

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 082008-004 Project Number: 2007-10-101

Parent Company: Mastertaste, Inc.-Greenville

Parent Company Address: HCR 2 Box 2560, Greenville, MO 63944

Installation Name: Mastertaste, Inc.-Greenville

Installation Address: HWY E, Greenville, MO 63944

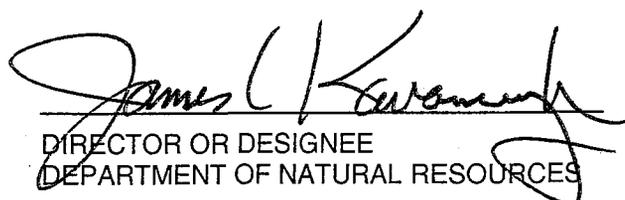
Location Information: Wayne County, S27, T29, R6

Application for Authority to Construct was made for:
The installation of one calciner. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

-
- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

AUG - 4 2008

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal; this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: Project Number: 2007-10-101

Parent Company: Mastertaste, Inc.-Greenville

Parent Company Address: HCR 2 Box 2560, Greenville, MO 63944

Installation Name: Mastertaste, Inc.-Greenville

Installation Address: HWY E, Greenville, MO 63944

Location Information: Wayne County, S27, T29, R6

Application for Authority to Construct was made for:
The installation of one calciner. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

-
- Standard Conditions (on reverse) are applicable to this permit.
 - Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal; this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

Page No.	3
Permit No.	
Project No.	2007-10-101

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Mastertaste, Inc.-Greenville
Wayne County, S27, T29, R6

1. Superseding Condition
 - A. The conditions of this permit supersede special conditions one (1), two (2), three (3) and four (4) found in the previously issued construction permit (Permit Number 1094-013) from the Air Pollution Control Program.

2. Control Device Requirement
 - A. Mastertaste, Inc.-Greenville shall control the sawdust dryer (EP-2) with two cyclones as specified in the permit application.
 - (1) The cyclones shall be operated and maintained in accordance with the manufacturer's specifications.
 - (2) Mastertaste, Inc.-Greenville shall maintain an operating and maintenance log for the cyclones which shall include the following:
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause and corrective actions
 - b) Maintenance activities, with inspection schedule, repair action and replacements, etc.
 - B. Mastertaste, Inc.-Greenville shall control the exhaust from the smoke scrubber with a flare.
 - (1) The flare shall be operated and maintained in accordance with the manufacturer's specifications.
 - (2) Mastertaste, Inc.-Greenville shall maintain an operating and maintenance log for the flare which shall include the following:
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause and corrective actions
 - b) Maintenance activities, with inspection schedule, repair actions and replacements, etc.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2007-10-101
Installation ID Number: 223-0019
Permit Number:

Mastertaste, Inc.-Greenville
HWY E
Greenville, MO 63944

Complete: 10/22/2007

Parent Company:
Mastertaste, Inc.-Greenville
HCR 2 Box 2560
Greenville, MO 63944

Wayne County, S27, T29, R6

REVIEW SUMMARY

- Mastertaste, Inc.-Greenville has applied for authority to install one calciner and increase the installation's sawdust handling limit.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- A flare and cyclones are being used to control the emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The project potential emissions of PM₁₀ are below de minimis levels.
- This installation is located in Wayne County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.

- Emissions testing is not required for the equipment.
- A modification of the Basic Operating Permit is required for this installation within 30 days of permit issuance.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Mastertaste, Inc.-Greenville is a liquid smoke manufacturer. Liquid smoke is produced by heating sawdust in the absence of oxygen. This process drives off the volatiles, which are condensed and treated to create liquid smoke.

Before heating, sawdust is shipped to the installation in trucks, where it is unloaded, screened and dried. The sawdust's average moisture content is between 35 and 45 percent by weight upon arrival at the installation, and after drying, the sawdust's moisture content is reduced to between two and three percent. The dryer is fired with a mixture of #6 fuel oil and wood tar. From the dryer, the sawdust is conveyed to the calcining kilns that drive off the volatiles. The calcining process reduces the sawdust to charcoal, which is removed and sold to charcoal briquetting companies. The smoke from this process is captured in a scrubber and treated in a series of tanks.

The following permits have been issued to Mastertaste, Inc.-Greenville from the Air Pollution Control Program.

Table 1: Construction Permits Issued

Permit Number	Description
0983-010	Liquid smoke production facility
1094-013	Add calciner

PROJECT DESCRIPTION

Mastertaste, Inc.-Greenville has requested that the emissions calculations for the installation be re-evaluated using updated emission factors. Mastertaste, Inc.-Greenville will also install a fourth calciner that will debottleneck the plant. After the debottleneck, the plant will be able to process 17,520 tons of dry sawdust per year, if the plant can exceed this value, a new construction permit will be required. The following table summarizes the emission points at the installation.

Table 2: Emission Points

Emission Point	Description
EP-1a	Liquid smoke production facility
EP-1b	Sawdust Haul Road
EP-1c	Sawdust Truck Unloading
EP-1d	Temporary Storage Basin (Unloading)
EP-1e	Temp Storage Transfer

Emission Point	Description
EP-1f	Temp Transfer drop point
EP-1g	Sawdust Storage (Unloading)
EP-1h	Sawdust Storage Transfer
EP-1i	Sawdust Transfer drop point
EP-1j	Inside Hopper
EP-1k	Screw Conveyor
EP-1l	Screen
EP-1m	Screw Conveyor
EP-2a	Sawdust Dryer
EP-2b	Furnace Hopper
EP-3	Calciners
EP-4	Charcoal Loading
EP-5	ASTs
EP-7	Evaporator

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Potential emissions of the sawdust handling operations were calculated using the material handling equation found in AP-42 section 13.2.4 "Aggregate Handling and Storage Piles," November 2006. Emissions from the haul roads were calculated using the unpaved haul road equation found in AP-42 section 13.2.2 "Unpaved Roads," November 2006.

Emissions from the dryer were calculated using emission factors from EPA's WebFIRE for a particleboard dryer, direct natural gas-fired, hardwood (SCC 3-07-006-32); subtracting the emissions from natural gas combustion, which were calculated using emission factors from AP-42 section 1.4 "Natural Gas Combustion," July 1998; and adding the emissions from fuel oil combustion, which were calculated using emission factors from AP-42 section 1.3 "Fuel Oil Combustion," September 1998.

Emissions from the calciners were calculated using a mass balance approach. Data from a Mastertaste Inc. pilot plant was provided to the Air Pollution Control Program and used in this calculation.

Baseline Actual Emissions were calculated using actual production data from Emissions Inventory Questionnaires (EIQs) submitted by Mastertaste, Inc.-Greenville in 2004 and 2005. These were the most recent full EIQs in the Air Pollution Control Program's database. Potential emissions represent the maximum emissions of the installation, assuming continuous operation (8,760 hours per year.) The project emissions were calculated by subtracting the baseline actual emissions from the potential emissions. This difference was limited to less than *de minimis* levels to avoid the air quality requirements found in Section (6) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*. Limiting the emissions increase to *de minimis* levels results in a PM₁₀

limit of less than 30.07 tons. The following table provides an emissions summary for this project.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Baseline Actual Emissions	Potential Emissions	Emissions Increase (Potential minus Baseline)	New Installation Limited Potential
PM ₁₀	15.0	19.77	16.89	30.46	13.57	N/A
SO _x	40.0	N/D	N/D	0.03	N/D	N/A
NO _x	40.0	N/D	N/D	9.97	N/D	N/A
VOC	40.0	N/D	N/D	35.66	N/D	N/A
CO	100.0	N/D	N/D	33.45	N/D	N/A
HAPs	10.0/25.0	N/D	N/D	0.37	N/D	N/A

N/D = Not Determined; N/A = Not Applicable

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The emissions increase of PM₁₀ is below de minimis levels.

APPLICABLE REQUIREMENTS

Mastertaste, Inc.-Greenville shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220

- *Restriction of Emission of Odors, 10 CSR 10-3.090*

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400*
- *Restriction of Emission of Sulfur Compounds, 10 CSR 10-6.260*
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating, 10 CSR 10-3.060*

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Michael Mittermeyer
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated 10/15/2007, received 10/22/2007, designating Mastertaste, Inc.-Greenville as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated 11/06/2007.

Mr. Chip Costephens
Plant Manager
Mastertaste, Inc.-Greenville
HCR 2 Box 2560
Greenville, MO 63944

RE: New Source Review Permit - Project Number: 2007-10-101

Dear Mr. Costephens:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance.

The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Michael Mittermeyer at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:mmk

Enclosures

c: Southeast Regional Office
PAMS File: 2007-10-101

Permit Number: