

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

Spin Flash Dryer Replacement

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

MAR 31 2020

Issued: _____

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
442	Swirl Fluidized Dryer with 34 MMBtu/hr natural gas-fired low-NOx burner equipped with two baghouses in parallel for product capture

**SECTION 3
EMISSION LIMITATIONS AND STANDARDS**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
442	11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).	3.1	SO ₂	4.8 lb/MMBtu
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.2	Fuel	Natural Gas Only
442	40 CFR 60, Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries 40 CFR 60.730(a) and (c)	3.3	PM	Applicability
	40 CFR 60.732(a) and 60.736(b)(1), Subpart UUU	3.4	PM	0.025 gr/dscf determined by using Method 5 for at least 2 hours and 1.70 dscm
	40 CFR 60.732(b) and 60.736(b)(2), Subpart UUU	3.5	Opacity	< 10% determined using Method 9
411 442	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.6	Operational Restriction	Emission Point 411 must be removed from service upon startup of Emission Point 442
442		3.7		Baghouses operated at all times emissions may be vented to them

3.1 For Emission Point 442, the maximum discharge of sulfur oxides from any fuel burning installation in which the fuel is burned primarily to produce heat or power by indirect heat transfer shall not exceed 4.8 pounds (measured as sulfur dioxide) per million BTU heat input.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).)

3.2 For Emission Point 442, the permittee shall combust natural gas only.

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

3.3 For Emission Point 442, the permittee is subject to and shall comply with all applicable requirements of the Standards of Performance for Calciners and Dryers in Mineral Industries (40 CFR 60, Subpart UUU) and the General Provisions (40 CFR 60, Subpart A).

(Ref.: 40 CFR 60.730(a) and (c), Subpart UUU)

- 3.4 For Emission Point 442, the permittee shall comply with the following on and after the date on which the initial performance test required by Condition 5.4 is completed, but no later than 180 days after the initial startup, whichever date comes first.

No emissions shall be discharged in to the atmosphere that contains particulate matter (PM) in excess of 0.025 gr/dscf. Method 5 shall be used to determine the particulate matter concentration. The sampling time and volume for each run shall be at least 2 hours and 1.70 dscm.

(Ref.: 40 CFR 60.732(a) and 60.736(b)(1), Subpart UUU)

- 3.5 For Emission Point 442, the permittee shall not exhibit greater than ten (10) percent opacity. Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity from stack emissions.

(Ref.: 40 CFR 60.732(b) and 60.736(b)(2), Subpart UUU)

- 3.6 Emission Point 411 shall be removed from service upon startup of Emission Point 442.

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

- 3.7 For Emission Point 442, the permittee shall operate the baghouses at all times emissions may be vented to them.

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

**SECTION 4
WORK PRACTICES**

**THIS SECTION WAS INTENTIONALLY LEFT BLANK SINCE NO WORK PRACTICE
STANDARDS APPLY TO THIS PERMIT ACTION**

**SECTION 5
MONITORING AND RECORDKEEPING REQUIREMENTS**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Monitoring/Recordkeeping Requirement
442	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.1	Fuel	Records of quantity of natural gas combusted.
	40 CFR 60.734(b) and 60.736(b)(2), Subpart UUU	5.2	PM Opacity	Certified visible emissions observer measure and record three 6-minute averages of opacity each day in accordance with Method 9
	40 CFR 60.735(a), Subpart UUU	5.3		Records required in Condition 5.1 shall be retained for at least 2 years
	40 CFR 60.736(a), Subpart UUU	5.4		Performance test requirements
	40 CFR 60.736(b)(2), Subpart UUU	5.5		
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.6	PM	Baghouse recordkeeping
5.7		Biweekly baghouse inspections		

5.1 For Emission Point 442, the permittee shall monitor and maintain records of the quantity of natural gas combusted.

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

5.2 For Emission Point 442, the permittee shall have a certified visible emissions observer measure and record three 6-minute averages of the opacity of visible emissions to the atmosphere each day of operation in accordance with Method 9 of 40 CFR 60, Appendix A and 40 CFR 60.11.

(Ref.: 40 CFR 60.734(b) and 60.736(b)(2)., Subpart UUU)

5.3 For Emission Point 442, records of the measurements required in 40 CFR 60.734(b) (Condition 5.1) shall be retained for at least 2 years.

(Ref.: 40 CFR 60.735(a), Subpart UUU)

5.4 For Emission Point 442, the permittee shall conduct an initial performance test within 180 days of startup in accordance with 40 CFR 60.8. Subsequent performance test shall be conducted biennially no more than 25 months from the previous one. In addition when conducting the performance tests required in 40 CFR 60.8, the permittee shall use the test methods in 40 CFR 60, Appendix A except as provided in 40 CFR 60.8(b).

(Ref.: 40 CFR 60.736(a), Subpart UUU)

- 5.5 For Emission Point 442, the permittee shall determine compliance with the emission limits in Condition 3.4 by determining the PM concentration using Method 5. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm.

Ref.: 40 CFR 60.736(b)(1), Subpart UUU)

- 5.6 For Emission Point 442, the permittee shall maintain sufficient records to document that the emission units are vented to the baghouses, as applicable, when operating. These records should also include times when the emission units are not venting to the baghouses and include any corrective actions that are taken. These records shall be maintained in log form and kept onsite for a period of at least five (5) years.

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

- 5.7 For Emission Point 442, the permittee shall perform biweekly inspections and any maintenance as needed to maintain proper operation of all baghouses for achieving the desired PM control efficiency. Records of these inspections and performed maintenance shall be kept in log form onsite for a period of at least five (5) years.

The permittee shall maintain on hand at all times sufficient equipment as is necessary to repair, replace, and/or overhaul the baghouses.

(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
442	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.1	Semiannual Reporting
442	40 CFR 60.735(c)(1), Subpart UUU	6.2	Semiannual reports of exceedances of control devices
411	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.3	Submit notification of date Emission Point 411 is removed from service
442		6.4	Semiannual reports of inspections and maintenance of the baghouses

6.1 For Emission Point 442, the permittee shall submit a semi-annual report due by July 31 and January 31 for the preceding six month period.

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

6.2 For Emission Point 442, the permittee shall submit written reports semiannually, in accordance with Condition 6.1, of exceedances of control device operating parameters required to be monitored by 40 CFR 60.734 (Condition 5.2). For the purpose of these reports, exceedances are defined as follows: All 6-minute periods during which the average opacity is greater than 10 percent.

(Ref.: 40 CFR 60.735(c)(1), Subpart UUU)

6.3 The permittee shall submit written notification of the date that Emissions Point 411 is removed from service.

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

6.4 For Emission Point 442, the permittee shall submit semiannual reports, in accordance with Condition 6.1, of the inspections and maintenance of the baghouses.

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