND STANDARDS**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
507 512 513 514 515	11 Miss. Admin. Code Pt. 2, R. 1.3.A.	3.1	Opacity	≤40%
	11 Miss. Admin. Code Pt. 2, R. 1.3.B.	3.2		
507 512	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.3	Fuel	Natural gas only
	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(b).	3.4	PM (filterable only)	$E = 0.8808 * T^{-0.1667}$
	11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).	3.5	SO ₂	4.8 lb/MMBTU
512	40 CFR 60, Subpart Db – New Source Performance Standards for Industrial –Commercial – Institutional Steam Generating Units 40 CFR 60.40b(a)	3.6	SO ₂ PM NO _x	Applicability
	40 CFR 60.42b(k)(2), Subpart Db	3.7	SO ₂	Exemption
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.8		0.32 lb/MMBTU (limit to meet SO ₂ exemption in NSPS Db)
	40 CFR 60.44b(l)(1), Subpart Db	3.9	NO _x	0.20 lb/MMBTU (30-day rolling average)
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). (PSD Avoidance Limit)	3.10		0.054 lb/MMBTU (30-day rolling average using PEMS)
	40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boiler and Process Heaters 40 CFR 63.7485, 63.7490(a)(2) and (b), and 63.7499(l)	3.11	HAP	Applicability
	40 CFR 63.7500(a)(3), Subpart DDDDD	3.12		Good Air Pollution Control Practices
	40 CFR 63.7500(f), and	3.13		Standards apply at all times

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Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
	63.7505(a), Subpart DDDDD			
502 508 509	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.14		Within 180 days of startup of Emission Point 512, Emission Points 502, 508, and 509 shall cease operation
507	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).;	3.15	Temporary Boiler	< 180 days on site
	40 CFR 60.40b(m), Subpart Db or 40 CFR 60.40c(i), Subpart Dc; and CFR 63.7491(j), Subpart DDDDD	3.16		Only operated when one or more of the permanent boilers are shutdown and shall not exceed the potential emissions of the boiler being replaced.
513 514 515	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.17	PM (filterable only)	0.6 lb/MMBTU
513 514 515	40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants from Reciprocating Internal Combustion Engines 40 CFR 63.6585, 63.6590(a)(2)(i), and 63.6590(b)(1)(i)	3.18	HAP	Applicability – Subject but only required to submit an initial notification
	40 CFR 60, Subpart IIII – New Source Performance Standards for Compression Ignition Internal Combustion Engines 40 CFR 60.4200(a)(2)(i)	3.19	NMHC/CO/ NO _x /PM	Applicability
	40 CFR 60.4205(b), Subpart IIII	3.20		Comply with 40 CFR 60.4202 for same model year and maximum engine power
	40 CFR 60.4202(a)(2), Subpart IIII and 40 CFR 89.112	3.21		NMHC + NO _x – 6.4 g/kw-hr CO – 3.5 g/kw-hr PM – 0.2 g/kw-hr
	40 CFR 60.4207(b), Subpart IIII and 40 CFR 80.510(b)	3.22	Fuel	Max sulfur content of 15 ppm Minimum cetane index of 40 or a maximum aromatic content of 35 volume percent
	40 CFR 4209(a), Subpart IIII	3.23	Hours of Operation	Install a non-resettable hour meter
406	11 Miss. Admin. Code Pt. 2, R.	3.24	Cl ₂	1.0 lb/hr and 4.38 tpy

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
	2.2.B(10).	3.25	HCl	1.0 lb/hr and 4.38 tpy

3.1 For Emission Points 507, 512, 513, 514, and 515, 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.: 11 Miss. Admin. Code Pt. 2, R. 1.3.A.)

3.2 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 Condition 3.1. This shall not apply to vision obscuration caused by uncombined water droplets.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.B.)

3.3 For Emission Points 507 and 512, the permittee shall only burn natural gas.

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

3.4 For Emission Points 507 and 512, the maximum permissible emission of ash and/or particulate matter from fossil fuel burning installations shall not exceed an emission rate as determined by the 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.: 11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(b).)

3.5 For Emission Points 507 and 512, the maximum discharge of sulfur oxides from any fuel burning installation in which the fuel is burned primarily to product heat or power by

indirect heat transfer shall not exceed 4.8 pounds (measured as sulfur dioxide) per million BTU heat input.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.4.A(2).)

- 3.6 For Emission Point 512, the permittee is subject to and shall comply with all applicable requirements of Standards of Performance for Industrial –Commercial-Institutional Steam Generation Units (40 CFR 60, Subpart Db) and the General Provisions (40 CFR 60, Subpart A).

(Ref.: 40 CFR 60.40b(a), Subpart Db)

- 3.7 For Emission Point 512, the boiler only fires gaseous fuel, as defined in Subpart Db, with a potential SO₂ emission rate of 0.32 lb/MMBtu heat input or less and is, therefore, exempt from the SO₂ emissions limit in 40 CFR 60.42b(k)(1).

(Ref.: 40 CFR 60.42b(k)(2), Subpart Db)

- 3.8 For Emission Point 512, the permittee shall only burn fuels with a potential SO₂ emission rate of 0.32 lb/MMBTU heat input or less.

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

- 3.9 For Emission Point 512, the permittee shall not cause to be discharged into the atmosphere any gases that contain NO_x (expressed as NO₂) in excess of 0.20 lb/MMBTU, determined on a 30-day rolling average basis.

(Ref.: 40 CFR 60.44b(l)(1) and 60.44b(i), Subpart Db)

- 3.10 For Emission Point 512, the permittee shall not cause to be discharged into the atmosphere any gases that contain NO_x (expressed as NO₂) in excess of 0.054 lb/MMBTU (30-day rolling average), as determined by using a Predictive Emissions Monitoring System (PEMS). This is a PSD avoidance limit.

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

- 3.11 For Emission Point 512, the permittee is subject to and shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63, Subpart DDDDD) and the General Provisions (40 CFR 63, Subpart A).

Emission Point 512 is a new boiler with a heat input capacity of more than 10 million Btu per hour, designed to burn natural gas. As such, the boiler is only required to meet the work practice standards of 40 CFR Part 63, Subpart DDDDD that are listed in Condition 4.1.

(Ref.: 40 CFR 63.7485, 63.7490(a)(2), (b), 63.7499(l) and 40 CFR 63.7500(a)(1), Subpart DDDDD)

- 3.12 For Emission Point 512, at all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the MDEQ that 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 63.7500(a)(3), Subpart DDDDD)

- 3.13 For Emission Point 512, the permittee shall be in compliance with the work practice standards at all times the affected unit is operating

(Ref.: 40 CFR 63.7500(f), and 63.7505(a), Subpart DDDDD)

- 3.14 Emission Points 502, 508, and 509 shall cease operation within 180 days of the startup of Emission Point 512.

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

- 3.15 For Emission Point 507, the temporary boiler shall be on-site for less than 180 consecutive days and, therefore, not be subject to 40 CFR 60, Subpart Db or 40 CFR 63, Subpart DDDDD .

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).; 40 CFR 60.40b(m), Subpart Db or 40 CFR 60.40c(i), Subpart Dc; 40 CFR 63.7491(j), Subpart DDDDD, and MACT and NSPS Avoidance Limit)

- 3.16 For Emission Point 507, the temporary boiler shall only be operated when one or more of the permanent boilers are shutdown, and potential emissions from the temporary boiler shall not exceed the potential emissions of the boiler being replaced.

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

- 3.17 For Emission Points 513, 514, and 515, 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.: 11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).)

- 3.18 For Emission Points 513, 514, and 515, the permittee is subject to and shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants from Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) and the General Provisions (40 CFR 63, Subpart A).

Emission Points 513, 514, and 515 are new stationary emergency RICE with a site rating of more than 500 brake hp located at a major source of HAP and constructed after December 19, 2002.

(Ref.: 40 CFR 63.6585, 63.6590(a)(2)(i), and 63.6590(b)(1)(i), Subpart ZZZZ)

- 3.19 For Emission Points 513, 514, and 515, the permittee is subject to and shall comply with all applicable requirements of the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) and the General Provisions (40 CFR 60, Subpart A).

(Ref.: 40 CFR 60.4200(a)(2)(i), Subpart IIII)

- 3.20 For Emission Points 513, 514, and 515, the permittee shall comply with the emission standards for new non-road CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power.

(Ref.: 40 CFR 60.4205(b), Subpart IIII)

- 3.21 For Emission Points 513, 514, and 515, the permittee shall not exceed the following emission limits:

- (a) NMHC + NO_x – 6.4 g/kw-hr
- (b) CO – 3.5 g/kw-hr
- (c) PM – 0.20 g/kw-hr

(Ref.: 40 CFR 60.4202(a)(2), Subpart IIII and 40 CFR 89.112)

- 3.22 For Emission Points 513, 514, and 515, the permittee shall only use diesel fuel that meets the requirements for non-road diesel fuel below.

- (a) A maximum sulfur content of 15 ppm
- (b) A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent

(Ref.: 40 CFR 60.4207(b), Subpart IIII and 40 CFR 80.510(b))

- 3.23 For Emission Points 513, 514, and 515, the permittee shall install a non-resettable hour meter prior to startup of the engine.

(Ref.: 40 CFR 60.4209(a), Subpart IIII)

- 3.24 For Emission Point 406, the Chlorine (Cl₂) emissions shall not exceed 1.0 lb/hr and 4.38 tons/year.

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

3.25 For Emission Point 406, the Hydrogen Chloride (HCl) emissions shall not exceed 1.0 lb/hr and 4.38 tons/year.

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

**SECTION 4
WORK PRACTICES**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Work Practice
512	40 CFR 63.7500(a)(1), 63.7515(d), 63.7540(a)(10), (12) and (13), 63.7575, and Table 3, Subpart DDDDD	4.1	HAP	Tune-up every 5 years

4.1 For Emission Point 512, the permittee shall equip the boiler with a continuous oxygen trim system that maintains an optimum air to fuel ratio and shall conduct an initial annual tune-up of the boiler within 61 months of startup. The oxygen level of the continuous oxygen trim system shall be set no lower than the oxygen concentration measured during the most recent tune-up. Subsequent tune-ups shall be conducted no more than 61 months after the previous tune-up. If the boiler is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

- (a) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown but it must be inspected at least once every 72 months). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;
- (b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
- (c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown).
- (d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject;
- (e) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
- (f) Maintain on-site and submit, if requested by the MDEQ, a report containing the information below:

- (1) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
- (2) A description of any corrective actions taken as a part of the tune-up; and

(Ref.: 40 CFR 63.7500(a)(1), 63.7515(d), 63.7540(a)(10), (12) and (13), 63.7575, and Table 3, Subpart DDDDD)

**SECTION 5
MONITORING AND RECORDKEEPING REQUIREMENTS**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Monitoring/Recordkeeping Requirement
507	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.1	Operational Restrictions	Records of operation
512	40 CFR 60.49b(d)(2), Subpart Db	5.2	Fuel	Monitor and record fuel usage monthly.
	40 CFR 60.45b(j) and 60.49b(r)(1), Subpart Db	5.3	SO ₂	Fuel based compliance alternatives
	40 CFR 60.46b(e)(1) and (4), Subpart Db	5.4	NO _x	Compliance demonstration
	40 CFR 60.48b(g)(2), Subpart Db	5.5		Monitor and predict NO _x emission rates
	40 CFR 60.49b(g), Subpart Db	5.6		Maintain records for each steam generating unit operating day
	40 CFR 60.49b(o), Subpart Db	5.7		Maintain records for 2 years
	40 CFR 63.7555(a)(1), Subpart DDDDD	5.8	HAP	Recordkeeping
	40 CFR 63.7560, Subpart DDDDD	5.9		
513 514 515	40 CFR 60.4206, Subpart IIII	5.10	Compliance	Comply for Life of the Engine
	40 CFR 60.4211(a), Subpart IIII	5.11		Operate and Maintain according to manufacturer's written instructions
	40 CFR 60.4211(c), Subpart IIII	5.12		
	40 CFR 60.4214(b), Subpart IIII	5.13		Recordkeeping
406	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.14	Cl ₂	Stack Testing in accordance with EPA Ref. Method 26A.
		5.14	HCl	

5.1 For Emission Point 507, the permittee shall maintain the following records of operation to demonstrate compliance with Conditions 3.15 and 3.16:

- (a) Number of days onsite,
- (b) Heat capacity and potential emissions of the temporary boiler,
- (c) Heat capacity and potential emissions of the boiler replacing,
- (d) Date brought onsite, and
- (e) Date removed from site.

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

- 5.2 For Emission Point 512, the permittee shall maintain monthly fuel usage records for the natural gas burned.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11). and 40 CFR 60.49b(d)(2))

- 5.3 For Emission Point 512, the permittee shall obtain and maintain fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the gaseous fuel meets the definition of natural gas as defined in 40 CFR 60.41b and the applicable sulfur limit.

(Ref.: 40 CFR 60.45b(j) and 60.49b(r)(1), Subpart Db)

- 5.4 For Emission Point 512, the permittee shall conduct performance test required under 40 CFR 60.8 using the continuous system for monitoring NO_x under 40 CFR 60.48b.

(a) For the initial compliance test, NO_x from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_x emission standards under Condition 3.10. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(b) Following the date on which the initial performance test is completed, the permittee shall upon request determine compliance with the NO_x standards in Condition 3.10 through the use of a 30-day performance test. During periods when performance tests are not requested, NO_x emissions data collected pursuant to Condition 5.5 are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_x emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

(Ref.: 40 CFR 60.46b(e)(1) and (4), Subpart Db)

- 5.5 For Emission Point 512, the permittee shall monitor the steam generating unit operating conditions and predict NO_x emission rates as specified in the plan submitted in accordance with Condition 6.4.

(Ref.: 40 CFR 48b(g)(2), Subpart Db)

- 5.6 For Emission Point 512, the permittee shall maintain records of the following information for each steam generating unit operating day:

(a) Calendar date;

- (b) The average hourly NO_x emission rates (expressed as NO₂) (lb/MMBtu heat input) predicted;
- (c) The 30-day average NO_x emission rates (lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;
- (d) Identification of the steam generating unit operating days when the calculated 30-day average NO_x emission rates are in excess of the NO_x emissions standards, with the reasons for such excess emissions as well as a description of corrective actions taken;
- (e) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
- (f) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
- (g) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(Ref.: 40 CFR 60.49b(g), Subpart Db)

- 5.7 For Emission Point 512, all records required under 40 CFR 60, Subpart Db shall be maintained for a period of 2 years following the date of such record.

(Ref.: 40 CFR 60.49b(o), Subpart Db)

- 5.8 For Emission Point 512, the permittee shall keep a copy of each notification and report that was submitted to comply with 40 CFR 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or compliance report that was submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).

(Ref.: 40 CFR 63.7555(a)(1), Subpart DDDDD)

- 5.9 For Emission Point 512, the permittee shall comply with the following:

- (a) Records shall be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1).
- (b) Each record shall be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

- (c) Records shall be keep on site, or accessible from on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The records can be kept off site for the remaining 3 years.

(Ref.: 40 CFR 63.7560, Subpart DDDDD)

- 5.10 For Emission Points 513, 514, and 515, the permittee shall operate and maintain the stationary compression ignition internal combustion engine (CI ICE) so that it meets the emission standards in Condition 3.B.21 for the entire life of the engine.

(Ref.: 40 CFR 60.4206, Subpart IIII)

- 5.11 For Emission Points 513, 514, and 515, the permittee shall comply with the following:

- (a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
- (b) Change only those emission-related settings that are permitted by the manufacturer; and
- (c) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply.

(Ref.: 40 CFR 60.4211(a), Subpart IIII)

- 5.12 For Emission Points 513, 514, and 515, the engine shall be installed and configured according to the manufacturer's emission-related specifications.

(Ref.: 40 CFR 60.4211(c), Subpart IIII)

- 5.13 For Emission Points 513, 514, and 515, the permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee shall record the time of operation of the engine and the reason the engine was in operation during that time.

(Ref.: 40 CFR 60.4214(b), Subpart IIII)

- 5.14 For Emission Point 406, the permittee is required to perform stack testing in accordance with EPA Reference Method 26A to demonstrate compliance with the permitted emission limitations for Hydrogen Chloride (HCl) and Chlorine (Cl₂). The permittee shall demonstrate compliance biennially not to exceed 25 months after previous stack test.

For the purpose of compliance demonstration, the permittee shall operate the sources at its maximum capacity.

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

SECTION 6 REPORTING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Reporting Requirement
507 512 513 514 515	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.1	Annual reports
512	40 CFR 60.49b(a)(1), Subpart Db	6.2	Notification of initial startup
	40 CFR 60.49b(b), Subpart Db and 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.3	Submit performance test data
	40 CFR 60.49b(c), Subpart Db	6.4	Submit monitoring of steam generating unit operating conditions plan
	40 CFR 60.49b(h)(2)(i), Subpart Db	6.5	Excess emissions reports
	40 CFR 60.49b(i), Subpart Db	6.6	Submit reports containing information in Condition 5.6
	40 CFR 60.49b(r)(1) Subpart Db	6.7	Reports of very low sulfur fuels
	40 CFR 60.49b(v), Subpart Db	6.8	Optional electronic reports
	40 CFR 60.49b(w), Subpart Db	6.9	Reports due every 6 months postmarked by the July 30 th and January 30 th
	40 CFR 63.7545(a), Subpart DDDDD	6.10	Notifications
	40 CFR 63.7545(c), Subpart DDDDD	6.11	Initial Notification
	40 CFR 63.7550(a), 63.7550(b) and (c), and Table 9, Subpart DDDDD	6.12	Reporting
	40 CFR 63.7550(h)(3), Subpart DDDDD	6.13	Electronic Reports
507	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.14	Notification of date rental boiler is brought on site
		6.15	Notification of date renter boiler is removed from site
406	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.16	Stack Test Results

- 6.1 For Emission Points 507, 512, 513, 514, and 515, the permittee shall address these emission points in the annual certification of compliance required by 11 Miss. Admin. Code Pt. 2, R. 6.3.C(5)(a), (c), & (d), due by January 31st for the preceding year.

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

- 6.2 For Emission Point 512, the permittee shall submit notification of the date of initial startup as provided in 40 CFR 60.7. This notification shall include the design heat capacity and identification of the fuel to be combusted.

(Ref.: 40 CFR 60.49b(a)(1), Subpart Db)

- 6.3 For Emission Point 512, the permittee shall submit the performance test data from the initial performance test and subsequent tests within sixty (60) days of conducting the performance test.

(Ref.: 40 CFR 60.49b(b), Subpart Db and 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

- 6.4 For Emission Point 512, the permittee who chooses to demonstrate compliance with the standards in Condition 3.10 through the monitoring of steam generating unit operating conditions, in accordance with Condition 5.5, shall submit to the MDEQ for approval a plan that identifies the operating conditions to be monitored in Condition 5.5 and the records to be maintained in Condition 5.6. This plan shall be submitted to the MDEQ for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

- (a) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_x emission rates (*i.e.*, lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.*, the ratio of primary air to secondary and/or tertiary air) and the level of excess air (*i.e.*, flue gas O₂ level);
- (b) Include the data and information that the permittee used to identify the relationship between NO_x emission rates and these operating conditions; and
- (c) Identify how these operating conditions, including steam generating unit load, will be monitored under Condition 5.5 on an hourly basis by the permittee during the period of operation; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the permittee in accordance with Condition 5.6.

(Ref.: 40 CFR 60.49b(c), Subpart Db)

- 6.5 For Emission Point 512, the permittee shall submit excess emission reports in accordance with Condition 6.9 for any excess emissions that occurred during each reporting period.
(Ref.: 40 CFR 60.49b(h)(2)(i), Subpart Db)
- 6.6 For Emission Point 512, the permittee shall submit reports in accordance with Condition 6.9 that contain the information recorded in Condition 5.6.
(Ref.: 40 CFR 60.49b(i), Subpart Db)
- 6.7 For Emission Point 512, the permittee shall submit reports in accordance with Condition 6.9 certifying that only natural gas was combusted during the reporting period.
(Ref.: 40 CFR 60.49b(r)(1), Subpart Db)
- 6.8 For Emission Point 512, the permittee may submit electronic quarterly reports for NO_x in lieu of submitting the written reports required under Conditions 6.5 and 6.6. The format of each quarterly electronic report shall be coordinated with MDEQ. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the permittee shall coordinate with the MDEQ to obtain their agreement to submit reports in this alternative format.
(Ref.: 40 CFR 60.49b(v), Subpart Db)
- 6.9 For Emission Point 512, the reporting period for the reports required under 40 CFR 60, Subpart Db is each 6 month period. All reports shall be submitted to the MDEQ and shall be postmarked by the 30th day following the end of the reporting period (i.e., July 30th and January 30th).
(Ref.: 40 CFR 60.49b(w), Subpart Db)
- 6.10 For Emission Point 512, the permittee shall submit all applicable notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply by the dates specified.
(Ref.: 40 CFR 63.7545(a), Subpart DDDDD)
- 6.11 For Emission Point 512, the permittee shall submit an Initial Notification no later than 15 days after the actual date of startup.
(Ref.: 40 CFR 63.7545(c), Subpart DDDDD)
- 6.12 For Emission Point 512, the permittee shall submit a 5-year compliance report postmarked or submitted by January 31st for the previous 5-year period that ended on December 31st of the previous year that contains the following information.
- (a) Company and Facility name and address.

- (b) Process unit information, emission limitations and operating parameter limitations.
- (c) Date of report and beginning and ending dates of the reporting period.
- (d) Date of the most recent tune-up and the date of the most recent burner inspection if it was not done with the tune-up and was delayed until the next scheduled or unscheduled unit shut down.
- (e) Statement by a responsible official with the official's name, title, and signature, certifying the truth accuracy, and completeness of the content of the report.
(Ref.: 40 CFR 63.7550(a), 63.7550(b) and (c)(5)(i)-(iii), (xiv), and (xvii), and Table 9, Subpart DDDDD)

6.13 For Emission Point 512, permittee must submit the compliance report required by Condition 6.12 to MDEQ and EPA as outlined below.

- (a) Written Reports shall be submitted to MDEQ at the following address:

Chief, Environmental Compliance and Enforcement Division
Mississippi Department of Environmental Quality
Office of Pollution Control
P.O. Box 2261
Jackson, Mississippi 39225

- (b) Electronic reports shall be submitted using CEDRI that is accessed through EPA's Central Data Exchange (CDX) at www.epa.gov/cdx.

(Ref.: 40 CFR 63.7550(h)(3), Subpart DDDDD)

6.14 For Emission Point 507, within 30 days after a temporary boiler is brought on site, the permittee shall submit written notification of the date a rental boiler is brought on site, a description of the boiler, and the potential emissions rate from the boiler including documentation demonstrating how potential emissions were derived. This notification shall also provide a description and potential emissions of the boiler(s) that is temporarily shutdown.

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

6.15 For Emission Point 507, within 30 days of removal of temporary boiler, the permittee shall submit written notification of the date the rental boiler is removed from site and will include the number of days the boiler remained onsite and the number of hours it operated while onsite.

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

- 6.16 For Emission Point 406, the permittee shall submit a written test protocol at least thirty (30) days prior to all intended test date(s) to ensure that all test methods and procedures are acceptable to the MDEQ. Also, the MDEQ shall be notified in writing at least ten (10) days prior to the scheduled test date(s) so that an observer may be afforded the opportunity to witness the test(s).

The permittee shall submit a test report of the results of each stack test required above within sixty (60) days of the test date.

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